EFFECTS OF MICROCREDIT PROGRAMS ON INCOME LEVELS OF PARTICIPANT MEMBERS: EVIDENCE FROM ESKİŞEHİR, TURKEY

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ABSTRACT

EFFECTS OF MICROCREDIT PROGRAMS ON INCOME LEVELS OF PARTICIPANT MEMBERS: EVIDENCE FROM ESKİŞEHİR, TURKEY

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This thesis mainly analyzes the effects of Turkish Grameen Microcredit Program (TGMP) on income levels of the program participants in Eskişehir. The studies found in the literature which examine the effects of TGMP on participants concentrate on Diyarbakır in 2007 whereas this thesis provides evidence for a province which has different socio-economic characteristics, Eskişehir, in 2011. The methodology used is sample survey on participants through interviews and results are evaluated with non-parametric statistical tests. Poverty levels of program participants, characteristics of microbusinesses conducted by them, effect of the program on profit levels of microbusinesses and relation between profit levels of microbusinesses and other variables are analyzed in detail. The main findings of the study reveal that TGMP Eskişehir branch does not discriminate in favor of or against poorest women, microbusinesses conducted by participants concentrates on traditional and low profit ones, the program positively affects the profit levels of some microbusinesses but not for all of the participants and the effect of the program on profit levels is positively related with the microcredit amount spent for these businesses. It is concluded from the findings that TGMP cannot be the solution for poverty by itself and recommendations for improving the program and its effects are provided accordingly.

Keywords: Microcredit, TGMP, Poverty, Women

ÖZ

MİKROKREDİ PROGRAMLARININ KATILIMCILARIN GELİRLERİ ÜZERİNDEKİ ETKİSİ: ESKİŞEHİR, TÜRKİYE'DEN BİR ÖRNEK

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Bu çalışmada Türkiye Grameen Mikrokredi Programı'nın (TGMP) Eskişehir'deki katılımcıların gelir seviyeleri üzerindeki etkisi analiz edilmiştir. Çalışma, literatürdeki TGMP'nin katılımcıları üzerindeki etkisini 2007 yılında Diyarbakır'da inceleyen çalışmalardan ayrılarak, farklı sosyo-ekonomik özellikleri olan Eskişehir'le ilgili 2011 yılına ait bulgular sunmaktadır. Kullanılan metodoloji katılımcılar üzerinde anket yoluyla yürütülen örneklem araştırmasını içermektedir ve sonuçlar parametrik olmayan istatistiksel testlerle değerlendirilmiştir. Program katılımcılarının yoksulluk durumu, yürüttükleri mikro-işlerin özellikleri, programın bu mikro-işlerin kâr seviyeleri üzerindeki etkisi ve kâr seviyelerinin diğer değişkenlerle ilişkisi detaylı olarak incelenmiştir. Çalışmanın temel bulguları, TGMP Eskişehir şubesinin en fakir kadınların lehine yada aleyhine ayrım yapmadığını, katılımcıların mikro-işlerinin geleneksel düşük kârlı işler üzerinde yoğunlaştığını, programın bazı mikro-işlerin kâr seviyesini pozitif yönde etkileyebildiğini ama bunun bütün katılımcılar için geçerli olmadığını ve programın etkisinin mikro-işler için harcanan kredi miktarıyla pozitif ilişkili olduğunu göstermektedir. Bu bulgular ışığında TGMP'nin tek başına yoksulluğa çözüm olamayacağı belirtilmiş ve programın ve etkilerinin geliştirilmesi için önerilerde bulunulmuştur.

Anahtar Kelimeler: Mikrokredi, TGMP, Yoksulluk, Kadın

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CHAPTER 1

INTRODUCTION

Poverty can be simply defined as the situation in which people cannot meet their basic needs. Statistics about how many people are living in poverty and even in starvation in the world are released by institutions using various definitions of poverty and methodologies to measure it. Poverty phenomenon is so large scaled in today's world that we do not need definitions or numbers to be able to recognize it. Growing economies of the world could not cure this phenomenon and majority of people continue to live in poverty while a handful of people enjoy living in the lap of luxury in a capitalist system.

While billions of people are trying to survive poverty, a brand new strategy came up with a claim of alleviating poverty in 1970s. Muhammad Yunus invented the idea of microcredit through which poor people are provided with small amounts of credit without requiring collateral and he founded Grameen Bank in Bangladesh to realize this idea. Poor people are supposed to set up their small businesses with microcredit provided to them and get out of poverty in this way. The system is different from other poverty alleviation programs in that it does not distribute grants but require repayment of credit with a certain amount of interest and aims to be sustainable in this way. The spread of the system from Bangladesh to other countries in the world was so rapid that many countries adapted the system to fight against poverty and G8 countries endorsed "Key Principles of Microfinance" at their June 2004 Summit recognizing microfinance as a powerful instrument against poverty. Finally, the idea brought Nobel Peace Prize to Yunus in 2006.

The application of microcredit system in Turkey began at the beginning of 2000s under the organization of non-governmental institutions Foundation for the Support of Women's Work (Kadın Emeğini Değerlendirme Vakfı, KEDV)

and Turkish Foundation for Waste Reduction (Türkiye İsrafı Önleme Vakfı, TISVA) with the name of "Maya Enterprise for Microfinance" and "Turkish Grameen Microcredit Program (TGMP)" respectively. TGMP was started as a pilot project in Diyarbakır by a member of the parliament from Justice and Development Party (AKP) and it is now the biggest microcredit institution of Turkey operating in many provinces according to the number of members and credit amount distributed. Together with the spread of microcredit applications, success stories of members of the program took place in media and the program was praised as a successful tool in fighting against poverty.

Although it is praised and recognized as a powerful instrument against poverty, the fact that many people continue to live in poverty in the countries microcredit is applied widely trigger debates as to the benefits of the system in fighting against poverty. Some argue that fight against poverty is privatized with microcredit system and giving very small amounts of credit to poor people cannot be the solution to poverty created by capitalist economic system. Some others argue that microcredit offers a choice to poor people at least for setting up their own businesses by providing the capital they lack and people may benefit from the system till they can find a job instead of doing nothing. Field surveys concentrating on the effects of microcredit programs on participants gain importance to provide some evidence instead of making arguments on the function of the program and there is a vast literature in this field. Still, some studies on the effects of the program find positive effects of it while others mention the program as useless for alleviating poverty. The results of surveys differ since they are conducted in different samples taken from different places of a country, in different time frames and using different methodologies.

While debates continue as to the effects of the program in various countries of the world based upon field surveys, literature lacks evidence on the effects of microcredit programs in Turkey both because they are newly started and field surveys are demanding in terms of cost and time. The few field surveys on the

effects of TGMP on participants were conducted in Diyarbakır in 2007 and there are only two recent master degree thesis which include field surveys in Bursa and Ankara to the best of my knowledge. However Diyarbakır is only one of the provinces in which TGMP operates and considering that there are deep socio-economic differences between eastern and western provinces of Turkey, field surveys conducted on other provinces are necessary to gain more insight regarding the effects of the program. This study tries to fill this gap by conducting a survey on TGMP Eskişehir members. The survey concentrates on the effects of the program on microbusinesses of participants and hence on economic side rather than its possible social effects since it is considered that initial effects of the program may be observed in economic side because the program is very recently launched.

Chapter 2 of the thesis gives background information on microcredit and begins with definition of microcredit and features of microfinance institutions. Evolution of microcredit programs, concept of microcredit and outreach of it in the world are provided in this chapter. Finally Grameen Methodology which is applied by many microcredit programs in the world is explained because the biggest microcredit program of Turkey, TGMP, also uses this method. In the second part of the chapter microcredit applications in Turkey are explained. Firstly, short history of microcredit institutions in Turkey is provided. Characteristics of two microcredit institutions of Turkey which are MAYA and TGMP such as institutional targets, credit mechanisms, and data representing their activities are explained and more emphasis is given to TGMP since the thesis is about the activities of this program. Lastly, a section about TGMP experience in Diyarbakır which explains initial project phase and events giving important insight as to what is happening in the application of the program is presented.

Chapter 3 provides data about education levels, labor force characteristics, and poverty and income inequality measurements on regional basis to understand

better the socio-economic differences between regions in Turkey. The differences between men and women are also noticed from the data provided.

The chapter is followed by literature review on microcredit impact assessment studies in Chapter 4. Conceptual framework regarding microcredit impact assessment studies is also given in this chapter. Common impact assessment methods and survey designs are discussed shortly and the methodology used in this thesis is explained. Explanation of questionnaire applied, sampling structure, survey details and statistical methods used can be found in this chapter.

Chapter 5 continues with representing findings of the survey firstly with descriptive statistics and then with the analysis of profit levels and impact of microcredit with other variables. Finally, main findings and recommendations for the program are mentioned in Chapter 6.

CHAPTER 2

MICROCREDIT AND ITS APPLICATIONS

This chapter begins with general information about microcredit regarding definition, concept, outreach and applications in the world. After background information is provided, microcredit programs and applications in Turkey are explained in second part.

2.1. BACKGROUND INFORMATION ON MICROCREDIT

Microcredit is simply defined as giving small loans to poor people in many research papers and websites dealing with the issue. However, this simple definition of microcredit excludes crucial basics of microcredit mechanism and philosophy and is open to be misunderstood since any small credit given might be perceived as microcredit.

Microcredit is actually one of the financial services that are provided under the name of "microfinance" defined as offering poor people access to basic financial services like loans, money transfer services, savings and microinsurance. Poor people too need financial services like any other person usually receiving these services from banks to manage their micro businesses, build assets, smooth consumption, and manage risks but they are traditionally are not considered as credit-worthy by banks. Having been excluded from financial system, poor people usually fulfill their need for financial services through informal relationships such as taking credit from informal moneylenders at a high cost and getting savings services through rotating savings clubs but these are insecure and high-cost ways of financing (CGAP: About Microfinance, 2011).

2.1.1. MICROFINANCE INSTITUTIONS

A formal microfinance provider is a microfinance institution which may exist in different forms varying in legal structure, mission, and methodology. However, they all provide financial services to clients who are poorer and more vulnerable than traditional bank clients. Microfinance providers may be grouped as formal and semiformal providers according to laws they are subject to. Formal providers are those that are subject both to general laws and specific banking regulation and supervision (development banks, savings and postal banks, commercial banks, and non-bank financial intermediaries). Semiformal providers are subject to general and commercial laws but are not subject to bank regulation and supervision (financial nongovernmental organizations-NGOs, credit unions and cooperatives). Ownership structure of microfinance institutions also varies and they can be government-owned (e.g. rural credit cooperatives in China), member-owned (e.g. credit unions in West Africa), can be owned by socially minded shareholders (e.g. NGOs in Latin America) or profit-maximizing shareholders (e.g. microfinance banks in Eastern Europe). There may also be informal providers which are non-registered groups such as rotating savings and credit associations (ROSCAs) and self-help groups (CGAP: About Microfinance, 2011).[1]

"Key Principles of Microfinance" endorsed by the G8 countries at their June 2004 Summit as part of their commitment to expand the access of microfinance summarizes the rules determining the operation and institutional character of microfinance institutions together with the role of governments. The eleven key principles of microfinance are as follows:

1. The poor need a variety of financial services, not just loans. Just like everyone else, poor people need a wide range of financial services that

[1] CGAP, Consultative Group to Assist the Poor, is an independent policy and research center with the aim of advancing financial access for the world's poor. It is supported by over 30 development agencies and private foundations and housed at the World Bank.

are convenient, flexible, and reasonably priced. Depending on their circumstances, poor people need not only credit, but also savings, cash transfers, and insurance.

2. Microfinance is a powerful instrument against poverty. Access to sustainable financial services enables the poor to increase incomes, build assets, and reduce their vulnerability to external shocks. Microfinance allows poor households to move from everyday survival to planning for the future, investing in better nutrition, improved living conditions, and children's health and education.

3. Microfinance means building financial systems that serve the poor. Poor people constitute the vast majority of the population in most developing countries. Yet, an overwhelming number of the poor continue to lack access to basic financial services. In many countries, microfinance continues to be seen as a marginal sector and primarily a development concern for donors, governments, and socially-responsible investors. In order to achieve its full potential of reaching a large number of the poor, microfinance should become an integral part of the financial sector.

4. Financial sustainability is necessary to reach significant numbers of poor people. Most poor people are not able to access financial services because of the lack of strong retail financial intermediaries. Building financially sustainable institutions is not an end in itself. It is the only way to reach significant scale and impact far beyond what donor agencies can fund. Sustainability is the ability of a microfinance provider to cover all of its costs. It allows the continued operation of the microfinance provider and the ongoing provision of financial services to the poor. Achieving financial sustainability means reducing transaction costs, offering better products and services that meet client needs, and finding new ways to reach the unbanked poor.

5. Microfinance is about building permanent local financial institutions. Building financial systems for the poor means building sound domestic financial intermediaries that can provide financial services to poor people on a permanent basis. Such institutions should be able to mobilize and recycle domestic savings, extend credit, and provide a range of services. Dependence on funding from donors and governments—including government-financed development banks—will gradually diminish as local financial institutions and private capital markets mature.

6. Microcredit is not always the answer. Microcredit is not appropriate for everyone or every situation. The destitute and hungry who have no income or means of repayment need other forms of support before they can make use of loans. In many cases, small grants, infrastructure improvements, employment and training programs, and other non-financial services may be more appropriate tools for poverty alleviation. Wherever possible, such non-financial services should be coupled with building savings.

7. Interest rate ceilings can damage poor people's access to financial services. It costs much more to make many small loans than a few large loans. Unless microlenders can charge interest rates that are well above average bank loan rates, they cannot cover their costs, and their growth and sustainability will be limited by the scarce and uncertain supply of subsidized funding. When governments regulate interest rates, they usually set them at levels too low to permit sustainable microcredit. At the same time, microlenders should not pass on operational inefficiencies to clients in the form of prices (interest rates and other fees) that are far higher than they need to be.

8. The government's role is as an enabler, not as a direct provider of financial services. National governments play an important role in

setting a supportive policy environment that stimulates the development of financial services while protecting poor people's savings. The key things that a government can do for microfinance are to maintain macroeconomic stability, avoid interest-rate caps, and refrain from distorting the market with unsustainable subsidized, high-delinquency loan programs. Governments can also support financial services for the poor by improving the business environment for entrepreneurs, clamping down on corruption, and improving access to markets and infrastructure. In special situations, government funding for sound and independent microfinance institutions may be warranted when other funds are lacking.

9. Donor subsidies should complement, not compete with private sector capital. Donors should use appropriate grant, loan, and equity instruments on a temporary basis to build the institutional capacity of financial providers, develop supporting infrastructure (like rating agencies, credit bureaus, audit capacity, etc.), and support experimental services and products. In some cases, longer-term donor subsidies may be required to reach sparsely populated and otherwise difficult-to-reach populations. To be effective, donor funding must seek to integrate financial services for the poor into local financial markets; apply specialist expertise to the design and implementation of projects; require that financial institutions and other partners meet minimum performance standards as a condition for continued support; and plan for exit from the outset.

10. The lack of institutional and human capacity is the key constraint. Microfinance is a specialized field that combines banking with social goals, and capacity needs to be built at all levels, from financial institutions through the regulatory and supervisory bodies and information systems, to government development entities and donor

agencies. Most investments in the sector, both public and private, should focus on this capacity building.

11. The importance of financial and outreach transparency. Accurate, standardized, and comparable information on the financial and social performance of financial institutions providing services to the poor is imperative. Bank supervisors and regulators, donors, investors, and more importantly, the poor who are clients of microfinance need this information to adequately assess risk and returns (CGAP: Key Principles of Microfinance, 2011).

2.1.2. EVOLUTION OF MICROCREDIT

A simple but revolutionary idea of extending credit to the poor was found by Muhammad Yunus who received the Nobel Peace Prize in 2006 along with Grameen Bank for their efforts in struggling against poverty by developing microcredit as a powerful instrument. There were some organizations giving credits to poor people before this but Yunus took the idea further than anyone had previously (Counts, 2008).

Muhammad Yunus explains the microcredit revolution, the roots of Grameen Bank, in his book "Creating a World without Poverty". Yunus was working as a chairman of the Economics Department at Chittagong University and had been living the Bangladesh famine of 1974-75. He was making visits with his students to nearby villages for finding a way to help poor people trying to eke out a living and he realized the nature of problem that poor people have when he met with a woman who was making bamboo stools. This woman relied on the local moneylender to buy necessary bamboo for her stools but moneylender would lend her only if she sold him all her stools at the price that moneylender decided. As a result, woman could earn little income although she worked all day. Yunus and his students discovered that the total amount of money some

poor people owned from local moneylenders in a village was only $27 and Yunus decided to lend this much money to these people from his own pocket and all villagers he lent paid back their loans. He tried to convince banks to lend to the poor after this experience but they replied as poor were not credit-worthy, had no credit histories and no collaterals, and they couldn't fill out the necessary paperwork since they were illiterate. Yunus states the reason of reluctance of banks to give credits to poor as it is easier and more profitable to make few large amounts of loans than making many tiny loans to the poor. After his failure of convincing banks to lend to poor people, he requested the government to allow them to establish a special bank for the poor and Grameen Bank (Grameen means village) was born under a special law in 1983 (Yunus, 2007).

2.1.3. THE CONCEPT OF MICROCREDIT

The issue of what is microcredit and what is not is controversial since the name could be used for many types of credits and there are no clearly defined characteristics to qualify a loan as microcredit. This problem is also mentioned by Yunus (2007) stating that it is not clear what people are talking about when they talk about microcredit.

Microcredit is assumed to represent loans offered with no collateral to support income-generating businesses of poor people. Therefore, to be classified as microcredit, these three criteria should be met: not requiring collateral, supporting income generation and choosing poor clients. But there are organizations that call themselves "microcredit" programs although they offer loans to people who are not poor, require collateral, and give loans which are used for consumption instead of income generation. This problem necessitates the classification of microcredit programs as poverty-focused microcredit programs and profit-maximizing microcredit programs according to the interest rates they charge. Poverty-focused microcredit programs are collateral-free,

low-interest microcredit programs like Grameen Bank and they charge interest rates which equal to the cost of funds at the market rate plus up to 10-15 percent. Profit-maximizing microcredit programs charge interest rates higher than poverty-focused programs and can be viewed as commercial enterprises aiming to earn large profits (Yunus, 2007). The concept of microcredit in this thesis is used to refer to microcredit offered by poverty-focused microcredit programs.

Microcredit challenge conventional economic thinking by addressing the problem of exclusion of poor people from the financial system since they are not considered as credit-worthy. In contrast to the traditional banking system, microcredit is a way of providing loans without collateral while achieving repayment rates of about 90 percent which is higher than the repayment rates of traditional banking (Yunus, 2007). The success of microcredit methodology stem from the group pressure which will be explained in detail later.

Microcredit also makes a change in conventional economic thinking by showing that credit for the poor can create self-employment and generate income for them in contrast to the economic literature which has no room for people making a living through self-employment. Economists try to alleviate poverty only by creating wage employment because this is the only kind of employment that most economics textbooks recognize (Yunus, 2007). Yunus explains clearly his view on self-employment versus wage employment in these sentences:

> I am not arguing against creating jobs. Go full speed ahead on that. But don't assume that people must wait for jobs to materialize, and that self-employment is merely a temporary stopgap. People should have options to choose from, including both jobs and self-employment. Let people choose what suits them. Many people do both (Yunus, 2007, p.54).

Another blind spot in conventional economic thinking is the assumption of entrepreneurship as a rare quality. Microcredit experience and observations among the poorest people demonstrate that entrepreneurial ability is universal

and poor people too have the talent to recognize opportunities around them (Yunus, 2007).

The term “labor” used in economic theory does not differentiate between men and women and treats male as the default value between male and female and microcredit brings a change in this way of thinking. It is important to think about men, women, and children as human beings with different capacities and needs and microcredit experiences show that giving credit to poor women is more beneficial to a family than giving it to men. This happens because men have tendency of spending money on themselves whereas women spend money mostly for children. Therefore, microcredit programs focus on women to create more social benefits in the long run (Yunus, 2007).

2.1.4. THE OUTREACH OF MICROCREDIT

The Microcredit Summit Campaign is a campaign that brings together all microcredit programs and practitioners around the world since 1997 to discuss microcredit practices and share knowledge with the aim of improving microcredit programs.

The core themes of the Microcredit Summit Campaign are reaching the poorest, reaching and empowering women, building financially self-sufficient institutions and ensuring a positive, measurable impact on the lives of clients and their families. Among these themes, reaching the poorest people of the world is the most challenging one. The Summit recognizes that microfinance institutions can give microcredit to any people who are overlooked by traditional banking sector, not necessarily the poorest people but it sets its goal as reaching the poorest families. Two goals of the Summit set in 2006 are below:

1. Working to ensure that 175 million of the world's poorest families, especially the women of those families, are receiving credit for self-employment and other financial and business services by the end of 2015.
2. Working to ensure that 100 million families rise above the US$ 1.25 a day threshold adjusted for purchasing power parity (PPP), between 1990 and 2015 (The Microcredit Summit Campaign: History of the Campaign, 2011).

Although the aims of the Campaign are worthwhile, there are some problems with the measurement of the realization of these goals. It is noted in the State of the Microcredit Summit Campaign Report 2012 that the Campaign's greatest challenge is the lack of effective poverty measurement tools and use of the term "poorest" should be read within the context of this challenge. The Campaign uses the word "poorest" to refer to people living on less than $1.25 a day adjusted for purchasing power parity or families whose income is in the bottom 50 percent of all those living below their country's poverty line, when they started with their respective programs. (Maes & Reed, 2012)

The State of the Microcredit Summit Campaign Report 2012 compiles the latest and most comprehensive data regarding the outreach of microcredit in the world and the data as of 31 December 2010 are represented in the below table:

Table 2.1.The Outreach of Microcredit in the World, 2010

Data Point	**Finding**
Number of MFIs Reporting (data from 12/31/97–12/31/10)	3,652
Total Number of Clients (as of 12/31/10)	205,314,502
Total Number of Women (as of 12/31/10)	153,306,542
Total Number of Poorest Clients (as of 12/31/10)	137,547,441
Total Number of Poorest Women (as of 12/31/10)	113,138,652

Source: (Maes & Reed, 2012)

According to the Table 2.1, 3,652 microfinance institutions reached 205,314,502 clients as of the end of 2010. Among these clients, 137,547,441 clients were among the poorest people of the world when they started with their respective programs according to the definition of "poorest" of the Campaign. If the average number of members in a family is assumed to be five, number of poorest people affected reaches to 687.7 million. 113,138,652 clients, representing 82.3 percent of poorest clients, are women showing the focus of the Campaign and microcredit institutions on women.

In terms of the goals of the Campaign, the fact that 113.1 million poorest women have been reached by microcredit programs gives the signal that the first goal of the Campaign could be realized by the end of 2015. The second goal includes a vast measurement challenge and the Campaign still struggles with collecting data about measurement of movement out of poverty. Despite the measurement problems, some studies in Bangladesh and India show by extrapolation that the second goal will not be reached by 2015. (Maes & Reed, 2012)

The regional distribution of the outreach of microfinance institutions as of 31 December 2010 is represented in the below table:

Table 2.2.The Outreach of Microcredit According to Regions in the World, 2010

Region	Number of Programs Reporting	Number of Total Clients in 2010	Number of Poorest Clients in 2010	Number of Poorest Women Clients in 2010
Sub-Saharan Africa	1,009	12,692,579	7,248,732	4,783,256
Asia & the Pacific	1,746	169,125,878	125,530,437	104,752,430
Latin America & the Caribbean	647	13,847,987	2,919,646	2,363,100
Middle East & the North Africa	91	4,290,735	1,680,181	1,165,358
Developing World Totals	**3,493**	**199,957,179**	**137,378,996**	**113,064,144**

Table 2.2 (Continued)

Region	Number of Programs Reporting	Number of Total Clients in 2010	Number of Poorest Clients in 2010	Number of Poorest Women Clients in 2010
North America & Western Europe	86	155,254	41,809	12,214
Eastern Europe & Central Asia	73	5,202,069	126,636	62,294
Industrialized World Totals	**159**	**5,357,323**	**168,445**	**74,508**
Global Totals	**3,652**	**205,314,502**	**137,547,441**	**113,138,652**

Source: (Maes & Reed, 2012)

It is seen that a great majority of microcredit institutions and number of clients reached are in the Asia & the Pacific region which is one of the most crowded regions of the world in terms of number of poor people. 82.4 percent of all the clients are from Asia & the Pacific and it is followed by Latin America and Africa each representing about 6 percent of all the clients. Developing world constitutes 97.4 percent of all clients and 99.8 percent of poorest clients in the world which states that outreach of microcredit is limited mostly to the developing world and microcredit applications in the industrialized world represents a negligible portion of all activities, which is about 2.6 percent in terms of total clients reached. This is an expected result since microcredit programs are mainly designed and implemented for reaching poor people which in turn take place in relatively underdeveloped regions of the world.

2.1.5. GRAMEEN METHODOLOGY

Microcredit programs in the world use a variety of models which are similar to each other with regard to use of group model which is also incorporated in grameen model (Srinivas, 2011). Grameen model is explained in detail in this study since many microcredit programs have modeled their operations on

Grameen Bank and microcredit operations in Turkey too are conducted under grameen methodology.

Grameen Bank operates only in Bangladesh and is not responsible from or does not cover other microcredit institutions citing grameen model as guidance. The number of people who took microcredit from Grameen Bank is 8.35 million, 96 percent of whom are women and the bank serves in 81,379 villages in Bangladesh. Total amount of loans given by the bank since it was opened is about US $ 11.35 billion and loan recovery rate is 96.6 percent. Grameen Bank is a self-sufficient institution which has not taken donor fund since 1998 and it has made profit almost every year since its beginning. It takes deposits for funding its operations and pay dividends like a usual bank but it differs from traditional banks in the ownership structure since 95 percent of the total equity of the bank is owned by the poor borrowers and remaining 5 percent is owned by the government (Grameen Bank at a Glance, 2011). The success of Grameen Bank in spite of the fact that it does not require any collateral when extending loans affected many organizations in the world and Grameen Trust was established to give trainings on the grameen methodology in 1989. The success of Grameen Bank on its microcredit operations with very high recovery rates also means expectations in some studies like (Adams & Pischke, 1992) arguing that many of the loans extended to microenterprises will not be repaid are not realized.

Grameen Bank staff generally consists of young people with average age of 22. The performance of field officers depends mostly on their work capacity and faithfulness to the bank. There are several training programs and a strict incentive system for increasing this faithfulness. The most important characteristic of the Grameen Bank staff can be recognized as their faithfulness and efforts for the bank (Korkmaz, Baloğlu, Sümer, Oktayer, & Çak, 2004).

The general features of Grameen microcredit provided by Grameen Bank are summarized in the official website of the bank and given below:

1. It promotes credit as a human right.
2. Its mission is to help the poor families to help themselves to overcome poverty. It is targeted to the poor, particularly poor women.
3. Most distinctive feature of Grameen credit is that it is not based on any collateral or legally enforceable contracts. It is based on "trust", not on legal procedures and system.
4. It is offered for creating self-employment for income-generating activities and housing for the poor, as opposed to consumption.
5. It was initiated as a challenge to the conventional banking which rejected the poor by classifying them to be "not creditworthy". As a result it rejected the basic methodology of the conventional banking and created its own methodology.
6. It provides service at the door-step of the poor based on the principle that the people should not go to the bank, bank should go to the people.
7. In order to obtain loans a borrower must join a group of borrowers.
8. Loans can be received in a continuous sequence. New loan becomes available to a borrower if her previous loan is repaid.
9. All loans are to be paid back in installments (weekly, or bi-weekly).
10. Simultaneously more than one loan can be received by a borrower.
11. It comes with both obligatory and voluntary savings programs for the borrowers.
12. Generally these loans are given through non-profit organizations or through institutions owned primarily by the borrowers. If it is done

through for-profit institutions not owned by the borrowers, efforts are made to keep the interest rate at a level which is close to a level commensurate with sustainability of the program rather than bringing attractive return for the investors. Grameen credit's thumb-rule is to keep the interest rate as close to the market rate, prevailing in the commercial banking sector, as possible, without sacrificing sustainability. In fixing the interest rate market interest rate is taken as the reference rate, rather than the moneylenders' rate. Reaching the poor is its non-negotiable mission. Reaching sustainability is a directional goal. It must reach sustainability as soon as possible, so that it can expand its outreach without fund constraints.

13. Grameen credit gives high priority on building social capital. It is promoted through formation of groups and centers, developing leadership quality through annual election of group and center leaders, electing board members when the institution is owned by the borrowers. To develop a social agenda owned by the borrowers, something similar to the "sixteen decisions", it undertakes a process of intensive discussion among the borrowers, and encourages them to take these decisions seriously and implement them. It gives special emphasis on the formation of human capital and concern for protecting environment. It monitors children's education, provides scholarships and student loans for higher education. For formation of human capital it makes efforts to bring technology, like mobile phones, solar power, and promote mechanical power to replace manual power (Grameen Bank: What is Microcredit , 2011)

The basic characteristic of lending model used by Grameen Bank is that no one can take a loan individually from the bank and group of five borrowers should be formed to apply for microcredit. The members of a group cannot be a blood relation to each other. Although application for microcredit is made as a group,

each individual receives credit for her own use and responsible to pay her individual debt. If one of group members falls into difficulty, other members are obliged to help her and in the event of default others either repay her loan or risk having their own line of credit reduced. This mechanism of lending model brings peer pressure on the members to repay their debt (Counts, 2008).

There is some confusion on the issue of group guarantee in case of default. It is stated in the website of Grameen Bank that "Grameen Bank does not require any collateral against its micro-loans. Since the bank does not wish to take any borrower to the court of law in case of non-repayment, it does not require the borrowers to sign any legal instrument. Although each borrower must belong to a five-member group, the group is not required to give any guarantee for a loan to its member. There is no form of joint liability, i.e. group members are not responsible to pay on behalf of a defaulting member." (Grameen Bank at a Glance, 2011). This explanation is in conflict with the lending mechanism explained by Counts (2008) which states that group members should repay the debt of defaulting member or their credit lines are reduced. It can be concluded from information in these two sources that group members are not legally responsible from each other's debt but they should repay the debt of defaulting member if they want to use further credits from the bank. Therefore there is a kind of group, or peer, pressure on members making them to pay their debt but not a legal obligation.

After the formation of a group, members receive a seven-day training in which they learn the rules of the bank. Members are examined in terms of the rules of the bank at the end of this training by bank officials to guarantee their understanding of the rules. If all of five members pass this examination, two members take their loans usually about $ 25 to $ 75. After these first two women pay their first five weekly installments out of 50, two other members receive their loans and if these members too pay their debts for five weeks, the last member of the group receives her credit. Members can apply for a larger

loan if they finish their loan repayment and this process goes on as long as members are in good standing with the bank (Counts, 2008).

Grameen Bank system is based on the motto that "We do not ask the people to come to the bank; we bring the bank to the people." Six to eight groups of five borrowers constitutes a center in their villages and weekly center meetings are hold in these centers. Bank employees collect loan repayments during these meetings, that is, women do not have to go to the Grameen Bank branches for paying installments. After center meetings, bank officials visit the houses of members to control if the credit is used appropriately, if members have problems like illness and if they will be able to repay their debts (Counts, 2008).

The Grameen Bank has four different loan products with different interest rates. In contrast with traditional banks which charge compound interest, Grameen Bank only apply simple interest and set the rule that the amount collected from the borrower in interest can never exceed the principal amount. With the application of this rule, poor borrowers are protected in case of difficulties to repay their debts since a borrower does not pay more than twice the sum she borrowed even if it takes too long to repay her debt. The basic loan of the bank is offered at twenty percent interest rate, housing loans at eight percent and student loans at zero to five percent interest rate. There is also a loan for beggars called struggling members which is interest free. If a borrower cannot repay her debt on time, it is converted into flexi-loan which allows her to pay in smaller amounts and longer time periods (Yunus, 2007).

Grameen Bank does not put any pressure on its customers with regard to what kind of economic activities they will do. Microcredit can be used in a variety of income generating activities like tire repairing, cosmetics, toys, mosquito wire, hair nets, candles, shoes, pickles, bread, blankets, boats, watches, umbrellas, cold drinks, spices. Everyone is completely free to carry out economic activity that she deems appropriate. The fact that members can use their microcredit

freely and in the most effective way they see for their welfare constitutes one of the outstanding characteristics of Grameen method (Korkmaz et al., 2004).

The group in the grameen model also serves as a social network which provides members with encouragement, psychological support, and practical assistance. During weekly meetings in the centers formed in villages, various inspirational, instructional, and practical activities are undertaken by bank officials. New business ideas might be discussed and health or financial topics might be presented in these meetings. Members are required to learn and pledge to follow the below Sixteen Decisions to promote social solidarity (Yunus, 2007).

1. The four principles of Grameen Bank—Discipline, Unity, Courage, and Hard Work—we shall follow and advance in all walks of our lives.
2. We shall bring prosperity to our families.
3. We shall not live in dilapidated houses. We shall repair our houses and work towards constructing new houses as soon as possible.
4. We shall grow vegetables all the year round. We shall eat plenty of them and sell the surplus.
5. During the plantation season, we shall plant as many seedlings as possible.
6. We shall plan to keep our families small. We shall minimize our expenditures. We shall look after our health.
7. We shall educate our children and ensure that they can earn to pay for their education.
8. We shall always keep our children and the environment clean.
9. We shall build and use pit latrines.

10. We shall boil water before drinking or use alum to purify it. We shall use pitcher filters to remove arsenic.

11. We shall not take any dowry at our sons' weddings; neither shall we give any dowry in our daughters' weddings. We shall keep the center free from the curse of dowry. We shall not practice child marriage.

12. We shall not inflict any injustice on anyone; neither shall we allow anyone to do so.

13. For higher income we shall collectively undertake bigger investments.

14. We shall always be ready to help each other. If anyone is in difficulty, we shall all help.

15. If we come to know of any breach of discipline in any center, we shall all go there and help restore discipline.

16. We shall take part in all social activities collectively (Yunus, 2007).

There are strict controls at various stages of credit mechanism like group formation, collection of loan applications and usage of credits in the Grameen system. Field officers control whether members use their credits appropriately for the welfare of their families and whether they will be able to repay their debts in their weekly visits to houses of members. This control mechanism significantly increases the operational costs of the bank and this cost might be seen as one of the potential problems of the system (Korkmaz et al., 2004).

The success of Grameen Bank in Bangladesh has led to the replication of the Grameen methodology in various countries of the world. Some of these countries are mentioned below:

Asia: Afghanistan, Bangladesh, Bhutan, China, Indonesia, Fiji, Philippines, Nepal, Pakistan, Sri Lanka, India, Cambodia, Kyrgyzstan, Lebanon, Malaysia, Vietnam

Africa: Burkina Faso, Chad, Ethiopia, Morocco, Ghana, Guinea, Republic of South Africa, Kenya, Lesotho, Malawi, Mali, Egypt, Mauritania, Nigeria, Central African Republic, Sierra Leone, Somalia, Sudan, Tanzania, Togo, Uganda, Zimbabwe

America: United States of America, Argentina, Bolivia, Brazil, Dominican Republic, Ecuador, Guatemala, Guyana, Jamaica, Canada, Colombia, Mexico, Peru, Chile, Salvador

Europe: Albania, France, Netherlands, Norway and Papua New Guinea in Australia (Korkmaz et al., 2004).

2.2. MICROCREDIT IN TURKEY

Microcredit programs aim to reduce poverty. Providing a short summary of other programs related to poverty reduction in Turkey without going beyond the theme of this thesis can give a complete picture as to poverty reduction activities.

The biggest institution related with poverty reduction programs in Turkey is the General Directorate of Social Assistance and Solidarity (Sosyal Yardımlaşma ve Dayanışma Genel Müdürlüğü-SYDGM). SYDGM meets the basic needs (fuel, food, clothing, education, health) of poor people who are not subject to any social security institutions, contributes to the education and rehabilitation expenses of disabled poor people and supports projects which aim to increase incomes of poor people and to make them own stable jobs. In this context, SYDGM distributed total of 1797 million TL in 2008 and 2379 million TL in 2009 (Bildirici, 2011).

The most important activities of SYDGM are the continuation of programs that started with Social Risk Mitigation Project (SRMP). SRMP started in 28 November 2001 with the aim of developing efficient policies to fight against

poverty after serious economic crises and strengthening the capacities of institutions that apply these policies. International Bank for Reconstruction and Development financed SRMP by extending 500 million $ credit, term of which was 15 years. The total cost of the project was 635 million $ and it ended in 31 March 2007 in the World Bank side. SRMP which was applied in 2002-2007 period consisted of four programs: Immediate Help Program, Institutional Development Program, Conditional Cash Transfer Program and Local Enterprises Program. Under the Immediate Help Program, total of 100 million $ was distributed in 2002 in the form of school attendance and health care support packages. Within the scope of Institutional Development Program, budget of 36.6 million $ was allocated for increasing the capacities of public institutions which serve to poor people. Conditional Cash Transfer Program and Local Enterprises Program are now conducted under SYDGM with the resources of Social Assistance and Solidarity Fund as continuation of SRMP (Bildirici, 2011).

The aim of Conditional Cash Transfer Program is to establish a social aid system for the poorest 6% of the population and to install a regular social cash transfer system for improving basic health and education services. Under Conditional Cash Transfer-Health Assistance Program, cash transfers are made to poor families on the condition that families take their children in 0-6 years age category to regular health controls and prospective mothers have regular health checks. A total of 112,050,631 TL was transferred to poor families and 836,506 mother benefited from the health assistance program as of September 2009. Under Conditional Cash Transfer-Education Assistance Program, 25 TL for each girl and 20 TL for each boy attending primary school is transferred each month. The amount of transfers increase for children attending elementary school; 45 TL for girls and 35 TL for boys. The amounts are regulated and increased each year. These transfers reached to 787,909 children and amounted to 260,834,624 TL as of September 2009 (Bildirici, 2011).

Within the scope of Local Enterprises Program, activities are conducted with the aim of increasing opportunities of poor people to earn income and create employment. Projects for setting up new businesses in both rural and urban areas are supported by providing soft loans. The amount of loans is limited to 15000 TL for each person, they are interest-free and paid in six years with the first two years being exempt from payment (SYDGM Project Support Programs, 2012). SYDGM Project Support Program differs from microcredit programs in that it does not apply interest when extending loans. Both SYDGM Project Support Program and microcredit programs do not require collateral but SYDGM requires guarantor when extending credits in application. SYDGM does not apply group mechanism to guarantee repayment of loans but it requires signing legal contracts as opposed to microcredit programs. Moreover, target group of SYDGM is not restricted to women and all people can benefit from project supports. Because of these reasons, SYDGM Project Support Program is not accepted as a microcredit program and rather it is a subsidized credit program (Güneş, 2009).

There are some institutions which also provide social aid to poor people in Turkey other than SYDGM. Social Services and Child Protection Agency (Sosyal Hizmetler ve Çocuk Esirgeme Kurumu- SHÇEK) gives supports in kind and in cash mainly to children who need protection and to poor families. General Directorate of Foundations (Vakıflar Genel Müdürlüğü) gives pensions to poor people who do not have any income from social security institutions. Ministry of Labor and Social Security provides social aid to poor people older than 65. Ministry of Health meets health expenses of poor people who are not registered to any social security institutions and who have income less than 1/3 of minimum wage under the scope of Green Card system. Moreover, municipalities and special provincial administrations provide social aid in the regions of their responsibility (Bildirici, 2011).

It is clear that there are many institutions which provide social aid to fight against poverty in Turkey. The profile of social aid programs and of people who benefit from these programs cannot be formed because social aids are provided by more than one institutions independently from each other and they are not organized under a central system. Since there is no coordination between the institutions which provide social assistance, aids are directed continually to people who are already benefiting from the system and they may not reach to poorest people who are in actual need of help (Bildirici, 2011). To solve this significant problem, SYDGM started "Integrated Social Assistance Services Project". The aim of this project is to bring all social aid programs under one umbrella and to integrate databases of all social aids for applying household approach. The works of SYDGM on this project are continuing (SYDGM Integrated Social Assistance Services Project, 2012)

Microcredit programs differ from other poverty reduction programs mainly in that they apply interest when extending credit. The following section begins with a brief history of various programs like microcredit in Turkey. There are two microcredit institutions in Turkey, namely Maya Enterprise for Microfinance and Turkish Grameen Microcredit Program (TGMP), and they are explained in detail in the following section. The second section of this chapter concentrates on the evidence obtained from various field studies regarding the operation of TGMP in its initial phase in Diyarbakır.

2.2.1. MICROCREDIT INSTITUTIONS IN TURKEY

Since the 1970s, various programs like microcredit showed presence in Turkey. The most comprehensive service provider in this area was Halk Bank since the early years of the republic. The aim of this bank was to provide credits to artisan-craftsmen and small business owners for enabling them to start and run a business and it has served to small and medium scale enterprises since 1942.

Approximately 230 thousand people benefited from these credits as of 2005. Although there were many entrepreneurs who may need these credits with maturities up to four years and low interest rates, the number of users was limited. The reason behind the low utilization of these soft loans was that it was mandatory to show collateral or to give security for taking credit (Adaman & Bulut, 2007). Moreover, since these borrowers are registered in the formal sector and can meet collateral requirements they are likely among the better off in the target market and nearly 100% of these loans go to men (Karataş & Helvacıoğlu, 2008). Another bank which provided small credits was Ziraat Bank serving to agricultural sector. This bank has provided credits to agricultural businesses with intermediation of agricultural cooperatives since 1916. The bank has given credit to about 2 million users but repayment rates were so low that it had financial difficulties. It was difficult for Halk Bank or Ziraat Bank to meet the demand for microcredit with their credit services because first of all businesses were supposed to be registered in the formal sector to give credit and this condition excluded those operating in informal economy. Secondly, obligation of showing collateral prevented poor people benefiting from the system (Adaman & Bulut, 2007). These banks seem to continue with the same mission and will not operate in the microfinance business in the near future. Neoliberal policies implemented after the 1980s in Turkey aimed to minimize state interventions in economic and social fields and reduce social expenditures. This economic atmosphere has led to the introduction of microcredit programs. There are two pioneering non-governmental organizations operating in the microfinance sector currently and these started to operate and lend microcredit to poor people free of financial collateral in the beginnings of the 2000s (Gürses, 2009).

The first microfinance institution of Turkey is the Maya Enterprise for Microfinance established by the Foundation for the Support of Women's Work (Kadın Emeğini Değerlendirme Vakfı, KEDV) in June 2002. KEDV is a non-profit, non-governmental organization established in 1986 with the aim of

supporting low income women, improving their lives and their leadership (KEDV: About Us, 2012).

MAYA is founded as a commercial enterprise of KEDV and aims to provide small loans to poor women who make small and micro businesses to support them in developing their business and actively participating in economic life. The center of MAYA is in Istanbul and it started its operations in Kocaeli, one of the mostly harmed cities of Turkey in 1999 earthquake, by giving its first credits in 2002. MAYA has provided 8497 loans summing up to 7 million Turkish Lira (TL) until now (KEDV İktisadi İşletmeleri, 2012).

The target group of MAYA is poor women who make their own business and these women generally have low income levels. Their businesses are mainly related to trade (66%), production (26%) and service sectors (8%) and comprise small catering jobs, home sales, garment sewing and repair, crafts and hairdressing. Most of these works are operated in the houses and some women works in local bazaars or in small shops. These women need financing for developing their businesses, purchasing fixed assets and meeting operational expenses (KEDV: MAYA'nın Hedef Kitlesi, 2012).

Since MAYA targets poor women who are economically active but cannot meet conditions and provide collateral demanded by conventional banks, it provides loans without collateral but instead uses “solidarity groups” method to lend. In these solidarity groups, each member is held responsible from other members’ debt and this mechanism decreases the risk of MAYA by providing a kind of social insurance. MAYA gives credit to solidarity groups of 3-10 women and the first loan amount changes between 100-900 TL. Credit terms vary between 3-12 months, payments are done by monthly installments and an interest rate enough to enable sustainability of MAYA is applied. Borrowers can apply for another credit after the first one and credit amounts may be increased up to 25% following the first loan (KEDV: Maya Borç Verme Metodolojisi, 2012).

Maya project has adopted a strategy for choosing credit receivers such that they should be women involved in the same business for at least six months and this strategy reveals that the program focus on its own sustainability rather than reaching the core poor (Gürses, 2009). Women were requested to own a small business for getting credit from MAYA at first stage but MAYA expanded the scope of its services in time and started to give credits to women who want to start a business. The aim of MAYA is not reaching the poorest people but providing loans to relatively poor women who have entrepreneurial abilities. MAYA may be regarded as women's entrepreneurship development program rather than a program aiming to fight against poverty because almost all of its members are above the poverty line (Adaman & Bulut, 2007).

The second microfinance institution of Turkey is the Turkish Grameen Microcredit Program (TGMP) established by the Turkish Foundation for Waste Reduction (Türkiye İsrafı Önleme Vakfı, TISVA) in 2003. TGMP was initiated by Aziz Akgül, who was a member of the parliament from Justice and Development Party (AKP) and head of TISVA. Akgül considered microcredit policies and practices as a potential strategy of poverty reduction and tried to persuade the Prime Minister to adopt them in Turkey. As a result of invitation from the Prime Minister, senior officials of Grameen Trust and Grameen Bank visited Turkey to investigate whether microcredit could be applied in Turkey in March 2003. These experts conducted preliminary examinations in Istanbul, Diyarbakır and Siirt and indicated that microcredit could be successfully applied in Turkey. Following this decision, two field officers and a project director from Grameen Bank, Shamsul Alam Khan Chowdury, were invited to Turkey to help the local staff of nine people in the implementation of microcredit practices and first loans were given on 18 July 2003 in Diyarbakır (Bakır, Günel, & Aytulun, 2007).

TGMP was launched by an agreement between Grameen Trust and TISVA under Build, Operate and Transfer (BOT) model of Grameen Trust with the

financial support provided by TISVA, Finans Bank, Vakif Bank and Open Society Institute (Bakır et al., 2007). Under BOT model, Grameen Trust implements a microcredit project with its own team from Bangladesh when a sponsor expresses the need for rapid implementation of project or when it is doubted whether microcredit can work in a particular country. Experts from Bangladesh sets up microcredit program in the target country, directs it to the point of sustainability and leaves or retains the ownership of the program depending on the wish of donors. Grameen Trust has implemented BOT projects in Myanmar, Turkey, Zambia, Kosovo, Costa Rica, Guatemala, and Indonesia till now (Yunus, 2007).

TGMP was taken over by TISVA in 2006 and became a non-profit commercial enterprise of it. TGMP is subject to corporate tax of 20% which is applied to net income and also its revenues which consist of service fees taken from clients are subject to VAT of 18%. It is not a sustainable institution as of the end of 2010 and TISVA transfers funds obtained from public fund supports of public institutions like special provincial administrations and donors given by various firms or people to TGMP for meeting its financing needs (TGMP 2010 Annual Audit Report, 2011).

TGMP aims to provide loans to poor women in rural and urban areas and to support them in their small businesses for reducing poverty. Poor women are required to use the credit for income generating activities for contributing to the maintenance of their families. Therefore, the program mainly tries to solve the financing problems of poor women in their income generating activities in Turkey. The main principles of the organization can be summarized as follow:

1. TGMP is a financial organization working for poor women and aims to help its members to overcome their financial problems.

2. TGMP requires formation of groups of 5 to give credit to its members.

3. TGMP goes to houses of poor women to provide credit and women are not required to come to TGMP branches. TGMP officials explain what microcredit is and how women can use it, give credit and collects weekly installments during group meetings held in neighborhoods of women. This service is provided as long as participants remain in the program.

4. TGMP loan repayments are taken by weekly installments completed in 46 weeks.

5. Loan amounts depend on business plan, entrepreneurial skill and performance of borrowers. Past performance of borrower is considered when extending loans to this member after the first loan is repaid (TGMP 2010 Annual Report, 2010).

The organization applies its viewpoint that taking credit is a human right when providing loans and it gives priority to poor women who own nothing as collateral but have ambition to work and potential to be realized. TGMP believes that all people are equipped with unlimited capabilities including those who are the poorest of the poor. It is against giving unconditional grants to people unless they are ill, old or incapable of working since this would lead them to laziness. Therefore, it aims to make people own their own businesses, that is, in some sense; it tries to help poor people on their first efforts for fishing, instead of giving them fish. When performing this, the core values of the organization are honesty, transparency and accountability, discipline and punctuality, productivity and respect and openness to continuous improvement (TGMP: Mikrofinans Nedir?, 2012).

One of the most remarkable characteristics of TGMP is that it does not require any collateral, or any legal document to be signed by borrowers and it never applies to court for enforcement. Traditional banking is based on the principle that “the more you have the more credit you can get”. In other words, people

who own nothing or very little cannot get credit from banks. As a result of this approach, half of the population in the world and almost one third of the population in Turkey cannot benefit from financial services of banks. Traditional banking operates based on collaterals but microcredit institutions give credit without collateral. Microfinance institutions consider potential that people have but unraveled. The aim of traditional banks is to maximize profit while the aim of microcredit institutions is to decrease poverty by providing credit opportunities especially to poorest of the poor and being sustainable at the same time. There is no legal instrument between lender and borrower in the microfinance methodology and execution or court process is not applied against poor women. In traditional banking, when borrowers fall into difficulty and cannot repay their debts on time, interest on the debt continues to increase and interest payment may exceed principle amount as a result. This situation cannot exist in microfinance applications and interest payment cannot exceed a certain amount (TGMP: Mikrofinans Sektörü, 2012).

The credit system applied in TGMP is Grameen Credit System the framework of which is explained in previous section 2.1.5. TGMP members start to take loans under basic loan system, the term of which is one year and repaid in weekly installments. Credit amounts change according to the performance and business plan of borrowers and increase each year while the first loan amounts are between 100 TL and 700 TL (TGMP 2010 Annual Report, 2010). Interest rate was determined as 24% in the establishment report of the project and it was stated that taking interest was essential in the microcredit projects to enable the sustainability of the project, but it was decreased to 20% before loans were distributed. The interest rate was again decreased to 15% in 2005 together with falling inflation rates (Adaman & Bulut, 2007). Weekly installment amounts including all costs according to some credit amounts are as follow:

Table 2.3.TGMP Microcredit Repayment Schedule

Microcredit amount (TL)	100	200	300	400	500	600	700	800	1000
Weekly installment amount (TL)	2.5	5	7.5	10	13	15	18	20	25
Total amount repaid (TL)	115	230	345	460	575	690	805	920	1150

Source: (Akgül, n.d.)

Repayment of microcredit is made with installments of 46 weeks. The payment of installments start one week after the credit is given to a member (Aynalı, 2011). Six loan types offered by TGMP to its members are basic loan, entrepreneurship loan, flexible loan, livestock loan, mini greenhouse loan and beggar loan (TGMP 2010 Annual Audit Report, 2011)

1. Basic Loan

Basic loan is the main credit type offered by TGMP. All members take their first credits as basic loan. Basic credit is repaid in one year term and members can take another credit after 6 months at the amount of the credit repaid in first 6 months. Members can also attend voluntary saving account system. 15% of principal amount is charged to credit receivers as service fee and repayments are done in 46 weekly installments.

2. Entrepreneurship Loan

TGMP offers entrepreneurship loan to successful, hardworking and experienced members. Members can receive this loan after they complete one year in the program and repay their first basic loan. 15% of principal amount is charged to credit receivers as service fee and repayments are done in 46 weekly installments.

3. Flexible Loan

Flexible loan is an alternative method used in case of difficulties faced by members when repaying weekly installments. If member has difficulties in repaying her debt, flexible loan system extends the term of the debt so that member can repay the debt in a longer time period easily. There is no any additional cost charged to members for extending the term of their debts since supporting poor women is aimed with this system.

4. Livestock Loan

TGMP started to give livestock loan in 2009. This loan is offered especially by rural branches of TGMP for supporting women who want to deal with husbandry. Livestock loan is given to members 6 months before the Muslim religious festival named Kurban Bayrami and members can repay their debt with the income received from sale of livestock. 15% of principal amount is charged to credit receivers as service fee and repayments are done in 26 or 46 weekly installments.

5. Mini Greenhouse Loan

TGMP started to give mini greenhouse loans in 2009. The aim of this loan is to provide job opportunities to women who don't own any land and to help them having better nutrition. Credit amounts may vary between 300 and 500 TL and repayments can be done in advance or in installments. 15% of principal amount is charged to credit receivers as service fee and repayments are done in 46 weekly installments. Service fee is not charged to members who make payments in advance.

6. Struggling Member Loan

TGMP gives struggling member loan to poorest of the poor people like beggars and people living in streets. There is no service fee and due date for debt

repayment applied for this type of loan (TGMP 2010 Annual Audit Report, 2011).

The program also offers its members with saving opportunities. Each member of TGMP can deposit 1 TL each week to TGMP voluntarily. Poor women are encouraged to save money for enhancing their consciousness of saving. Members can withdraw their savings at any time they want but new members are not allowed to withdraw their savings if there is any in first 6 months of their membership (TGMP 2010 Annual Audit Report, 2011).

Microcredit program can be seen as a mere financial program at first sight but it also serves as a social program while interacting with its members. Before extending loans to members, women are given seven day training and family planning, health of children, the importance of education and waste reduction are some topics explained in these trainings. Also, ten decision of TGMP are taught to members during these trainings (TGMP 2009 Annual Report, 2009). The "ten decision" is as follows:

1. We shall follow and advance the four principles of TGMP: Discipline, Unity, Courage and Hard work, in all areas of our lives.
2. Prosperity we shall bring to our families.
3. We shall plan to keep our families small. We shall minimize our expenditures. We shall look after our health.
4. We shall grow vegetables all the year round. We shall eat plenty of them and sell the surplus.
5. We shall educate our children and ensure that they can earn to pay for their education.
6. We shall always be ready to help each other. If anyone is in difficulty, we shall all help him or her.

7. If we come to know of any breach of discipline in any center, we shall all go there and help restore discipline.
8. We shall not inflict any injustice on anyone; neither shall we allow anyone to do so.
9. We shall always keep our children and the environment clean.
10. We shall collectively undertake bigger investments for higher incomes (Akgül, n.d.)

This application and knowledge transferred during meetings provide members with important social support. The benefits of this system can be summarized in below items:

- First of all, microcredit is beacon of hope for poor people to transform their lives and break the vicious cycle of poverty.
- Microcredit highly motivates poor women. Women apply rules; attend meetings and trainings on time to be able to get microcredit.
- Women gain discipline of work and life style.
- Spirit of solidarity that exists between the poor develops.
- Women reach a certain level of consciousness on various issues like family planning and business processes during trainings.
- Most importantly, women gain self-confidence by working, earning income and contributing to household income.
- Women who use credit and have bank accounts for the first time in their lives begin to taste the happiness of adding value to society and their environment (TGMP 2009 Annual Report, 2009).

TGMP has reached over 40,000 members and lent about 74 million TL with its supportive credit mechanism and social agenda and it can be regarded as the biggest microcredit institution of Turkey operating in 48 provinces with 65 branches as of the end of 2010. The development of TGMP from its initial stage till date can be seen in the below table:

Table 2.4.TGMP Activity by Years

Year	Number of Branches	Number of staff	Number of members	Number of members who used credit	Total credit amount (TL)
2003	2	8	304	292	142,100
2004	2	15	1328	1275	819,437
2005	3	25	2882	2851	2,460,335
2006	3	39	4050	3385	4,998,936
2007	9	60	7397	6925	9,580,336
2008	16	124	16556	15369	20,008,556
2009	56	194	29077	28314	41,175,379
2010	65	210	42306	40467	74,122,621

Source: (TGMP 2009 Annual Report, 2009; TGMP 2010 Annual Report, 2010)

The provinces in which TGMP operates actively are Adıyaman, Afyon, Aksaray, Amasya, Ankara, Ardahan, Artvin, Aydın, Balıkesir, Batman, Bilecik, Bingöl, Burdur, Bursa, Çankırı, Çorum, Denizli, Diyarbakır, Elazığ, Erzincan, Eskişehir, Gaziantep, Hakkari, Hatay, Iğdır, Isparta, İstanbul, İzmir, Kahramanmaraş, Kayseri, Kırıkkale, Kırşehir, Konya, Malatya, Manisa, Mardin, Muğla, Muş, Niğde, Rize, Samsun, Şanlıurfa, Siirt, Sivas, Tokat, Trabzon, Yozgat, Zonguldak as of the end of 2010. The number of members and allocation of total loan amount distributed according to the provinces can be found in Appendix F. According to the table F.1, TGMP has achieved loan repayment rate of 100% as of the end of 2010 which may result from flexible

loan opportunities for members who are in difficult situation to pay their debts. Although the first branch of TGMP was opened in 2003, TGMP operated only in Diyarbakır till it was taken over by TISVA in 2006. Therefore, TGMP branches opened very recently and they have been operating at most for five years. Because of the commissioning date differences between TGMP branches and since time of operation of TGMP Diyarbakır branch is much longer than the other branches, there is a big difference between the number of members and loan amount distributed in Diyarbakır and in other provinces. In terms of number of members who used credit and loan amount distributed, the first province is Diyarbakır and it is followed by Kahramanmaraş, Şanlıurfa, Gaziantep and Eskişehir.

Esra Aynalı who is the manager of the TGMP Eskişehir branch gave information about the procedures followed while evaluating candidates who apply for microcredit and group formation. The income status of candidate women is the most important criteria while accepting the application for microcredit and they try to give microcredit to poor women with willingness to work. Income status of candidates is not checked with official documents and also there is no criterion of not working in a job for women applying to microcredit. Whether candidate woman is poor enough to get microcredit is determined according to the unique situation and living conditions of that candidate. Number of children and marital status of candidate woman, presence of dependent people, furniture and white goods in the house are all considered and observed during meetings with candidates and decision on income status of candidate women is given accordingly. No credit is given to persons applying alone as a rule and five women residing in the same district should apply for the credit as a group. More than one person from the same family can not apply in the same group because the aim of creating a group is to create group psychology on the group members so that they will feel the group pressure for paying their credit debts. She stated that they do not tell the candidates that

they are guarantors of each other in case a person fails to pay her debt but group psychology helps a lot for return of credits (Aynalı, 2011).

Once the application of a group of five women is received, one of the microcredit officers arranges a meeting in the house of one candidate and following the first meeting, candidates are given a motivation training lasting seven days with 45 minutes a day. Information about microcredit is given and candidates are observed for their behaviors and attitudes for work during this training. Credit officer gives much attention to the jobs candidates are planning to do and tries to understand if they misinform about their plans on how to use the credit because candidates are told that microcredit is given for them to start a business and it should not be used for other needs. The officer decides according to the observations and if the decision is positive, three members of the group are given credit. These three women are checked in one week if they start to do some jobs with the credit. If these women are found appropriate and if the officer observes that they start to do some jobs, then the remaining two members of the group are also given credit. The aim for this kind of application is to create an inside mechanism for checking the use of credit in the group. There are some cases in which women who want to apply for microcredit cannot find enough members to create a group of five persons. A supporting member can be accepted to group in such cases so that the number of group is completed to five. Supporting members may choose not to use microcredit and they may only have voluntary saving account. If one of group members leaves the group, she is replaced by another woman to follow the rule of five regarding the number of group members, again for not breaking group psychology (Aynalı, 2011).

2.2.2. TGMP EXPERIENCE IN ITS INITIAL PHASE

Main principles, basic viewpoint and application procedures of Turkish Grameen Microcredit Program seems to be devoted to help poor women and beneficial effects of the program are explained frequently in the website and annual reports of the program. However, examining the impacts of the program on participants by field surveys and observing what is happening in reality is much more necessary than just writing down the benefits of the system without exact reflection of reality. Considering this purpose, field surveys carried out to assess applications of TGMP gain vital importance. Unfortunately, there are very few studies which are supported by field survey and give observations on the application and effects of the program in Turkey.

The first and most comprehensive study on TGMP experience supported with field survey is the study of (Adaman & Bulut, 2007). In the book "500 Milyonluk Umut Hikayeleri", the authors explain the incidents that took place at the early stage of the program and effects on the members in detail and give real life stories of members. They gathered information about characteristics and socioeconomic conditions of members of TGMP and MAYA and tried to find the effect of microcredit on their lives by conducting survey with questionnaires applied to the sample of 708 women. The survey was conducted in İstanbul, Kocaeli, Düzce and Sakarya regions for MAYA activities and in Diyarbakır city center and Bismil province for TGMP activities between April 15th and May 31st, 2005. Samples were chosen randomly with 95% confidence interval and ± 0.5 sampling error. Moreover, 89 women were interviewed face to face more deeply to observe and learn the effects of microcredit. The results of the survey are provided in percentage values and figures in the book.

The other field surveys targeting the application of TGMP available in the literature are the studies of (Döşeyen, 2007) and (Savlı, 2008). The study of Döşeyen (2007) is a Master of Science thesis submitted to the Department of

Economics of the Istanbul Technical University in 2007 and presents the results of interviews conducted on the sample of 104 members chosen out of 2257 microcredit recipients in Diyarbakır city center in 2006. The sample was chosen by stratified random sampling technique with 9.38% sampling error and 95% confidence interval. The study of Savlı (2008) is too a Master of Science thesis submitted to the University of Guelph in 2008 and gives the results of qualitative survey conducted on 16 women chosen randomly among microcredit users in Diyarbakır in 2007. Considering the very small sample size, the results of this thesis can only be supportive when analyzing TGMP applications. Savlı (2008) too mentions herself that the research findings cannot be directly generalized to the larger population given the small sample size and it cannot meet the statistical assumptions. There are also two recent master degree thesis including field surveys in Ankara and Bursa. Given the limited number of studies in the literature, TGMP experience is explained mostly by referring to the study of (Adaman & Bulut, 2007) and findigs of other studies are given supportively.

TGMP started as a pilot project in Diyarbakır city in eastern Turkey. Diyarbakır is one of the poorest cities in Turkey and unemployment has reached intolerable proportions in last 15 years. Also because of the political tensions, many wealthy families have left there and immigrated to the western and southern cities which have wider economic opportunities. This capital flight reduced the business opportunities thoroughly in Diyarbakır and with 2001 economic crisis, investments stopped, construction sector had been idle and poverty had increased. The idea of microcredit was born in such an environment as an alternative solution to the problem of chronic unemployment and poverty in Diyarbakır. Deputy of Diyarbakır, Aziz Akgül, thought that Grameen Microcredit Project could cure poverty in this city (Adaman & Bulut, 2007).

At the beginning of the project, the number of applications for microcredit was very low since the idea of getting credit was unfamiliar to poor women who used to get food aids and grants from the government in the region. Mr. Chowdury who was appointed by Grameen Foundation as a project manager was trying to break resistance to the idea of taking credit showed by women in Diyarbakır. TGMP officials working for the local field went to the homes of poor women for many times and tried to explain that microcredit is for poor people and they can benefit from it. But mobilization in districts of Diyarbakır did not create the expected impact although unemployment and poverty rates were in very high levels in the city. It was clear that there were some people who needed microcredit but no one was accustomed to the idea of getting credit with interest. According to Islamic rules, giving or taking interest was a sin and they were forbidden. For convincing women to the idea that microcredit was not a sin, TGMP officials started to use the word "service fee" instead of "interest". They explained that women were requested to pay an additional amount for covering the expenses of officials working there and this was not interest but service fee. This action of using the term service fee instead of interest worked successfully and women in Diyarbakır started to get microcredit (Adaman & Bulut, 2007).

Although the number of members had increased with the use of term service fee instead of interest, the demand for microcredit was still low in Diyarbakır and there was a need to implement another strategy for popularizing the program. TISVA established the Food Bank of Diyarbakır in 24 January 2004. This food bank aimed to provide basic needs of people who were in hunger threshold by distributing them food, clothing and cleaning supplies and this project was implemented with donors of big scale firms and business men of Diyarbakır. The donations and grants offered by the food bank of Diyarbakır were directed to microcredit program members for making microcredit program more attractive and enabling the food program to reach people who were in actual need of help. This strategy helped a lot to microcredit program

and although many women became members of the program just for getting food aid at first, they then became more familiar with the program and started to take loans (Adaman & Bulut, 2007). This strategy for popularizing microcredit among poor women actually raises doubts on the conclusions drawn from the number of participants in the program. In the annual program and media, the increasing number of participants in TGMP is represented with compliments to the program officers and counted as a success of the program. However, whether these women take credit since they really need it or since they want to get food aid is crucial. If most of women in Diyarbakır attended the TGMP since they want to benefit from the food program, then need for a microcredit program in this city cannot be measured with the number of applications. However, it is not known if this strategy was applied only in the initial stage of the program or if it is continued to be applied in Diyarbakır. In the context of this study, Esra Aynalı, branch manager of TGMP Eskişehir, did not mention such a food aid strategy applied in Eskişehir during the interview made with her in Eskişehir. Moreover, women participating in the interviews in this study did not mention any such help while answering question about why they got microcredit, too. Therefore, generalization of food aid for promoting microcredit to the whole population involved with the program in Turkey cannot be made. But data should be collected regarding who are the receivers of food aid in each city and audits with regard to applications and accuracy of data should be conducted.

Reaching the poorest of the poor is mentioned among the themes of TGMP like other microcredit programs in the world but some aspects of the implementation design of the program prevent this aim from being realized. One of the success criteria for managers of centers of microcredit program is reaching a certain number of members each year. If the managers cannot meet this criterion they are regarded as unsuccessful. Because of this expectation, managers tend to give credit not only to very poor women but also to women who are not very poor. Moreover, it is easier to work with relatively richer

women because the poorest of the poor people may not utilize credit well and they spend microcredit for their basic needs instead of investing in income generating activities. These members delay weekly repayments and this in turn is regarded as the failure of managers. The success criteria of managers carry the risk of preventing microcredit to reach poor women and should be reviewed for making the program to meet its targets (Adaman & Bulut, 2007). Gürses (2009) states that TGMP group lending model may result in exclusion of very poor people from groups by group members since they are seen very risky. Moreover, Altay (2007) claims that poorest women may exclude themselves from credit groups, because they know that they will never be able to meet weekly repayment rates at 15 per cent interest. (Altay, 2007). However, saying that TGMP does not reach very poor people would be wrong and these claims should be evaluated as possible obstacles which may prevent TGMP from reaching poorest people more. According to the results of the (Adaman & Bulut, 2007), the household incomes of participating women in TGMP were very low in Diyarbakır. For example, 65% of them had only 250 TL per month for maintaining their large families in 2005. About 20 percent of them had household income of 250-350 TL and rest of the members had incomes reaching at most 1 billion TL (Adaman & Bulut, 2007). However, the authors do not make an analysis of household incomes to classify them as poorest or not. The use of the term "poorest" makes such an analysis harder but the Microcredit Summit Campaign to which TGMP also reports uses the word "poorest" to refer to families whose income is in the bottom 50 percent of all those living below their country's poverty line, when they started with their respective programs (Maes & Reed, 2012). Considering that poverty line for household size of 1 was 216 TL in 2005 according to poverty lines determined by TURKSTAT[2], most of the households of TGMP Diyarbakır can be said to stand below the poverty line. However, more exact analysis necessitates the

[2] The poverty lines according to household size and year can be found in Appendix C.

household sizes of each participating member together with household incomes for locating them below or above the poverty line announced according to household sizes and years by TURKSTAT. At this point, whether TGMP in Diyarbakır could reach the poorest of the poor or not cannot be concluded but the results of survey conducted on TGMP Eskişehir members in the context of this thesis reveal that the program does not discriminate in favor or against the poorest people. The detailed results regarding poverty analysis of TGMP Eskişehir members are given in Chapter 5. Another important point here is to stress that the possible failure of microcredit programs in reaching the poorest people is not specific to Turkish Grameen Microcredit Program. There are studies in the literature revealing that other microcredit programs applied in other countries of the world too fail to reach the poorest people. For example, Haque & Yamao (2008) states that there was no destitute or hardcore poor in microcredit programs in Bangladesh since under group mechanism, groups do not accept these poorest people due to their risks. Similarly, Navajas, Schreiner, Meyer, Vega, & Meza (2000) find that microcredit programs in Bolivia serve to the clients which are near the poverty line instead of the poorest of the poor. Therefore, relative exclusion of the poorest people from microcredit system should not be seen as an isolated failure of TGMP but should be attributed to the design of microcredit programs in general such as group methodology and success criteria of program officers.

However, except from the design of microcredit programs as a reason for relative exclusion of poorest people, there is another reason unique to TGMP. This reason that prevents the program from reaching the poorest of the poor people is impersonation of the program as a political project. Aziz Akgül comes to the fore very much in the promotion of the project and this has led to perception of the program as a project of The Justice and Development Party, AKP, which is the ruling political party in Turkey. Since politics is based on a delicate balance in Diyarbakır, some women avoid getting credit from the program. The possibility of excluding some poor women from microcredit was

also disturbing Chowdury, the project manager of TGMP. It is not certain yet how much longer Aziz Akgül will carry the responsibility of TGMP and what will be the corporate future of the program (Adaman & Bulut, 2007).

Although household incomes of TGMP members were found to be very low in the studies of (Adaman & Bulut, 2007) and (Döşeyen, 2007) in Diyarbakır, many households had white goods in their houses unexpectedly. According to the results of (Adaman & Bulut, 2007), 42% of members had washing machine in their houses and 32% had cellular phone. In conformity with this result, (Döşeyen, 2007) found that 65% of members had washing machine and 96% of members had refrigerator and television. The authors do not give explanation for this result contradicting with income levels of families. The reason for this contradiction can be grasped from newspaper articles stating that The Justice and Development Party, AKP, which is the ruling party in Turkey since 2002, distributed white goods to households in the region with the purpose of winning elections. For example, distribution of refrigerators and washing machines even to villages which do not have electricity is mentioned in one of the local news blogs, Diyarbakır Haber (Diyarbakır Haber: Postacı makarna getirdi, 2011). Similarly, this event is also explained in one of the high circulation newspapers in Turkey (Hürriyet: AKP altın, para, eşya dağıttı ve DTP ile işbirliği yaptı, 2007).

High repayment rates is often regarded as the success of microcredit programs and attributed to peer pressure arising in member groups. However high repayment rates in Diyarbakır seem to be result from peer support instead of peer pressure. Women are not requested to provide any collateral for receiving microcredit and they are not under any legal responsibility for repaying it and if they have difficulty with repaying their loans, TGMP does not litigate them. Although there is not any legal threat, women repay their loans most of the time. Even if they do not have money to pay weekly installments, they borrow from somewhere else to pay the debt. 30% of women surveyed stated that they

were borrowing from some other sources from time to time to repay their debts. The reason behind high repayment rates in microcredit program applied in Diyarbakır is the sense of solidarity among women there. Women think that microcredit helps them when they are in difficult situation and they should repay their loans to make other women benefit from microcredit. Moreover, in their culture, debt is viewed as a matter of honor. They promise to repay their debt and this promise is more important than peer pressure in the loyalty of them to their debts (Adaman & Bulut, 2007).

However the study of (Adaman & Bulut, 2007) reveals a very important fact behind high repayment rates in Diyarbakır. About 63.6% of TGMP members in Diyarbakır stated that they would be litigated and 25.6% of them thought that they would have to pay large amounts of interest if they did not pay their debts. Although there is no additional interest or litigation applied in TMGP system, the reason for concerns of members was discourse of some TGMP field officials. Some officials told women to guarantee the return of credits that they would be given to the court and have to pay interest if they did not pay their debts. About 30% of women stated that their group mates would be in difficult situation and 15% thought they would be publicly disgraced if they did not pay microcredit debt (Adaman & Bulut, 2007). The results show that women repay their debts mostly because they think that they will be given to the court and peer pressure comes second. Since not all the members answered as they would be litigated or have to pay additional interest, it can be concluded that not all TGMP officers told women that they would be given to the court. Therefore, saying that TGMP applies the policy of intimidating members with court and additional interest discourses would be unfair. However, it is clear that some officials try this way to ease repayment process. This kind of discourses put pressure on members and they may become more vulnerable when borrowing from somewhere else to repay their weekly installments. The issue should be considered by TGMP and officials should be warned for avoiding this kind of discourses in line with the aim of program which is to support poor people. The

mechanism behind high repayment rates of TGMP should only be peer pressure as in other microcredit programs using grameen methodology.

The success of microcredit programs lies in their sustainability while they are helping poor people. There are other assistance programs but they use their limited sources by giving grants and so they are not permanent. The reason for providing credit instead of granting in microcredit programs is ensuring sustainability of these programs. Microcredit should be collected with a certain amount of interest for running the program with sustainability. In this way, capital stock of programs does not melt and they continue to provide credit to poor women. But the costs of distributing microcredit are very high and meeting these costs is challenging. There are several reasons for higher costs of microcredit institutions relative to traditional banks. One of these is distributing loans in very small amounts. Operational costs of giving credit almost stay the same regardless of the amount of credit. Therefore, distributing 100 billion to a hundred customers makes the cost hundred times higher than the cost of giving this amount of credit to one customer. Moreover, since microcredit organizations deal with each of their members and try to monitor what they do, their costs increase. Because of these reasons, TGMP is not successful yet in the sustainability side mainly because its number of members is low. Microcredit institutions become sustainable only when they reach a certain number of members because as the number of members increases, costs per credit decrease. This happens because members in a district are visited for weekly installments regardless of 10 members or 100 members being there. Since the cost of visiting a district is the same regardless of the number of members in this district, meeting the same costs with interest taken from 100 members is easier. If the number of members is limited, microfinance institutions have to increase the interest rates applied to the loans offered to their members for recovering their costs. However, if interest rates applied in microfinance institutions are tried to be kept compatible with prevailing market rates, microfinance programs are confined to report losses unless the number of

members reaches a certain level (Adaman & Bulut, 2007). Microfinance institutions in the world have raised their interest rates and have tried to lower their costs to achieve their sustainability (Gürses, 2009). For example, the annual interest rate on most of Grameen Bank's microcredits to the poor was 20% which was at least 8% higher than the commercial market rate in Bangladesh (Rahman, 1999). The interest rate applied by Grameen Bank in Bangladesh is still higher than the commercial rate in the country.

For example, AB Bank which is the first private sector bank in Bangladesh charges an interest rate between 14.5% and 17.5% for its personal loans[3]. The interest rate applied by TGMP is 15% in most of its loan products and this interest rate is not much higher than the rate applied by commercial banks in Turkey. Interest rates applied in individual consumer credits provided by Garanti Bank which is one of the biggest commercial banks in Turkey and by Ziraat Bank which is a public bank are analyzed here to compare with the interest rate applied by TGMP. A member repays a total amount of 1,150 TL in equal 46 weekly installments if she takes a loan of 1,000 TL from TGMP. When the same amount of loan is received from Garanti Bank as individual consumer credit, a total of 1,136.69 TL is repaid in equal 12 monthly installments which show the 13.6% interest rate applied. Similarly, if 1,000 TL is received from Ziraat Bank as individual consumer credit, a total of 1,140 TL is repaid in equal 12 monthly installments which show the 14% interest rate applied[4]. Moreover, banks may charge additional file expenses when extending

[3] The information is obtained from the website of the AB Bank on 27 January 2012 and can be found in the below link:

http://www.abbank.com.bd/retail-banking.html#goldGrace

[4] The calculations are based on the calculator programs available in the websites of two banks and can be found in the below links:

http://www.garanti.com.tr/tr/bireysel/krediler/bireysel_destek_kredisi/hesap_makinesi.page#calcContent=UID29a4495

http://www.ziraatbank.com.tr/z/tr/bireysel/zb_hesapmak/hesapmakinesi.aspx#

credits. Therefore, interest rate applied by TGMP seems reasonable and compatible with the market rate and sustainability problem of the program remains to be solved by increasing the number of members and trying to lower costs of distributing loans.

TGMP stresses the importance of women by stating that they work for poor women among main principles of the program and gives credit only to women like many other microcredit programs in the world. However, there are different evaluations of microcredit programs with regard to their impacts on women. Some argue that microcredit programs are important tools for empowerment of women and some argue that they do not affect status of women in the society positively (Savlı, 2008). The reason for restricting TGMP membership to women is that the possibility of return of money to household is higher when it is used by women than by men. Moreover, women who are excluded totally from economic activities are provided with the opportunity of turning their capabilities into money by this way. However, although only women can receive microcredit, 55% of women who got microcredit were not involved in businesses for which microcredit was spent in Diyarbakır. This was the result of high unemployment rates among men in Diyarbakır. The fact that many women did not run income generating businesses by themselves was not disturbing TGMP officials since their first aim was to fight against poverty and microcredit was helping to poor families even if it was used by other family members than women. Strengthening the role and status of women in society and in their families was secondary for TGMP (Adaman & Bulut, 2007). At this point, Savlı (2008) stresses that women are targeted primarily because they are considered as reliable borrowers since they pay their loans on time when they are properly organized. Moreover, microcredit organizations find easier dealing with women than men because men are harder to reach during working hours and they do not have tendency for attending group meetings (Savlı, 2008). Considering that strengthening the role of women comes secondary for TGMP, Savlı (2008) claims that microcredit programs do not result in social,

political and economic empowerment of women in a substantial way when these programs are mainly concerned with poverty alleviation since gender relations in the society mediate the impacts of having access to the microcredit. Therefore, TGMP officials should commit themselves to promote gender equality through addressing gender issues at the design and implementation of their program for improving women's subordinated position in the society (Savlı, 2008). However, Adaman & Bulut (2007) states that members are not restricted to use microcredit only themselves and they may prefer to start businesses that family members work together at first stage if socio cultural aspects of people who use microcredit are considered. Change in the role of women in family and society can only be realized in long term and therefore, women who take microcredit may invest it to family business at first stage. Microcredit is also changing women's attitude toward life. Women are beginning to believe in their own abilities and looking at the future with confidence (Adaman & Bulut, 2007). This argument can be strengthened by the findings of the study of (Onay & Özer, 2011). The authors investigate the changes in the women identity of participants in microcredit programs in Izmir. Data was obtained by interviews with 300 women who had previous involvement in microcredit programs facilitated through governorship of Izmir and nongovernmental organizations. Findings of the study reveal that women develop stronger sense of self perception and self-confidence as a result of participation in microcredit schemes. They also find that women have difficulties in adapting to the life outside but this gets easier when women support each other. Moreover, women experience developments in their personality by means of having better material means (Onay & Özer, 2011). Discussions about the role of women in microcredit programs are abundant in the literature but the field surveys designed mainly to measure the effects of microcredit programs on women empowerment in Turkey are necessary to reach conclusions and make policy suggestions to the program officers.

TGMP officers also claim that the program serves as a social program while interacting with its members. For example, ten decision of TGMP are taught to members during trainings and this is supposed to contribute to social life of members. However, field survey of (Adaman & Bulut, 2007) shows that making members to memorize the ten decisions of TGMP is not helpful for human development and social life of those members. Although learning and memorizing are different from each other, Aziz Akgül does not see the difference and think that they are teaching members social rules that help them. But, ten decisions do not become life principles of members just by memorizing them and members memorized them only because it was precondition for taking microcredit (Adaman & Bulut, 2007). Therefore, social aspect of the microcredit program seems to remain as one of the ideological goals of the program rather than real contribution to the life of members.

CHAPTER 3

REGIONAL SOCIO-ECONOMIC ANALYSIS OF TURKEY

TGMP operates in 48 provinces of Turkey as of the end of 2010 and this study incorporates the survey conducted on Eskişehir branch of TGMP. The analysis of regional socio-economic indicators such as education level, labor force status and poverty indicators can provide a more complete picture about the living conditions in Eskişehir and its place in Turkey.

Turkish Statistical Institute (TURKSTAT) analyzes and provides data on regional basis according to the classification system named "Nomenclature of Territorial Units for Statistics (NUTS)". This classification consists of three levels. Third level of the classification provides information on provincial basis and includes 81 cities with administrative structure (NUTS-3). These 81 cities are grouped into 26 territorial units according to the sizes of population and economic, social, cultural and geographical factors and second level is formed (NUTS-2). In the first level of the classification, there are 12 regions composed by territorial units which are in the second level (NUTS-1). The analysis in this part of this study is constructed according to the regional classification of TURKSTAT since most of statistics are provided in regional level and the next table shows the regions and cities included in each level:

Table 3.1.Nomenclature of Territorial Units for Statistics by TURKSTAT

North East Anatolia	Erzurum, Erzincan, Bayburt
	Agri, Kars, Igdir, Ardahan
Central East Anatolia	Malatya, Elazig, Bingol, Tunceli
	Van, Mus, Bitlis, Hakkari
South East Anatolia	Gaziantep, Adiyaman, Kilis
	Sanliurfa, Diyarbakır
	Mardin, Batman, Sirnak, Siirt
Istanbul	Istanbul
West Marmara	Tekirdag, Edirne, Kırklareli
	Balikesir, Canakkale
Aegean	İzmir
	Aydin, Denizli, Mugla
	Manisa, Afyon, Kütahya, Usak
East Marmara	Bursa, Eskişehir, Bilecik
	Kocaeli, Sakarya, Duzce, Bolu, Yalova
West Anatolia	Ankara
	Konya, Karaman
Mediterrannean	Antalya, Isparta, Burdur
	Adana, Mersin
	Hatay, Kahramanmaras, Osmaniye
Central Anatolia	Kirikkale, Aksaray, Nigde, Nevsehir, Kirsehir
	Kayseri, Sivas, Yozgat
West Black Sea	Zonguldak, Karabuk, Bartin
	Kastamonu, Cankiri, Sinop
	Samsun, Tokat, Corum, Amasya
East Black Sea	Trabzon, Ordu, Giresun, Rize, Artvin,Gumushane

Source: (Turkstat Income and Living Conditions Survey Methodology, n.d.)

Since TGMP in Turkey considers poor women as potential borrowers, regions can be analyzed according to various features of female population living in these regions. The below table shows the numbers of male and female population in each region of NUTS-2 which are above 15 years old according to 2011 Address Based Population Registration System. The ratio of female population to whole population is almost the same among the regions and there is a balance between male and female population with the share of women being about 50%. The most crowded region in terms of female population is Istanbul metropolitan area as expected because of high population density of

region. Ankara and Izmir follows Istanbul as they are the other biggest cities of Turkey. The region to which Eskişehir belongs is the fourth region in terms of female population above 15 years old.

Table 3.2.Female Population in Turkey According to Region, 2011

Region	Male above 15 years old	Female above 15 years old	Share of female population (%)
Turkey	27,838,215	**27,999,479**	50.1
İstanbul	5,197,259	**5,223,133**	50.1
Ankara	1,884,691	**1,927,611**	50.6
İzmir	1,577,085	**1,606,814**	50.5
Bursa, Eskişehir, Bilecik	**1,418,201**	**1,436,354**	**50.3**
Adana, Mersin	1,378,389	**1,412,436**	50.6
Kocaeli, Sakarya, Düzce, Bolu, Yalova	1,270,897	**1,270,664**	50.0
Manisa, Afyon, Kütahya, Uşak	1,136,782	**1,163,911**	50.6
Aydın, Denizli, Muğla	1,099,039	**1,099,845**	50.0
Samsun, Tokat, Çorum, Amasya	1,028,042	**1,070,051**	51.0
Hatay, Kahramanmaraş, Osmaniye	1,056,489	**1,052,216**	49.9
Antalya, Isparta, Burdur	1,048,642	**1,043,050**	49.9
Şanlıurfa, Diyarbakır	995,262	**1,006,559**	50.3
Trabzon, Ordu, Giresun, Rize, Artvin, Gümüşhane	971,083	**999,758**	50.7
Kayseri, Sivas, Yozgat	868,783	**873,982**	50.1
Konya, Karaman	820,163	**854,327**	51.0
Gaziantep, Adıyaman, Kilis	817,131	**821,183**	50.1

Table 3.2 (Continued)

Region	Male above 15 years old	Female above 15 years old	Share of female population (%)
Balıkesir, Çanakkale	675,641	**671,043**	49.8
Malatya, Elazığ, Bingöl, Tunceli	622,278	**616,211**	49.8
Tekirdağ, Edirne, Kırklareli	652,622	**615,886**	48.6
Mardin, Batman, Şırnak, Siirt	634,651	**609,262**	49.0
Van, Muş, Bitlis, Hakkari	654,586	**599,168**	47.8
Kırıkkale, Aksaray, Niğde, Nevşehir, Kırşehir	551,213	**568,269**	50.8
Zonguldak, Karabük, Bartın	399,527	**415,096**	51.0
Erzurum, Erzincan, Bayburt	390,499	**384,409**	49.6
Ağrı, Kars, Iğdır, Ardahan	396,009	**355,149**	47.3
Kastamonu, Çankırı,Sinop	293,251	**303,092**	50.8

Source: (Turkstat Regional Statistics , 2011)

The inequalities between regions of Turkey can be seen very clearly from education levels of people living in each region. The below table shows percentages of people in total population which is above 15 years old according to regions and education categories as of 2010. Percentage of illiterate people is very high in the eastern parts of the country and it decreases in the western and metropolitan areas. The same trend is observed for people who are literate without a diploma. High school graduates follow an opposite trend and their percentage is higher in western parts. The region of Eskişehir comes fourth if the regions are sorted from the smallest to largest in terms of percentage of illiterate people. The percentage of high school and university graduates in

Bursa, Eskişehir, Bilecik region is above the Turkish average. Therefore, the education level in Eskişehir can be said to stand above the average.

Table 3.3.Education Level in Turkey According to Region, 2010

Region	Illiter.	Literate without diploma	Primary school	Elementary school	High school and equivalent vocational school	Univer. and higher
Turkey	**7.0%**	5.9%	28.7%	23.4%	20.8%	9.2%
Mardin, Batman, Şırnak, Siirt	**17.1%**	13.6%	18.1%	25.9%	15.0%	4.2%
Şanlıurfa, Diyarbakır	**16.7%**	16.4%	18.3%	23.6%	13.2%	4.3%
Van, Muş, Bitlis, Hakkari	**16.2%**	16.2%	19.3%	23.7%	13.7%	4.0%
Ağrı, Kars, Iğdır, Ardahan	**13.7%**	13.6%	23.4%	21.0%	13.5%	4.2%
Malatya, Elazığ, Bingöl, Tunceli	**11.1%**	7.2%	22.9%	24.3%	21.3%	7.8%
Kastamonu, Çankırı,Sinop	**10.9%**	7.1%	34.6%	21.5%	16.3%	6.5%
Gaziantep, Adıyaman, Kilis	**10.3%**	7.9%	26.7%	28.1%	16.0%	5.6%
Erzurum, Erzincan, Bayburt	**10.3%**	7.6%	26.0%	22.8%	20.2%	7.5%
Trabzon, Ordu, Giresun, Rize, Artvin, Gümüşhane	**9.9%**	6.2%	28.4%	22.1%	21.0%	7.8%
Hatay, Kahramanmaraş, Osmaniye	**9.1%**	6.3%	29.7%	25.2%	18.6%	6.5%
Samsun, Tokat, Çorum, Amasya	**9.0%**	6.3%	32.4%	23.1%	17.5%	7.2%
Zonguldak, Karabük, Bartın	**8.5%**	5.6%	31.4%	24.0%	20.0%	7.4%
Kırıkkale, Aksaray, Niğde, Nevşehir, Kırşehir	**8.1%**	4.9%	32.0%	24.9%	19.3%	7.1%
Kayseri, Sivas, Yozgat	**7.6%**	4.9%	29.3%	23.4%	20.7%	7.8%
Manisa, Afyon, Kütahya, Uşak	**7.4%**	5.2%	36.8%	23.3%	17.9%	6.8%
Adana, Mersin	**7.2%**	5.8%	28.5%	23.5%	21.8%	8.8%

Table 3.3 (Continued)

Region	Illiter.	Literate without diploma	Primary school	Elementary school	High school and equivalent vocational school	Univer. and higher
Konya, Karaman	**6.4%**	3.9%	37.8%	23.9%	17.2%	7.8%
Aydın, Denizli, Muğla	**5.9%**	4.5%	35.6%	21.7%	18.9%	9.1%
Balıkesir, Çanakkale	**5.7%**	5.1%	37.2%	19.9%	19.4%	8.9%
Kocaeli, Sakarya, Düzce, Bolu, Yalova	**5.0%**	4.3%	29.9%	24.9%	22.7%	8.8%
Tekirdağ, Edirne, Kırklareli	**4.4%**	4.3%	34.2%	22.6%	22.6%	8.5%
İzmir	**4.3%**	4.1%	29.5%	22.0%	23.2%	12.1%
Bursa, Eskişehir, Bilecik	**4.3%**	**3.8%**	**30.3%**	**23.9%**	**23.9%**	**9.7%**
İstanbul	**3.7%**	4.3%	26.8%	23.8%	23.4%	11.8%
Antalya, Isparta, Burdur	**3.6%**	5.2%	31.8%	22.6%	21.9%	10.2%
Ankara	**3.5%**	2.9%	22.9%	21.5%	27.4%	17.0%

*Sums do not add up to 100% since there is unknown education status for some people.
Source: (Turkstat Regional Statistics, 2010) and author's calculation.

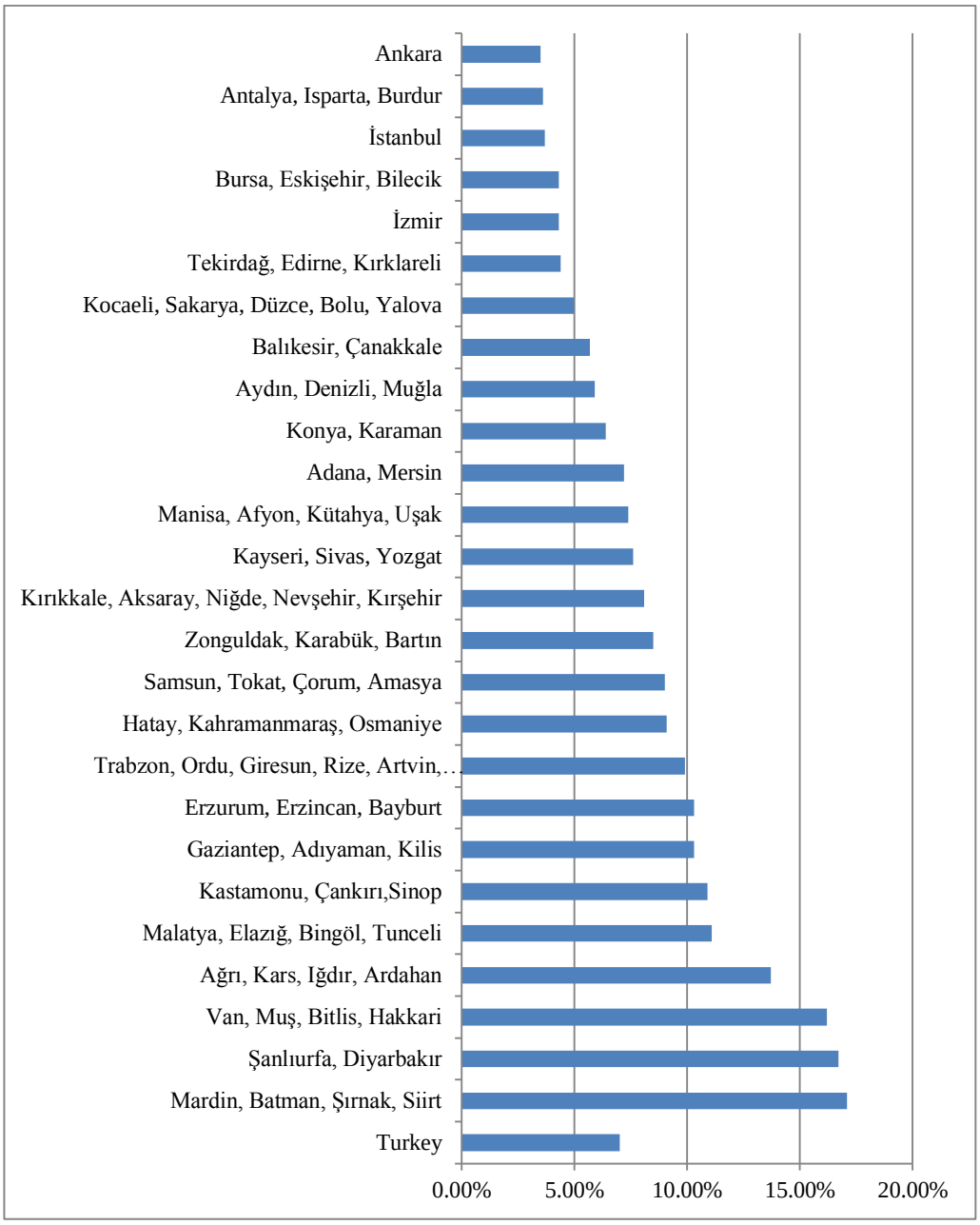

Figure 3.1.Percentages of Illiterate People According to Region, 2010

Source: (Turkstat Regional Statistics, 2010)

There is also inequality between genders in terms of education. The following table shows the percentages of female population above 15 years old in each education category according to regions as of 2010. About 80% of illiterate people consist of female population in all regions of Turkey which shows a clear discrimination against women. Share of women in literate without a diploma category is also very high and about 60% in all regions. The discrimination against women according to regions can be easily observed from share of women among high school graduates in each region. This ratio is only about 30% in eastern parts and it increases to about 45% in western regions. The same trend is also observed for university graduates. Therefore it can be said that women has less chance to get high levels of education in eastern parts of the country. The percentage of female population in high school graduates in Eskişehir region is 41.7 which is a little bit lower than the Turkish average and the same is true for university graduates. This may be interpreted as although education level in Eskişehir region is above the average, the same cannot be said for the education status of women in the region. The education level of women in Eskişehir region is higher than that in eastern regions but not higher than the average in Turkey.

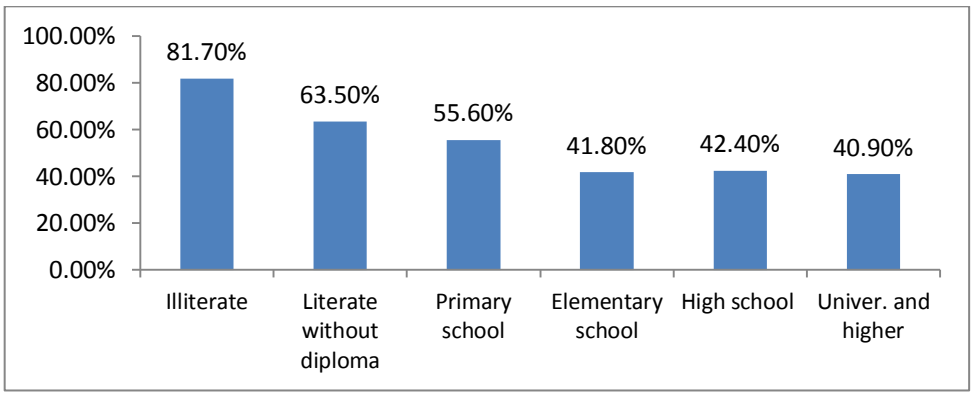

Figure 3.2.Percentages of Female in Education Categories in Turkey, 2010

Source: (Turkstat Regional Statistics, 2010)

Table 3.4.Share of Women in Education Categories in Turkey According to Region, 2010

Region	Illiter.	Literate without diploma	Primary school	Elementary school	High school and equivalent vocational school	Univer. and higher
Turkey	81.7%	63.5%	55.6%	41.8%	**42.4%**	40.9%
Van, Muş, Bitlis, Hakkari	79.6%	61.8%	45.8%	37.4%	**28.3%**	28.9%
Mardin, Batman, Şırnak, Siirt	80.3%	64.1%	47.9%	40.1%	**28.7%**	27.7%
Ağrı, Kars, Iğdır, Ardahan	80.3%	57.3%	46.2%	37.5%	**33.1%**	35.5%
Şanlıurfa, Diyarbakır	80.9%	62.0%	44.8%	37.5%	**33.4%**	32.4%
Erzurum, Erzincan, Bayburt	82.0%	61.8%	57.3%	40.1%	**35.0%**	33.8%
Kastamonu, Çankırı,Sinop	78.5%	61.4%	54.9%	42.0%	**37.7%**	36.2%
Manisa, Afyon, Kütahya, Uşak	81.5%	60.4%	56.1%	38.8%	**37.8%**	36.1%
Zonguldak, Karabük, Bartın	83.2%	67.6%	57.7%	38.5%	**38.4%**	38.8%
Malatya, Elazığ, Bingöl, Tunceli	80.4%	66.2%	57.6%	41.3%	**38.6%**	35.2%
Gaziantep, Adıyaman, Kilis	81.3%	63.6%	55.1%	40.7%	**39.1%**	35.2%
Kayseri, Sivas, Yozgat	82.1%	62.7%	57.1%	41.0%	**39.3%**	36.4%
Konya, Karaman	84.9%	65.6%	58.4%	42.6%	**39.9%**	34.9%
Hatay, Kahramanmaraş, Osmaniye	80.4%	63.3%	53.4%	41.8%	**40.1%**	36.1%
Kırıkkale, Aksaray, Niğde, Nevşehir, Kırşehir	85.5%	66.2%	56.3%	43.0%	**40.2%**	36.2%
Kocaeli, Sakarya, Düzce, Bolu, Yalova	83.3%	66.9%	58.8%	43.0%	**40.8%**	39.1%
Samsun, Tokat, Çorum, Amasya	77.9%	60.7%	54.9%	42.9%	**40.9%**	37.5%
Trabzon, Ordu, Giresun, Rize, Artvin, Gümüşhane	83.7%	64.0%	53.5%	43.4%	**41.0%**	37.4%
Balıkesir, Çanakkale	76.7%	57.1%	56.6%	40.0%	**41.1%**	39.0%
Bursa, Eskişehir, Bilecik	**82.6%**	**65.7%**	**59.3%**	**42.6%**	**41.7%**	**40.8%**
Tekirdağ, Edirne, Kırklareli	78.2%	60.8%	55.4%	43.0%	**42.8%**	42.3%

Table 3.4 (Continued)

Region	Illiter.	Literate without diploma	Primary school	Elementary school	High school and equivalent vocational school	Univer. and higher
Antalya, Isparta, Burdur	82.8%	67.5%	54.9%	40.9%	**43.1%**	40.7%
Adana, Mersin	81.7%	63.8%	55.2%	42.4%	**45.3%**	41.3%
Aydın, Denizli, Muğla	82.8%	64.3%	52.9%	42.0%	**45.6%**	42.3%
Ankara	85.5%	69.8%	60.5%	43.3%	**46.0%**	44.0%
İzmir	81.6%	63.7%	55.7%	41.8%	**46.1%**	45.0%
İstanbul	84.0%	64.0%	55.9%	43.4%	**46.5%**	45.0%

Source: (Turkstat Regional Statistics, 2010) and author's calculation.

The regional differences in terms of education may be linked with development level of regions and similar trend is observed in per capita gross value added (GVA) amounts of regions in the below table. Gross Value Added may be interpreted as a proxy to GDP and it is calculated by TURKSTAT with the below formula:

GDP = Gross Value Added + Taxes- Subsidies- Financial Intermediation Services Indirectly Measured

Eastern parts of the country are at bottom in terms of per capita GVA. Istanbul has the biggest per capita GVA and Eskişehir region comes third. Although GVA values provide some insight for the regions, it does not reflect the income levels of majority living in these regions because of income inequalities.

Table 3.5.Per Capita Gross Value Added in Turkey According to Regions, 2008

Region	Per Capita GVA (TL)	Per Capita GVA ($)
Turkey	12,020	9,384
İstanbul	18,689	14,591
Kocaeli, Sakarya, Düzce, Bolu, Yalova	16,990	13,265
Bursa, Eskişehir, Bilecik	**16,630**	**12,983**
Ankara	16,136	12,598
Tekirdağ, Edirne, Kırklareli	15,682	12,243
İzmir	14,817	11,568
Antalya, Isparta, Burdur	13,236	10,334
Aydın, Denizli, Muğla	11,626	9,076
Balıkesir, Çanakkale	11,528	9,000
Zonguldak, Karabük, Bartın	11,187	8,734
Manisa, Afyon, Kütahya, Uşak	10,575	8,256
Adana, Mersin	9,431	7,363
Konya, Karaman	9,239	7,213
Trabzon, Ordu, Giresun, Rize, Artvin, Gümüşhane	9,042	7,059
Samsun, Tokat, Çorum, Amasya	8,855	6,914
Kayseri, Sivas, Yozgat	8,726	6,813
Kırıkkale, Aksaray, Niğde, Nevşehir, Kırşehir	8,696	6,789
Kastamonu, Çankırı, Sinop	8,551	6,676
Hatay, Kahramanmaraş, Osmaniye	7,605	5,937
Erzurum, Erzincan, Bayburt	7,071	5,520
Malatya, Elazığ, Bingöl, Tunceli	7,066	5,517
Gaziantep, Adıyaman, Kilis	5,888	4,597
Mardin, Batman, Şırnak, Siirt	4,882	3,812
Şanlıurfa, Diyarbakır	4,770	3,724
Ağrı, Kars, Iğdır, Ardahan	4,613	3,601
Van, Muş, Bitlis, Hakkari	4,379	3,419

* Average exchange rate used by TURKSTAT in the calculation is 1.28 $/TL.
** Latest statistics available about regional GVA is for 2008.
Source: (Turkstat Regional Statistics, 2008)

General trend of eastern regions being at the bottom in terms of education and per capita gross value added breaks down when unemployment level of regions are analyzed. In the next table, labor force status of non-institutional population above 15 years old by regions as of 2010 can be seen. Non-institutional population consists of all the population excluding the residents of dormitories of universities, orphanage, rest homes for elderly persons, special hospitals, prisons and military barracks. Non-institutional population above 15 years old is then called as non-institutional working age population. Definitions and calculations of labor force participation rate, unemployment rate and employment rate are as usual:

Labor force participation rate (LFPR) = Labor force/ Non-institutional working age population

Unemployment rate (UR) = Unemployed persons/ Labor force

Employment rate (ER) = Employed persons/ Non-institutional working age population (Turkstat Metadata on Labor Force Statistics, n.d.)

Table 3.6.Labor Force Status in Turkey According to Regions, 2010

Region	Non-inst. working age pop. (1000)	LFPR (%)	UR (%)	ER (%)
Turkey	52,541	48.8	**11.9**	43
Van, Muş, Bitlis, Hakkari	1,138	43.9	**17**	36.4
Adana, Mersin	2,660	52.9	**16.7**	44.1
İzmir	3,066	50.1	**15.1**	42.5
İstanbul	9,633	47.8	**14.3**	41
Kayseri, Sivas, Yozgat	1,655	44.2	**13.7**	38.1
Hatay, Kahramanmaraş, Osmaniye	1,989	49.3	**13.6**	42.6
Şanlıurfa, Diyarbakır	1,932	33.5	**13.1**	29.1
Kocaeli, Sakarya, Düzce, Bolu, Yalova	2,408	50.3	**13**	43.7
Ankara	3,513	46.7	**12.1**	41.1
Gaziantep, Adıyaman, Kilis	1,559	44.8	**12.1**	39.4

Table 3.6 (Continued)

Region	Non-inst. working age pop. (1000)	LFPR (%)	UR (%)	ER (%)
Aydın, Denizli, Muğla	2,099	54.8	**11.9**	48.3
Malatya, Elazığ, Bingöl, Tunceli	1,162	47.4	**11.9**	41.8
Mardin, Batman, Şırnak, Siirt	1,165	36	**11.8**	31.8
Zonguldak, Karabük, Bartın	812	52.2	**10.8**	46.6
Antalya, Isparta, Burdur	1,914	57.6	**10.7**	51.4
Ağrı, Kars, Iğdır, Ardahan	665	50.9	**10.3**	45.7
Bursa, Eskişehir, Bilecik	**2,694**	**47.1**	**10.1**	**42.3**
Kırıkkale, Aksaray, Niğde, Nevşehir, Kırşehir	1,093	46.3	**10.1**	41.6
Tekirdağ, Edirne, Kırklareli	1,194	54.6	**9.8**	49.3
Konya, Karaman	1,592	51.5	**8.4**	47.2
Kastamonu, Çankırı, Sinop	565	55.3	**8.3**	50.8
Balıkesir, Çanakkale	1,274	48.3	**7.7**	44.6
Manisa, Afyon, Kütahya, Uşak	2,157	48.2	**7.6**	44.5
Samsun, Tokat, Çorum, Amasya	1,988	50.6	**7.2**	47
Erzurum, Erzincan, Bayburt	716	52.8	**6.2**	49.5
Trabzon, Ordu, Giresun, Rize, Artvin, Gümüşhane	1,897	58.2	**6.1**	54.6

Source: (Turkstat Labor Force Statistics, 2010)

High unemployment rates of metropolitan cities like Istanbul, Izmir, Ankara and Kocaeli region are noteworthy in the table. These regions are at first places in terms of gross value added per capita but they have unemployment rates above the Turkish average. This shows us that per capita gross value added numbers are very rough values which do not indicate actual social situation in the regions because of income inequality. Van and Adana regions are at the top place in unemployment rates and Eskişehir region has unemployment rate below the Turkish average. The other thing that draws attention is about labor

force participation rates (LFP). Although the rate differs, it is about 45-50% in all regions except (Şanlıurfa, Diyarbakır) and (Mardin, Batman, Şırnak, Siirt) regions. The LFP rate in these regions is very low and about 35%.

There is a striking feature of LFP rates in Turkey: LFP of female population is much more less than that of male population. While LFP rate of male population is 70% in average, it is only 27.6% for female population and in all regions of Turkey; female LFP rate is much less than the male LFP rate. Eastern regions of Turkey like Diyarbakır, Mardin, Van, Gaziantep regions have the least female LFP rates. However, there is not a general trend that female LFP rates increases in western regions. For example, Istanbul, Ankara and Eskişehir regions are among the regions that have female LFP rate below the Turkish average. This situation shows that regardless of the region, there is a clear discrimination against women in terms of LFP and they are excluded from economic activities. With regard to unemployment rates, average female unemployment rate is above male unemployment rate but there is no significant difference like LFP rates. Female unemployment rates are above male unemployment rates in some regions and below in some others regardless of western or eastern location in Turkey. Highest female unemployment rates are in Adana, Izmir, Kayseri, Istanbul, Kocaeli and Ankara regions. Therefore, in terms of unemployment and LFP rates of female population, there is no clear trend between eastern and western regions.

Table 3.7: Labor Force Status by Gender in Turkey According to Regions, 2010

Region	Non-inst. working age pop. (1000)		LFPR (%)		UR (%)	
	Male	**Female**	**Male**	**Female**	**Male**	**Female**
Turkey	25,801	26,740	70.8	27.6	11.4	13
Şanlıurfa, Diyarbakır	937	995	58.7	9.8	14.5	4.7
Mardin, Batman, Şırnak, Siirt	559	606	64	10.2	12.4	7.9
Van, Muş, Bitlis, Hakkari	561	577	71.2	17.4	17.9	13.4
Gaziantep, Adıyaman, Kilis	775	783	72.3	17.6	12.8	9.4
Kayseri, Sivas, Yozgat	812	844	67.4	21.8	12.1	18.4
İstanbul	4,787	4,846	71.9	24	13.2	17.4
Kırıkkale, Aksaray, Niğde, Nevşehir, Kırşehir	523	569	69.7	24.7	10.6	8.8
Ankara	1,728	1,784	68.7	25.3	10.5	16.1
Bursa, Eskişehir, Bilecik	**1,339**	**1,354**	**68.9**	**25.5**	**9.6**	**11.4**
Malatya, Elazığ, Bingöl, Tunceli	555	607	70.5	26.3	12	11.6
Manisa, Afyon, Kütahya, Uşak	1,045	1,112	70.6	27.1	7.7	7.4
Hatay, Kahramanmaraş, Osmaniye	958	1,031	72	28.2	14.2	12.1
Ağrı, Kars, Iğdır, Ardahan	318	348	75.7	28.3	13.2	3.2
Konya, Karaman	778	814	74.7	29.3	7.9	9.7
Balıkesir, Çanakkale	625	648	67	30.3	7.4	8.4
İzmir	1,490	1,575	69.9	31.2	13.1	19.2
Adana, Mersin	1,315	1,345	74.3	32	15.3	19.9
Samsun, Tokat, Çorum, Amasya	949	1,039	69.5	33.4	7.3	6.9
Erzurum, Erzincan, Bayburt	353	364	72.2	33.9	7.6	3.4
Tekirdağ, Edirne, Kırklareli	603	591	74.3	34.6	8.4	13
Zonguldak, Karabük, Bartın	396	416	68.4	36.8	11.7	9.4
Aydın, Denizli, Muğla	1,035	1,065	73.1	37	10.2	15.1
Antalya, Isparta, Burdur	947	967	76.5	39	9.8	12.5
Kastamonu, Çankırı, Sinop	274	291	69.7	41.7	6.8	10.5
Trabzon, Ordu, Giresun, Rize, Artvin, Gümüşhane	939	958	71.3	45.4	7.3	4.4

Source: (Turkstat Labor Force Statistics, 2010)

TURKSTAT also provides statistics which give reasons behind low LFP rates of women. Persons not in labor force include persons who are neither unemployed nor employed and 15 years of age and over. This group consists of two sub-groups; persons who did not look for a job but were available for work and persons were not seeking a job and were not available for work. The first group of persons consists of discouraged workers and the persons who were not seeking a job for reasons such as being seasonal workers, busy with household chores, student, property income earner, retired, or disabled, but available to start a job. The second group consists of seasonal workers, housewives, persons in education or training, retired persons, disabled, old or ill and others who were not available for work. (Turkstat Metadata on Labor Force Statistics, n.d.). Most women do not participate in labor force because they mainly deal with housework. Among 19 million women who are not in labor force, about 61%, 12 million, are housewives. Women who are disabled, old or ill and in education or training constitutes about 20% of all not-in labor force female population. Share of discouraged workers is very low among women who are not in labor force.

Table 3.8.Not-in Labor Force Female Population Distribution in Turkey, 2010

Turkey		**Number (1000)**	**Ratio (%)**
Total	Female pop. not in labor force	19,357	100
Not seeking a job, but available for work	Discouraged	300	1.5
	Other	835	4.3
Not seeking a job and not available for work	Working seasonally	49	0.3
	Housewife	11,914	61.5
	Education/Training	1,912	9.9
	Retired	730	3.8
	Disabled, old ill etc.	2,156	11.1
	Other	1,461	7.5

Source: (Turkstat Labor Force Statistics, 2010) and author's calculation.

Restricting women to housework and excluding them from economic activities is actually the result of the view of society on women. According to the results of Family Structure Survey, 2006 conducted by TURKSTAT, 23% of males and 10% of females in Turkey think that it is not appropriate for women to work. (Turkstat Gender, Life and Family Statistics, 2006). The below table represents the reasons stated about inappropriateness of works for women. Women are not seen appropriate to work because they should deal with housework and traditions do not allow them to work. Other reasons stated are risky working environment, childcare and exhausting works.

Table 3.9.Reasons Stated About Inappropriateness of Works for Women, 2006

Reason	**Female**	**Male**
The main job of women is doing housework	64.7	60.7
It breaches our traditions	14.1	12.0
Work environments are not safe for women	9.5	16.5
Children of working women suffers	7.8	7.0
A paid job exhaust women	2.5	2.0
Other	1.4	1.8
Total	**100.0**	**100.0**

Source: (Turkstat Gender, Life and Family Statistics, 2006)

Poverty analysis of Turkey and regions beside unemployment levels and education status should be presented to understand living conditions of society better. TURKSTAT provides statistics about poverty levels and thresholds in Turkey and among regions. Poverty is defined as the situation in which people can not meet their basic needs in TURKSTAT poverty analysis metadata and it can be interpreted in two ways with narrow and broad meanings. State of hunger and not having a shelter is narrow definition of poverty. The poverty in a broad meaning is the state of living standards being quite below the level of the general society although the food, clothing and housing opportunities are

enough to live. According to these interpretations, various poverty thresholds can be determined and they can be analyzed under two definitions (Turkstat Metadata on Poverty Analysis Statistics, n.d.).

Absolute poverty: A household or an individual can not reach the welfare sufficient to continue their lives in an absolute poverty situation. The minimum needs of individuals to ensure them continue their lives should be determined to measure absolute poverty.The rate of absolute poverty is then calculated as the ratio of those who are below the determined absolute poverty line to the total population. The absolute poverty lines can be estimated to reflect food poverty alone and complete poverty (food and nonfood expenditures). In determining the food basket constituting the base of the food poverty, a basket of goods is formed ensuring an individual to receive 2100 calories per day and the cost of this basket is taken as the food poverty line. The rate of food poverty is calculated as the ratio of total population of households which have consumption expenditures per equivalent individual below the determined food poverty line to the total population. (Turkstat Metadata on Poverty Analysis Statistics, n.d.)

Equivalence scale and equivalised household size are used in the calculations to make an appropriate comparisons between households of different sizes and composition in terms of adults and children. When transferring total income of a household to individual income, it is not correct to divide total household income by the number of household members. Adult-child structure of the households should be taken into account in this calculation because the consumption of the children is scientifically less than the consumption of the adults. In this context, number of adults for each household size is calculated by using the constants which are called equivalence scale. TURKSTAT uses OECD measure of equivalence scale which is 1 for the reference person of the household, 0.5 for household members aged 14 and over, 0.3 for household members less than age 14 and equivalised household size is calculated by using

these coefficients (Turkstat Metadata on Income Distribution and Living Conditions Statistics, n.d.).

For determining complete poverty line, the average of the non-food expenditures share in total expenditure of the households whose total consumption was just above the food poverty line is considered and the poverty line covering food and non-food goods and services is determined. The rate of complete poverty is calculated as the ratio of total population of households which have consumption expenditures per equivalent individual below the determined complete poverty line to the total population (Turkstat Metadata on Poverty Analysis Statistics, n.d.).

Relative poverty: Individuals below the average welfare level of the society can be considered as being relatively poor. Therefore, the households having incomes and expenditures below a specified threshold compared to the general population is defined to be the poor in a relative meaning. As a welfare measure, consumption or income level may be selected according to the situation. For example, 50% of median value of equivalised consumption expenditures per individual can be considered as one measure of relative poverty line (Turkstat Metadata on Poverty Analysis Statistics, n.d.).

Moreover, various poverty lines especially used in international comparisons can be used to state poverty levels. 1$, 2.15$ and 4.30$ per capita per day according to PPP are used as the poverty lines in TURKSTAT statistics (Turkstat Metadata on Poverty Analysis Statistics, n.d.).

According poverty analysis statistics provided by TURKSTAT, there is no person living with an income level of less than 1$ per day in Turkey as can be seen from the next table. Percentages of people living under food poverty line is very low and only 0.5% but still their numbers is important and 339,000 people live in food poverty. When complete poverty is considered, numbers increase significantly and percentage of people living under complete poverty

is 18% with more than 12 million people. Another important point about poverty numbers of Turkey is that there is a big difference between urban and rural areas. Almost all of people living under food poverty and more than half of people living under complete poverty are from rural areas. Therefore, it can be stated clearly that people living in rural areas of Turkey suffer from poverty much more than people living in urban areas[5].

Table 3.10.Poverty Rates According to Poverty Line Methods in Turkey, 2009

Poverty lines	Turkey		Urban		Rural		Share of rural pop. in total poor
	Rate of poor (%)	Number of poor (1000)	Rate of poor (%)	Number of poor (1000)	Rate of poor (%)	Number of poor (1000)	
Food poverty	0.5	339	0.1	29	1.4	310	91%
Complete poverty (food+nonfood)	18.1	12,751	8.9	4,318	38.7	8,432	66%
Below 1 $ per capita per day	-	-	-	-	-	-	-
Below 2.15 $ per capita per day**	0.2	159	0.0	20	0.6	138	87%
Below 4.3 $ per capita per day	4.4	3,066	1.0	469	11.9	2,597	85%
Relative poverty based on expenditure*	15.1	10,669	6.6	3,214	34.2	7,455	70%

* Relative poverty line is estimated as 50% of median value of equivalised consumption expenditures per individual by Turkstat.
**0.917 TL is used for the equivalent of 1 $ as purchasing power parity (PPP).
Source: (Turkstat Poverty Analysis Statistics, 2009) and author's calculation.

[5] Settlements with a population of 20,001 and over are defined as urban and settlements with a population of 20,000 and less are defined as rural by TURKSTAT. (Turkstat Metadata on Income Distribution and Living Conditions Statistics, n.d.)

Another important aspect of poverty status in Turkey is about education levels. As education level increases, poverty risk decreases. In the below table, it can be easily seen that poverty rate among illiterate or literate without a diploma is about 30% while this rate is below 10% for secondary school, high school and university graduates. Therefore, education can be considered as an important tool to decrease poverty. Poverty rate among female population is a little bit higher than poverty among male population but difference is not significant.

Table 3.11.Complete Poverty Rates According to Gender and Educational Status in Turkey, 2009

	Total	**Male**	**Female**
Turkey	18.1	17.1	19.0
Members younger than 6 years of age	24.0	22.9	25.3
Illiterate or literate without a diploma	29.8	30.3	29.5
Primary school	15.3	16.9	13.8
Elemantary school	17.8	17.2	18.4
Secondary school and equivalent vocational school	9.8	10.9	7.8
High school and equivalent vocational school	5.3	5.7	4.8
University, faculty, masters, doctorate	0.7	0.9	0.4

Source: (Turkstat Poverty Analysis Statistics, 2009)

Moreover, as household size increases, poverty risk increases as can be seen from the next table. Extensive families are the most risky families for being under poverty and this may be result of the fact that as family size increases, number of income earning members does not increase accordingly mainly due to non-working child members.

Table 3.12.Complete Poverty Rates According to Household Type in Turkey, 2009

	Rate of poor households (%)	Rate of poor individuals (%)
Turkey	14.5	18.1
Nucleus family (without children)	9.8	9.9
Nucleus family (with children)	13.0	16.0
Extensive family	21.4	24.5
A single adult family, other	16.6	19.3

Source: (Turkstat Poverty Analysis Statistics, 2009)

In a regional basis, there are differences in poverty rates as expected. The next table shows the distribution of poor people in each region according to NUTS-1 classification. If 50% of median value of equivalised household disposable incomes in Turkey (3,689 TL in 2010) is used as relative poverty treshold, there are about 12 milllion people living in poverty.[Equivalised household disposable income is calculated as total of yearly household disposable income divided by equivalised household size. Disposable income is defined as net income obtained as deducting retirement, social insurance and tax payments from total income in (Turkstat Metadata on Income Distribution and Living Conditions Statistics, n.d.)]. According to this threshold, 30% of all poor live in South East Anatolia and this region is followed by Central East Anatolia and Mediterranean regions. These three regions contains more than 50% of all poor in Turkey. Except these regions, there are not major differences among regions and they each share 3%-6% of all poor in Turkey.

Table 3.13.Number of Poor People and Share of Regions in Total Poor in Turkey, 2010

	Number of poors (1000)	Share of region in total poor (%)
Total	11,817	**100.00**
South East Anatolia	3,643	**30.83**
Central East Anatolia	1,475	**12.48**
Mediterranean	1,234	**10.44**
Aegean	812	**6.87**
North East Anatolia	786	**6.65**
West Black Sea	730	**6.18**
West Anatolia	660	**5.59**
Central Anatolia	602	**5.09**
Istanbul	566	**4.79**
East Marmara	**536**	**4.53**
West Marmara	421	**3.56**
East Black Sea	353	**2.99**

Source: (Turkstat Income Distribution and Living Conditions Statistics, 2010)

The important thing to notice in Table 3.13 is that there is one threshold applied for all regions to determine the number of poor people living there. However, living conditions in each region differs from each other and relative poverty thresholds can be estimated for each region separately to give a different perspective in the analysis of regional poverty. Table 3.14 represents separate poverty thresholds calculated for each region by using 50% of median value of equivalised household disposable incomes and poverty rates in each region. When relative poverty thresholds are calculated separately for each region, major differences between regions in Table 3.13 get smaller. When each region is analyzed in its own framework, poverty rate is the highest in North East Anatolia and 15.3 % of people who live in this region are below poverty threshold determined for this region. There is no clear trend of poverty rates between eastern and western regions of Turkey. For example, South and Central East Anatolia regions are at the bottom of the table together with East

Marmara (Eskişehir is in this region) and Istanbul regions with lowest poverty rates.

Table 3.14.Number of Poor People and Regional Poverty Rates in Turkey, 2010

Region	Regional Poverty threshold (TL)	Number of poors (1000)	Poverty rate (%)
North East Anatolia	2,387	323	**15.3**
West Marmara	3,878	451	**14.6**
West Anatolia	4,387	973	**14.5**
West Black Sea	3,424	630	**14.4**
East Black Sea	3,621	336	**13.4**
Mediterranean	3,558	1,140	**12.6**
Central Anatolia	3,332	456	**12.2**
Aegean	4,196	1,121	**12.1**
South East Anatolia	1,817	863	**11.5**
Central East Anatolia	2,128	413	**11.5**
Istanbul	5,161	1,454	**11.5**
East Marmara	**4,087**	**663**	**9.9**

Source: (Turkstat Income Distribution and Living Conditions Statistics, 2010)

There are also some regional differences in terms of income inequality as in the case of poverty rates. Income inequality can be measured by Gini coefficient which takes values between "0" and "1". As the value of Gini coefficient gets bigger, inequality in income distribution gets bigger. The below table shows distribution of annual equivalised household disposable incomes by quintiles with first quintile representing the bottom income group. Gini coefficient for Turkey is 0.40 and first quintile gets only 5.8% of total equivalised income while the highest income group receives 46.4%. Although there are regional differences, Gini coefficient does not vary much between regions. Highest income inequality is in Central East Anatolia and this region is followed by Mediterranean, North East and South East Anatolia regions. Income inequality

is less severe in East Black Sea, East Marmara and West Black Sea regions with lowest Gini coefficients.

Table 3.15.Distribution of Annual Equivalised Household Disposable Incomes by Quintiles and Gini Coefficient by Regions in Turkey, 2010

Region		Total	First 20%	Second 20%	Third 20%	Fourth 20%	Fifth 20%	Gini Coeff.
Turkey	%	100.0	5.8	10.6	15.3	21.9	46.4	**0.40**
	Avg. (TL)	9,735	2,841	5,151	7,457	10,658	22,573	
Central East Anatolia	%	100.0	6.4	10.2	14.0	20.2	49.2	**0.42**
	Avg. (TL)	6,174	1,987	3,130	4,311	6,261	15,240	
Mediterranean	%	100.0	6.6	11.1	14.9	20.4	47.0	**0.40**
	Avg. (TL)	9,546	3,137	5,283	7,147	9,723	22,472	
North East Anatolia	%	100.0	6.2	10.1	14.9	21.9	46.9	**0.40**
	Avg. (TL)	6,429	1,982	3,253	4,785	7,040	15,118	
South East Anatolia	%	100.0	6.6	10.6	14.2	20.9	47.7	**0.40**
	Avg. (TL)	5,144	1,674	2,702	3,708	5,380	12,298	
Aegean	%	100.0	6.7	10.8	15.2	21.7	45.7	**0.39**
	Avg. (TL)	11,085	3,681	5,984	8,427	12,011	25,323	
Istanbul	%	100.0	7.1	11.4	15.5	21.1	44.9	**0.37**
	Avg. (TL)	13,382	4,712	7,644	10,355	14,139	30,075	
West Anatolia	%	100.0	6.6	11.5	15.9	22.2	43.8	**0.37**
	Avg. (TL)	11,116	3,681	6,336	8,892	12,369	24,335	
West Marmara	%	100.0	6.6	11.7	16.0	22.6	43.1	**0.36**
	Avg. (TL)	9,777	3,240	5,683	7,836	11,061	21,093	
Central Anatolia	%	100.0	7.1	11.7	15.9	21.4	43.8	**0.36**
	Avg. (TL)	8,338	2,955	4,881	6,635	8,944	18,305	
West Black Sea	%	100.0	6.8	12.1	16.8	22.3	42.0	**0.35**
	Avg. (TL)	8,231	2,816	4,967	6,880	9,254	17,284	

Table 3.15 (Continued)

Region		Total	First 20%	Second 20%	Third 20%	Fourth 20%	Fifth 20%	Gini Coeff.
East Marmara	**%**	**100.0**	**7.6**	**12.4**	**16.3**	**21.5**	**42.2**	**0.34**
	Avg. (TL)	**10,147**	**3,874**	**6,254**	**8,226**	**10,976**	**21,438**	
East Black Sea	%	100.0	7.6	12.0	17.2	23.1	40.1	**0.33**
	Avg. (TL)	8,403	3,171	5,087	7,209	9,721	16,858	

Source: (Turkstat Income Distribution and Living Conditions Statistics, 2010)

Provincial distribution of number of clients and total credit amounts provided by TGMP in Appendix F shows that Diyarbakır comes first and choice of Diyarbakır as the pilot area for microcredit application seems appropriate considering that 30% of all poor in Turkey live in South East Anatolia when relative poverty treshold is considered. Although the number of clients and credit amounts distributed in other eastern parts of the country are much less than those in Diyarbakır, TGMP branches opened more recently in these areas after TGMP was taken over by TISVA in 2006 as can be seen in the table in Appendix F. Still, TGMP can give priority and open branches in provinces Erzurum, Ağrı, Kars, Tunceli, Van, Bitlis and Şırnak when extending its activities considering that education level in these eastern parts of the country is less than the average in Turkey and poverty risk increases as education level decreases. The education level differences between eastern and western regions are noteworthy but another point that should be noticed in regional analysis is the high female unemployment rates in metropolitan areas like İstanbul, Ankara, İzmir, Kocaeli, Adana and Mersin. These provinces are also among the most crowded provinces in terms of female population. Therefore, TGMP activities in these regions can be boosted and it should open branches in Kocaeli, Adana and Mersin. Most importantly, rural areas suffer from poverty much more than urban areas. There is no information on TGMP activities on

the basis of rural and urban distribution till now but considering rural poverty numbers, activities in rural areas should be increased. The findings and suggestions in this part depend only on poverty analysis, unemployment rates and education levels in the regions but whether demand for microcredit in these regions is substantial or women can use credit effectively in rural areas should also be investigated to reach conclusions.

CHAPTER 4

LITERATURE REVIEW AND METHODOLOGY

This chapter begins with literature review on microcredit impact assessment studies and then continues with conceptual framework and methodology involved in this thesis. Explanation of questionnaire, sampling structure, survey details and statistical methods used are also provided in second section of this chapter.

4.1. LITERATURE REVIEW

There are very few studies assessing the impacts of microcredit programs in Turkey and therefore some studies conducted on other countries are also reviewed for having a methodological insight and knowledge about effects of microcredit programs on the other parts of the world. More recent studies and studies concentrating on the economic effects of microcredit programs are chosen for the review.

One of the latest studies on the impact of microcredit is the study of (Mamun, Malarvizhi, Wahab, & Mazumder, 2011) conducted in Malaysia named "Investigating the Effect of the Utilization of Microcredit on Hardcore Poor Clients Household Income and Assets". Mamun et al. (2011) begins with recognizing the problem of poor people such that there is low demand for the products and services offered by commercial banks among the poor but the reason for this is not that poor people do not need them, instead, the reason is that commercial bank products and services are not designed to meet the requirements of poor people. Amanah Ikhtiar Malaysia (AIM) is microcredit provider replicating Grameen Bank model established in 1987 in Malaysia.

Households with income below country's poverty line is considered to be absolute poor and households with income below half of poverty line is named as hardcore poor and AIM selects its clients among these poor and hardcore poor households. AIM provides microcredit in line with the rules of grameen system and served 82 percent of total poor in Malaysia with 99 percent repayment rate as of 2010.

The purpose of the study is to assess the usage of microcredit among hardcore poor clients of AIM and find out how the usage of microcredit affects household income and assets. Sampling method used is stratified random sampling which is designed to compare two groups of clients as old and new clients based on the number of months they participated with the scheme. Data collection method used is interview and among 483 hardcore poor clients, 333 are interviewed but the survey questions are not provided in the study. It is stated explicitly that non-parametric tests were used for data analysis since the data do not satisfy the assumption of normality shown in the results of normality tests.

Results show that 54.65% of the participants used loans on income generating activities and remaining used at least a part of the loans on non-income generating activities like purchasing food, health expenses, schooling expenses and marriage. As for the type of income generating activities of the participants, it is found that 36.04% used credit on trade or retail activities, 22.82% on agricultural or fishing activities, 11.41% on manufacturing activities and 7.8% on service activities. Among the participants 37.2 percent started new economic activities after they received credit from AIM and old ones started new economic activities more than new ones. An important finding of the study is that average household income of the members who used microcredit in income generating activities is significantly higher than that of others. Another related finding is that total market value of household assets is significantly higher for the members who used microcredit in income

generating activities than that of others. As a result of these findings it is recommended in the study that AIM should incentivize the usage of credit in income generating activities by its clients and also should provide trainings to its members to increase their income generating opportunities (Mamun et al., 2011).

Another recent study on the impacts of microcredit programs is the study of (Ahmed, Siwar, & Idris, 2011) which tries to assess the role of microcredit in the lives of poor women in Bangladesh. Data was collected by interviewing the selected sample in 2008. A sample of 200 out of 700 Grameen Bank members in Pachagarh districts was chosen randomly and they were asked about change in specified indicators before and after they got credit. The results are analyzed using percentages obtained from survey (Ahmed et al., 2011).

According to results, there was an increase in the number of house items like bed, radio, wardrobe, of the respondents after they got loan. Therefore, microcredit program helps to improve living conditions of its members. Another result is that 85% of the respondents stated that there is an increase in their family income after they joined the program. In terms of self-confidence, 84% of members answered that their self-confidence improved after the program. With regard to the effectiveness of Grameen Bank program, 74% of respondents mentioned the loans offered as sufficient, 92.5% mentioned terms and conditions as acceptable and reasonable and 90% mentioned the program performed very well. The study concludes with increasing supply of microcredit can be seen as significant contribution to empowering rural women in Bangladesh (Ahmed et al., 2011).

In contrast with the positive results of the study of (Ahmed et al., 2011) in Bangladesh, Haque & Yamao (2008) states different results by investigating the effects of microcredit on poverty in Bangladesh. The study used data collected by surveying 500 members selected randomly in 2008 who had been borrowing for more than six years from famous microcredit organizations in

Bangladesh like Grameen Bank, Bangladesh Rural Advancement Committee (BRAC), and Association for Social Advancement (ASA).

It is noted that survey gathered mainly qualitative data and opinions of borrowers were asked regarding effects of microcredit on their lives and results analyzed according to percentages obtained from questionnaires. It is found that members could not get enough credit to start up an income generating activity which can produce an income sufficient to repay debt after meeting necessary family requirements. Therefore, members simultaneously borrowed from several microfinance institutions (MFI). Moreover, heavy group pressure forced members to borrow from other MFIs when they had difficulty of paying debt in time and their indebtness increased. Also, among the members surveyed, there was no destitute or hardcore poor since under group mechanism, groups do not accept these poorest people due to their risks. It is mentioned that productive use of microcredit increases income levels of members but this is only the case for those who have some level of income and those who have previous indebtness cannot use microcredit for income generating activities but they pay their previous debts. Therefore, it is concluded that MFIs reach wealthier poor but not hard core poor and microcredit can only be helpful in reducing poverty of those poor who has achieved some economic level and has no previous debt. According to results, monthly income of participant households increased when compared with pre-credit period but this is found negligible considering they had been using loans for six years. Those people who received professional skill training from government organizations or other private institutions were successful to increase their income level, but present MFIs do not offer skill training to their members (Haque & Yamao, 2008).

It is concluded that borrowers should be offered consultation services to choose profitable businesses and sufficient amount of loans should be provided at lower interest rates since MFIs usually charge higher interest rates than

commercial banks under the purpose of sustainability. Fight against poverty cannot be handled solely by MFIs but efficient and honest leadership of government is needed (Haque & Yamao, 2008).

A similar result showing microfinance institutions have difficulties in reaching hardcore poor people is found in the study of (Navajas, Schreiner, Meyer, Vega, & Meza, 2000). In their study, they try to answer the question whether microfinance organizations reach the poorest of the poor by analyzing five microcredit institutions in a city of Bolivia. They first define the outreach of microcredit programs as the social value of microcredit in terms of depth, worth to users, cost to users, breadth, length, and scope and then focus on the depth of outreach by analyzing how poor the borrowers of microcredit organizations in La Paz in Bolivia.

Five microcredit programs representing more than half of clients and portfolio of all microcredit programs in Bolivia were chosen among the 30 programs. A random sample of 622 was surveyed among 52,000 borrowers in 1995 and results of the survey were condensed to obtain an index of fulfillment of basic needs (IFBN) which incorporates measures of housing, access to public and health services and education. This index is used to compare the results of the survey with national data of poverty assessment which sets the poverty line at an IFBN of 0.9. Households below this line are regarded as poor and these are also classified as moderate or poorest whereas households above the line are considered to be non-poor. The choice of nonparametric tests to analyze the results is expressed clearly because of the Kolmogorov-Smirnov test results which show that the data was not Gaussian.

According to the results, microcredit programs analyzed serve to the clients which are near the poverty line instead of the poorest of the poor which may be due to the fact that poorest are less creditworthy and have less demand for loans. Another finding of the study is that among the credit institutions, those which lend to groups reach the poorest better than those which lend to

individuals. Also, it is found that rural lenders have deeper outreach than urban lenders such that rural borrowers are more likely to be among the poorest. It is commented that empirical results show limits of microcredit programs to reach the poorest of the poor and more research is needed for the funds allocated to these programs for the access of loans to poorest people since governments and donors should know whether the poor gain more from microcredit programs than other aid programs. However, the limit of microcredit to reach the poorest should not conceal net gains that accrue to poor people near the poverty line (Navajas et al., 2000).

The study of (Afrane, 2002) reviews two impact assessment studies in Ghana and South Africa focusing on impact results. It is stated that small and micro enterprises are very crucial in the Sub-Saharan Africa economies but they are excluded from official support, especially credit, and microfinance institutions have been involving in providing financial services to these enterprises.

One of the two case studies analyzed in (Afrane, 2002) involves a microcredit organization named SAT in Ghana impact study of which was carried out in 1997 and the other case study involves an organization named SOMED in Johannesburg of South Africa whose impact study was undertaken in 1998. Data collection methods used were questionnaire-interviews, case studies, focus group discussions, and field observations. When determining the sample frame, it is considered that clients should have been on the scheme for a minimum period of eight to twelve months to experience some form of impact in their lives and businesses. 129 and 82 clients were chosen for interviews representing 92% and 90% confidence levels for SAT and SOMED respectively. This sample size is distributed to categories defined by gender, business sector, size of enterprise, and level of education according to proportional sampling approach. Author comments that impact assessment studies of microcredit programs can be improved by use of control groups but "before and after" methodology was used in the survey instead of "with and

without" methodology (i.e., control group) because of two reasons. First, there was a lack of baseline data which measures the conditions of clients before they joined the scheme. Second, use of a control group requires surveying people who are not beneficiaries of the scheme and this brings difficulties in the application since cooperation of these people could not be guaranteed as experiences from similar studies also show. Therefore, survey was based on recall data such that respondents are required to compare their situations before and after the scheme. Afrane (2002) also comments that it is difficult to attribute any change in lives or businesses of program borrowers to credit intervention because other social and economic changes occur while credit intervention is taking place but it is almost impossible to separate out specific impact of credit programs (Afrane, 2002).

There are no statistical testing procedure mentioned in the study, but the results are evaluated in predefined impact thresholds. For each indicator specified, respondents stated whether their situations improved, deteriorated or remained the same after they joined the scheme. If less than 40% of positive change is stated, it is mentioned as low impact, 41–60% of positive change as moderate impact and 61–100% of positive change as high impact.

The results of two studies show that there is an overall improvement in the lives and businesses of clients. Business turnover increased by 157% and 118% for SAT and SOMED clients meaning that small capital injections into microenterprises result in higher sales. The increase in turnovers was higher for the enterprises operated by females than those operated by males which shows competence of women in enterprise development. Although, a positive impact is observed in general, there was negative growth for some enterprises and no explanation is provided for this situation in the study. Another positive impact was on employment and the total number of people employed by the enterprises increased by 46%- 49%, 20–25% of which were unpaid family labor. In social and spiritual domains, there were both positive and negative

effects. Among the positive effects, enhanced public respect and acceptance, self-esteem, participation in community activities, and empowerment of women could be mentioned. Time pressure resulting from increased business activities, worsening family relations and poor church attendance were negative effects of the microcredit programs (Afrane, 2002).

The study of (Bolnick & Nelson, 1990) tries to measure the economic impact of special credit program that offer loans to small-scale enterprises in Indonesia. Under this special credit program small-scale enterprises receive loans named KIK/KMKP from commercial banks (KIK is acronym for small investment credit and KMKP is for permanent working capital credit in local language) which are low interest rate installment credits extendable up to ten years.

The method used in the study is interviewing credit recipients. Twenty-nine subsectors were selected for the sampling and for each subsector 30 people were selected both for experimental and control groups, making a sample size of 1740. Experimental group was selected from small-scale enterprises which received their first credit in 1980 and control group was selected from those enterprises which received loan in 1982. This design is used for choosing the groups as similar as possible apart from the use of credit and results are evaluated in terms of differential impact of credit on experimental group as different from control group. Authors state that they would prefer to use panel data tracing the sample over time but this was not possible because of cost and time constraints and therefore they had to rely on recall data (Bolnick & Nelson, 1990). It is mentioned that regression is used to estimate the effect of credit but neither statistical results and equations nor the questionnaire used are given explicitly.

As a result of their investigation, it is found that credits generally support small, labor-intensive, and expanding business enterprises although impact varies according to sector and target variable. If the sample is assumed to

represent all sectors and regions, it is calculated that the Rp524 billion of credits approved in 1980 led to Rp169 billion additional fixed investments, 67,000 new jobs and increase in sales of Rp279 billion per year within two years. Another conclusion by the authors is that impact studies should not be ad hoc efforts. Costs of surveys are substantial and impact of credit programs are crucial, therefore monitoring and evaluating the effects of a program should be integrated into the program itself (Bolnick & Nelson, 1990).

The detailed study of (Snodgrass & Sebstad, 2002) is an integrated analysis of three longitudinal studies on the impact of microfinance services. The three microfinance programs chosen are from three different geographic regions which are India, Peru and Zimbabwe and studies are commissioned by USAID. The study combines survey and case study data, uses random sampling for the selection of clients and non-clients as control group. Surveys were conducted in 1997 and 1999 and the case studies took place in 1998 and 1999. A panel data set was obtained by interviewing the clients in both rounds of survey and it included 786, 529, and 579 clients and non-clients from India, Peru and Zimbabwe respectively. This large data set enabled the use of variety of statistical techniques like Anova test, chi-squared test, gain score analysis, multiple linear regression, probit analysis, and analysis of covariance for analyzing the data but the techniques and test results are not provided explicitly in the study.

The impact of microcredit changes from country to country and according to the variables analyzed. On the household level, there is a positive impact on household incomes in India and Peru and increased diversification in household income in Peru and Zimbabwe. Microcredit also has positive impact on school enrollment for boys but not for girls. On the enterprise level, it is reported that enterprise revenues are improved as a result of microcredit scheme, and there is positive impact on employment in India and Peru but microcredit has no impact on the level of enterprise assets. As a result of these

analyses, it is concluded that no uniform impact is found in all three countries because of different economic, legal, and regulatory schemes and structures of microfinance programs. Another important conclusion of the study is that microfinance has very modest impacts on the poverty among clients since climbing out of poverty tends to be slow and uneven. It is stated that benefits from microcredit depend on how these loans are used and this depends in some part on the opportunities offered by the local economy. Therefore, although not proved, it might be expected that microcredit can be more useful in times of economic growth. However, this possibility does not sweep away benefits of microcredit for clients relative to non-clients since households reported that microcredit helped them increasing their working capital, buying more inventory goods at lower prices and increasing their sales. The positive impacts of microcredit will be increased if this service can be extended to more people (Snodgrass & Sebstad, 2002).

The study of (Panda & Atibudhi, 2010) evaluates the impact of group based microcredit programs on household income of participants in India. This impact evaluation compares target group, i.e., a group participating in some microfinance program, with a control group, i.e., a group that did not participate in any microfinance program.

A multi-stage stratified random sampling method was used when choosing participants for field survey. Firstly, 4 districts were randomly selected and then 2 blocks from each district, five villages from each block, and 20 households from each village were chosen randomly, 10 for target group and 10 for control group by matching method. Under the matching method, it is stated that, members of target group and control group are matched according to the similarity of their starting values for the relevant characteristics like income, activity, family size but the application of this procedure and how similarity of starting values are measured are not presented in the paper. The sample was also stratified by economic activity, namely agriculture and

microenterprise activities and total of 800 clients were interviewed. Total number of clients, time of survey and survey questions are not given in the paper. While analyzing the data, z-test and linear regression method is used but normality conditions are also not stated. Gini coefficient is calculated for target and control group to assess the impact of credit on the equality of household-income distribution.

The household income in the target group was 26.4% higher than in the control group according to the results and also it was less variable for the target group than the control group. Household income of the participants who deal with microenterprise activities were higher than that of participants dealing with agriculture irrespective of the participation in microfinance programs. The same significant positive result was not observed in terms of income distribution, although Gini coefficient of the target group was lower than that of the control group, the difference was slight, 0.15 and 0.20 respectively. Therefore, microfinance intervention seems to produce a weak effect on the equality of household-income distribution. Higher household income for target group is explained to be the joint result of loans and development training programs offered to participants for their occupational activities (Panda & Atibudhi, 2010).

Another study conducted in India is the study of (Basargekar, 2009) which makes an impact analysis of microcredit institution in India, namely Annapurna Mahila Mandal (AMM) working for women empowerment founded in 1970. Total sample of 67 women was chosen from 4,150 members of AMM and survey conducted on this sample through personal interviews by questionnaires. The results are analyzed according to percentages obtained from questionnaires.

According to the results, AMM helped 42% of the borrowers to start their own small businesses. Borrowers stated that they joined AMM since it provides low interest rate loans and it may help them to have some income and they saw it as

a helping hand. Respondents were asked about their own perception on what credit brought in their lives. No member answered that her economic status has gone down after joining AMM and 60% and 75% of respondents stated that there is improvement in their business condition and monthly income, though marginally. However only 21% of beneficiaries made marginal improvement in the assets of their businesses due to a very small surplus generated out of these enterprises. This is important since lack of ownership of assets is one of the reasons behind economic backwardness of poor people. Microcredit program of AMM improved 60% of its members' feelings about economic independence and self-esteem and years of association was found to be significantly correlated with developing self-esteem (Basargekar, 2009).

Copestake, Bhalotra, & Johnson (2001) studies impact of credit program on business performance of attendees in Zambia. The studied microcredit program is the Peri-Urban Lusaka Small Enterprise Project (PULSE) which is a group based microcredit program offering loans to poor self-employed people in Lusaka, Zambia since 1994. PULSE provide loans to both women and men who own a business that is at least six months old and loan amounts vary according to the capital requirements of each person's business.

The impact assessment study is based on sample survey of PULSE participants with questionnaires and qualitative focus group discussions. The sample size is 420 but related confidence level is not stated in the study. Chosen sample comprise groups who received credit and who did not receive but was in line to get credit, the second one being control group. Additionally, 196 people were interviewed to obtain qualitative data in 1998 (Copestake et al., 2001).

According to the results, one-third of clients were below the national poverty line stating that the program does not discriminate against or in favor of poorest people. Profits of experimental group increased significantly while profits of control group did not change over a year obtained from simple before and after comparison of groups. About one third of profits obtained were

transferred to household budgets which show indirect effect of credit on household incomes. An interesting finding is that positive effect of microcredit on the growth of borrowers' business profits resulted from the second loan and the first loan was ineffective. Moreover, some borrowers were made worse off after receiving credit and majority of them had left the program after their first loan. Qualitative data show that a few respondents referred to PULSE explicitly when they are asked about the reason for changes in the profitability of their business. The reasons they mentioned are increased investment, turnover and diversification. With regard to labor market, loans had no direct effect on paid employment in the respondent's businesses. Another finding of qualitative interviews is that borrowers who had been forced to cover the debts of defaulting members to secure future access to loans were resentful of this situation and demanded individual loans (Copestake et al., 2001).

There are very few studies assessing the impacts of microcredit programs in Turkey and these are mentioned in section 2.2.2. The findings of the studies related with microcredit programs in Turkey are also mentioned in following chapters when necessary.

4.2. CONCEPTUAL FRAMEWORK AND METHODOLOGY

Conceptual framework of impact assessment studies targeting to explore the effects of microcredit programs can be evaluated under three topics. Three main elements of a conceptual framework are a model of the impact chain that the study is to examine, the specification of units at which impacts are assessed and the specification of types of impact to be assessed (Hulme, 2000).

As for models of the impact chain used in microcredit impact assessment studies, there are two main schools of thought which are "intended beneficiary" school and "intermediary" school. Intended beneficiary school aims to assess the impact of the program on intended beneficiaries, that is, on program

participants, as deep as possible in terms of budgets and techniques. This school makes fewer assumptions about the impact chain and can recognize who benefits and how. However, it requires great effort in methodological and cost terms. Intermediary school focuses on changes in microfinance institutions and their operations. Institutional outreach and institutional sustainability are main considerations of this school of thought. It is assumed that if outreach and sustainability have been improved then the program has beneficial effects since it has widened the financial market. Assumption behind this argument is that such institutions offer a wider range of choices to people looking for credit and this in turn leads to improved microenterprise performance and household economic security. Although this assumption can be validated by theoretical frameworks with a set of other assumptions like perfect competition, it has proved invalid in a number of experiences. The choice between these two schools of thought can be seen as an ideological choice and it changes according to prioritizing improved welfare or more efficient markets (Hulme, 2000). Considering this framework, this thesis is in line with intended beneficiary school since it makes an assessment of impact of TGMP on program participants.

Prevalent units of assessment used in microfinance impact assessment studies are household, enterprise and institutional environment of microfinance institutions. In terms of types of impact to be assessed, economic indicators like changes in income have dominated the studies about microfinance impacts but there is an almost infinite array of variables that can be used (Hulme, 2000). The study of (Gaile & Foster, 1996) gives a comprehensive list of variables that can be used for impact assessment.

Common impact assessment methods used for microfinance studies are sample surveys, rapid appraisal, participant observation, case studies and participatory learning and action. The summary of features of these methods is given in the following table:

Table 4.1.Common impact assessment methods

Method	Key features
Sample surveys	Collect quantifiable data through questionnaires. Usually a random sample and a matched control group are used to measure predetermined indicators before and after intervention
Rapid appraisal	A range of tools and techniques developed originally as rapid rural appraisal (RRA). It involves the use of focus groups, semi-structured interview with key informants, case studies, participant observation and secondary sources
Participant observation	Extended residence in a program community by field researchers using qualitative techniques and mini-scale sample surveys
Case studies	Detailed studies of a specific unit (a group, locality, organization) involving open-ended questioning and the preparation of ``histories''
Participatory learning and action	The preparation by the intended beneficiaries of a program of timelines, impact flow charts, village and resource maps, well-being and wealth ranking, seasonal diagrams, problem ranking and institutional assessments through group processes assisted by a facilitator

Source: (Hulme, 2000)

Use of control groups in sample surveys requires a before and after comparison of a population that received a specific treatment and an identical population (or as near as possible) that did not receive the treatment. This approach may be regarded as a quasi-experiment which seeks to compare the outcomes of an intervention with a simulation of what the outcomes would have been if there had been no intervention. This approach is useful for attributing specific effects to microcredit interventions but it has practical problems. First of all, finding a control group who's economic, physical and social characteristics match with that of the treatment group is difficult (Hulme, 2000). Moreover, motivating the control group to respond is a challenging problem. Since they have no connection to the activity evaluated, they do not have incentive to cooperate with the survey and they may give biased, incomplete and misleading answers.

This problem may be solved by choosing prospective borrowers, that is, individuals who have been approved for loans but have not yet borrowed as control group. However, this can only be used for periods before interviewee became a borrower. Another way to solve the problem may be paying control group members for participating in survey but this increases the cost of the survey (Mosley, 1998). Hulme (2000) states that costs of studies using the quasi-scientific method are so great that few agencies can fund them. Their timescales are also very long and agencies studied may treat the results as historical rather than being of operational relevance. Because of these reasons, many studies do not involve in use of control groups (Hulme, 2000). For example, Afrane (2002) states that impact assessment studies of microcredit programs can be improved by use of control groups but "before and after" methodology was used in the survey conducted by him instead of "with and without" methodology (i.e., control group) because of two reasons. First, there was a lack of baseline data which measures the conditions of clients before they joined the scheme. Second, use of a control group requires surveying people who are not beneficiaries of the scheme and this brings difficulties in the application since cooperation of these people could not be guaranteed as experiences from similar studies also show. Therefore, survey was based on recall data such that respondents are required to compare their situations before and after the scheme (Afrane, 2002).

This thesis uses sample survey method to collect data about microcredit program participants in Eskişehir by questionnaires which is the common method used in most of the impact assessment studies. Survey questions are designed to assess impact of TGMP on participants by using "before and after" methodology which requires participants to compare their situations before and after they received microcredit. The "before and after" methodology is used in many microcredit impact assessment studies and this thesis follows this method as the studies of (Mamun et al., 2011), (Ahmed et al., 2011), (Afrane, 2002) and (Basargekar, 2009) in the literature and the studies of (Adaman & Bulut,

2007) and (Döşeyen, 2007) in Turkey do. The survey questions are concentrated on assessing microcredit impact on enterprise level and studies of (Gaile & Foster, 1996), (Adaman & Bulut, 2007) and (Döşeyen, 2007) are used as a guide when preparing the questions. However, the questions are prepared by the author and are not replication of other questionnaires reviewed and therefore they are unique to this study in the manner that they follow a path constructed by the author to differentiate the effects of microcredit as much as possible. The results of the survey are analyzed firstly by descriptive statistics and then by using non-parametric tests to figure out relations between variables. The use of non-parametric tests model the studies of (Mamun et al., 2011), (Navajas et al., 2000) and (Döşeyen, 2007) but it is a result of statistical procedure because data collected do not satisfy the normality conditions for using parametric tests as explained in statistical interpretation of survey results in Chapter 5.

4.2.1. QUESTIONNAIRE

The questionnaire consists of 31 questions designed to capture relevant data about the participants compatible with the aim of this thesis and can be found in Appendix E. The first three questions ask basic demographic characteristics of the participants which are age, marital status and education level.

The questions from 4 to 9 give information about income status of members' households in general. Question 4 and 5 are asked both because to observe basic family structure and to measure poverty status of the participants. TURKSTAT announces poverty lines according to family size and year. Therefore, comparing each household's income with respective poverty line according to the size of that family gives information about poverty status of this household. Sixth question gives information about the participant's interest in microcredit program as Döşeyen (2007) states. If participant is really

interested in the program she is expected to remember the year she received her first microcredit. This question also gives information about how long the participant is in the program. Question 7 and 8 are asked to measure poverty status of the participants before they joined the microcredit program. The income level of each household in the year they received microcredit is compared with relevant poverty line in that year and household is found to be above or below the poverty line before they received microcredit. By this way, whether microcredit program in Eskişehir reaches very poor people or not is observed. The change in poverty status of families as being below or above the poverty line after the use of microcredit cannot be associated with microcredit program. Because these questions give the total amount of household income and there may be more than one income earning members in a family. When women receive microcredit, they should invest it in an income generating activity so that microcredit can affect the income earned from this business and then the income level of household indirectly. If, for example, a woman started to earn more money from the business she run after she used microcredit and her husband was fired from his job, then total household income may decrease. Linking the decrease in household income with microcredit program would give a wrong conclusion about the effect of the program. In the ninth question, regularity of household income is observed.

Questions 10 to 13 are asked to learn the usage of microcredit. The remarkable point here is about the information that question 12 contains. Microcredit can affect income level of women or their households only if it is used to invest in income generating activities. If members spent all of the microcredit for their family needs like wedding or urgent health expenses, then microcredit functions like a consumption credit and does not have any effects on income earned from businesses of women and thus on income level of household. Therefore, women who spent all of microcredit for their family needs can be regarded as not affected by microcredit in terms of their income levels. Microcredit may help these families as a source of cash when they are in urgent

need but since this study targets to capture the impact of microcredit on income levels through its effect on small businesses, these women are not included in the business related questions part of the questionnaire. Another point to mention here is that the option "d" is added to this question post facto since this answer is unexpected. When the survey started, some of the participants answered that they gave their microcredit to another group member and participated in the program just for completing the number of members in a group to five. These women are excluded in the business related questions part of this study since they did not use credit for themselves.

The remaining questions are related with businesses on which microcredit is spent by women. In question 15, participants explain the details of their businesses. Questions 17 and 18 give profit amounts obtained from these businesses before and after microcredit usage. If a woman set off a new business after she received microcredit, then there is no profit or loss for this business before the usage of microcredit. Women may have difficulties for calculating their profit levels. Therefore, what is profit and how it is calculated approximately were explained to participants during the survey. Still, some members answered that they did not know their profits. It was expected that members would have difficulties in calculating and remembering their profit levels numerically although an approximate number would also be enough. The question 19 is prepared for filling this gap. In question 19, women are asked qualitatively about the direction of change in their profit levels after they invested microcredit in their businesses. Since this question asks about their feelings in a sense, more women could answer that question. In this way, change which is realized with the use of microcredit in profit levels of small businesses run by microcredit receivers is measured both by quantitative and qualitative questions. Members also state the reasons they see behind the change in the profitability of their businesses in this question. Questions 21 to 26 ask about workers out of families of microcredit receivers who work for the small businesses of participating women. With these questions, capacity and

size of small businesses run by microcredit receivers can be analyzed. In questions 27 to 30, information about family workers is gathered. Analyses like how many people work for small businesses on which microcredit is invested, how much they work etc. are done depending upon the data gathered from these questions. Finally, the last question is about vocational training status of people who work for small businesses.

4.2.2. SAMPLING

Meeting with TGMP Eskişehir branch was hold on 12 August 2011 with Esra Aynalı attending as the manager of the branch and the interview lasted for 4 hours approximately. She gave information about the procedures followed while evaluating candidates who apply for microcredit, amounts and payment schedule of the credit given to members and the database containing information about the members.

The first thing she explained is the merger of the two branches in Eskişehir, namely Tepebasi and Odunpazari branches, in 2010. Although they continue to give credits in all regions of Eskişehir, the organization is now united under Odunpazari branch (Aynalı, 2011).

The online database of TGMP Eskişehir members are received during the interview. The database contains information about names and national identity numbers of members, date of membership, name of district and amount of microcredit given to each member. This online database is started to be used in September 2009 and membership information was kept on paper documents before this application. Therefore, some of members who used microcredit and left the program or finished the payment of their microcredit debt before the start of online database application are not included in the online database member list. The incompleteness of member list in the online database results in some confusion while determining the sample size although Esra Aynalı

(2011) stated that the number of members before the start of online database was negligible since the program was newly launched by then and public was not familiar with it. Moreover, Aynalı (2011) stated that they included most of these members in the online database since most of them had not finished payment of microcredit debt by the time of online database application.

The population size is determined by using the member list in the online database retrieved from TGMP Eskişehir branch. This member list includes the names of 2,072 members 36 of which have not used microcredit but only have voluntary saving accounts. Therefore the remaining 2,036 members are taken into consideration when determining population size since these are the only members on whom the effects of microcredit could be observed.

Another criterion used when evaluating the population is the minimum time period that should pass after members take microcredit. Members need some time to experience some impact on their business activities after they take microcredit as stated in (Afrane, 2002). The threshold for time period that should pass after the usage of microcredit is adopted as three months in this thesis such that members who got microcredit but have not completed three-month period are not considered in the population. The database was retrieved on 12 August 2011 and therefore the members who take microcredit after 12 May 2011 are excluded from the population. The number of members excluded due to the minimum time period criterion is 120 and population size is calculated as 1,916. That is, the size of population of women who used microcredit and experienced three-month period after taking microcredit in Eskişehir city is 1,916 as of 12 August 2011.

There are several strategies used in application when determining sample size. These strategies can be summarized as using a census for small populations, reviewing sample sizes of similar studies, using published tables, and using formulas to calculate a sample size as stated in (Israel, 1992).

There are published statistical tables showing the necessary sample size for given criteria. The below table is extracted from the tables presented in the article of (Israel, 1992) for the analysis of necessary sample size in the case of population size being 1,916. As can be seen from the table, necessary sample size for 95% confidence level, ±10% precision level (i.e., sampling error), and maximum variability in population (i.e., p= 0.5) is 95 if the size of population is 2,000. It is noted in (Israel, 1992) that p=0.5 (level of maximum variability in population attributes being measured) is used for the calculation of sample size to be more conservative, that is, necessary sample size is larger when p=0.5 is used [since px(1-p) gets the maximum value when p is 0.5].The population size estimated for this study is 1,916 , therefore sample size between 91 and 95 is necessary for 95% confidence level, ±10% sampling error and p= 0.5 .

Table 4.2. Sample Size Required for Various Precision Levels

Sample size for ±5%, ±7% and ±10% Precision Levels Where Confidence Level is 95% and P=.5.			
Size of Population	**Sample Size (n) for Precision (e) of:**		
	±5%	±7%	±10%
1,000	286	169	91
2,000	333	185	95

Source: (Israel, 1992)

Another strategy stated in (Israel, 1992) for determining sample size is to review sample sizes of similar studies. The study of (Döşeyen, 2007) includes a sample of 104 participants from the population of 2,257 TGMP members in Diyarbakır. Given that the population size for Eskişehir is 1,916 which is less than that in Diyarbakır, sample size below 104 is appropriate.

The necessary sample size for the population of 1,916 can be calculated with the below formula:

$$n= Np(1-p) / [(N-1)\sigma^2 + p(1-p)]$$

where N represents population size, p represents the proportion of an attribute in the population and σ^2 represents variance of sample proportion which is determined according to desired confidence level and sampling error. 95% confidence interval of the proportion p in population lies in both side of sample proportion as much as 1.96σ. Since the proportion of an attribute in the population is not known, p is taken as 0.5 to calculate the maximum sample size conservatively (Newbold, 2000). Replacing N with 1,916, p with 0.5 and calculating σ from the equation $1.96\sigma=0.1$ with 95% confidence level and 10% sampling error gives the necessary sample size as 91.5. If 5% sampling error instead of 10% is targeted, necessary sample size becomes 320[6]. Taking sampling error as low as possible is desired but 10% level is chosen for this study due to limited budget and time constraint of the survey and sample size is determined to be 92.

Sampling method used when taking 92 members from the population is stratified random sampling which divides the population into subgroups, called strata, and then takes simple random sample from each stratum according to some determined criteria. Stratum in this study is determined as the amount of microcredit members took since amount of microcredit is considered to affect members' business. There are members who used big amounts of microcredit together with great majority of members using credit of 700 TL since first microcredit amount is limited to 700 TL and most members received only their first credits with the newly launched TGMP in Eskişehir. If random sampling is applied to this population, those members who received microcredit amount other than 700 TL may be underrepresented by chance. With the use of

[6] The computation of sample size for a given confidence level, sampling error and population size can be easily obtained from online calculators like http://www.surveysystem.com/sscalc.htm

stratified random sampling, clustering of microcredit amounts around some number in a way in contrast with the actual distribution in population is avoided and amounts which could be considered as outliers in the population are also included in the sample chosen. There may certainly be other factors affecting the impact of microcredit on the business of members like education level or businesses of women but database of members only provide information on amount of microcredit given to members therefore only one stratum criteria is used.

Population is divided into subgroups according to microcredit amounts and proportion of members in each stratum is kept the same for the respective stratum in the sample. The first stratum limit is determined as 700 TL since the first microcredit amount is limited to 700 TL and most of members choose to receive as much as they can at first time as observed in the database. The strata used and number of members in each stratum in the population are as follow:

Table 4.3.Population Distribution According to Microcredit Amount

Microcredit amount used (TL)	Frequency	Percent
100-700	922	48.1%
701-1500	93	4.9%
1501-2000	419	21.9%
2001-3000	221	11.5%
3001-4000	159	8.3%
4001-5000	78	4.1%
5001-	24	1.3%
Total	1916	100.0%

Since Eskişehir TGMP is a new program, most of the members have been receiving their first or second microcredit and the credit amounts are

concentrated in first three strata. The proportion of members in each stratum is kept the same for the sample of 92 and the resulting number of members divided into subgroups for the sample is as follow:

Table 4.4.Sample Strata According to Microcredit Amount

Microcredit amount used (TL)	Number of members if percentage in population is applied to sample size	Number of members used
100-700	44.27	44
701-1500	4.47	4
1501-2000	20.12	20
2001-3000	10.61	11
3001-4000	7.63	8
4001-5000	3.75	4
5001-	1.15	1
Total	92.00	92

In the table 4.4, "number of members if percentage in population is applied to sample size" is calculated as sample size, 92, multiplied by the percentage of each stratum in the population and "number of members used" is taken by rounding the exact number of members to make them integer. Members are then chosen randomly from the population for each stratum according to the numbers determined above and sampling is finalized.

4.2.3. ABOUT THE SURVEY CONDUCTED

Interviews with the members who are randomly chosen according to the sampling method explained above are conducted on the phone. Since database of members does not contain phone numbers of members as a list, the list of

members in the sample were sent to Eskişehir TGMP officials via email and they entered phone numbers of these members and resent the file again via email. During the interviews, some of members could not be reached and some of them, not many, were not willing to participate. Therefore, new lists of members randomly chosen from the population to replace the missing members were sent to Eskişehir TGMP officials and they sent relevant phone numbers till 92 members were interviewed. In this process, Eskişehir TGMP officials were very kind and their help was irreplaceable. At the first meeting with Esra Aynalı, she kindly offered that they could distribute questionnaires to members during their weekly meetings at houses of members and interviews could be completed very quickly. However, this method was not chosen because of several reasons. Firstly, making interviews in this way excludes members who were participated in the program but not actively using microcredit. Members are visited weekly if they received microcredit and their weekly installment payments are not ended. For example, if some women received credit only once and did not want to use more credit, they exist in the database but they are not visited weekly. This anticipation proved correct during interviews. There were women who answered that they used credit only once and they were not using credit at the time of the survey. If survey had been conducted by distributing questionnaires to members actively using credit, then the results would not have reflected the actual member profile and their experiences with TGMP. Secondly, making interviews directly at the houses of members and with participation of TGMP officials carries the risk of obtaining biased answers to the questions. Since members may think that their answers might be judged by TGMP officials, they may tend to give positive answers to questions regarding their business profits or negative answers to questions regarding their household income levels. Prospective credit receivers are told during the trainings before provision of microcredit that they should use microcredit for income generating activities. Therefore, members may tend to hide the actual use of microcredit with the concern that TGMP officials will not extend any

more credit to them. Thirdly, members may not understand the written questions directly and may need explanations about the questions and terms like profit and household income. One option was to train TGMP officials such that they would understand the structure of questionnaire and what each question tries to capture and then they would explain to members before collecting answers. However, this option was eliminated by the time limit of TGMP officials who have to visit houses of members and collect weekly installments. Because of these reasons, members are contacted directly by the author on the phone.

Interviews started on 20, August 2011 and lasted about 4 weeks and approximate duration of phone interviews was 15-20 minutes. Before starting to ask questions, members are informed about the research. The author introduced herself and told that phone number of interviewee was obtained from TGMP Eskişehir office. Author explained clearly that the aim of the call is not to audit members about their credit usage or not to request payment of their microcredit debt if there is any but to measure if microcredit program is beneficial to them. Interviewees were told that their answers are strictly confidential and will not be provided to TGMP officials in any case and they are not and will not be requested to sign any document regarding their participation in survey and their answers. Interviewer also explained that members do not have to give answers and participate in survey if they are not willing to do and their help and attendance is appreciated to complete the survey. During the interviews, some members had difficulties to answer questions about income level and profits and they were explained about how these are calculated.

4.2.4. STATISTICAL INTERPRETATION OF SURVEY RESULTS

Many statistical tests require the assumption that the data are sampled from a normally distributed population. These tests are called parametric tests examples of which include t-test and one way Anova (Motulsky, 1995). Moreover, central limit theorem allows the use of parametric tests when applied to large samples even if the population distribution is not normal. Shortly, central limit theorem states that when the sample sizes are large enough, the sampling distribution of sample means is approximately normally distributed even if the underlying population is not normally distributed with respect to the analyzed variable. However, normality assumption may not hold in application or data of interest may be categorical instead of numerical which prevents the use of parametric tests (Newbold, Carlson, & Thorne, 2007). Additionally, central limit theorem requires determining how large is large enough. If population is heavily skewed, sample size required for a good approximation of sampling distribution of sample means to a normal distribution would be even more than 100 (Dougherty, 2011). Non-parametric tests can be used in cases where the use of parametric tests is not appropriate. Non-parametric tests make no assumptions about the distribution of the data and are appropriate for analyzing categorical data or numerical data when underlying population is not normally distributed and there are not enough observations in the sample to apply central limit theorem. Since these tests do not make assumptions about the distribution of the data, they are also called "'distribution-free" tests (Motulsky, 1995).

Determining the use of parametric or non-parametric tests is not always straightforward as stated by Robson (1994):

> Different statisticians give different advice as to the relative merits of parametric and non-parametric tests. The non-parametric camp claim that their tests are simpler to compute, have fewer assumptions and can be used more widely. The parametric camp claims that their tests are

> robust with respect to violations of their assumptions and have greater power efficiency (Robson, 1994, p.122).

Applying non-parametric tests where the data is actually normally distributed is not very disadvantageous but applying parametric tests where the data is actually not normally distributed should be avoided. If it is not certain that conditions of parametric tests are met, the use of non-parametric tests is more appropriate. However, if conditions are met, parametric tests should be preferred to benefit from advantages of these tests (Kalaycı, 2010). Additionally, a formal statistical test like Kolmogorov –Smirnov can be used to test whether data were sampled from a normally distributed population and choice of statistical tests can be made accordingly (Motulsky, 1995).

Survey results in this study are evaluated with statistical package program SPSS and non-parametric tests are used to interpret relations because data contain categorical variables and numeric data does not satisfy the assumptions of parametric tests as stated in Chapter 5. Explanations on tests that are used for statistical analysis can be found in Appendix D.

CHAPTER 5

STATISTICAL ANALYSIS OF SURVEY RESULTS

The basic descriptive statistics representing the survey results are given in this section firstly. Secondly, profit levels of microbusinesses conducted by participants are analyzed with statistical tests and their relations with some variables are questioned. Similarly, impact of microcredit intervention on profit levels is analyzed with statistical tests and additions of some participants are mentioned finally.

5.1. DESCRIPTIVE STATISTICS

1) Age, marital status and education level of participants

The sample of 92 members chosen has an average age of 41.7, with minimum 22 and maximum 70 years old members. Age of participants is categorized and 85 percent of the members are seen to be between 26 and 55 years old. The distribution of these members among 26-35, 36-45 and 46-55 years old categories is smooth as can be seen from the below table:

Table 5.1.Age Status of TGMP Eskişehir Members

Age category	Frequency	Percent
22-25	3	3.3
26-35	26	28.3
36-45	27	29.3
46-55	26	28.3
56-70	10	10.9
Total	**92**	**100.00**

Women who used microcredit were in 37 years old in average in the study of (Adaman & Bulut, 2007) in Diyarbakır and 35 years old in the study of (Döşeyen, 2007) again in Diyarbakır. Average age of TGMP members in Eskişehir is a little bit higher than it is in Diyarbakır but difference is not notable.

Most of the members are married, but there are also single women among them:

Table 5.2.Marital Status of TGMP Eskişehir Members

Marital status	Frequency	Percent
Married	76	82.6
Single	9	9.8
Widow	4	4.3
Divorced	3	3.3
Total	**92**	**100**

Marital status of women participating in microcredit program in Eskişehir is compatible with that in Diyarbakır. 90% of women who involved in TGMP were married according to the study of (Adaman & Bulut, 2007) and this ratio was 76% in the study of (Döşeyen, 2007). The difference between the percentages of married women among TGMP members in Diyarbakır found in these two studies can be explained by the time and sample differences between these two studies.

With regard to education level, number of members is concentrated on the primary school category, which includes primary and elementary schools of 5 years and 3 years education in this study. The distribution of members in education categories is compatible with the distribution of the whole population in Bursa, Eskişehir, Bilecik region. It is noteworthy that, there are

both illiterate and university graduates among the members but they represent a small percentage.

Table 5.3.Education Level of TGMP Eskişehir Members

Education level	Frequency	Percent
Illiterate	5	5.4
Able to read	1	1.1
Primary school	59	64.1
High school	23	25
University	4	4.3
Total	**92**	**100**

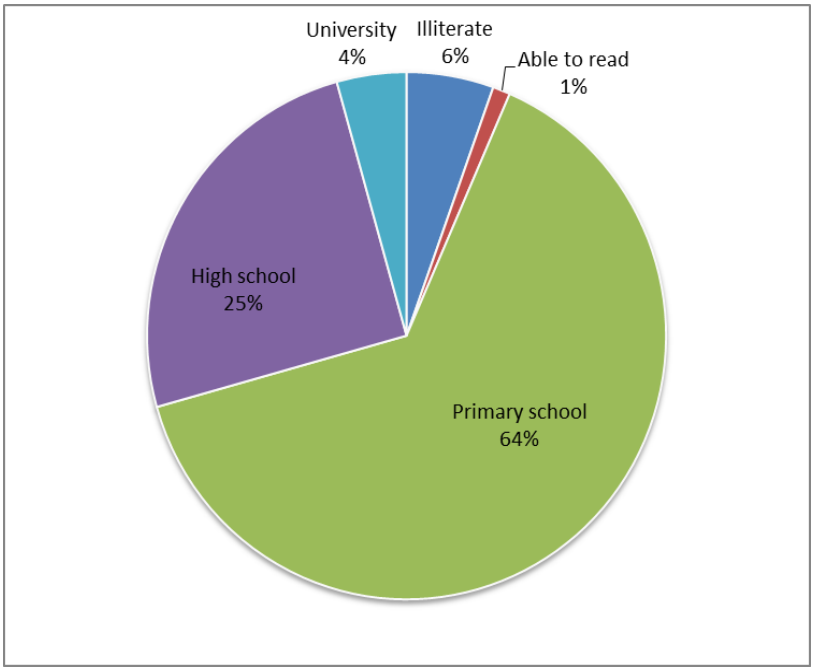

Figure 5.1.Education Level of TGMP Eskişehir Members

There is a substantial difference between education levels of TGMP members in Eskişehir and in Diyarbakır. Almost 60 percent of women were stated as

illiterate in the study of (Adaman & Bulut, 2007) and this ratio was 46.2 % in the study of (Döşeyen, 2007). Given that percentage of illiterate women is only 5.4% among Eskişehir TGMP members, it can be said that education level of TGMP Eskişehir members is higher than that of TGMP Diyarbakır members. Moreover, only 2% of members were high school graduates in Diyarbakır but this rate is 25% among Eskişehir members. The education level difference found between these studies reflects the differences between western and eastern regions of Turkey.

2) Current household income and poverty status of members

The current household incomes and family sizes of members reflect the information taken from the participants at the time of the survey. The information about family sizes of members is important for a meaningful analysis of household incomes since income necessary to meet basic needs of a family increases as the size of family increases. Average family size is found as 4 for the participants and the size varies between 1 and 8. Most of the members have families of 3 to 5 person and percentage of crowded families is low:

Table 5.4.Household Sizes of TGMP Members at the Time of the Survey

Household size	Frequency	Percent
1-2	11	12.0
3-5	75	81.5
6-8	6	6.5
Total	**92**	**100**

Monthly income level of members' households differs between 300 and 4,000 TL with an average of 1,185 TL and income levels can be seen in the Table 5.5. 43.5% of members have household incomes between 500 TL and 1,000 TL which shows low level of income among members. Similar result is stated in

the study of (Adaman & Bulut, 2007) in Diyarbakır and it was stated that most of members had low income levels. The numeric comparison of Eskişehir and Diyarbakır members in terms of household incomes is not possible here since income levels of households are not given together with household sizes neither in the study of (Adaman & Bulut, 2007) nor in the study of (Döşeyen, 2007). Therefore, comparing income levels of households which have different number of household members would lead wrong conclusions. Moreover, the study periods of field surveys carried out in Diyarbakır are 2005 and 2006 and there is a time difference between the results of this survey in Eskişehir and surveys in Diyarbakır. However, the authors state that household incomes of members of TGMP in Diyarbakır were low and members were living in poverty.

Table 5.5.Monthly Household Incomes of TGMP Eskişehir Members at the Time of the Survey

Household monthly income	Frequency	Percent
0-500	9	9.8
501-1000	40	43.5
1001-1500	24	26.1
1501-2000	11	12.0
2001-2500	6	6.5
2501-3000	1	1.1
3001-	1	1.1
Total	**92**	**100**

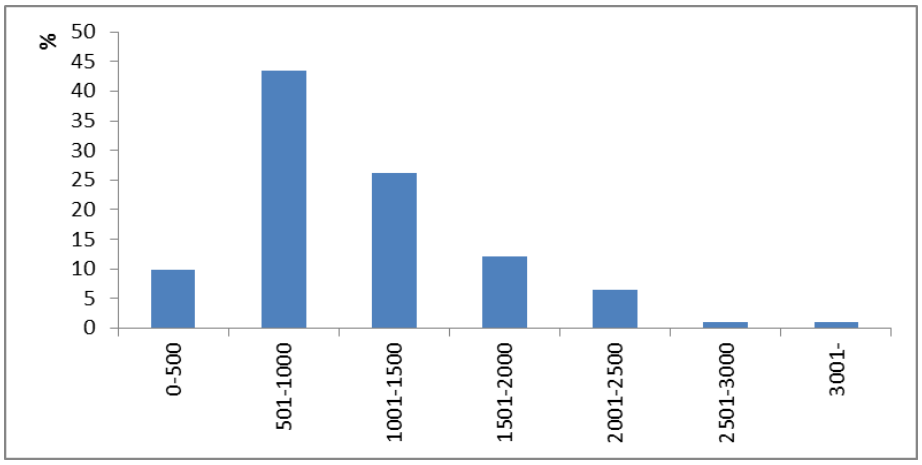

Figure 5.2. Monthly Household Incomes of TGMP Eskişehir Members at the Time of the Survey

If total household income is divided by the number of members in a household, then average monthly income per person can be analyzed. Most of the members of participating households are in the range of 100 TL and 500 TL as for monthly income per person. There are outliers, as representing very poor families and relatively rich families in the categories of 0-100 TL and 1001 and higher per person income level categories.

Table 5.6.Monthly Income per Household Member of TGMP Members at the time of the Survey

Monthly income per household member	Frequency	Percent
0-100	3	3.3
101-200	29	31.5
201-300	18	19.6
301-400	13	14.1
401-500	16	17.4
501-600	3	3.3
601-700	4	4.3
701-800	2	2.2

Table 5.6 (Continued)

Monthly income per household member	Frequency	Percent
801-900	1	1.1
901-1000	0	0.0
1001-	3	3.3
Total	**92**	**100.0**

Stating the household income levels of TGMP members can only give a rough evaluation of poverty level among TGMP members. The more meaningful representation of household incomes may be conducted by comparing the income levels of the members' households with poverty line announced by TURKSTAT according to household size and year which can be found in Appendix C. 59.8 % of the members' households are found to be above the poverty line while the remaining 40.2% are below the poverty line as of the time of survey. This result shows that an important part of TGMP members still lives in poverty.

Another aspect of poverty can be seen as the irregularity of income since volatility of household income may cause serious problems in terms of meeting basic needs of family when there is a lack of income. Regularity of household income is not very low among the participant members but still almost 20% of families live with very irregular monthly income. However, 42.4 % of participants have regular income flow. Still, total percentage of families who have very irregular and irregular income flows, which is 57.6%, is higher than families who have regular incomes:

Table 5.7.Income Regularity of TGMP Eskişehir Members

Regularity of household income	Frequency	Percent
Very irregular	18	19.6
Irregular	35	38.0
Regular	39	42.4
Total	**92**	**100**

3) The year of first microcredit received by members

Most of members could remember the year in which they received their first microcredit. Only 12 respondents could not remember the year and from 80 respondents who were able to remember the year, only 9 members could also remember the month of their first microcredit. The fact that 87% of members could remember the year of their first microcredit shows that members are usually interested in the program they are involved with. This can also result from the fact that microcredit program was very recently launched in Eskişehir. This result is compatible with the results of (Döşeyen, 2007) in Diyarbakır and 88.5% of members there could remember the years they became TGMP members.

Since Eskişehir TGMP started its operations at the end of 2007, most of its members used credit for the first time during 2009 and 2010. This is because of the usual time period necessary for introducing the program to public and familiarizing people with it as Esra Aynalı stated during the interview with her (Aynalı, 2011). Therefore, microcredit program in Eskişehir is in its initial phase and members are affected from the program for 2 years at an average. The number of members who received their first credit in 2011 is small in the sample chosen since the survey is conducted in the middle of 2011 and those members who are not in the program for at least 3 months are excluded in the sampling stage.

Table 5.8.Time of First Microcredit Received by TGMP Eskişehir Members

Year of first microcredit	Frequency	Percent
Don't remember	12	13.0
2007	1	1.1
2008	7	7.6
2009	31	33.7
2010	32	34.8
2011	9	9.8
Total	**92**	**100**

4) Household income and poverty status of members before the use of microcredit

Members are also asked about their family sizes and total monthly household incomes before they got microcredit. Household sizes before microcredit usage do not differ from those at the time of the survey since the microcredit program in Eskişehir is new and members are in the scheme for 2 years at an average only.

Table 5.9.Household Sizes of TGMP Members before Microcredit Usage

Household size	Frequency	Percent
0-2	10	10.9
3-5	76	82.6
6-	6	6.5
Total	**92**	**100.0**

As for household incomes before the use of microcredit by members, only 78 women out of 92 could remember their household income. Again, by dividing total household income with the number of members in a household before the

use of microcredit, average monthly income per person can be analyzed as in the below table:

Table 5.10.Monthly Income per Household Member of TGMP Members before Microcredit Usage

Monthly income per household member	Frequency	Percent
Don't remember	14	15.2
0-100	5	5.4
101-200	32	34.8
201-300	13	14.1
301-400	12	13.0
401-500	11	12.0
501-600	1	1.1
601-700	1	1.1
701-800	2	2.2
801-900	1	1.1
901-1000	0	-
1001-	0	-
Total	**92**	**100.0**

Members are observed mostly to be in the range of 100 TL and 500 TL with regard to monthly income per person before the use of microcredit as in the case of their income status stated as of the time of survey. The more meaningful analysis here is the comparison of household income levels with the poverty lines announced by TURKSTAT according to household size. Each household income is compared with the respective poverty line according to the size of family and the year member took first microcredit. According to this analysis, 52.6 % of the members' households are found to stand above the poverty line and the remaining 47.4 % are below the poverty line as of the time they got first microcredit. Percentage of members' households below and

above the poverty line does not change much before and after the use of microcredit (the percentages are 59.8% and 40.2% for above and below poverty line respectively after microcredit usage) and a more exact analysis cannot be made since some participants did not remember their household incomes before microcredit usage. The important point here is that the change in poverty status of families as being below or above the poverty line after the use of microcredit cannot be associated with microcredit program since analysis done here depends on the total amount of household income and there may be more than one income earning members in a family. Linking the change in whole household income with microcredit program could give a wrong conclusion about the effect of the program and therefore impact of program is tried to be observed in the change of profit amounts of micro businesses for which microcredit is spent by recipient women. The poverty status of families is analyzed here to learn how effectively microcredit program in Eskişehir could reach the poorest people. Microcredit is considered to be able to reach the poorest of the poor people and TGMP also states this as one of its targets. When poverty status of the members surveyed is considered, it is found out that percentages of members below and above the poverty line are almost equal to each other in the time they received microcredit. Moreover, when the difference between the household incomes and respective poverty line is calculated for the members above the poverty line, it is found that there is an average difference of 487 TL, which states that members above the poverty line are well above the respective poverty line and may be regarded as relatively non-poor. It is also stated in the study of Adaman & Bulut (2007) that there were some wealthy members among TGMP Diyarbakır members. The total number of people below complete poverty line in Turkey is about 13 million in 2009 according to Turkstat Poverty Analysis Statistics. If average household size is taken as four, there are about 3.25 million households below the poverty line and TGMP could choose to give priority to these families when extending microcredit in line with its aim to reach the poorest of the

poor. The facts that there were some wealthy members among TGMP Diyarbakır members and that percentages of members below and above the poverty line are almost equal to each other among TGMP Eskişehir members show that TGMP does not differentiate in favor of or against poorest members. Despite the result found in this study and other studies in the literature, TGMP reported that all of its members are among the poorest people in Turkey to the Microcredit Summit Campaign[7]. Since the term "poorest" may cause confusions and may be evaluated differently by different institutions which report to the Campaign, they set the rule as to the use of the term "poorest" by the reporting countries so that "poorest" should represent families whose income is in the bottom 50 percent of all those living below the reporting countries' official poverty line, when they started with their respective programs. Therefore, TGMP should report to this Campaign the number of poorest families that they reached according to this criteria and should use the official poverty line announced by TURKSTAT to determine whether a member stands above or below the poverty line. However, as Esra Aynalı also stated in the meeting hold in Eskişehir, TGMP does not use such a criteria when extending credit to the applicants. Whether a candidate woman is poor enough to get microcredit is determined according to the unique situation and living conditions of that candidate by TGMP field officers and income levels of participants are not documented. In State of the Microcredit Summit Campaign Report 2012, poorest client number of TGMP as of 31 December 2010 is given as 42306 all of whom are women (Maes & Reed, 2012). Since the total client number of TGMP as of 31 December 2010 is 42306, it is clear that TGMP reported all of its members as the poorest ones in Turkey although there are wealthy members among the participants according to the findings here and in literature and did not use the rule set by the Campaign. Moreover, it is stated in the report that data submitted to the Campaign by microcredit organizations is

[7] The information about the Microcredit Summit Campaign is given in section 2.1.4.

corroborated by at least one external organization. Considering the findings in Eskişehir that half of the members were above the official poverty line when they started to use microcredit, the data submitted to the summit and control of external organization on this data must be questioned. This situation raises doubts both about the information provided by the Campaign as to the outreach of microfinance institutions in the world and their success to reach poorest of the poor and about the transparency of TGMP while announcing its activities to public. How TGMP measures the poverty level of its members and what criterion is used when stating a member as poorest is important to reflect actual panorama of TGMP activities because it receives public funds from special public administrations and grants from other institutions with its motto that it reaches poorest of the poor and help them to fight against poverty. The amount of funds received by TGMP from special provincial administrations together with grants of other institutions was 15,311,050 TL in 2010 according to TGMP 2010 Annual Audit Report. There must be a clear methodology that all TGMP officials can use and record the number of poorest clients to the public for efficient allocation of public funds among the programs fighting against poverty.

5) Microcredit usage among members

Since Eskişehir TGMP is a new program, most of the members have been receiving their first or second microcredit. But there are other members who took third or fourth microcredit:

Table 5.11.Number of Microcredit Used by TGMP Eskişehir Members

How many times microcredit received	Frequency	Percent
1	44	47.8
2	29	31.5
3	12	13.0
4	7	7.6
Total	92	100

Total amount of microcredit received changes between 300 TL and 6,200 TL and the distribution of microcredit amount used in the sample is the same as it is in the population since stratified random sampling is conducted at the sampling stage according to microcredit amount used in the population. Almost half of the respondents received microcredit between 100-700 TL since they used microcredit only once and the first microcredit amount is limited to 700 TL.

Table 5.12.Microcredit Amounts Used by TGMP Eskişehir Members

Total amount of microcredit received	Frequency	Percent
100-700	44	47.8
701-1500	4	4.3
1501-2000	20	21.7
2001-3000	11	12.0
3001-4000	8	8.7
4001-5000	4	4.3
5001-	1	1.1
Total	**92**	**100**

With regard to reasons members stated for microcredit usage, 24% of them did not use microcredit for income generating activities but they spent credit for their family needs or gave their own microcredit to other members in the group.

Table 5.13.The Reasons for Microcredit Usage among TGMP Eskişehir Members

The usage of microcredit	Frequency	Percent
Both for business and family needs	15	16.3
For business only	55	59.8
For family needs only	16	17.4
Given to another group member	6	6.5
Total	**92**	**100**

Members who gave their own microcredit to another group member show the fact that some women are involved in the scheme not because they need credit, but just because their neighbors try to form a group of five members to get microcredit. These members stated that, they gave their microcredit to another group member and when it was time to pay weekly installments, this member paid in the name of them. Therefore, about 6.5% of members cannot be considered as benefiting from the program. This finding is original to this study among the studies in the literature about effects of TGMP on participants and gives an important correction when analyzing the success of microcredit programs by their increasing number of members. Moreover, it is seen that 17.4% of members in Eskişehir used microcredit like a consumption credit and did not invest it in income generating activities. Adaman & Bulut (2007) states that many women use microcredit to solve cash flow problems for family needs and one of the most important problems of families which do not have regular income sources is that they do not have savings enough to meet large expenses. Women use microcredit when they are in urgent need of cash for reasons like repairing their houses, making weddings and health expenses. They use all of microcredit when they are in urgent need and repaying it in small installments becomes easier for them after they solve cash problem. In other words, some women see microcredit as a kind of consumption credit rather than a credit for starting their own businesses (Adaman & Bulut, 2007). Although these families may be regarded as benefiting from the scheme when they needed cash for their expenses, microcredit could not affect income levels of these families since it was not invested in any business. Use of microcredit for family needs is not unique to Eskişehir members and studies in Diyarbakır give similar results. For example, about 82% of women used microcredit for income generating activities and the remaining ones used it for family needs in Diyarbakır according to the study of (Adaman & Bulut, 2007). Similarly, it is found in the study of (Döşeyen, 2007) that about 25% of members used microcredit for meeting family needs in Diyarbakır. Moreover, there are examples in the

literature for the use of microcredit in activities other than income generating ones in the world. For example, the study of (Mamun et al., 2011) in Malaysia shows that 54.65% of the participants used loans on income generating activities and remaining ones used at least a part of the loans on non-income generating activities. These findings show that microcredit receivers do not participate in the programs only for starting small businesses of their own but also for using microcredit as a usual consumer credit provided by traditional banks.

Since microcredit cannot affect business income of members when it is not used in income generating activities of members, only 70 members out of 92 were asked about their business returns for evaluating microcredit impact on them. 22 members, who did not use microcredit for business needs, were not included in the business related questions part of the survey.

59.8% of members stated that they used all of microcredit they received for business needs and 16.3% of members used some part of microcredit for family needs and some part of it for business needs. Among 70 members who used a part or all of microcredit for business needs, most spent about 75-100% of the total amount of credit they received on their income generating activities. Therefore, spending microcredit for business purposes may be stated as high among TGMP members. This is an expected result if poverty status of members and small amounts of microcredit given is considered. Since microcredit amounts provided is already very small, with first credit amount limited to 700 TL, it barely meets financing needs of members to set up or develop their micro businesses. Adaman & Bulut (2007) states that lack of capital was dominant problem of women in Diyarbakır when starting a business. 25.7% of them stated that they were not able to buy goods in large amounts and 28.6% could not find credit to start their businesses. This means that 55% of women had capital problems in Diyarbakır and microcredit helped them to solve this by providing start-up capital.

Table 5.14.Percentage of Microcredit Spent for Business Purposes by TGMP Eskişehir Members

Percentage of microcredit used in business related activities	Frequency	Percent
0%-25%	0	0
25%-50%	7	10
50%75%	6	8.6
75%-100%	57	81.4
Total	**70**	**100.00**

Another study supported by Istanbul Chamber of Commerce also reveals capital problems faced when setting up a business. The purpose of the study by Korkmaz et al. (2004) is to discuss various aspects of microcredit programs for unemployed and poor people living in Istanbul. Data is collected by questionnaires, interviews and observations. The population of the study is stated as 15 million unemployed and poor people living in Turkey and having possibility of immigrating to Istanbul. The sample consists of 1000 people living in various districts of Istanbul chosen randomly. Unemployed people, people employed but not content with their jobs and small scale entrepreneurs comprise these 1000 people with 505 men and 495 women participants. It is found out that about 54% of participants stated lack of capital among the problems faced with when setting up a business. 25% of them mentioned bureaucratic obstacles and 18.6% of them high tax rates among the problems arising when setting up a business. Therefore, lack of capital can be evaluated as dominant problem faced by small scale entrepreneurs and microcredit programs try to solve this problem. However, the minimum credit amount necessary for setting up a small scale business was stated as 1000 TL and most of participants stated they needed higher amounts of capital for this. Therefore the minimum amount of microcredit offered to poor people should be 1000 TL at least (Korkmaz et al., 2004).

6) Microbusinesses of members

Members who used microcredit for income generating activities all stated that they invested microcredit in one small business and there were not any members who were doing more than one job. This is an expected result since small amount of credit provided is barely enough for supporting a business and time constraint of members may prevent them from involving more than one business at a time. Most of the income generating activities of members is in informal sector and micro scale activities. These activities may be named as microenterprises according to definition given in (Sebstad, Neill, Barnes, & Chen, 1995). It is stated in the study of (Sebstad et al., 1995) that many microenterprises employ just one person, the owner-operator or "micro entrepreneur". Some microenterprises may include unpaid family workers and several hired employees. Although there is no unique feature of microenterprises that distinguish them from small enterprises, USAID has adopted a threshold of ten employees including the owner- operator and family workers as the threshold for an enterprise to be counted as micro (Sebstad et al., 1995).

Income generating activities of members can be classified according to NACE Rev.2, which is the "Statistical Classification of Economic Activities in the European Community, Revision 2" and obligatory for use in member states of European Union and also used by TURKSTAT[8]. Activities are classified in this system according to their characteristics in four levels, with level 1 representing the most general name for related activities and level 4 representing the smallest class of activities.

[8] The details of NACE Rev.2 classification can be found in the link:

http://ec.europa.eu/eurostat/ramon/nomenclatures/index.cfm?TargetUrl=LST_NOM_DTL&StrNom=NACE_REV2&StrLanguageCode=EN&IntPcKey=&StrLayoutCode=HIERARCHIC

When activities are classified in level 4 of NACE Rev.2 classification, details of jobs may be represented more clearly as can be seen from the Table 5.15. Most of members are involved with traditional lace making and knitting baby shoes, waistcoat, bootee etc. or buying cosmetic products, cleaning products, food supplements, small kitchen appliances and textile from wholesalers and retail sale of them in near neighborhoods. Therefore, activities concentrate on the categories of "Manufacture of other textiles n.e.c." and "Other retail sale not in stores, stalls or markets ". The categories involved here are explained in detail in the Appendix A as in their original format in NACE Rev.2 classification for the convenience of the reader.

Table 5.15.Income Generating Activities of TGMP Eskişehir Members According to NACE Rev.2 Classification, Level 4

NACE Rev.2 Code	Activity description	Frequency	Percent
01.13	Growing of vegetables and melons, roots and tubers	1	1.4
10.73	Manufacture of macaroni, noodles, couscous and similar farinaceous products	1	1.4
13.99	**Manufacture of other textiles n.e.c.**	**13**	**18.6**
14.13	Manufacture of other outerwear	4	5.7
14.14	Manufacture of underwear	2	2.9
14.39	Manufacture of other knitted and crocheted apparel	2	2.9
16.29	Manufacture of other products of wood; manufacture of articles of cork, straw and plaiting materials	1	1.4
47.11	Retail sale in non-specialized stores with food, beverages or tobacco predominating	1	1.4
47.62	Retail sale of newspapers and stationery in specialized stores	1	1.4
47.71	Retail sale of clothing in specialized stores	1	1.4
47.72	Retail sale of footwear and leather goods in specialized stores	1	1.4

Table 5.15 (Continued)

NACE Rev.2 Code	Activity description	Frequency	Percent
47.73	Dispensing chemist in specialized stores	1	1.4
47.78	Other retail sale of new goods in specialized stores	1	1.4
47.81	Retail sale via stalls and markets of food, beverages and tobacco products	1	1.4
47.82	Retail sale via stalls and markets of textiles, clothing and footwear	5	7.1
47.99	**Other retail sale not in stores, stalls or markets**	**25**	**35.7**
56.10	Restaurants and mobile food service activities	3	4.3
56.29	Other food service activities	1	1.4
95.29	Repair of other personal and household goods	2	2.9
96.02	Hairdressing and other beauty treatment	3	4.3
	Total	**70**	**100**

These subcategories are classified under bigger categories representing main activity classes in the NACE Rev.2 classification system. According to this classification, most of the TGMP members in Eskişehir are in manufacturing and trade sectors as can be seen in the below table. The result is similar to that obtained in Diyarbakır by (Döşeyen, 2007); 50.2% of women deal with trade activities and 33.6% with manufacturing in Diyarbakır according to this study.

Table 5.16.Income Generating Activities of TGMP Eskişehir Members According to NACE Rev.2 Classification, Level 1

Sector	Frequency	Percent
Agriculture, forestry and fishing	1	1.4
Manufacturing	23	32.9
Wholesale and retail trade	37	52.9
Accommodation and food service activities	4	5.7
Other service activities	5	7.1
Total	**70**	**100**

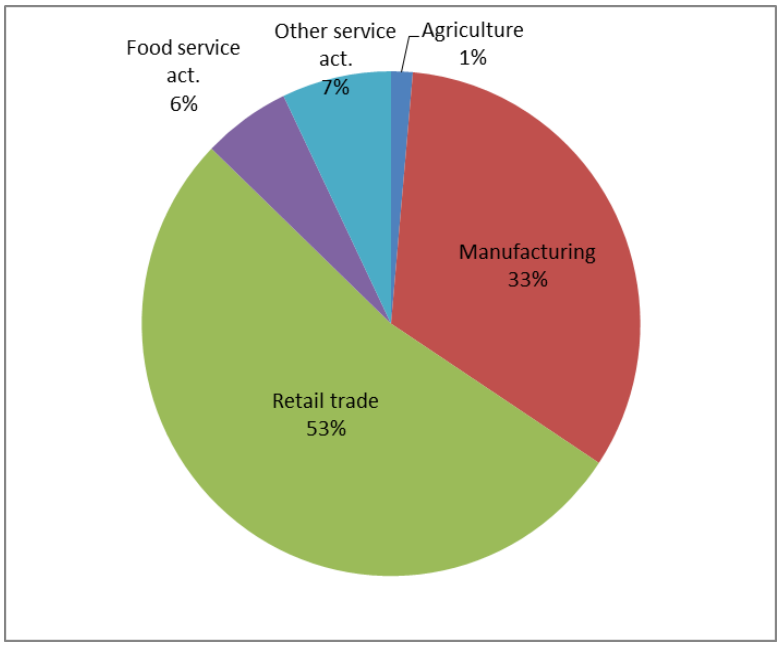

Figure 5.3. Income Generating Activities of TGMP Eskişehir Members

Since these categories include a broad range of activities, it would be convenient to explain the kinds of activities done by TGMP Eskişehir members in each group. In agriculture category, one member grows vegetables in their garden working together with her family and then sells them to wholesalers. In manufacturing category, most of the members are involved with traditional lace making and knitting baby shoes, waistcoat, bootee etc. and there are some members sewing clothes although their numbers are negligible. Members who buy cosmetic products, cleaning products, food supplements, small kitchen appliances and textile from wholesalers and make retail sale of them in near neighborhoods or in bazaars and shops are in trade category. In accommodation and food services category, there is not any member dealing with accommodation services but they are involved with food services for immediate consumption like preparing home-made meals and desserts for working class people and selling fast-food in school canteens. Women who are

involved with hairdressing and tailoring are grouped into other services category[9].

These sectors might be expected to differ in terms of how much work load they necessitate. In small businesses most of women, 62 out of 70, work alone and only 8 women work together with one of her family's members. If weekly working hours spent for each small business by members and their family members are added, total working hours spent for each small business can be obtained. Total of weekly working hours spent for small businesses according to business sector is represented in the below table:

Table 5.17.Total of Weekly Working Hours Spent for Microbusinesses According to Business Sector

Sector	Mean	Median	Std. Deviation	Min.	Max.	N
Agriculture	84.0	84		84	84	1
Manufacturing	34.1	30	16.4	15	72	23
Retail trade	31.6	20	26.3	6	86	37
Food service activities	51.3	35	35.9	30	105	4
Other service activities	54.4	60	26.0	21	84	5

It is seen that people who are in service sectors work more than those in manufacturing and trade sectors at first glance, however mean values are misleading and it should be noted that in each sector, there are huge differences between minimum and maximum working hours spent for these businesses. Although, service sector contains very few observations, there are big differences among working hours spent for these jobs too as can be observed

[9] "Accommodation and food service activities" category will be called as "food service activities" going forward for the sake of simplicity. Similarly "Agriculture, forestry and fishing" category will be called as "Agriculture" and "Wholesale and retail trade" as "Retail trade".

from minimum and maximum of total hours. Therefore it can be said that women themselves decide how much to work regardless of their sectors.

NACE Rev.2 classification system is used with the purpose of international classification of activities of members for giving a general evaluation. Income generating activities of members can also be classified in their own nature and framework giving the result in the table below:

Table 5.18.Income Generating Activities of TGMP Eskişehir Members

Activity description	Frequency	Percent
Retail sale of cosmetic products, cleaning products, food supplements, small kitchen appliances	18	25.7
Retail sale of clothing, underwear, home textile products	17	24.3
Knitting lace, embroidery, cardigans, booties	15	21.4
Tailor, sewing jobs, fabric painting, wood decorating	8	11.4
Food services	3	4.3
Running stationery, grocery, canteen, shop	5	7.1
Hairdressing	3	4.3
Agriculture	1	1.4
Total	**70**	**100**

Most of Eskişehir TGMP members who got microcredit do small businesses like traditional lace making and knitting baby shoes, waistcoat, bootee etc. or retail sale of some products in their neighborhoods which are easy to set up in informal sector although there are various jobs that can be set up with microcredit investment. Korkmaz et al. (2004) state that photography, homemade lunches and desserts, small scale gardening, fruit and vegetable cultivation, arboriculture, culture fishing, small-scale repair work, small-scale cleaning jobs, production of canned food, jam making, manufacture of hair band, knitting, lace making, candles, ceramic production and processing, leather processing, manufacture of jewelry, woven carpets and rugs,

woodworking and painting, glass processing and painting are examples of small businesses that can be set up with microcredit (Korkmaz et al., 2004). Concentration of businesses in microcredit sector on lace making-knitting or retail sales in women' neighborhoods may result from lack of capital for setting up large scale businesses and lack of experience of women in various business sectors other than traditional lace making or retail sale of some products in their neighborhoods without renting a shop. Women may choose these kinds of activities since these are the only ones with which women are familiar and since they do not want to take risk of doing different jobs. This situation is not special to TGMP Eskişehir members. For example, 21.5% of women in Diyarbakır deal with traditional handicraft according to (Döşeyen, 2007). Adaman & Bulut (2007) states that most women who use microcredit tend towards traditional businesses and produce similar products. They prefer businesses that can be run at home like knitting, embroidery, sewing and making crafts. These members do not look at demand-supply balance in the market or if market is saturated for these kind of products and they merely start these businesses since they have the ability of making traditional handicraft. There are some women who make different jobs but their numbers is low. Savlı (2008) supports these views and mention that most common practices for TGMP Diyarbakır members to use microcredit are sewing/knitting businesses. She explains that women who had no experience in the labor market find this option easier since they do these activities even they do not earn money out of it. She further explains that these jobs are more convenient for them because they are doing these jobs inside their houses and by this way they can also care for their children (Savlı, 2008).

The income generating activities of members can also be evaluated by categorizing them according to the education levels of members and it can be analyzed if there is a tendency for members having higher education level to do different jobs other than traditional, low value added ones. In the cross table of education level versus job categories, low education level represents illiterate,

members who are only able to read and primary school graduates while high level represents high school and university graduates. Members having high education level do not differentiate from the others as most of them are included in manufacturing and trade categories. Percentage of high education members in service activities seems to be higher than that of low education members but this is not conclusive evidence since only total of 9 people are in the service sector and data is highly concentrated on manufacturing and trade sectors.

Table 5.19.Cross Table of Education Level versus Job Categories of TGMP Eskişehir Members

Education level:		Agricult.	Manufac.	Retail trade	Food service act.	Other service act.	Total
Low	Count	0	15	26	1	2	44
	% in low	0.0%	34.1%	59.1%	2.3%	4.5%	100.0%
High	Count	1	8	11	3	3	26
	% in high	3.8%	30.8%	42.3%	11.5%	11.5%	100.0%

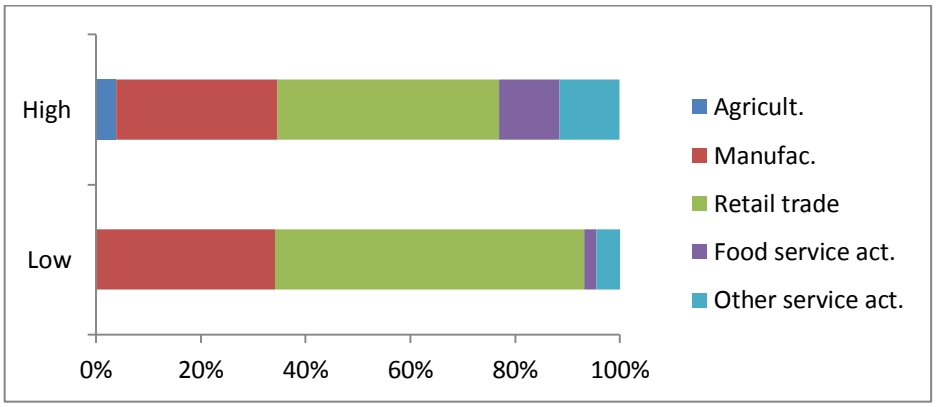

Figure 5.4. Education Level versus Job Categories of TGMP Eskişehir Members

Another aspect of microbusinesses conducted by recipient women is sales techniques adopted. When describing their works, most of the members stated that they were selling their products in their near neighborhood or to people they know, that is they do not involve in active sales in market, exhibitions, streets or shops. The situation is similar in Diyarbakır. According to the study of (Adaman & Bulut, 2007), 43.6% of TGMP Diyarbakır members sold their products only to their neighbors and others were making sales in local bazaars, small shops or by visiting houses in their near environment.

Table 5.20.Sales methods of TGMP Eskişehir Members

Sales other than their own environment?	Frequency	Percent
Yes	25	35.7
No	45	64.3
Total	**70**	**100**

Most of members have not got any vocational training for their small scale jobs but there are some members who got some kind of training. Members who got training mentioned that they got training related with their jobs in public training centers like sewing-embroidery courses, in their previous working places like hairdressing and sewing or some firms gave them basic training during which they taught features of their products before making these members sales representative.

Table 5.21.Vocational Training Status of TGMP Eskişehir Members

Training status	Frequency	Percent
Yes	24	34.3
No	46	65.7
Total	**70**	**100**

Members are also asked if they began doing their small businesses after they received microcredit or they were doing these activities also before they received credit. Percentage of members does not differentiate much between old and new job categories as can be seen in the next table:

Table 5.22.Commissioning Status of Microbusinesses of TGMP Eskişehir Members

Status of job	Frequency	Percent
New	32	45.7
Old	38	54.3
Total	**70**	**100**

7) Income generated from microbusinesses of members

When they are asked about their profits from microbusinesses involved, most of the members stated that they were making profits. Only 6 members could not answer this question, and it is noteworthy that 5 of these members are primary school graduates and one of them is high school graduate.

Table 5.23.Profit Status of Microbusinesses Involved by TGMP Eskişehir Members

Profit Status	Frequency	Percent
Profit	54	77.1
Loss	1	1.4
Zero profit	9	12.9
Do not know	6	8.6
Total	**70**	**100**

Although most of members stated that they were making profit from their jobs, monthly profit levels are not high and distributed as in the next table:

Table 5.24.Monthly Profit Levels of Microbusinesses Involved by TGMP Eskişehir Members

Profit level (TL)	Frequency	Percent
Zero profit, loss and do not know	16	22.9
1-100	13	18.6
101-200	17	24.3
201-300	5	7.1
301-400	2	2.9
401-500	4	5.7
501-1000	10	14.3
1001-2000	3	4.3
Total	**70**	**100**

Very high percentage of members, about 43%, is doing jobs with monthly profit of at most 200 TL. When considered together with members making zero profit or making loss, 57.2% of members who invested microcredit in income generating activities may be considered to be involved in activities which do not generate significant income for them. The situation is very similar in Diyarbakır as expected because characteristics of jobs done by members are similar in two regions. Adaman & Bulut (2007) states that most women use credit in low value added jobs like knitting, sewing, hairdressing, peddling and selling dessert. These small scale jobs bring very low profits because these products are generally produced with labor-intensive methods. Moreover, one of the most important problems of women who start a business with microcredit is marketing and sale of their products. Since there are a lot of women producing the same kind of handicraft like lace and embroidery in one district, there emerge marketing problems and selling these products becomes harder because of competition. Because of these reasons, these businesses do

not bring much profit enough to live on and pay the interest and women have difficulty of making weekly repayments (Adaman & Bulut, 2007). These findings support the view of Gökyay (2008) about microcredit programs. Gökyay (2008) states that entrepreneurship is not only related with financing facilities and having knowledge about market that will be involved with and marketing, sales techniques is very important for the success of women who use microcredit. He proposes that these women can be organized in cooperatives that will enable them to sell in larger scale markets and may be to foreign markets (Gökyay, 2008). Korkmaz et al. (2004) share similar idea and explain that the demand for cultural goods produced at houses differs between developed countries and developing countries. Domestic demand for cultural goods having local nature is very low in Turkey. Therefore, exporting goods produced with microcredit can be considered for supporting women. Non-governmental organizations and professional organizations can provide trainings and services for the exportation of cultural goods produced at home by women (Korkmaz et al., 2004). Considering the importance of marketing problem, some microfinance institutions in the world started to provide marketing opportunities for their members. For example, AKRSP in Pakistan made intermediation between women's organizations founded by its members and marketing cooperations to make easier the sale of goods produced by its members. BRAC in Bangladesh tried to direct women to jobs other than traditional ones and solve the problem of marketing in this way. However, TGMP does not have a plan to involve with marketing problems of its members (Adaman & Bulut, 2007).

Another method suggested to overcome the problem of low profit levels obtained from microbusinesses of poor women is training TGMP members. Many experts who are specialized in fighting against poverty argue that members of TGMP should be given vocational training and should be directed to different areas of business for making the project really successful. Members might be trained for services which are demanded in their regions and have

high profit potential for increasing their productivity. However, Aziz Akgül thinks that TGMP should not be and will not be involved with training of members since microfinance organizations generally are not supposed to do that. He argues that microcredit organizations should not spend their limited sources for training expenses but non-governmental organizations other than TGMP should provide these trainings. However, non-governmental organizations were not interested in providing these trainings in Diyarbakır and Akgül hardly convinced one of them to provide a two-day training to increase efficiency of members. However, the language used during the training was too technical for poor women to understand and members could not get any benefit from this training. Moreover, some women did not know Turkish and therefore did not understand even a single word of the training (Adaman & Bulut, 2007).

Although many members obtain very low profit levels from their microbusinesses, there are also members making profit above 500 TL in a month and these represent 18.6% percent of members who used microcredit for income generating activities. Therefore, it cannot be said that all of TGMP members deal with jobs that do not bring any benefit to them. However stressing that not many of TGMP members can achieve significant amount of profits is important to understand the actual effects of the program apart from those stated in mass media. Baltacı (2009) states that the news about successful women among microcredit participants is prominent in media news in Turkey. In this news, microcredit is mentioned as very powerful instrument against poverty but neither the reasons behind poverty nor the necessity of various policies to fight against poverty are mentioned. The message given is that women can get rid of poverty by taking credit; poor people are responsible from their own destiny and they can choose their own ways to recover from poverty. However, problems of microcredit receivers or unsuccessful members are not mentioned (Baltacı, 2009). The findings here show clearly that the real effects of the program are not so brilliant. Analysis of profit level of members

with regard to other variables which may affect it will be done later in this chapter.

8) Change in the profit levels of members after receiving microcredit

Members were also asked about profit levels before their use of microcredit and most of them were able to remember their profit levels since the program is very new in Eskişehir. However, there were 14 members who could not tell their profit levels before the use of microcredit. Change in the profit levels of income generating activities of members is then calculated as the difference between profit levels before and after microcredit intervention as usual in the before-after analysis. Those members who started to do a job after they received microcredit were not doing these jobs before microcredit intervention and hence no profit or loss before the intervention is asked for them and amount of change microcredit has on their profits is simply their profit level today. Change amount is observed to be concentrated on very low levels but there are also members who have achieved significant changes in their profit levels:

Table 5.25.Change in Profit Levels of Microbusinesses after Microcredit Usage

Change in profit	Frequency	Percent
Do not remember	14	20
(-100) - (-1)	2	2.9
0	16	22.9
1-100	12	17.1
101-200	11	15.7
201-300	2	2.9
301-400	2	2.9
401-500	4	5.7
501-1000	4	5.7
1001-2000	3	4.3
Total	**70**	**100**

The impact of microcredit on *household income* is similar in Diyarbakır. Although many members stated that their household incomes increased after the use of microcredit, amount of change was very small. Almost 75% of members stated that there was a very small increase in their incomes and only 3.3% answered as their incomes were increased substantially. 20.7% of members did not experience any change and only 1.3% percent stated that their incomes were lower. Therefore, it can be said that household incomes of women who used microcredit in Diyarbakır increased but the amount of change was small. But still this was important since one is bigger than zero, and women who used microcredit stated that they can meet their basic needs at least (Adaman & Bulut, 2007). The same result is found in the study of (Savlı, 2008). It is seen that microcredit program increased income of households in Diyarbakır but there was not a dramatic improvement in members' financial situation because micro businesses founded using micro credit are usually low profit businesses which makes harder to increase income of these families (Savlı, 2008).

Since it was expected that members would have difficulties in calculating and remembering their profit levels numerically although an approximate number would also be enough, it is asked qualitatively if they feel better or worse in terms of profit levels after the intervention of microcredit. The reason for asking this qualitative question is to get more answers with regard to the effect of microcredit and to check numeric answers of members. Members who stated lower profit numbers before the use of microcredit than after the use of it are expected to answer as having positive changes and vice versa. As expected, more members were able to answer this question than members who were able to state profit levels numerically and also there were no inconsistency when answers to this question are compared with profit levels stated. Only one member could not determine if her situation with regard to the profitability of her job is now better or worse and most of the members stated positive change:

Table 5.26.Qualitative Change in Profit Levels of Microbusinesses after Microcredit Usage

Comparison of profit level before and after microcredit	Frequency	Percent
Better	47	67.1
No change	19	27.1
Worse	3	4.3
Do not know	1	1.4
Total	**70**	**100**

67% of members who used microcredit for business purposes experienced positive change in their profit levels. It can be said that household incomes of these members are affected positively as a result of participating in microcredit program. However, the wording here is important and should be explained further. It cannot be said that household incomes of participating members increased as a result of microcredit program but it can only be said that household incomes were positively affected by the program. The difference here results from the fact that usage of microcredit can affect household income only through its investment in businesses and effect in profit levels. Household incomes may increase or decrease for many reasons other than the profits of small businesses on which microcredit is invested. If some members of a household are fired and total household income of a family decreases although profits from microbusiness increase after microcredit usage, linking decrease in household income with microcredit usage would give a totally wrong conclusion about effects of the program. This study differs from the studies of (Adaman & Bulut, 2007) and (Döşeyen, 2007) in Diyarbakır in this aspect because these studies focus on change in total household incomes of participants and link it to microcredit usage. In short, the effect of microcredit usage on profitability of small businesses and hence on household incomes is positive for 67% of members using microcredit for business needs in Eskişehir.

The result found here is compatible with the findings of (Döşeyen, 2007) in Diyarbakır. It is stated that 77.9% of all TGMP Diyarbakır members increased their business profits after microcredit usage and for 21.2% of members, business profits did not change (Döşeyen, 2007). This study also differs from the studies in Diyarbakır in that it differentiates members who used microcredit for business needs from members who did not. Although it is stated in (Döşeyen, 2007) that there were members who used microcredit for family needs among TGMP Diyarbakır members, change in business profits of these members too is linked to microcredit. However, this study links only the change in business profits of members who used credit for business needs to microcredit and this methodology brings an important change in the interpretation of the effects of the program. It cannot be said that 67% of households receiving microcredit are affected positively by the program in terms of their household incomes but it can only be said that 67% of households using microcredit for business needs are affected positively. It should be remembered that survey was conducted on 92 women and 22 of them either used microcredit for family expenses or gave their credits to other group members. If these members are counted as not affected by microcredit in terms of their household incomes, total number of members who are not affected positively by the program increases to 44; 47.8% of all participants. That is, 51.1% of participating members are positively affected while 47.8% of them are not. These numbers result in very important corrections when evaluating microcredit programs. The number of members reached by TGMP is increasing in Turkey and this might be seen as a success of program. Moreover, TGMP itself gives statistics about its increasing number of members and stories of some successful members are explained in annual reports. However, representing only good side of whole picture may cause misunderstandings about the success of the program. It should be kept in mind that only half of members using credit from TGMP Eskişehir are affected

positively in terms of their business profits and household incomes and therefore the program is not a remedy for poverty of all of its members.

Members explained the factors affecting their profitability in the jobs. There are three main reasons stated by members who are positively affected by the program. One of them is buying goods and inputs from wholesalers at bigger amounts and in cash, therefore getting a discount and increasing the diversity of products which enables them to sell more. This reason gives clear evidence about the positive effect of microcredit in small businesses of participants since it serves as capital which members lack. The similar result is also found in the study of (Snodgrass & Sebstad, 2002) in India, Peru and Zimbabwe which states that microcredit helped receivers increasing their working capital, buying more inventory goods at lower prices and increasing their sales. The second reason stated is having good customer relations and being well-connected to many people. The last reason is working much, and making high quality works.

There are several reasons described for not having any change in the profitability of the jobs after microcredit intervention or not being able to make profit from newly started jobs. One of the reasons stated is choosing wrong job in terms of demand from their near environment and competition conditions. They stated that there were many people doing the same job of their own and competing with them was so hard that they could not obtain any profit. Members stating this reason were doing retail sale of cosmetic, cleaning products and kitchen appliances and sewing jobs. The other reason is that sales did not increase although they increased their product diversity and microcredit helped them to buy products from wholesalers. The members stating this reason also mentioned that sales were dependent to customers and they could not sell more even if they increased their goods. One of the members expressed that municipality officials did not allow her to sell in streets and she could not increase her sales. Three members out of 19 which experienced no change after

microcredit intervention see economic crisis and recession as the reason for their failure to make more profit. Only two members stated that microcredit offered to them was not enough to make a significant increase in their product diversity or to rent a hairdresser saloon.

It should be noted that, there are three members whose profitability status became worse after microcredit intervention. One of these members was in trade sector, trying to sell home cleaning products in her neighborhood and decided to do this job after taking microcredit. She stated that she chose wrong products because she was living in a very low income level district and her neighbors did not demand high quality-high price products. Also, she was not very capable of selling her products since she was not very educated and did not have ability of persuasion, in her words. She quitted this job after seeing that she was making loss and she had to use products herself. Other member was selling cleaning products in a small shop and used microcredit to buy additional products. She stated that she made profit both before and after the use of microcredit but her profit level fall in recent years since municipality officials prohibited the sale of one of her products which is detergent in open bags. Therefore, this woman can be said not to be adversely affected by microcredit but by market conditions. The last member was sewing clothing in a work place and selling them to people who have stalls in local bazaars. She stated that her sales do not cover the rent of work place therefore she may consider to continue this job in her home in near future.

Change in profit levels will be analyzed in terms of other variables which may affect it later in this chapter.

9) Permanence of microbusinesses

Permanence of microbusinesses set up by TGMP members is questioned in this study as different from the other studies in literature on the effects of TGMP in Turkey. It is found that 35.7% of members who used microcredit for income generating activities do not continue doing their jobs. At first, it may be

considered that members who do not make profit may stop operating as expected but most of them were actually making profits when they quitted their jobs:

Table 5.27.Cross Table of Profit Status and Permanence of Microbusinesses

Profit status of jobs		Continuing	Not continuing
Profit	Count	42	12
	% in profit	77.8%	22.2%
Loss	Count	0	1
	% in loss	0.0%	100.0%
Zero Profit	Count	0	9
	% in zero profit	0.0%	100.0%
Do not know	Count	3	3
	% in do not know	50.0%	50.0%
Total	Count	45	25
	% within total	64.3%	35.7%

As can be seen, 12 members out of 25 who quitted their jobs were making profits. All members making loss or no profit stopped working as expected but the reasons behind quitting jobs while making profits must be analyzed. 4 women among 12 members who quitted their jobs although they made profit stated that they stopped working because they were pregnant, they must deal with children or old relatives in their households. 3 women found a job and became wage labors which shows that they prefer working in another job to be self-employed since profits of their small businesses are very low; being 500, 200 and 120 TL for these three members which are below minimum wage rate in Turkey. These women can be example for the argument of Gökyay (2008) who states that women doing small businesses in informal sector deal with these jobs not because they prefer them but because they do not have any other

option to earn income. 2 women stopped working since their husband did not want them to work and 2 members stated that their job was really tiring and they quitted them.

10) How much do microbusiness owners work?

Women who run microbusinesses usually work for themselves or together with family members and do not hire people outside their family since the scales of their jobs are not enough for this. This can easily be observed among the members surveyed since only one member out of 70 hired an employee for her work. This employee was working 20 hours in a week and paid in cash.

In small businesses of 70 women surveyed, 78 people work since some members work together with other family members. Weekly working hours of these people are very low as can be seen in the next table if compared with 40 hours per week criteria generally applied for working class:

Table 5.28.Weekly Working Hours of Microbusiness Workers

Weekly working hour	Frequency	Percent
0-20	26	33.3
21-40	33	42.3
41-60	10	12.8
61-	9	11.5
Total	**78**	**100**

Only 24.4% of members work above 40 hours in a week and among 33 members in the 21-40 hours category, only 5 people work exactly 40 hours per week. Therefore, it may be stated that people working in microbusinesses for which microcredit is invested are generally underemployed. Time related underemployment is defined as persons who work less than 40 hours in a week but who are willing to work additional hours and available to do so by

TURKSTAT (Turkstat Metadata on Labor Force Statistics, n.d.). Since it is not known whether these women are willing to work 40 hours in a week, it can not be argued that all women who work less than 40 hours are underemployed.

37 people started to work in these microbusinesses after they received microcredit and their weekly working hours are also less than 40 hours for 78 percent of them. Microcredit seems to make 37 people out of 92 surveyed self-employed, about 40 percent, but it should be considered that these newly self employed 37 people were not asked if they were working somewhere else or in any other jobs before the microcredit intervention. Therefore, it cannot be concluded from this study that microcredit decreased unemployment among its members but it can be stated that the program has the capacity of making about 40% of its members to be involved in some kind of income generating activities.

5.2. ANALYSIS OF PROFIT LEVELS OF MICROBUSINESSES

Profit levels of microbusinesses and its relation with other variables which may affect it are analyzed in this part as different from the other studies found in the literature on the effects of TGMP on members. Although it is stated in (Adaman & Bulut, 2007) that income generating activities of TGMP Diyarbakır members bring very low profits, profit levels are not quantified and not analyzed in terms of variables which may affect it.

1) Profit amounts of microbusinesses and minimum wage level

Profit levels are known to be skewed in a population like income level. Therefore, normality assumption required for parametric tests may not hold for analyzing profit levels. Moreover, 6 women out of 70 could not answer the question about profit levels of their microbusinesses and only 64 women could tell their profit levels and hence there are not enough observations to apply

central limit theorem for the use of parametric tests. When normality test is applied for profit level data of 64 women, it is observed that distribution is not normal:

H_0: Profit level data is not different from normal distribution.

H_1: Profit level data is different from normal distribution.

Table 5.29.Normality Test for Profit Level Data

One-Sample Kolmogorov-Smirnov Test		
Profit Level		
N		64
Normal Parameters	Mean	323.59
	Std. Deviation	404.405
Kolmogorov-Smirnov Z		1.96
Asymp. Sig. (2-tailed)		0.001

The p-value calculated for Kolmogorov-Smirnov test is 0.001, which is less than 0.05, and H_0 is rejected. Therefore, non-parametric tests are appropriate when analyzing profit level data.

It is stated in descriptive statistics that profit levels are not high in microbusinesses carried out by women. This relative conclusion can be reinforced by comparing profit levels with minimum wage level officially stated in Turkey. Net minimum wage level for workers above 16 year-old is 658.95 TL for the period 01.07.2011-31.12.2011 in Turkey (Ministry of Labor and Social Security Minimum Wage Calculation, 2011).Those women who do not make profit from their businesses would obviously be better off if they were employed in a job offering minimum wage. The important analyze is to compare positive profit levels of women with minimum wage so that one can

argue that these women would be better off if they were employed in a job offering minimum wage.

Out of 54 women making profit in their jobs, 47 were making profit less than 658.95 TL and only 7 of them, 13 percent, were gaining profits above the minimum wage level. Average profit level among these 54 women is 346 TL, which is well below the minimum wage. The significance of difference between profit amounts and minimum wage rate can be tested with Wilcoxon Signed Ranks Test:

H_0: There is not a significant difference between profit levels and minimum wage.
H_1: There is a significant difference between profit levels and minimum wage.

Table 5.30.Wilcoxon Signed Ranks Test Results for Profit Level and Minimum Wage Comparison

Ranks	**N**	**Mean Rank**	**Sum of Ranks**
Negative Ranks	7[a]	27.43	192
Positive Ranks	47[b]	27.51	1293
Ties	0[c]		
Total	54		
Test Statistics			
Z	-4.747		
Asymp. Sig. (2-tailed)	0.000		

a. minimum wage < profit level
b. minimum wage > profit level
c. minimum wage = profit level

According to test results, the p value calculated is 0.00 which is less than 0.05, and H_0 is rejected.

Since profit levels of microbusinesses are below the minimum wage level for most of them, poverty reduction strategies which focus on generating

employment opportunities for these women could be considered as an alternative to microcredit since these women would be better off if they were working in a minimum wage job. However, it is not known if all of these women would be willing to work in another job instead of doing traditional works mostly in their home or neighborhoods. Still, employment opportunities for these women should be increased so that they will be able to choose between self-employment opportunities and other jobs. It should be noted at this point that there were some women who quitted their small businesses when they found a job in the market.

Weekly working hours of members are analyzed in the previous section and it is found that most of members were working less than 40 hours in a week. Therefore, one may argue that profit levels of these microbusinesses are below the minimum wage level because they are not working in a full time basis. Profit levels can be analyzed by dividing them with monthly working hours and obtaining approximate hourly profits of the small businesses of women. Then, the hourly profits could be compared with minimum hourly wage level which is 4.118 TL with the assumption of 40 working hours in a week.

Most of the members' hourly profit levels are found to be below the minimum hourly wage level, with only 13 of 54 small businesses giving hourly profit above the minimum level. The mean of hourly profit levels is calculated as 3.05 TL which is well below the minimum hourly wage and significance of this difference can be tested again by using Wilcoxon Signed Ranks Test with the same hypothesis above:

Table 5.31.Wilcoxon Signed Ranks Test Results for Hourly Profit Level and Minimum Hourly Wage Comparison

Ranks	N	Mean Rank	Sum of Ranks
Negative Ranks	13[a]	25.38	330
Positive Ranks	41[b]	28.17	1155
Ties	0[c]		
Total	54		
Test Statistics			
Z	-3.552		
Asymp. Sig. (2-tailed)	0.000		

a. minimum hourly wage < hourly profit level
b. minimum hourly wage > hourly profit level
c. minimum hourly wage = hourly profit level

According to test results, the p value calculated is 0.00 which is less than 0.05, and H_0 is rejected.

It is found that there is a significant difference between hourly profits and minimum hourly wage rate and therefore women doing small businesses earn less than they would be earning in a minimum wage job. The low profit levels of microbusinesses are related with the business characteristics which are explained in descriptive statistics part. Most of Eskişehir TGMP members who got microcredit do small businesses like traditional lace making and knitting baby shoes, waistcoat, bootee etc. or retail sale of some products in their neighborhoods not in stores, stalls or markets which bring very low profits due to marketing problems, supply surplus and sales techniques shortcomings.

2) Profit levels according to the education levels of members

Although most of the members were making very little profit, some of them were reported making relatively higher profits. One may expect that success in the business may change according to education levels of the members. In the below table, differences between profit levels of members according to education levels are seen clearly however there is no such a trend that profit

levels increase as education level increases; illiterate members were making profits as much as high school and university graduates. Also, it should be noted that standard deviations of the groups differ much and observing means may lead to wrong conclusions since it may be affected by extreme profit values of one or two members in a group. Therefore, significance level of difference between these groups should be tested and Kruskal-Wallis test can be used for this purpose since it is non-parametric version of one-way Anova.

Table 5.32.Profit Amounts According to Education Levels of TGMP Eskişehir Members

Education Level	Mean	Median	Std. Deviation	Min.	Max.	N
Illiterate	425.0	425	530.3	50	800	2
Able to read	300.0	300		300	300	1
Primary school	212.8	150	249.2	-100	1000	36
High school	495.2	200	567.0	0	2000	21
University	375.0	400	330.4	0	700	4

H_0: Profit levels of members do not change significantly according to the education levels of these members.

H_1: Profit levels of members change significantly according to the education levels of these members.

Table 5.33.Kruskal-Wallis Test Results for Profit Level and Education Comparison

Education	N	Mean Rank
Illiterate	2	34.25
Able to read	1	44
Primary school	36	28.31
High school	21	37.93
University	4	38
Total	64	

Table 5.33 (Continued)

Test Statistics	
Chi-Square	4.399
df	4
Asymp. Sig.	0.355

Since calculated p-value of the test statistic is 0.355 > 0.05, H_0 cannot be rejected and it cannot be said that there is a significant difference between profit levels of these groups according to their education levels.

Kruskal-Wallis test should be used with caution if number of observations fall below five for some categories. Therefore, to reinforce the results, members are grouped into two education categories, high and low, high school and university graduates being in high group and the others in the low group. Mann-Whitney U test is used to test the difference between profit levels of these groups with the same hypothesis above and the results are as follow:

Table 5.34.Mann-Whitney U Test Results for Profit Level and Education Comparison

Education	**N**	**Mean Rank**	**Sum of Ranks**
Low	39	29.01	1131.5
High	25	37.94	948.5
Total	64		
Test Statistics			
Mann-Whitney U	351.5		
Z	-1.88		
Asymp. Sig. (2-tailed)	0.06		

Again, H_0 cannot be rejected and there is no significant difference between profit levels of these groups. The result that education level of members does

not affect the profitability of microbusinesses is related with the high concentration of microbusinesses in lace making-knitting and retail sale of some products in neighborhoods. It was noted in the descriptive statistics part that most of members do such kind of businesses regardless of their education levels, therefore profit levels of them do not differentiate much.

3) Profit levels according to the business sectors of members

Although members are concentrated on traditional-low profit capacity jobs as explained in the descriptive statistics part of this study, there are differences in the sectors and this may result in differences in profit levels. At first glance, differences between mean profit levels of business sectors are clear from the below table however table should be viewed with caution since standard deviations and number of observations in each category differs much. Still, manufacturing sector draws attention with regard to its low profit level.

Table 5.35.Profit Amounts According to Business Sectors of TGMP Eskişehir Members

Sector	Mean	Median	Std. Deviation	Min.	Max.	N
Agriculture	600.0	600		600	600	1
Manufacturing	141.8	100	156.8	0	700	20
Retail trade	360.7	200	448.8	-100	2000	35
Food service activities	525.0	550	250.0	200	800	4
Other service activities	637.5	525	696.9	0	1500	4

Whether there is a significant difference between these categories according to the profit levels can be found by using Kruskal-Wallis Test:

H_0: Profit levels of members do not change significantly according to the business sectors of these members.

H_1: Profit levels of members change significantly according to the business sectors of these members.

Table 5.36.Kruskal-Wallis Test Results for Profit Level and Business Sector Comparison

Sector	N	Mean Rank
Agriculture	1	53.50
Manufacturing	20	23.18
Retail trade	35	34.53
Food service activities	4	49.38
Other service activities	4	39.25
Total	64	
Test Statistics		
Chi-Square	10.609	
df	4	
Asymp. Sig.	0.031	

Since p-value 0.031 is less than 0.05, H_0 is rejected and it is found that there is a significant difference between these business sectors. However, Kruskal-Wallis Test does not tell us between which groups these differences occur and therefore pair wise comparison of sectors is conducted using Mann-Whitney U test and 10 pair wise comparisons are made for these 5 categories test results of which can be found in Appendix B.

As a result of these comparisons, p-value of test statistic is found to be less than 0.05 only for two comparisons: one of them is "Manufacturing versus Retail trade" and the other is "Manufacturing versus Food service activities". Therefore there is a significant difference among these groups: profit level of manufacturing jobs is significantly less than that of trade and food services jobs. This result should be evaluated considering the characteristics of the jobs in each category rather than saying manufacturing jobs bring less profit than

trading activities. As explained in descriptive statistics section of this study, most of the members are involved with traditional lace making and knitting baby shoes, waistcoat, bootee etc. in manufacturing category. These works are also mentioned not to bring much profit to women doing these jobs in the book of Adaman since there are many women doing the same thing and they have difficulty of selling these products as there is surplus in the market. Therefore, women planning to invest their microcredit on these kinds of jobs can be warned about the possible sales problem and might be directed in different jobs.

One may argue that this result might be affected by working hours spent for the jobs in each category rather than characteristics and profitability of jobs. It was observed in descriptive statistics part that total working hours for each sector depend on choice of women about how much to work and there are both small businesses for which total working hour is very few and very much in each sector. Therefore dividing profit amounts of each small business by total working hours spent for these businesses and comparing the hourly profit levels in each sector is not expected to change the results. When hourly profit level of each small business is calculated and these profit levels are compared with Kruskal-Wallis Test and then with Mann-Whitney U test, as expected, the results do not change. Again, significant differences are found only for two comparisons: “Manufacturing versus Retail trade” and “Manufacturing versus Food service activities”. Hourly profit level of manufacturing jobs is significantly less than that of trade and food services jobs. The test results for this analysis can be found in Appendix B.

It was noted that some members try to sell their products not only in their near neighborhoods but also in bazaars, streets, and shops or by visiting offices and workplaces. This may lead to differences in profits of women doing similar jobs since those women who reach different places and people may sell their products more easily. If profit levels of women are compared according to their

sales methods in each sector, it is found that women who actively sell their products in the market have more profits than women who do not in trade sector and the test result is below:

H_0: Profit levels of members do not change significantly according to the sales method of these members.

H_1: Profit levels of members change significantly according to the sales method of these members.

Table 5.37.Mann-Whitney U Test Results for Profit Level and Sales Method Comparison for Trade Sector

Active sales in market	**N**	**Mean Rank**	**Sum of Ranks**
Yes	13	25.65	333.50
No	22	13.48	296.50
Total	35		
Test Statistics			
Mann-Whitney U	43.500		
Z	-3.412		
Asymp. Sig. (2-tailed)	0.001		
Exact Sig. [2*(1-tailed Sig.)]	0.000		

Since p-value of 0.00 is less than 0.05, H_0 is rejected and it is concluded that profit levels of women who actively sell their products in the market, that is in bazaars, streets, and shops or by visiting offices and workplaces, are significantly higher than those of women who do not in trade sector. The same test is applied also for other categories but the differences are not significant in these sectors. This gives an important result for manufacturing jobs, women doing traditional lace making and knitting jobs obtain low profits regardless of their sales techniques. This may result from the supply surplus for these products in the market and also from the fact that many women produce these

traditional handicrafts themselves and do not need to buy them from someone else. Test results for this analysis can be found in Appendix B.

4) Profit levels according to ages and vocational training status of members

Profit amounts can be tested to find out if there is a difference between old and young members. Average age of 64 women who stated their profit amounts is 40.51 and members can be grouped as young and old, those below 41 years old constituting young group. Profit amounts for these two groups are compared with Mann-Whitney U test and difference is found insignificant:

Table 5.38.Mann-Whitney U Test Results for Profit Level and Age Group Comparison

Age Group	N	Mean Rank	Sum of Ranks
Young	36	30.61	1102.00
Old	28	34.93	978.00
Total	64		
Test Statistics			
Mann-Whitney U	436.000		
Z	-0.924		
Asymp. Sig. (2-tailed)	0.355		

H_0: There is no significant difference between old and young group of members according to profit amounts

H_1: There is significant difference between old and young group of members according to profit amounts

Since 0.355>0.05, H_0 is not rejected and profit amounts do not differ significantly between age groups. This result can be reinforced by estimating correlation coefficient between age and profit variables. Correlation between

these variables is found insignificant as reflected by Spearman's rho and the result can be found in Appendix B.

Similarly, profit level is tested to find out if there is a significant difference between members who have got vocational training for their jobs and members who have not. Again Mann-Whitney U test is used for this comparison with similar hypotheses above and the difference is found insignificant with p value being higher than 0.05:

Table 5.39.Mann-Whitney U Test Results for Profit Level and Training Status Comparison

Training for job	N	Mean Rank	Sum of Ranks
Yes	23	36.00	828.00
No	41	30.54	1252.00
Total	64		
Test Statistics			
Mann-Whitney U	391.000		
Z	-1.131		
Asymp. Sig. (2-tailed)	0.258		

The result that vocational training status of members does not affect profit levels may be related with the content of trainings. Members got training related with their jobs in public training centers like sewing-embroidery courses, in their previous working places like hairdressing and sewing or some firms gave them basic training during which they taught features of their products before making these members sales representative. Sewing-embroidery courses may not affect the profitability of members since making these businesses bring very low profits regardless of the sales techniques involved because of supply surplus for these products. Trainings given to

members by some firms involve introducing products of these firms to women and do not involve sales techniques.

5.3. ANALYSIS OF IMPACT OF MICROCREDIT INTERVENTION ON PROFIT LEVELS OF MICROBUSINESSES

To capture the impact of microcredit invested on small businesses of women, two questions were asked, as explained in the descriptive statistics part, one is about quantitative change in profit levels and the other is about how the members feel about profit levels of their businesses. Quantitative change in profit levels is calculated as the difference between profits of businesses, with which women are involved, before and after the microcredit intervention. Since the program is very newly launched in Eskişehir, most of women were able to state their profit levels before the intervention also but still some could not answer that question. As a result of this question, data of 56 observations was obtained stating the numeric change in profit levels. This data was observed to be concentrated on very low levels, in descriptive statistics part of this study, but there were some members achieving very high amounts of change which makes the data skewed to the right, with mean value being in the right of median (Mean of the change in profit level data is 229 and median is 90). This data is tested for normality, and it is found that change in profit level is not distributed normally:

H_0: Change in profit level data is not different from normal distribution.

H_1: Change in profit level data is different from normal distribution.

Table 5.40.Normality Test for Change in Profit Level Data

One-Sample Kolmogorov-Smirnov Test		
Change in profit level		
N		56
Normal Parameters	Mean	229.02
	Std. Deviation	358.385
Kolmogorov-Smirnov Z		1.979
Asymp. Sig. (2-tailed)		0.001

The p-value calculated for Kolmogorov-Smirnov test is 0.001, which is less than 0.05, and H_0 is rejected. Therefore, non-parametric tests are appropriate when analyzing change in profit level data.

Change in profit level data has a mean value of 229.02 showing that there is an average positive change in the profit levels but also has high standard deviation. The significance of change in profit levels can be tested by using Wilcoxon Signed Ranks test:

H_0: Change in profit level is not significantly different from zero

H_1: Change in profit level is significantly different from zero

Table 5.41.Wilcoxon Signed Ranks Test Results for Significance of Change in Profit Levels

Ranks	**N**	**Mean Rank**	**Sum of Ranks**
Negative Ranks	38[a]	20.92	795.00
Positive Ranks	2[b]	12.50	25.00
Ties	16[c]		
Total	56		
Test Statistics			
Z	-5.181		
Asymp. Sig. (2-tailed)	0.000		

a. zero < change in profit
b. zero > change in profit
c. zero = change in profit

Since calculated p-value is 0.00 which is less than 0.05, H_0 is rejected and change in profit level is found significant. Therefore, profit levels of members changed significantly after microcredit intervention and members increased their profit levels. The reasons behind this were also explained by members as stated in descriptive statistics section, and microcredit contributed mainly by helping women to buy goods and inputs from wholesalers at bigger amounts and in cash, therefore to get a discount and increase the diversity of products which enables them to sell more. The positive change in profit levels is also revealed by the answers of women to qualitative question.

Women were able to respond qualitative question about how they feel after microcredit intervention in terms of profit levels more than they responded the quantitative question. 69 women out of 70 stated whether their profit levels increased, decreased or did not change after they used microcredit. 47 women stated positive change in their profit levels and remaining ones did not experience any positive change after the intervention:

Table 5.42.The Effect of Microcredit Intervention on Profits of Microbusinesses Felt by TGMP Eskişehir Members

Positive change after microcredit intervention?	Frequency	Percent
Yes	47	68.1
No	22	31.9
Total	**69**	**100**

Quantitative data gives more detailed information about how much the impact of microcredit was on profit levels but qualitative data in this study contains more observations since more women answered this question. Therefore, the variables which may affect the impact of microcredit will be analyzed both by using quantitative and qualitative data and comparing the results.

1) Impact of microcredit on business profits and microcredit amount spent for these businesses

The amount of microcredit used differs between members. It is stated by members that microcredit helps them to buy goods at a discount since they buy in bigger amounts and in cash. Therefore, microcredit amount used for business needs is expected to affect amount of change in profit levels. Whether microcredit amount spent for small businesses affect the change in profit levels can be analyzed by using Mann-Whitney U Test. Microcredit amount spent for business needs can be categorized as low and high according to being under or above the average. If the change in profit amounts for these two groups is tested, the results follow:

H_0: There is no significant difference between high and low groups of microcredit amount spent according to change in profit amounts

H_1: There is significant difference between high and low groups of microcredit amount spent according to change in profit amounts

Table 5.43.Mann-Whitney U Test Results for Change in Profit Level and Microcredit Amount Spent for Business Needs Comparison

Microcredit amount spent	**N**	**Mean Rank**	**Sum of Ranks**
High	24	36.38	873.00
Low	32	22.59	723.00
Total	56		
Test Statistics			
Mann-Whitney U	195.000		
Z	-3.171		
Asymp. Sig. (2-tailed)	0.002		

Since p-value is 0.002 and less than 0.05, H_0 is rejected and change in profit levels is found to be significantly higher for those women who spent high microcredit amounts for business than for those women who spent low amounts. This result can be reinforced by calculating correlation coefficient between microcredit amount spent and change in profit levels and the table showing the estimated Spearman's rho can be found in Appendix B. There is found to be significant correlation between these variables and correlation coefficient is 0.469, showing that two variables are positively correlated. This finding is original to this study among the studies in the literature about the effects of TGMP on participant members to the best of my knowledge[10].

Amount of change in profit levels can be analyzed further to investigate the effects of other variables on this change. However, it is found that microcredit amount used by women differs and affects the amount of change in profits. Therefore, amount of change in profit should be divided by microcredit amount spent for business and "change in profit per credit amount spent" should be obtained to externalize the differences resulting from microcredit usage. That is, change in profit per credit amount gives information that how much profit changes if there is one unit change in microcredit amount spent for business. This variable then can be analyzed according to differences in education levels or business sectors of women who used microcredit.

2) Impact of microcredit on business profits and education level of members

Change in profit levels per microcredit amount spent for business according to education levels of members is tabulated below. It seems that the amount of change is bigger for high school and university graduates than for primary

[10] The relation between microcredit amount and change in household incomes of TGMP Diyarbakır members is analyzed in the study of (Döşeyen, 2007) and no significant relation can be found. This may be due to using change in household income as dependent variable instead of change in profits.

school graduates. However, standard deviations in high school and university category are very high and the differences between these groups should be tested for reaching a reliable conclusion.

Table 5.44.Change in Profit Amounts per Microcredit Amount According to Education Levels of TGMP Eskişehir Members

Education	Mean	Median	Std. Deviation	Min.	Max.	N
Illiterate	0.17	0.17		0.17	0.17	1
Able to read	0.00	0.00		0.00	0.00	1
Primary school	0.08	0.05	0.155	-0.25	0.71	31
High school	0.22	0.24	0.176	0.00	0.60	19
University	0.22	0.24	0.194	0.00	0.41	4

Kruskal-Wallis test could be used to test the significance of difference between these groups and the result is below:

H_0: Changes in profit levels per microcredit amount spent for business do not differ significantly according to the education levels of members.

H_1: Changes in profit levels per microcredit amount spent for business differ significantly according to the education levels of members.

Table 5.45.Kruskal-Wallis Test Results for Changes in Profit Levels per Microcredit Amount and Education Comparison

Education	**N**	**Mean Rank**
Illiterate	1	39.00
Able to read	1	10.50
Primary school	31	22.73
High school	19	36.50
University	4	37.12
Total	56	
Test Statistics		
Chi-Square	11.482	
df	4	
Asymp. Sig.	0.022	

Since 0.022 is less than 0.05, H_0 is rejected and there is a significant difference between these groups according to change in profit levels per microcredit amount spent for business. However, there are some categories which have very few observations and this may affect the results obtained from Kruskal-Wallis test. Therefore the results should be reinforced by applying a different test. Education levels can be incorporated and low and high education groups can be generated, high school and university graduates comprising the high education group. If these two groups are tested in terms of change in profit levels per microcredit amount with Mann-Whitney U test, then the difference is again found to be significant and the test results are in the Appendix B. Those members who have higher education experienced higher changes in their profit levels per microcredit amount than the other group.

This result can be reinforced by using qualitative data to analyze the difference between low and high education groups according to the impact of microcredit felt on profit levels. In the below table, it is seen that percentage of women who felt positive effect or not does not differentiate much within the low

education group, with 58.1% and 41.9% respectively. However, for the high education group, most of women, 84.6% felt positive effect.

Table 5.46.Cross Table of Microcredit Effect Felt and Education Levels of TGMP Eskişehir Members

Positive change after microcredit intervention?		Education		Total
		Low	High	
Yes	Count	25	22	47
	% within education	58.1%	84.6%	68.1%
No	Count	18	4	22
	% within education	41.9%	15.4%	31.9%

The significance of difference between education groups can be tested with Pearson Chi-Square test and the result follows:

H_0: There is no significant difference between education groups according to the direction of change in profit levels after microcredit intervention

H_1: There is significant difference between education groups according to the direction of change in profit levels after microcredit intervention

Table 5.47.Chi-Square Tests Results for Microcredit Effect Felt and Education Comparison

Chi-Square Tests	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	5.230[a]	1	0.022	
Continuity Correction[b]	4.082	1	0.043	
Fisher's Exact Test				0.032
N of Valid Cases	69			

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 8.29.

b. Computed only for a 2x2 table

Since p-value 0.022 is less than 0.05, H_0 is rejected and difference between groups is found significant. Members in the high education group are more likely to experience a positive change in the business profits with the intervention of credit.

The results of both quantitative and qualitative analysis show that, education level is important for microcredit to be effective in profit levels of women who run microbusinesses. In previous analyses, it was found that education level of members does not affect the profitability of microbusinesses since most of members do lace making-knitting and retail sale of some products in neighborhoods regardless of their education levels which causes their profit levels not to differentiate much. But change in profit amounts per microcredit amount spent for business is higher for members with high education. If the effect of microcredit on business profits is considered to be realized through the channel of getting discounts from wholesalers via buying goods and inputs at bigger amounts and in cash and increasing the diversity of products which enables to sell more, these results propose that members who have higher education are using microcredit more effectively when investing in their businesses. They may be able to reach different and bigger wholesalers other than the ones in their near environment by searching once they have credit in their hands and get higher discounts since may be they are more aware of importance of paying in cash in trade and hence they can differentiate their profit levels after microcredit intervention than before microcredit intervention.

3) Impact of microcredit on business profits and ages of members

Members are categorized according to their ages as old and young members, those below the average of 41 being in the young category. Difference between these two groups in terms of change in profit amounts per microcredit amount can be tested by using Mann-Whitney U test:

H_0: Changes in profit levels per microcredit amount spent for business do not differ significantly according to the age categories of members.

H_1: Changes in profit levels per microcredit amount spent for business differ significantly according to the age categories of members.

Table 5.48.Mann-Whitney U Test Results for Change in Profit Level per Microcredit Amount and Age Comparison

Age Category	N	Mean Rank	Sum of Ranks
Young	32	29.56	946.00
Old	24	27.08	650.00
Total	56		
Test Statistics			
Mann-Whitney U	350.000		
Z	-0.570		
Asymp. Sig. (2-tailed)	0.569		

P-value is bigger than 0.05 and H_0 cannot be rejected. There is no significant difference between age categories according to change in profit levels per microcredit. This result is also observed by insignificance of correlation between age and change in profit per microcredit variables and Spearman's rho correlation coefficient can be found in Appendix B.

The result is reinforced by using qualitative data. There is no big difference between age levels of members stating positive change in their profit levels after microcredit intervention and members not stating positive change as can be seen from the below table. Means of ages for the two groups are very close to each other together with their standard deviations. It can be concluded that, age does not affect the direction of change in profit levels with microcredit intervention. The reliability of this result is also tested with Mann-Whitney U

test which is in the Appendix B and the difference between these two groups in terms of their ages is found insignificant.

Table 5.49.The Effect of Microcredit Intervention on Profits of Microbusinesses Felt by TGMP Eskişehir Members and Ages of Members

Positive change after microcredit intervention?	Mean	Median	Std. Deviation	Min.	Max.	N
Yes	39.59	40	9.85	24	68	47
No	42.59	41	9.17	22	60	22

4) Impact of microcredit on business profits and time of receiving the first microcredit

Microcredit program was launched at the end of 2007 and members in the sample of this study took microcredit mostly in 2009 and 2010. Those members who took their first microcredit in 2009 or before might be regarded as relatively old members of the program and members who took their first microcredit in 2010 or later as new members. There seems to be a negligible difference between these two groups in terms of change in profit per microcredit as can be seen in the below table. Mean values of the two groups are very close to each other but the significance should be tested to reach a sound conclusion.

Table 5.50.Change in Profit Amounts per Microcredit According to Status in the Program

Status in microcredit program	Mean	Median	Std. Deviation	Min.	Max.	N
Old	0.155	0.071	0.176	-0.031	0.604	25
New	0.136	0.084	0.165	0.000	0.714	28

H_0: Changes in profit levels per microcredit amount spent for business do not differ significantly according to the status of members as old and new in the program.

H_1: Changes in profit levels per microcredit amount spent for business differ significantly according to the status of members as old and new in the program.

Table 5.51.Mann-Whitney U Test Results for Change in Profit Level per Microcredit Amount and Status in the Microcredit Program Comparison

Status in the microcredit program	N	Mean Rank	Sum of Ranks
Old	25	27.34	683.50
New	28	26.70	747.50
Total	53		
Test Statistics			
Mann-Whitney U	341.500		
Z	-0.153		
Asymp. Sig. (2-tailed)	0.878		

Since calculated p-value is higher than 0.05, H_0 cannot be rejected and there is no significant difference between these groups.

The same observation also applies to the results of qualitative question. The percentages of members who experienced positive change in their profit levels are very close to each other for new and old participants of the program, 64.7% and 72.4% respectively. This observation can be tested with similar hypothesis above and the results of Pearson Chi-Square test shows that there is no significant difference between these two groups.

Table 5.52.Cross Table of Microcredit Effect Felt and Status in the Program

Positive change after microcredit intervention?		Status in the program	
		New	Old
Yes	Count	22	21
	% within status in program	64.7%	72.4%
No	Count	12	8
	% within status in program	35.3%	27.6%

Table 5.53.Chi-Square Tests Results for Microcredit Effect Felt and Status in the Program Comparison

Chi-Square Tests	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	0.429[a]	1	**0.512**	
Continuity Correction[b]	0.147	1	0.701	
Fisher's Exact Test				0.593
N of Valid Cases	63			

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 9.21
b. Computed only for a 2x2 table

As a result of analyzing quantitative and qualitative changes in profit levels and status of members in the program as old and new, it is found that time of participation in the program does not change the effect of the program on profit levels. The result may follow from the fact that there is little time difference between members since the program was recently launched in Eskişehir.

5) Impact of microcredit on business profits and business sector

Changes in profit per microcredit spent for business according to business sectors of members are seen in the below table. There are differences in the sectors in terms of change in profit per microcredit but standard deviations and number of observations in each group also differs.

Table 5.54.Change in Profit Amounts per Microcredit According to Business Sectors of TGMP Eskişehir Members

Sector	Mean	Median	Std. Deviation	Min.	Max.	N
Agriculture	0.353	0.353		0.353	0.353	1
Manufacturing	0.086	0.054	0.118	0.000	0.412	18
Retail trade	0.141	0.071	0.205	-0.250	0.714	29
Food service activities	0.258	0.280	0.109	0.118	0.353	4
Other service activities	0.154	0.165	0.133	-	0.286	4

Whether there is a significant difference between business sectors or not can be measured with Kruskal-Wallis Test:

H_0: Changes in profit levels per microcredit amount spent for business do not differ significantly according to the business sectors.

H_1: Changes in profit levels per microcredit amount spent for business differ significantly according to the business sectors.

Table 5.55.Kruskal-Wallis Test Results for Changes in Profit Levels per Microcredit Amount and Business Sector Comparison

Business Sector	N	Mean Rank
Agriculture	1	51.50
Manufacturing	18	23.64
Retail trade	29	28.02
Food service activities	4	44.25
Other service activities	4	32.38
Total	56	
Test Statistics		
Chi-Square	7.754	
df	4	
Asymp. Sig.	0.101	

Since 0.101 is more than 0.05, H_0 cannot be rejected and there is no significant difference between these groups according to change in profit levels per microcredit amount spent for business. However, there are some categories which have very few observations and this may affect the results obtained from Kruskal-Wallis test. Therefore, 10 pair wise comparisons of five sectors are done with Mann-Whitney U test to reinforce the result of Kruskal-Wallis test and test results can be found in the Appendix B. According to the results, p-value is less than 0.05 only for "Manufacturing versus Food service activities" comparison and there is a significant difference only between these two groups. Change in profit level per microcredit is significantly higher in food service category than in manufacturing category. This may result from the fact that in manufacturing category, women mostly deal with lace making and knitting baby shoes, waistcoat, bootee which have low profit potential regardless of the investment done because of supply surplus for these products.

A similar result is obtained with qualitative analysis. Cross table of business sector versus direction of change in profit level is below and chi-square test results show that there is no significant association between these two variables:

H_0: There is no significant difference between business sectors according to the direction of change in profit levels after microcredit intervention

H_1: There is significant difference between business sectors according to the direction of change in profit levels after microcredit intervention

Table 5.56.Cross Table of Microcredit Effect Felt and Business Sectors of TGMP Eskişehir Members

Positive change after microcredit intervention?		Agricult.	Manufact.	Retail trade	Food service activities	Other service activities
Yes	Count	1	12	26	4	4
	% within sector	100.0%	54.5%	70.3%	100.0%	80.0%
No	Count	0	10	11	0	1
	% within sector	0.0%	45.5%	29.7%	0.0%	20.0%

Table 5.57.Chi-Square Test Results for Microcredit Effect Felt and Business Sectors Comparison

Chi-Square Test	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.610[a]	4	0.33
N of Valid Cases	69		

a. 6 cells (60.0%) have expected count less than 5. The minimum expected count is 0.32.

Since p-value is higher than 0.05, H_0 cannot be rejected and there is no significant difference. Chi-square test results should be evaluated with caution since there are cells which have expected count less than five. Therefore, 10 pair wise comparisons of five sectors are made with Chi-square test and the results are in the Appendix B. All p-values are found as higher than 0.05 and again there is no significant difference between business sectors in terms of change felt in profit levels.

6) Impact of microcredit on business profits and vocational training status of members

Change in profit per microcredit seems to be higher for the group of members who got training related with their jobs however standard deviation of this

group is also higher than the other group. Mann Whitney U test can be used to test if there is a significant difference between two groups.

Table 5.58.Change in Profit Amounts per Microcredit According to Vocational Training Status of TGMP Eskişehir Members

Training status	Mean	Median	Std. Deviation	Min.	Max.	N
Yes	0.198	0.130	0.202	0.000	0.714	20
No	0.102	0.060	0.148	-0.250	0.556	36

H_0: Changes in profit levels per microcredit amount spent for business do not differ significantly according to the training status of members.

H_1: Changes in profit levels per microcredit amount spent for business differ significantly according to the training status of members.

Table 5.59.Mann-Whitney U Test Results for Change in Profit Level per Microcredit Amount and Training Status Comparison

Training Status	N	Mean Rank	Sum of Ranks
Yes	20	33.85	677.00
No	36	25.53	919.00
Total	56		
Test Statistics			
Mann-Whitney U	253.000		
Z	-1.852		
Asymp. Sig. (2-tailed)	0.064		

H_0 cannot be rejected since p-value is higher than 0.05 and there is not a significant difference between members who got training and members who did not get in terms of changes in profit levels per microcredit amount spent for business.

The same result is obtained from qualitative analyses. In the cross table below, it is seen that percentage of members who felt positive change in their profit levels in the two training groups does not differ much. The significance of difference between these two groups can be tested using Pearson Chi-Square test with similar hypothesis above.

Table 5.60.Cross Table of Microcredit Effect Felt and Training Status of TGMP Eskişehir Members

Positive change after microcredit intervention?		Training status	
		Yes	No
Yes	Count	19	28
	% within training status	79.2%	62.2%
No	Count	5	17
	% within training status	20.8%	37.8%

Table 5.61.Chi-Square Tests Results for Microcredit Effect Felt and Training Status Comparison

Chi-Square Tests	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	2.069[a]	1	0.150	
Continuity Correction[b]	1.363	1	0.243	
Fisher's Exact Test				0.183
N of Valid Cases	69			

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 7.65

b. Computed only for a 2x2 table

P-value from Chi-Square test is higher than 0.05 and there is not a significant difference between members who got training and members who did not get in terms of change felt in profit levels after microcredit intervention.

The results of both quantitative and qualitative analyses show that training status of members does not affect change in profit levels realized with microcredit intervention significantly.

7) Impact of microcredit on business profits and working time spent for small businesses

There is no significant correlation between changes in profit per microcredit spent for business and total monthly working hours dedicated to this business as can be seen from the calculation of Spearman's rho:

Table 5.62.Spearman's Rho for Change in Profit per Microcredit Amount and Total Monthly Working Hour Comparison

	Spearman's rho	**Total monthly working hour**
Change in profit per microcredit	Correlation Coefficient	0.198
	Sig. (2-tailed)	0.144
	N	56

Mean value of total monthly working hours does not differ much between members who felt positive change in their profit levels and members who did not felt any positive change. Although mean of total monthly working hours is higher for members who felt positive change in profit levels, standard deviation for this group is also higher. The significance of difference between these two groups in terms of total monthly working hours can be tested with Mann-Whitney U test.

Table 5.63.Microcredit Effect Felt and Total Monthly Working Hours for Microbusinesses

Positive change after microcredit intervention?	Mean	Median	Std. Deviation	Min.	Max.	N
Yes	152.9	120	108.6	32	420	47
No	124.7	106	79.7	24	320	22

H_0: There is no significant difference between groups who felt positive change or not in profit level according to total monthly working hours

H_1: There is significant difference between groups who felt positive change or not in profit level according to total monthly working hours

Table 5.64.Mann-Whitney U Test Results for Microcredit Effect Felt and Total Monthly Working Hours Comparison

Positive change after microcredit intervention?	N	Mean Rank	Sum of Ranks
Yes	47	36.11	1697.00
No	22	32.64	718.00
Total	69		
Test Statistics			
Mann-Whitney U	465.000		
Z	-0.672		
Asymp. Sig. (2-tailed)	0.502		

Since p-value 0.502 is higher than 0.05, H_0 cannot be rejected and there is no significant difference between groups who felt positive change or not in profit levels according to total monthly working hours.

As a result of both quantitative and qualitative analyses, it is found that total monthly working hours does not affect changes in profit levels after microcredit intervention.

5.4. ADDITIONAL CONTRIBUTIONS OF PARTICIPANTS

There were some participants who wanted to mention their ideas about microcredit program in Eskişehir although such a question was not asked separately. 6 women expressed their complaints and recommendations about the program and therefore, the statements in this part are not representative of the entire sample. Still, it is worth to state their ideas here because of these women' interest on the program and willingness to contribute to the survey. One of them stated that microcredit program is actually exploiting women because the interest rate is too high. If microcredit officials want to support poor women, 15% interest rate should be decreased. She mentioned that she had to take this credit to start a small business because she could not get credit from anywhere else. She sees the weekly visits of TGMP officials as their pressure on members to get weekly installments. Altay (2007) shares the idea of this member about interest rates. She states that if women use most of their income earned from small businesses to pay interest, they cannot save enough money and increase their capital to expand their businesses. Therefore, they might not be able to graduate from microcredit programs.

Another member mentioned that the amount of credit she got was not enough to buy all the inputs for her work. She said she must have got more credit at first time to develop her business and make profit but she could not since TGMP gave only 700 TL at first. Repaying the microcredit debt by weekly installments is not helpful and she would prefer to repay in monthly installments, another member stated. There was one more member complaining about the same issue and she stated that it would be better if installments are

collected biweekly. Complaints about weekly installment schedule of microcredit program are also seen in Diyarbakır. Adaman & Bulut (2007) states that weekly installments start just one week after receiving microcredit and this result in difficulties for women. Many small businesses run by women do not pay in such a short term and women become worried about how to pay weekly installments. Therefore, some women do not spend all of the microcredit they get and spare a small amount of it for repaying first installments. However microcredit officials think that if some amount of credit is not used and hold at hand, then this credit becomes wasted since women pay interest for using microcredit (Adaman & Bulut, 2007). Another TGMP Eskişehir member contacted for the survey told that group method was putting very much pressure on them and they were anxious about other members' loyalty to their debt. Although these members stated their complaints about the program, there was another member who told that she could not repay her debt for some time and microcredit officers were very kind to her, they did not put pressure on her and she was grateful about their attitude and support.

5.5. A SUCCINCT OVERVIEW OF THE SURVEY RESULTS

The comparison of household income levels of participant members with the poverty lines announced by TURKSTAT according to household size and year gives that 52.6 % of the members' households were above the poverty line and the remaining 47.4 % were below the poverty line as of the time they got first microcredit. Percentage of members' households below and above the poverty line does not change much before and after the use of microcredit (the percentages are 59.8% and 40.2% for above and below poverty line respectively after microcredit usage). Despite the result found in this study and other studies in the literature, TGMP reported that all of its members are among the poorest people in Turkey to the Microcredit Summit Campaign. This situation raises doubts both about the information provided by the

Campaign as to the outreach of microfinance institutions in the world and their success to reach poorest of the poor and about the transparency of TGMP while announcing its activities to public.

As to the usage of microcredit, about 6.5% of members gave their microcredit to another group member and hence these members cannot be considered as benefiting from the program. This finding is original to this study among the studies in the literature about the effects of TGMP on participants and gives an important correction when analyzing the success of microcredit programs by their increasing number of members. Moreover, it is seen that 17.4% of members in Eskişehir used microcredit like a consumption credit and did not invest it in income generating activities.

67% of members who used microcredit for business purposes experienced positive change in their profit levels while 27.1% experienced no change. This study differs from the studies in the literature on the effects of TGMP because other studies focus on change in total household incomes of participants and link it to microcredit usage instead of focusing on change in business profits for which microcredit is spent. Linking the change in whole household income with microcredit program could give a wrong conclusion about the effect of the program because there are usually more than one income earning members in the households of participant women. This study also differs from other studies examining the effects of TGMP in that it differentiates members who used microcredit for business needs from members who did not. It links only the change in business profits of members who used credit for business needs to microcredit and this methodology brings an important change in the interpretation of the effects of the program. It cannot be said that 67% of households receiving microcredit are affected positively by the program in terms of their household incomes but it can only be said that 67% of households using microcredit for business needs are affected positively. If members who did not use microcredit for income generating activities are

counted as not affected by microcredit in terms of their household incomes, total number of members who are not affected positively by the program increases to 44; 47.8% of all participants. That is, 51.1% of participating members are positively affected while 47.8% of them are not. This result states lower positive effect of TGMP on participants' incomes than previous results found in the literature. For example, 78.8% of members increased their household incomes after microcredit usage according to the study of (Adaman & Bulut, 2007) in Diyarbakır and 77.9% of all TGMP Diyarbakır members increased their business profits after microcredit usage according to the study of (Döşeyen, 2007).

Permanence of microbusinesses set up by TGMP members is also questioned in this study as different from the other studies in literature on the effects of TGMP. It is found that 35.7% of members who used microcredit for income generating activities do not continue doing their jobs. Most of members are involved with traditional lace making and knitting baby shoes, waistcoat, bootee etc. or buying cosmetic products, cleaning products, food supplements, small kitchen appliances and textile from wholesalers and retail sale of them in near neighborhoods as similar to the activities of TGMP Diyarbakır members. Profit levels of microbusinesses and its relation with other variables which may affect it are analyzed in this study as different from the other studies found in the literature on the effects of TGMP on members. Out of 54 women making profit in their jobs, 47 were making profit less than minimum wage and only 7 of them, 13 percent, were gaining profits above the minimum wage level. Profit level of manufacturing jobs is significantly less than that of trade and food services jobs. Women who actively sell their products in the market have more profits than women who do not in trade sector.

Change in profit levels after microcredit usage is found to be significantly higher for those women who spent high microcredit amounts for business than for those women who spent low amounts. This finding is original to this study

among the studies in the literature about the effects of TGMP on participant members to the best of my knowledge. Also, it is found that members in the high education group are more likely to experience a positive change in the business profits with the intervention of credit than members in the low education group.

CHAPTER 6

CONCLUSION AND RECOMMENDATIONS

The findings in this study clearly reveal that microcredit program TGMP cannot be solution to mass poverty by itself and active participation of government in fighting against poverty either by increasing employment opportunities or by applying social solidarity programs is crucial. Providing small amounts of credit to women do not harm poor people because neither they are forced to use credit nor they are litigated if they cannot pay their debts. The threat of the program stems from how it is perceived and interpreted in media and in public opinion. The number of members reached by TGMP is increasing and this is seen as a success of the program. The news about successful women among microcredit participants is prominent in media and microcredit is mentioned as very powerful instrument against poverty in this news. Moreover, TGMP itself gives statistics about its increasing number of members and stories of some successful members are explained in annual reports. However, representing only good side of whole picture causes misunderstandings about the success of the program and this in turn creates the threat of decreasing public support in fighting against poverty since the program may be seen as already enough for coping with it. The results of the survey conducted on Eskişehir TGMP members show clearly that the real effects of the program are not as brilliant as they are mentioned in media and in TGMP annual reports.

First of all, number of TGMP members does not really reflect the actual number of people who need credit. It is found that 6.5% of members in the survey were in the program just for completing number of members in a group to five and they did not use the microcredit themselves but gave it to other group members. Secondly, not all of the participants in the program use

microcredit for income generating activities and some of them use it as a usual consumer credit provided by traditional banks. If members who gave their credits to another group member and who used credit for family needs other than income generating activities are considered together, 24% of participants in Eskişehir do not involve in any income generating activities with microcredit and therefore their income levels and poverty status are not affected. This is an important correction for evaluating number of TGMP members and it is clear that participation to the program does not mean that poverty status of members change. Moreover, usage of microcredit in areas other than income generating activities is not special to Eskişehir and similar results are also found in Diyarbakır. Usage of microcredit for family needs may be expected to be more extensive in poorer provinces of Turkey than Eskişehir because poorer people tend to spend microcredit for their basic needs instead of investing it in income generating activities as stated in (Adaman & Bulut, 2007). Considering that poverty levels of East Anatolia and Mediterranean regions are much higher than that of Eskişehir region as stated in the regional socio-economic analysis part of this thesis; conversion of microcredit to investment -and hence possibility to increase income- is even less likely in these regions. However, these members use credit for their family needs in case they do not have enough cash and can repay in small installments which helps them to smooth their expenditures. Since they will not be able to get credit from traditional banks in small amounts and without collateral, participation of these members in the program is actually helpful to them and suggesting to exclude these members from the program would be insensitive. The point here is that increasing number of participants to the program does not prove that increasing number of people is released from poverty although some of them may benefit in consumption smoothing side.

The situation is not much better for members who use credit for income generating activities because these microbusinesses have very low profit levels. 14.3% of members who used credit for income generating activities do not

make any profit and about 43% of them are doing jobs with monthly profit of at most 200 TL. The low profit levels of these businesses become more evident if they are compared with minimum wage level: Out of 54 women who were making profit in their jobs, 47 were making profit less than minimum wage and only 7 of them, 13 percent, were gaining profits above that level. Since profit levels of microbusinesses are below the minimum wage level for most of them, poverty reduction strategies which focus on generating employment opportunities for these women should be considered as an alternative to microcredit since these women would be better off if they were working in a minimum wage job at least. These women should have the opportunity to choose between self-employment opportunities and other jobs. It should be noted at this point that there were some women among the participants who quitted their small businesses when they found a wage-job in the market. Another point to be highlighted is that microcredit does not affect positively the profit levels of all members who use credit for income generating activities: 67% of members who used microcredit for business purposes experienced positive change in their profit levels but 31.4% of them did not. If members who did not use microcredit for income generating activities are counted as not affected by microcredit in terms of their household incomes, total number of members who are not affected positively by the program increases to 44; 47.8% of all participants. Moreover, among the members who experienced positive change in their profit levels with the use of microcredit on business needs, 32.8% had at most 200 TL monthly increase in profit. It is also found that members who have high level of education experience higher positive change in the business profits with the intervention of credit than members who have low level of education. Since education level in Eskişehir is above the average in Turkey as stated in the regional socio-economic analysis part of this thesis, positive effect of microcredit on business profits is likely to be even less in other regions of Turkey than that of Eskişehir. All these findings make it

clear that providing small amounts of credit to poor women cannot be the solution to poverty by itself.

Although the program is not helpful to some of its members, its positive effects should not be overlooked because members who are benefiting from the program would be deprived of it if they could not get credit. There were members who were making profit above 500 TL in a month and their share was 18.6% among members who used microcredit for income generating activities. Analyzing the reasons behind profit differences among members is important for the program to be more successful in fight against poverty. Most of Eskişehir TGMP members who got microcredit do small businesses like traditional lace making and knitting baby shoes, waistcoat, bootee etc. or retail sale of some products in their neighborhoods not in stores, stalls or markets which are easy to set up in informal sector. This may result from lack of capital for setting up large scale businesses, lack of experience of women in various business sectors, risk of doing different jobs or women may prefer to do these kinds of jobs since they can be run at home. These small scale jobs bring very low profits because these products are generally produced with labor-intensive methods and there is supply surplus in the market. Women do not question if market is saturated for these kinds of products and choose these jobs because these are the only ones with which they are familiar. This brings important marketing and sales problems; choosing wrong job in terms of demand from their near environment and competition conditions is one of the reasons for not being able to make profit according to members. Since there are many people doing the same job in a district, selling these products becomes harder. Profit level of knitting-lace making jobs is found to be significantly less than that of trade and food service jobs in particular. This may result from the supply surplus for these products in the market and also from the fact that many women produce these traditional handicrafts themselves and do not need to buy them from someone else. In retail trade activities, women can choose which product to sell at least but they cannot make product differentiation in lace

making-knitting jobs. Moreover, profit levels of women who actively sell their products in the market, that is in bazaars, streets, and shops or by visiting offices and workplaces, are significantly higher than those of women who do not in trade sector but women doing traditional lace making and knitting jobs obtain low profits regardless of their sales techniques. Therefore, women planning to invest their microcredit on these kinds of jobs should be warned about the possible sales problem and should be directed to different jobs. Another solution for low profit levels of these jobs may be to organize women in cooperatives that will enable them to sell in larger scale markets and may be to foreign markets as Gökyay (2008) states. Domestic demand for cultural goods having local nature is very low in Turkey and exporting goods produced with microcredit can be considered for supporting women (Korkmaz et al., 2004). Alternatively, members might be trained for services which are demanded in their regions and have high profit potential but who will take the responsibility of training members remains unclear since TGMP is not willing to be involved with training of members.

Another reason stated by members for not being able to make profit is that microcredit offered to them is not enough to make a significant increase in their product diversity or to buy all the inputs for their work. Since microcredit amounts provided is very small at the beginning, with first credit amount limited to 700 TL, it barely meets financing needs of members to set up or develop their micro businesses. Members are positively affected by the program mainly because microcredit enables them to buy goods and inputs from wholesalers at bigger amounts and in cash, therefore to get a discount and increase the diversity of products which enables them to sell more. Moreover, change in profit levels is found to be significantly higher for those women who spent high microcredit amounts for business than for those women who spent low amounts. Considering that the effect of the program increases in a positive manner as microcredit amount spent for businesses increases, the minimum amount of microcredit offered should be increased. The repayment rate of

microcredit debt is already very high and stated as 100% in TGMP reports. Therefore, providing higher amount of microcredit at first does not bring any risk to TGMP but it may help a lot to members. Members who want to use smaller amounts of microcredit may still choose to do so, but the needs of members who require higher amounts of credit can also be satisfied in this way. Moreover, providing higher amounts of credit at first also helps TGMP increase its sustainability since it will get higher service fee from these credits. Therefore, increasing the amount of microcredit offered at first can help both TGMP and members.

Apart from how much TGMP can be effective against poverty of its members, the problem of whom is affected by it is also important. When poverty status of the members surveyed in Eskişehir is considered, it is found out that percentages of members below and above the poverty line are almost equal to each other in the time they received microcredit. It may be argued that TGMP does not differentiate in favor of or against members below the poverty line. But the success criteria of managers carry the risk of preventing microcredit to reach poorest women. Adaman & Bulut (2007) states that one of the success criteria for managers of centers of microcredit program is reaching a certain number of members each year and if the managers cannot meet this criterion they are regarded as unsuccessful. Because of this expectation, managers tend to give credit not only to very poor women but also to women who are not very poor (Adaman & Bulut, 2007). Therefore, success criteria of TGMP managers should be changed and new criteria can be constructed in such a way that members who are poorest are weighted with a higher number and bring more points to managers than members who are relatively less poor. However, this requires a clear methodology that all TGMP officials can use and record the number of poorest clients. TGMP may set a list of criteria for stating a member as poorest or it may easily use the poverty lines announced by TURKSTAT according to size of families and year. Poorest people are excluded from the system also because of group lending model which may result in exclusion of

very poor people from groups by group members since they are seen very risky. This problem can be overcome by active participation of TGMP officials in group formation for poorest people. They can form special groups whose members are apparently poorer than the average in their districts once they get an application from one or two poorest women. This can be easily managed by TGMP officials since they are already visiting houses of women who apply for microcredit before they give credit. However, the difficulty of finding five poorest people living close to each other and forming a group with them in case they do not know each other before microcredit program can harm feasibility of this idea. Actually, the rule of five members in a group is one of the problems in TGMP lending methodology. TGMP replicates Grameen methodology and uses the rule of 5 members for extending credit to a group but this is not the correct way of adapting a methodology in one country to another country because Bangladesh is much more populous than Turkey and forming a group of five may be feasible for that country but not for Turkey. This can be easily observed from the fact that some members participated to the program just for completing the number of members in a group to five although they did not need credit. Therefore, number of members required in a group should be decreased to four or may be to three. Another shortcoming of the TGMP lending methodology is weekly visits by TGMP officials to districts of members for collecting installments. Some members state that repaying the microcredit debt by weekly installments is not helpful, it takes their time a lot and they would prefer to repay in monthly installments. Weekly visits also increase the operational costs of TGMP but they use this method since they consider that this is necessary for controlling members and discipline. But, there is no reason for not bringing flexibility to repayment schedule according to the status of members. The repayment schedule can stay weekly for members who get their first microcredit and once members are observed that they do not default on debt payment, their schedule can be changed to biweekly, and to monthly for third credit extended. This method both helps

members since it takes less time and TGMP since it decreases operational costs of TGMP.

Lastly, the choice of Diyarbakır as the pilot area for microcredit application is found appropriate considering that 30% of all poor in Turkey live in South East Anatolia when relative poverty treshold is considered. There are already many branches of TGMP in eastern provinces of Turkey. TGMP should continue giving priority to eastern regions and should also open branches in provinces Erzurum, Ağrı, Kars, Tunceli, Van, Bitlis and Şırnak when extending its activities considering that education level in these eastern parts of the country is less than the average in Turkey and poverty risk increases as education level decreases. Another point that should be noticed is the high female unemployment rates in metropolitan areas like Istanbul, Ankara, Izmir, Kocaeli, Adana and Mersin. These provinces are also among the most crowded provinces in terms of female population. Therefore, TGMP activities in these regions can be boosted and it should open branches in Kocaeli, Adana and Mersin. Most importantly, rural areas suffer from poverty much more than urban areas. There is no information on TGMP activities on the basis of rural and urban distribution till now but considering rural poverty numbers, activities in rural areas should be increased.

The suggestions provided here can be a part of an improvement scheme for TGMP Turkey and there may be many more suggestions by other parties because there can be shortcomings in any methodology and efficiency of applications can be increased as long as it is kept in mind that there is usually no single method that is applicable and efficient everywhere and in any time. The suggestions provided here or others can be tested in pilot schemes to be applied in some provinces and then may be extended to whole Turkey after they prove successful. The field surveys on the effects of TGMP gain importance at that point and future field surveys may help to improve the program both in sustainability side and in fight against poverty.

APPENDIX A

NACE Rev.2 CLASSIFICATION DETAILS

Table A.1 NACE Rev.2 Classification Details for Activity Categories of TGMP Eskişehir Members*

Code	Description
1.13	**Growing of vegetables and melons, roots and tubers**
This class includes:- growing of leafy or stem vegetables such as: artichokes, asparagus, cabbages, cauliflower and broccoli, lettuce and chicory, spinach, other leafy or stem vegetables - growing of fruit bearing vegetables such as: cucumbers and gherkins, eggplants (aubergines), tomatoes, watermelons, cantaloupes, other melons and fruit-bearing vegetables - growing of root, bulb or tuberous vegetables such as: carrots, turnips, garlic, onions (incl. shallots), leeks and other alliaceous vegetables, other root, bulb or tuberous vegetables - growing of mushrooms and truffles - growing of vegetable seeds, including sugar beet seeds, excluding other beet seeds - growing of sugar beet - growing of other vegetables - growing of roots and tubers such as: potatoes, sweet potatoes, cassava,yams,other roots and tubers	
This class excludes: - growing of chillies, peppers (capsicum sop.) and other spices and aromatic crops, see 01.28 - growing of mushroom spawn, see 01.30	
10.73	**Manufacture of macaroni, noodles, couscous and similar farinaceous products**
This item includes:	
This class includes:- manufacture of pastas such as macaroni and noodles,whether or not cooked or stuffed - manufacture of couscous - manufacture of canned or frozen pasta products	
This item excludes:	
This class excludes: - manufacture of prepared couscous dishes, see 10.85 manufacture of soup containing pasta, see 10.89	
13.99	**Manufacture of other textiles n.e.c.**
This class includes:- manufacture of felt- manufacture of tulles and other net fabrics, and of lace and embroidery, in the piece, in strips or in motifs-manufacture of pressure sensitive cloth-tape - manufacture of shoe-lace, of textiles - manufacture of powder puffs and mitts	
This class excludes: - manufacture of needle-loom felt floor coverings, see 13.93 - manufacture of textile wadding and articles of wadding: sanitary towels, tampons etc., see 17.22	
14.13	**Manufacture of other outerwear**
This class includes: - manufacture of other outerwear made of woven, knitted or crocheted fabric, non-wovens etc. for men, women and children:coats,suits,ensembles, jackets, trousers, skirts etc.	

This class also includes:- custom tailoring - manufacture of parts of the products listed
This class excludes: - manufacture of wearing apparel of fur skins (except headgear), see 14.20 - manufacture of wearing apparel of rubber or plastics not assembled by stitching but merely sealed together, see 22.19, 22.29 -manufacture of fire-resistant and protective safety clothing, see 32.99 - repair of wearing apparel, see 95.29

14.14	**Manufacture of underwear**
This class includes: - manufacture of underwear and nightwear made of woven, knitted or crocheted fabric, lace etc. for men, women and children:shirts, T-shirts, underpants, briefs, pyjamas, nightdresses, dressing gowns, blouses, slips, brassieres, corsets etc.	
This class excludes:- repair of wearing apparel, see 95.29	
14.39	**Manufacture of other knitted and crocheted apparel**
This class includes: - manufacture of knitted or crocheted wearing apparel and other made-up articles directly into shape: pullovers, cardigans, jerseys, waistcoats and similar articles	
This class excludes: - manufacture of knitted and crocheted fabrics, see 13.91 - manufacture of hosiery, see 14.31	
16.29	**Manufacture of other products of wood; manufacture of articles of cork, straw and plaiting materials**
This class includes: - manufacture of various wood products: wooden handles and bodies for tools, brooms, brushes, wooden boot or shoe lasts and trees, clothes hangers, household utensils and kitchenware of wood, wooden statuettes and ornaments, wood marquetry, inlaid wood, wooden cases for jewellery, cutlery and similar articles, wooden spools, cops, bobbins, sewing thread reels and similar articles of turned wood, other articles of wood - natural cork processing, manufacture of agglomerated cork - manufacture of articles of natural or agglomerated cork, including floor coverings - manufacture of plaits and products of plaiting materials: mats, matting, screens, cases etc. - manufacture of basket-ware and wickerwork - manufacture of fire logs and pellets for energy, made of pressed wood or substitute materials like coffee or soybean grounds - manufacture of wooden mirror and picture frames - manufacture of frames for artists' canvases - manufacture of wooden shoe parts (e.g. heels and lasts) - manufacture of handles for umbrellas, canes and similar - manufacture of blocks for the manufacture of smoking pipes	
This class excludes:- manufacture of mats or matting of textile materials, see 13.92 - manufacture of luggage, see 15.12 - manufacture of wooden footwear, see 15.20 - manufacture of matches, see 20.51 - manufacture of clock cases, see 26.52 - manufacture of wooden spools and bobbins that are part of textile machinery, see 28.94 - manufacture of furniture, see 31.0 - manufacture of wooden toys, see 32.40 - manufacture of brushes and brooms, see 32.91 - manufacture of coffins, see 32.99 - manufacture of cork life preservers, see 32.99	
47.11	**Retail sale in non-specialised stores with food, beverages or tobacco predominating**

This class includes: - retail sale of a large variety of goods of which, however, food products, beverages or tobacco should be predominant:activities of general stores that have, apart from their main sales of food products, beverages or tobacco, several other lines of merchandise such as wearing apparel, furniture, appliances, hardware, cosmetics etc.	
47.62	**Retail sale of newspapers and stationery in specialised stores**
This class also includes:- retail sale of office supplies such as pens, pencils, paper etc.	
47.71	**Retail sale of clothing in specialised stores**
This class includes: - retail sale of articles of clothing - retail sale of articles of fur - retail sale of clothing accessories such as gloves, ties, braces etc	
This class excludes: - retail sale of textiles, see 47.51	
47.72	**Retail sale of footwear and leather goods in specialised stores**
This class includes: - retail sale of footwear - retail sale of leather goods - retail sale of travel accessories of leather and leather substitute	
This class excludes: - retail sale of special sports equipment footwear such as ski boots, see 47.64	
47.73	**Dispensing chemist in specialised stores**
This class includes: - retail sale of pharmaceuticals	
47.78	**Other retail sale of new goods in specialised stores**
This class includes:- retail sale of photographic, optical and precision equipment - activities of opticians - retail sale of souvenirs, craftwork and religious articles - activities of commercial art galleries - retail sale of household fuel oil, bottled gas, coal and fuel wood - retail sale of weapons and ammunition - retail sale of stamps and coins - retail trade services of commercial art galleries - retail sale of non-food products n.e.c.	
47.81	**Retail sale via stalls and markets of food, beverages and tobacco products**
This class excludes: - retail sale of prepared food for immediate consumption (mobile food vendors), see 56.10	
47.82	**Retail sale via stalls and markets of textiles, clothing and footwear**
47.99	**Other retail sale not in stores, stalls or markets**
This class includes: - retail sale of any kind of product in any way that is not included in previous classes: by direct sales or door-to-door sales persons through vending machines etc. - direct selling of fuel (heating oil, firewood, etc.), delivered to the customers premises - activities of non-store auctions (retail, except Internet) - retail sale by (non-store) commission agents	
56.10	**Restaurants and mobile food service activities**

This class includes the provision of food services to customers, whether they are served while seated or serve themselves from a display of items, whether they eat the prepared meals on the premises, take them out or have them delivered. This includes the preparation and serving of meals for immediate consumption from motorised vehicles or non-motorised carts.This class includes activities of: - restaurants – cafeterias - fast-food restaurants - take-out eating places - ice cream truck vendors - mobile food carts - food preparation in market stalls	
This class also includes: - restaurant and bar activities connected to transportation, when carried out by separate units	
This class excludes: - retail sale of food through vending machines, see 47.99 - concession operation of eating facilities, see 56.29	
56.29	**Other food service activities**
This class includes industrial catering, i.e. the provision of food services based on contractual arrangements with the customer, for a specific period of time. Also included is the operation of food concessions at sports and similar facilities. The food is usually prepared in a central unit.This class includes: - activities of food service contractors (e.g. for transportation companies) - operation of food concessions at sports and similar facilities - operation of canteens or cafeterias (e.g. for factories, offices, hospitals or schools) on a concession basis	
This class excludes: - manufacture of perishable food items for resale, see 10.89 - retail sale of perishable food items, see division 47	
95.29	**Repair of other personal and household goods**
This class includes repair of personal and household goods: - repair of bicycles - repair and alteration of clothing - repair of sporting goods (except sporting guns) and camping equipment - repair of books - repair of musical instruments (except organs and historical musical instruments) - repair of toys and similar articles - repair of other personal and household goods - piano-tuning	
This class excludes: - industrial engraving of metals, see 25.61 - repair of sporting and recreational guns, 33.11 - repair of hand held power tools, see 33.12	
96.02	**Hairdressing and other beauty treatment**
This class includes: - hair washing, trimming and cutting, setting, dyeing, tinting, waving, straightening and similar activities for men and women - shaving and beard trimming - facial massage, manicure and pedicure, make-up etc.	
This class excludes: - manufacture of wigs, see 32.99	

***Some descriptions refer to sections which are not included in this table because the whole list is too long to represent here.The reader can find more detail in the link:** http://ec.europa.eu/eurostat/ramon/nomenclatures/index.cfm?TargetUrl=LST_NOM_DTL&StrNom=NACE_REV2&StrLanguageCode=EN&IntPcKey=&StrLayoutCode=HIERARCHIC

Source: (Eurostat Nace Rev.2 Classification, n.d.)

APPENDIX B

STATISTICAL TEST RESULTS

1) 10 PAIRWISE COMPARISONS OF BUSINESS SECTORS ACCORDING TO PROFIT LEVELS USING MANN-WHITNEY U TEST

Table B.1 Agriculture versus Manufacturing

Business	N	Mean Rank	Sum of Ranks
Agriculture	1	20	20
Manufacturing	20	10.55	211
Total	21		
Test Statistics			
Mann-Whitney U	1		
Z	-1.505		
Asymp. Sig. (2-tailed)	0.132		
Exact Sig. [2*(1-tailed Sig.)]	0.19		

Table B.2 Agriculture versus Retail Trade

Business	N	Mean Rank	Sum of Ranks
Agriculture	1	30	30
Retail Trade	35	18.17	636
Total	36		
Test Statistics			
Mann-Whitney U	6		
Z	-1.111		
Asymp. Sig. (2-tailed)	0.266		
Exact Sig. [2*(1-tailed Sig.)]	0.389		

Table B.3 Agriculture versus Food Services

Business	N	Mean Rank	Sum of Ranks
Agriculture	1	3.5	3.5
Food Services	4	2.88	11.5
Total	5		
Test Statistics			
Mann-Whitney U	1.5		
Z	-0.363		
Asymp. Sig. (2-tailed)	0.717		
Exact Sig. [2*(1-tailed Sig.)]	0.8		

Table B.4 Agriculture versus Other Services

Business	N	Mean Rank	Sum of Ranks
Agriculture	1	3	3
Other Services	4	3	12
Total	5		
Test Statistics			
Mann-Whitney U	2.00		
Z	0.00		
Asymp. Sig. (2-tailed)	1.00		
Exact Sig. [2*(1-tailed Sig.)]	1.00		

Table B.5 Manufacturing versus Retail Trade

Business	N	Mean Rank	Sum of Ranks
Manufacturing	20	21.73	434.5
Retail Trade	35	31.59	1105.5
Total	55		
Test Statistics			
Mann-Whitney U	224.50		
Z	-2.207		
Asymp. Sig. (2-tailed)	0.027		

Table B.6 Manufacturing versus Food Services

Business	N	Mean Rank	Sum of Ranks
Manufacturing	20	10.73	214.5
Food Services	4	21.38	85.5
Total	24		
Test Statistics			
Mann-Whitney U	4.50		
Z	-2.773		
Asymp. Sig. (2-tailed)	0.006		
Exact Sig. [2*(1-tailed Sig.)]	0.002		

Table B.7 Manufacturing versus Other Services

Business	N	Mean Rank	Sum of Ranks
Manufacturing	20	11.68	233.5
Other Services	4	16.63	66.5
Total	24		
Test Statistics			
Mann-Whitney U	23.50		
Z	-1.293		
Asymp. Sig. (2-tailed)	0.196		
Exact Sig. [2*(1-tailed Sig.)]	0.210		

Table B.8 Retail Trade versus Food Services

Business	N	Mean Rank	Sum of Ranks
Retail Trade	35	19.07	667.5
Food Services	4	28.13	112.5
Total	39		
Test Statistics			
Mann-Whitney U	37.50		
Z	-1.511		
Asymp. Sig. (2-tailed)	0.131		
Exact Sig. [2*(1-tailed Sig.)]	0.136		

Table B.9 Retail Trade versus Other Services

Business	N	Mean Rank	Sum of Ranks
Retail Trade	35	19.7	689.5
Other Services	4	22.63	90.5
Total	39		
Test Statistics			
Mann-Whitney U	59.50		
Z	-0.488		
Asymp. Sig. (2-tailed)	0.625		
Exact Sig. [2*(1-tailed Sig.)]	0.639		

Table B.10 Retail Trade versus Other Services

Business	N	Mean Rank	Sum of Ranks
Food Services	4	4.5	18
Other Services	4	4.5	18
Total	8		
Test Statistics			
Mann-Whitney U	8.00		
Z	0.000		
Asymp. Sig. (2-tailed)	1.000		
Exact Sig. [2*(1-tailed Sig.)]	1.000		

2) 10 PAIRWISE COMPARISONS OF BUSINESS SECTORS ACCORDING TO HOURLY PROFIT LEVELS USING MANN-WHITNEY U TEST AND KRUSKAL-WALLIS TEST

Table B.11 Kruskal Wallis Test for Comparison of All Sectors

Business sector	**N**	**Mean Rank**
Agriculture	1	36
Manufacturing	20	21.18
Retail Trade	35	37.23
Food Services	4	43.38
Other Services	4	36
Total	64	
Test Statistics		
Chi-Square	11.234	
df	4	
Asymp. Sig.	0.024	

Table B.12 Agriculture versus Manufacturing

Business sector	**N**	**Mean Rank**	**Sum of Ranks**
Agriculture	1	19	19
Manufacturing	20	10.6	212
Total	21		
Test Statistics			
Mann-Whitney U	2.00		
Z	-1.324		
Asymp. Sig. (2-tailed)	0.186		
Exact Sig. [2*(1-tailed Sig.)]	0.286		

Table B.13 Agriculture versus Retail Trade

Business sector	N	Mean Rank	Sum of Ranks
Agriculture	1	15.5	15.5
Retail Trade	35	18.59	650.5
Total	36		
Test Statistics			
Mann-Whitney U	14.5		
Z	-0.289		
Asymp. Sig. (2-tailed)	0.772		
Exact Sig. [2*(1-tailed Sig.)]	0.833		

Table B.14 Agriculture versus Food Services

Business sector	N	Mean Rank	Sum of Ranks
Agriculture	1	2	2
Food Services	4	3.25	13
Total	5		
Test Statistics			
Mann-Whitney U	1.00		
Z	-0.707		
Asymp. Sig. (2-tailed)	0.48		
Exact Sig. [2*(1-tailed Sig.)]	0.80		

Table B.15 Agriculture versus Other Services

Business sector	N	Mean Rank	Sum of Ranks
Agriculture	1	2.5	2.5
Other Services	4	3.12	12.5
Total	5		
Test Statistics			
Mann-Whitney U	1.5		
Z	-0.363		
Asymp. Sig. (2-tailed)	0.717		
Exact Sig. [2*(1-tailed Sig.)]	0.80		

Table B.16 Manufacturing versus Retail Trade

Business sector	N	Mean Rank	Sum of Ranks
Manufacturing	20	19.65	393
Retail Trade	35	32.77	1147
Total	55		
Test Statistics			
Mann-Whitney U	183		
Z	-2.927		
Asymp. Sig. (2-tailed)	0.003		

Table B.17 Manufacturing versus Food Services

Business sector	N	Mean Rank	Sum of Ranks
Manufacturing	20	10.8	216
Food Services	4	21	84
Total	24		
Test Statistics			
Mann-Whitney U	6.0		
Z	-2.637		
Asymp. Sig. (2-tailed)	0.008		
Exact Sig. [2*(1-tailed Sig.)]	0.005		

Table B.18 Manufacturing versus Other Services

Business sector	N	Mean Rank	Sum of Ranks
Manufacturing	20	11.62	232.5
Other Services	4	16.88	67.5
Total	24		
Test Statistics			
Mann-Whitney U	22.5		
Z	-1.359		
Asymp. Sig. (2-tailed)	0.174		
Exact Sig. [2*(1-tailed Sig.)]	0.183		

Table B.19 Retail Trade versus Food Services

Business sector	N	Mean Rank	Sum of Ranks
Retail Trade	35	19.79	692.5
Food Services	4	21.88	87.5
Total	39		
Test Statistics			
Mann-Whitney U	62.5		
Z	-0.348		
Asymp. Sig. (2-tailed)	0.728		
Exact Sig. [2*(1-tailed Sig.)]	0.738		

Table B.20 Retail Trade versus Other Services

Business sector	N	Mean Rank	Sum of Ranks
Retail Trade	35	20.09	703
Other Services	4	19.25	77
Total	39		
Test Statistics			
Mann-Whitney U	67.0		
Z	-0.139		
Asymp. Sig. (2-tailed)	0.889		
Exact Sig. [2*(1-tailed Sig.)]	0.911		

Table B.21 Food Services versus Other Services

Business sector	N	Mean Rank	Sum of Ranks
Food Services	4	4.75	19
Other Services	4	4.25	17
Total	8		
Test Statistics			
Mann-Whitney U	7.0		
Z	-0.289		
Asymp. Sig. (2-tailed)	0.773		
Exact Sig. [2*(1-tailed Sig.)]	0.886		

3) COMPARISON OF PROFIT LEVEL ACCORDING TO SALES METHOD IN EACH SECTOR USING MANN-WHITNEY U TEST

Table B.22 Comparison for Manufacturing Sector

Active Sales in Market?	N	Mean Rank	Sum of Ranks
Yes	4	7.25	29
No	16	11.31	181
Total	20		
Test Statistics			
Mann-Whitney U	19.0		
Z	-1.246		
Asymp. Sig. (2-tailed)	0.213		
Exact Sig. [2*(1-tailed Sig.)]	0.249		

Table B.23 Comparison for Food Services Sector

Active Sales in Market?	N	Mean Rank	Sum of Ranks
Yes	3	2.67	8
No	1	2.0	2
Total	4		
Test Statistics			
Mann-Whitney U	1.0		
Z	-0.447		
Asymp. Sig. (2-tailed)	0.655		
Exact Sig. [2*(1-tailed Sig.)]	1.000		

Table B.24 Comparison for Other Services Sector

Active Sales in Market?	N	Mean Rank	Sum of Ranks
Yes	2	3.5	7
No	2	1.5	3
Total	4		
Test Statistics			
Mann-Whitney U	0.0		
Z	-1.549		
Asymp. Sig. (2-tailed)	0.121		
Exact Sig. [2*(1-tailed Sig.)]	0.333		

4) CORRELATION BETWEEN AGE AND PROFIT AMOUNT

Table B.25 Spearman's Rho for Profit Amount and Age Relation

Profit Amounts and Ages	
Spearman's rho	
Correlation Coefficient	0.134
Sig. (2-tailed)	0.291
N	64

5) CORRELATION BETWEEN MICROCREDIT AMOUNT SPENT FOR BUSINESS AND AMOUNT OF CHANGE IN PROFIT LEVELS

Table B.26 Spearman's Rho for Microcredit Amounts Spent for Business and Change in Profit Relation

Microcredit Amounts Spent for Business and Change in Profit	
Spearman's rho	
Correlation Coefficient	0.469**
Sig. (2-tailed)	0.000
N	56

**Correlation is significant at the 0.01 level (2-tailed)

6) COMPARISON OF CHANGE IN PROFIT AMOUNT PER MICROCREDIT SPENT FOR BUSINESS ACCORDING TO EDUCATION LEVEL

Table B.27 Mann-Whitney U Test for Change in Profit Amount Per Microcredit Spent and Education Comparison

Education Level	N	Mean Rank	Sum of Ranks
Low	33	22.85	754
High	23	36.61	842
Total	56		
Test Statistics			
Mann-Whitney U	193.0		
Z	-3.144		
Asymp. Sig. (2-tailed)	0.002		

7) CORRELATION BETWEEN CHANGE IN PROFIT AMOUNT PER MICROCREDIT SPENT FOR BUSINESS AND AGE

Table B.28 Spearman's Rho for Change in Profit Amount per Microcredit Spent for Business and Age Relation

Change in Profit per Microcredit Spent for Business and Age	
Spearman's rho	
Correlation Coefficient	-0.128
Sig. (2-tailed)	0.347
N	56

8) COMPARISON OF MICROCREDIT EFFECT FELT AND AGES OF MEMBERS

Table B.29 Mann-Whitney U Test for Comparison of Microcredit Effect Felt and Ages of Members

Positive change after microcredit intervention?	N	Mean Rank	Sum of Ranks
Yes	47	32.63	1533.5
No	22	40.07	881.5
Total	69		
Test Statistics			
Mann-Whitney U	405.5		
Z	-1.437		
Asymp. Sig. (2-tailed)	0.151		

9) 10 PAIRWISE COMPARISONS OF BUSINESS SECTORS ACCORDING TO CHANGE IN PROFIT AMOUNT PER MICROCREDIT SPENT FOR BUSINESS USING MANN-WHITNEY U TEST

Table B.30 Agriculture versus Manufacturing

Business sector	N	Mean Rank	Sum of Ranks
Agriculture	1	18.00	18
Manufacturing	18	9.56	172
Total	19		
Test Statistics			
Mann-Whitney U	1.0		
Z	-1.499		
Asymp. Sig. (2-tailed)	0.134		
Exact Sig. [2*(1-tailed Sig.)]	0.211		

Table B.31 Agriculture versus Retail Trade

Business sector	N	Mean Rank	Sum of Ranks
Agriculture	1	27.00	27
Retail Trade	29	15.10	438
Total	30		
Test Statistics			
Mann-Whitney U	3.0		
Z	-1.342		
Asymp. Sig. (2-tailed)	0.18		
Exact Sig. [2*(1-tailed Sig.)]	0.267		

Table B.32 Agriculture versus Food Services

Business sector	N	Mean Rank	Sum of Ranks
Agriculture	1	4.50	4.5
Food Services	4	2.62	10.5
Total	5		
Test Statistics			
Mann-Whitney U	0.500		
Z	-1.088		
Asymp. Sig. (2-tailed)	0.277		
Exact Sig. [2*(1-tailed Sig.)]	0.400		

Table B.33 Agriculture versus Other Services

Business sector	N	Mean Rank	Sum of Ranks
Agriculture	1	5.00	5
Other Services	4	2.50	10
Total	5		
Test Statistics			
Mann-Whitney U	0.000		
Z	-1.414		
Asymp. Sig. (2-tailed)	0.157		
Exact Sig. [2*(1-tailed Sig.)]	0.400		

Table B.34 Manufacturing versus Retail Trade

Business sector	N	Mean Rank	Sum of Ranks
Manufacturing	18	21.83	393
Retail Trade	29	25.34	735
Total	47		
Test Statistics			
Mann-Whitney U	222.000		
Z	-0.868		
Asymp. Sig. (2-tailed)	0.385		

Table B.35 Manufacturing versus Food Services

Business sector	N	Mean Rank	Sum of Ranks
Manufacturing	18	9.94	179
Food Services	4	18.50	74
Total	22		
Test Statistics			
Mann-Whitney U	8.000		
Z	-2.423		
Asymp. Sig. (2-tailed)	0.015		
Exact Sig. [2*(1-tailed Sig.)]	0.014		

Table B.36 Manufacturing versus Other Services

Business sector	N	Mean Rank	Sum of Ranks
Manufacturing	18	10.81	194.5
Other Services	4	14.62	58.5
Total	22		
Test Statistics			
Mann-Whitney U	23.500		
Z	-1.091		
Asymp. Sig. (2-tailed)	0.275		
Exact Sig. [2*(1-tailed Sig.)]	0.300		

Table B.37 Retail Trade versus Food Services

Business sector	N	Mean Rank	Sum of Ranks
Retail Trade	29	15.88	460.5
Food Services	4	25.12	100.5
Total	33		
Test Statistics			
Mann-Whitney U	25.500		
Z	-1.806		
Asymp. Sig. (2-tailed)	0.071		
Exact Sig. [2*(1-tailed Sig.)]	0.072		

Table B.38 Retail Trade versus Other Services

Business sector	N	Mean Rank	Sum of Ranks
Retail Trade	29	16.69	484
Other Services	4	19.25	77
Total	33		
Test Statistics			
Mann-Whitney U	49.000		
Z	-0.502		
Asymp. Sig. (2-tailed)	0.616		
Exact Sig. [2*(1-tailed Sig.)]	0.651		

Table B.39 Food Services versus Other Services

Business sector	N	Mean Rank	Sum of Ranks
Food Services	4	5.50	22
Other Services	4	3.50	14
Total	8		
Test Statistics			
Mann-Whitney U	4.000		
Z	-1.155		
Asymp. Sig. (2-tailed)	0.248		
Exact Sig. [2*(1-tailed Sig.)]	0.343		

10) 10 PAIRWISE COMPARISONS OF BUSINESS SECTORS ACCORDING TO MICROCREDIT EFFECT FELT USING CHI-SQUARE TESTS

Table B.40 Agriculture versus Manufacturing

Chi-Square Tests	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	0.804[a]	1	0.370	
Continuity Correction	0.000	1	1.000	
Fisher's Exact Test				1.000
N of Valid Cases	23			

a. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 0.43.

Table B.41 Agriculture versus Retail Trade

Chi-Square Tests	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	0.418[a]	1	0.518	
Continuity Correction[b]	0.000	1	1.000	
Fisher's Exact Test				1.000
N of Valid Cases	38			

a. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 0.29.

Table B.42 Agriculture versus Food Services

Chi-Square Tests	Value
Pearson Chi-Square	.a
N of Valid Cases	5

a. No measures of association are computed for the crosstabulation of "Agriculture versus Food Services". At least one variable in each 2-way table upon which measures of association are computed is a constant.

Table B.43 Agriculture versus Other Services

Chi-Square Tests	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	0.240[a]	1	0.624	
Continuity Correction	0.000	1	1.000	
Fisher's Exact Test				1.000
N of Valid Cases	6			

a. 4 cells (100.0%) have expected count less than 5. The minimum expected count is 0.17.

Table B.44 Manufacturing versus Retail Trade

Chi-Square Tests	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	1.488[a]	1	0.223	
Continuity Correction	0.881	1	0.348	
Fisher's Exact Test				0.268
N of Valid Cases	59			

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 7.83.

Table B.45 Manufacturing versus Food Services

Chi-Square Tests	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	2.955[a]	1	0.086	
Continuity Correction	1.346	1	0.246	
Fisher's Exact Test				0.136
N of Valid Cases	26			

a. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 1.54.

Table B.46 Manufacturing versus Other Services

Chi-Square Tests	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	1.093[a]	1	0.296	
Continuity Correction	0.293	1	0.588	
Fisher's Exact Test				0.618
N of Valid Cases	27			

a. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 2.04

Table B.47 Retail Trade versus Food Services

Chi-Square Tests	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	1.625[a]	1	0.202	
Continuity Correction	0.464	1	0.496	
Fisher's Exact Test				0.559
N of Valid Cases	41			

a. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 1.07.

Table B.48 Retail Trade versus Other Services

Chi-Square Tests	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	0.204[a]	1	0.651	
Continuity Correction	0.000	1	1.000	
Fisher's Exact Test				1.000
N of Valid Cases	42			

a. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 1.43.

Table B.49 Food Services versus Other Services

Chi-Square Tests	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	0.900[a]	1	0.343	
Continuity Correction	0.000	1	1.000	
Fisher's Exact Test				1.000
N of Valid Cases	9			

a. 4 cells (100.0%) have expected count less than 5. The minimum expected count is 0.44.

APPENDIX C

POVERTY LINES ACCORDING TO HOUSEHOLD SIZE

Table C.1 Food and complete poverty lines according to household size, Turkey, 2010

Household size	Food povety line (TL)	Complete poverty line (TL)
1	141	396
2	213	599
3	269	759
4	318	896
5	363	1,025
6	404	1,140
7	444	1,252
8	482	1,358
9	515	1,451
10	548	1,545

Source: (Turkstat Poverty Analysis Statistics, 2010)

APPENDIX D

NON-PARAMETRIC STATISTICAL TESTS USED

This section provides information on non-parametric tests used in this study when analyzing the results of the survey for readers unfamiliar with these tests. Characteristics of the tests are explained shortly here and they can be found in any statistical text book for further information.

WILCOXON SIGNED RANK TEST

Wilcoxon signed rank test is the non-parametric version of paired samples t-test for equality of means and also it is the non-parametric version of one-sample t-test to compare one group to a hypothetical value. The test is based on a statistic T which is derived from the sum of the ranks for the differences in the data pairs. In the calculation of test statistic, firstly the differences between each pair of data set are calculated and ranked in absolute value giving rank 1 to the smallest difference. Then, the sums of ranks corresponding to positive and negative differences are calculated and smaller of these sums give the Wilcoxon signed rank statistic T. This T statistic is compared with the corresponding value in the Wilcoxon test table and if T value is less than or equal to the table value, it is concluded that there is a significant difference between the two matched data set. The sampling distribution of the statistic T approaches to the normal distribution as the sample size becomes large (more than 25 pairs of scores). The standard deviation of T is found as:

$$SD_T = \sqrt{\frac{N(N+1)(2N+1)}{24}}$$

And a z-score as:

$$Z = \{T - N\,(N+1)/4\} \div SD_T$$

Then the significance decisions are straightforward. In a two-tailed test, the observed z is significant at the 5 percent level if it exceeds 1.96 and 1.64 for a one-tailed test. In SPSS applications, the program computes the z statistic and asymptotic significance value (p-value). If the computed p-value is less than or equal to 0.05, then there is significant difference between the two compared data set (Robson, 1994; Kalaycı, 2010 & Motulsky, 1995).

MANN-WHITNEY U TEST

Mann-Whitney U test is the non-parametric version of the independent samples t-test for equality of means. Null hypothesis that central locations of two population distributions are the same is tested based on a statistic U which incorporates the sum of ranks in each group. For the calculation of U statistic, firstly data is ranked giving rank 1 to the lowest score and taking both groups together. If there are tied observations, mean rank is given to these observations. Then, ranks in the smaller sample are summed and named as T (if the samples have the same size, the sum of ranks in sample A is used in the below formula). The U statistic is computed with the below formula:

$$U = N_A N_B + N_A (N_A+1)/2 - T$$

where N_A is the number of scores in the smaller sample and N_B is the number of scores in the other sample. Similarly, U′ is calculated with the below formula:

$$U' = N_A N_B - U$$

The smaller of U and U′ is compared with the corresponding value in Mann-Whitney table. If the observed value is less than or equal to the table value, there is a significant difference between two samples. The sampling distribution of the test statistic U follows normal distribution approximately when the sample size becomes large. The standard deviation of U is given by the formula:

$$SD_U = [N_A N_B (N_A+N_B+1)/12]^{1/2}$$

And a z-score as:

$$Z= (U- N_AN_B/2) \div SD_U$$

The observed z is significant at 5 percent level if it exceeds 1.96 and 1.64 in two-tailed and one-tailed tests respectively. SPSS calculates U statistic, z-value and asymptotic and exact significance values (p-value) according to sample size. If p-value is less than or equal to 0.05, then there is a significant difference between the groups compared (Robson, 1994; Newbold et al., 2007 & Kalaycı, 2010).

KRUSKAL-WALLIS TEST

Kruskal-Wallis test is the non-parametric version of one-way ANOVA and it is the generalization of Mann-Whitney U test to more than two groups. It tests the null hypothesis that the samples all come from identical populations based on a test statistic called H. When calculating the test statistic, all the observations are ranked together and the sum of ranks is obtained for each sample (in case of ties, observations are given the mean value of ranks). Then the H statistic is given by the below formula:

$$H = \frac{\frac{12}{N(N+1)} \sum_{i=1}^{c} \frac{R_i^2}{n_i} - 3(N+1)}{1 - \frac{T}{N^3-N}}$$

where

c=the number of samples,

n_i= the number of observations in the ith sample,

N= the number of observations in all samples combined,

R_i= the sum of the ranks in the ith sample,

T= (t- l)t(t+l) for each group of ties, t being the number of tied observations in the group,and the summation is over all groups.

If n_i are not too small, H is distributed as X2(c- l) and X2 tables can be used to find a critical value. This test procedure is valid given that each sample

contains at least five observations. SPSS gives Chi-Square value and asymptotic significance (p-value) and there is a significant difference between the groups if p-value is less than or equal to 0.05. Kruskal-Wallis test, like the F-test in standard ANOVA, does not indicate which groups differ and Mann-Whitney U test could be used for pairwise comparisons of groups (Kruskal & Wallis, 1952; Newbold et al., 2007 & Kalaycı, 2010).

CHI-SQUARE TESTS FOR ANALYSIS OF CONTINGENCY TABLES

The term "chi-square" is used both for a statistical distribution and for a hypothesis testing procedure of contingency tables that produces a statistic which is approximately distributed as the chi-square distribution. If a sample of n observations is cross tabulated according to two attributes in an RxC table, chi-square test can be used to test the null hypothesis that there is no association between the two attributes in the population. For the calculation of the test statistic, firstly expected frequencies are computed for each cell of cross table. Expected frequencies are computed with the formula E = (row total x column total)/grand total for each cell. The standard Pearson chi-square statistic is then calculated with the below formula:

$$X^2 = \frac{(O_{ij} - E_{ij})^2}{E_{ij}}$$

where i and j represent the rows and columns of the table, O_{ij} and E_{ij} represents observed (actual) and expected values in each cell respectively. The test statistic is approximately distributed as chi-square with (R-1)x(C-1) degrees of freedom. The approximation is valid as long as no more than 20% of expected frequencies are less than 5. Adjacent classes can be combined to meet this assumption sometimes but it is important to note that chi-square statistic is only approximated by the chi-square distribution and the possible values of this statistic are quite discrete with small expected frequencies. When there are cells with expected count less than five, Yates' continuity correction and Fisher's exact test can be calculated as an alternative to Pearson chi-square.

Yates proposed the below correction to bring Pearson chi-square more in line with the true probability:

$$X^2 = \frac{(|O_{ij} - E_{ij}| - 0.5)^2}{E_{ij}}$$

The correction is only used when there are one or two categories and the revised equation overcorrects with calculated X^2 value too low and the p-value is too high. Given that Yates' correction involves overcorrection and modern software makes Fisher's exact test computationally feasible, Yates' correction should be replaced by more exact methods. Fisher's exact test gives an exact probability with underlying hyper geometric probability model but it is computationally demanding. In a 2x2 cross table like the below one, the smallest observed value in the cells is found and new tables are obtained by subtracting 1 from the value of the cell with smallest frequency until it becomes zero. In this process, sums of columns and rows are kept constant. Therefore, while subtracting 1 from the cell with the smallest frequency, other cells are added 1 or subtracted 1 accordingly to keep column and row totals fixed. In this way, (value in the cell with smallest frequency + 1) tables are obtained and for each table probability is calculated with the below formula. Summing probabilities over the tables obtained gives the exact p-value:

Row variable\Column variable	1	2	Total
1	a	b	A
2	c	d	B
Total	C	D	n

$$P = \frac{A!B!C!D!}{a!b!c!d!n!}$$

The recommended approach for the use of chi-square tests is that standard Pearson chi-square test is used whenever the expected frequencies are at least five. If there are cells with expected count less than five, then Fisher's exact

test gives the exact probability. SPSS calculates Pearson chi-square statistic and asymptotic significance for cross tables and present a footnote about the expected count of the cells. For 2x2 tables, Fisher's exact test and Yates' correction is also calculated by SPSS. If p-values from the SPSS results are found to be higher than 0.05 then differences between attributes are said to be due to chance variation (Newbold et al., 2007; Motulsky, 1995; Howell, n.d.; Bulut & Güngör, 2008).

SPEARMAN'S RHO CORRELATION COEFFICIENT

Spearman's rho is simply the non-parametric version of ordinary correlation coefficient which takes values between -1 and 1. For calculation, data is firstly ranked with smallest one getting 1 and then differences, between the ranks of each observation on the two variables are calculated. The below formula gives Spearman's ρ:

$$\rho = 1 - (6\sum D^2)/N(N^2-1)$$

SPSS calculates both Spearman's rho and significance level of the coefficient. If the calculated p-value is less than or equal to 0.05 then there is a significant relation between the variables and the strength of the relation is given by the rho value (Kalaycı, 2010 & Scanlan, n.d.).

APPENDIX E

QUESTIONNAIRE

1) How old are you?

2) What is your marital status?

a) Married b) Single c) Widow d) Divorced

3) What is your education level?

a) I am illiterate
b) I can read and write but did not go to primary school
c) I am a primary/secondary school graduate
d) I am a high school graduate
e) I am a university graduate

4) How many people are there in your family including those dependent on you and living with you?

5) What is the amount of your monthly household income approximately? Please consider all members earning income in your family and give the total amount.

6) Do you remember the year you received your first microcredit from Eskişehir TGMP?

a) Yes (year:……..month:……..)
b) No

7) How many people were there in your family including those dependent on you and living with you <u>before you received your first microcredit?</u>

8) What was the amount of your monthly household income approximately <u>before you received your first microcredit</u>? Please consider all members earning income in your family and give the total amount.

9) Is your monthly household income regular?

a) It is very irregular, we cannot anticipate how much income we will have next month
b) It is irregular, but we can anticipate how much income we will have next month approximately
c) It is regular, sometimes it may change but usually we have almost constant monthly income

10) How many times have you received microcredit?

a) Only once b) Twice c) Three times d) Four times

11) What is the total amount of microcredit you received from Eskişehir TGMP?

12) Why did you need microcredit and how did you spend microcredit you received?

a) I spent some of them for family needs and some of them for business purposes
b) I spent all of it for business purposes
c) I spent all of it for family needs
d) I gave it to another group member

(The questionnaire ends here for those participants answering question 12 with "c" or "d")

13) What is the total amount of microcredit you spent for business purposes?

14) Is there a single business for which you spent microcredit or more than one?

a) I spent it for one single business
b) I spent it for more than one business

15) Could you please explain the business for which you spent your microcredit? Firstly explain the business for which you spent most of your microcredit and then please explain the second business if there is any.

First business:

Second business:

(Note: For the following questions, "explained in question 15" part will be filled by the name of business explained in question 15 while asking to participant.)

16) The business explained in question 15 **for which you spent your microcredit is:**

a) a new business for me, I started this business after I received microcredit
b) not a new business for me, I had been doing this business before I got microcredit

17) What is the current and/or last amount of monthly profit/loss you earn from the business explained in question 15 **approximately?**

a) Profit:
b) Loss:
c) No profit or no loss: (meaning the profit amount of zero)
d) I do not know

18) What was the amount of monthly profit/loss you earned from the business explained in question 15 **approximately before you used microcredit?**

a) Profit:
b) Loss:
c) No profit or no loss: (meaning the profit amount of zero)
d) I do not know

19) Which option is more suitable for profit/loss status of the business explained in question 15**?**

a) Profitability of the business is now better than before / I have been making profit from my new business

   Reasons behind this:

b) Profitability of the business has not changed / I have been making no profit or loss from my new business

   Reasons behind this:

c) Profitability of the business is now worse than before / I have been making loss from my new business

Reasons behind this:

d) I do not know

20) Do you continue to run the business explained in question 15**?**

a) Yes, I still run this business
b) No, I stopped doing this business
Reasons behind this:

21) How many people who are not in your family work for the business explained in question 15**?**

(If there is no worker out of the family, jump to the question 27)

22) What is the approximate number of weekly working hours of people who are not in your family and work for the business explained in question 15**?**

First employee works .....hours in a week

Second employee works .....hours in a week

Third employee works .....hours in a week

23) How do you pay people who are not in your family and work for the business explained in question 15**?**

First employee:
a) Payment in kind b) Payment in cash c) Payment both in kind and in cash d) I do not pay him/her

Second employee:
a) Payment in kind b) Payment in cash c) Payment both in kind and in cash d) I do not pay him/her

Third employee:
a) Payment in kind b) Payment in cash c) Payment both in kind and in cash d) I do not pay him/her

24) How many people who are not in your family started to work for the business explained in question 15 **after you received microcredit?**

(If the answer is none, jump to the question 27)

25) How do you pay people who are not in your family and started to work for the business explained in question 15 **after you received microcredit?**

First employee:

a) Payment in kind b) Payment in cash c) Payment both in kind and in cash d) I do not pay him/her

Second employee:

a) Payment in kind b) Payment in cash c) Payment both in kind and in cash d) I do not pay him/her

Third employee:

a) Payment in kind b) Payment in cash c) Payment both in kind and in cash d) I do not pay him/her

26) What is the approximate number of weekly working hours of people who are not in your family and started to work for the business explained in question 15 **after you received microcredit?**

First employee works .....hours in a week

Second employee works .....hours in a week

Third employee works .....hours in a week

27) How many people from your family work for the business explained in question 15**? Please count yourself too.**

28) What is the approximate number of weekly working hours of people from your family and work for the business explained in question 15**?**

First member works .....hours in a week

Second member works .....hours in a week

Third member works .....hours in a week

29) How many people from your family started to work for the business explained in question 15 **after you received microcredit?**

(If the answer is none, jump to the question 31)

30) What is the approximate number of weekly working hours of people from your family and started to work for the business explained in question 15 **after you received microcredit?**

First member works .....hours in a week

Second member works .....hours in a week

Third member works .....hours in a week

31) Is there anyone from your family working for the business explained in question 15 **who got any vocational training special for this business?**

a) Yes b) No

(Note: If the participant spent microcredit for more than one business, that is if she answered the question 14 with "b", the questions 16-31 will be asked again this time for the second business)

APPENDIX F

TGMP ACTIVITY BY PROVINCE

Table F.1 TGMP Activity by Province, 2010

Commissioning Date	Branch	Number of members	Number of members used credit	Total credit amount (TL)	Total credit amount repaid (TL)	Loan recovery rate (%)
18-Jul-2003	Diyarbakır	8608	8053	27,887,630	24,007,910	100
9-Nov-2006	Ankara	537	526	1,131,624	955,548	100
7-Dec-2006	Batman	1264	1093	1,646,986	1,244,757	100
21-May-2007	Mardin	1589	1540	2,496,555	1,838,397	100
9-Jul-2007	Gaziantep	2440	2366	4,126,050	3,109,417	100
17-Jul-2007	Yozgat	513	497	952,258	753,622	100
20-Jul-2007	Zonguldak	680	670	1,412,677	1,159,126	100
3-Aug-2007	Çankırı	566	554	1,135,249	812,971	100
3-Sep-2007	Maraş	3781	3690	5,071,754	3,373,210	100
5-Sep-2007	Eskişehir	1701	1622	2,685,056	1,942,130	100
7-Mar-2008	Rize	593	569	934,951	667,247	100
7-Mar-2008	Sivas	448	439	936,356	734,639	100
25-Mar-2008	Amasya	446	430	888,575	698,304	100
15-Apr-2008	Kayseri	506	494	942,802	679,720	100
23-May-2008	Bursa	1415	1345	1,767,226	1,107,420	100
25-May-2008	Niğde	486	467	739,672	518,453	100
11-Jul-2008	Erzincan	763	741	942,100	655,344	100
19-Jul-2008	Aydın	1026	1008	1,490,661	1,064,110	100
30-Jul-2008	Tokat	785	769	1,396,411	1,029,723	100
10-Sep-2008	Çorum	498	465	765,363	608,097	100
28-Oct-2008	Kırşehir	406	382	546,203	394,332	100
31-Oct-2008	Şanlıurfa	3032	2947	4,385,058	2,761,789	100
21-Nov-2008	Siirt	289	281	355,838	227,422	100
13-Jan-2009	Hatay	1055	1034	1,151,306	706,562	100
12-Feb-2009	Malatya	627	621	867,863	581,974	100
10-Mar-2009	Adıyaman	515	504	546,830	358,484	100
2-Apr-2009	Bilecik	719	691	834,888	510,130	100
8-Apr-2009	Burdur	414	388	469,614	292,539	100
9-Apr-2009	Isparta	357	341	519,428	344,258	100

Table F.1 (Continued)

14-Apr-2009	Bingöl	361	348	392,428	252,554	100
5-Jun-2009	Samsun	490	474	566,404	327,396	100
16-Jul-2009	Balıkesir	600	518	515,933	306,425	100
3-Sep-2009	Manisa	271	262	244,500	139,242	100
18-Sep-2009	Muğla	603	542	400,606	177,230	100
17-Oct-2009	Elazığ	768	756	732,646	455,186	100
4-Dec-2009	Denizli	774	756	592,322	319,005	100
31-Dec-2009	Afyon	378	348	262,244	128,740	100
1-Jan-2010	Hakkari	174	174	136,200	71,562	100
2-Jan-2010	Artvin	128	126	94,356	43,612	100
17-Feb-2010	Trabzon	427	404	287,500	107,664	100
15-Mar-2010	Muş	213	213	160,242	67,177	100
28-Apr-2010	Aksaray	141	131	81,400	16,452	100
28-Apr-2010	Konya	169	167	118,452	39,351	100
30-Apr-2010	Kırıkkale	135	126	83,400	19,778	100
15-May-2010	Ardahan	91	89	57,600	15,330	100
20-May-2010	İzmir	428	421	313,013	91,668	100
21-Oct-2010	Iğdır	61	52	31,800	2,917	100
16-Dec-2010	İstanbul	35	33	24,600	605	100
	Total	**42306**	**40467**	**74,122,621**	**55,719,518**	**100**

Source: (TGMP Weekly Group, Member, Microcredit Amount and Collection Table by Branches, 2011)

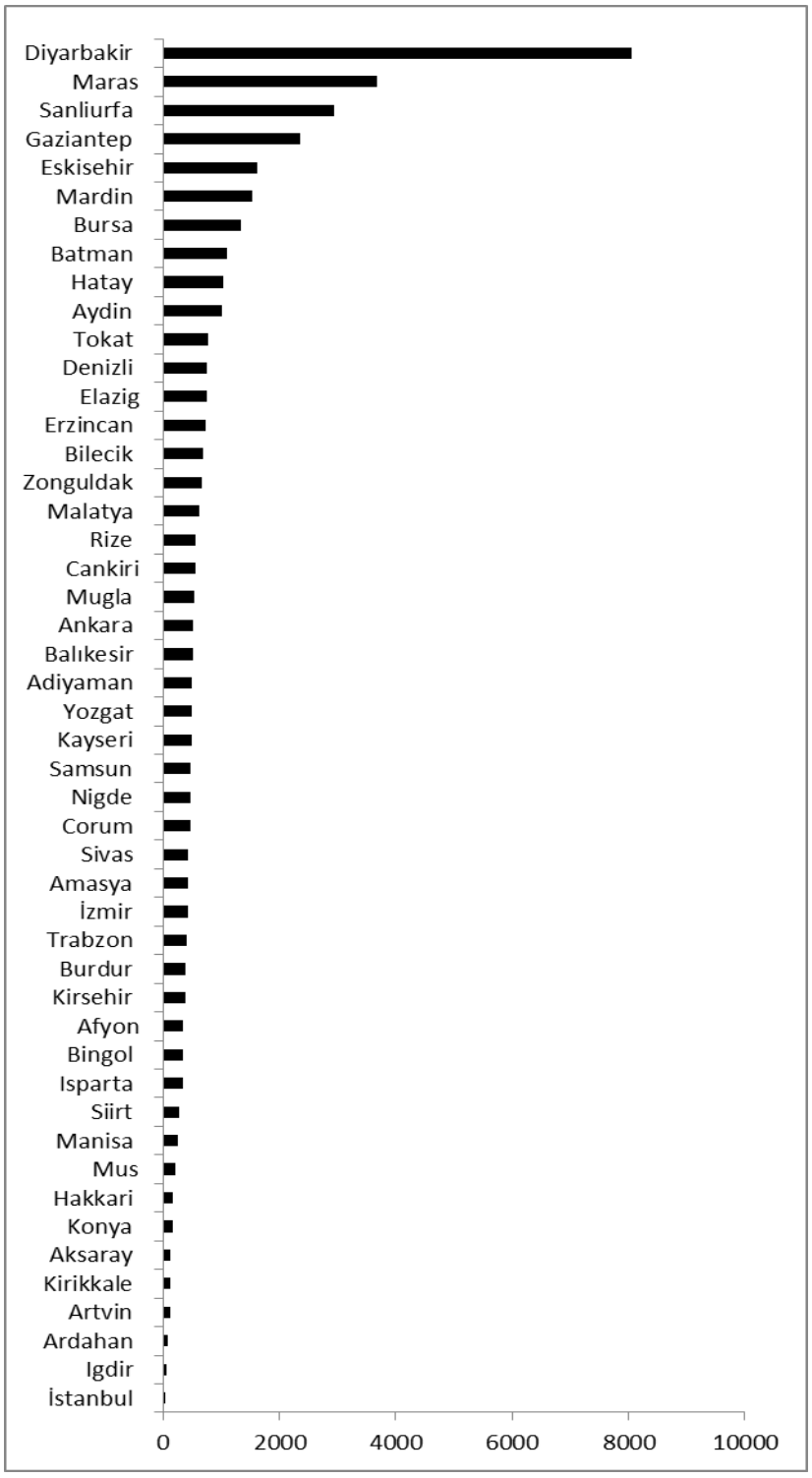

Figure F.1 Number of Members who Used Credit from TGMP, 2010

Source: (TGMP Weekly Group, Member, Microcredit Amount and Collection Table by Branches, 2011)

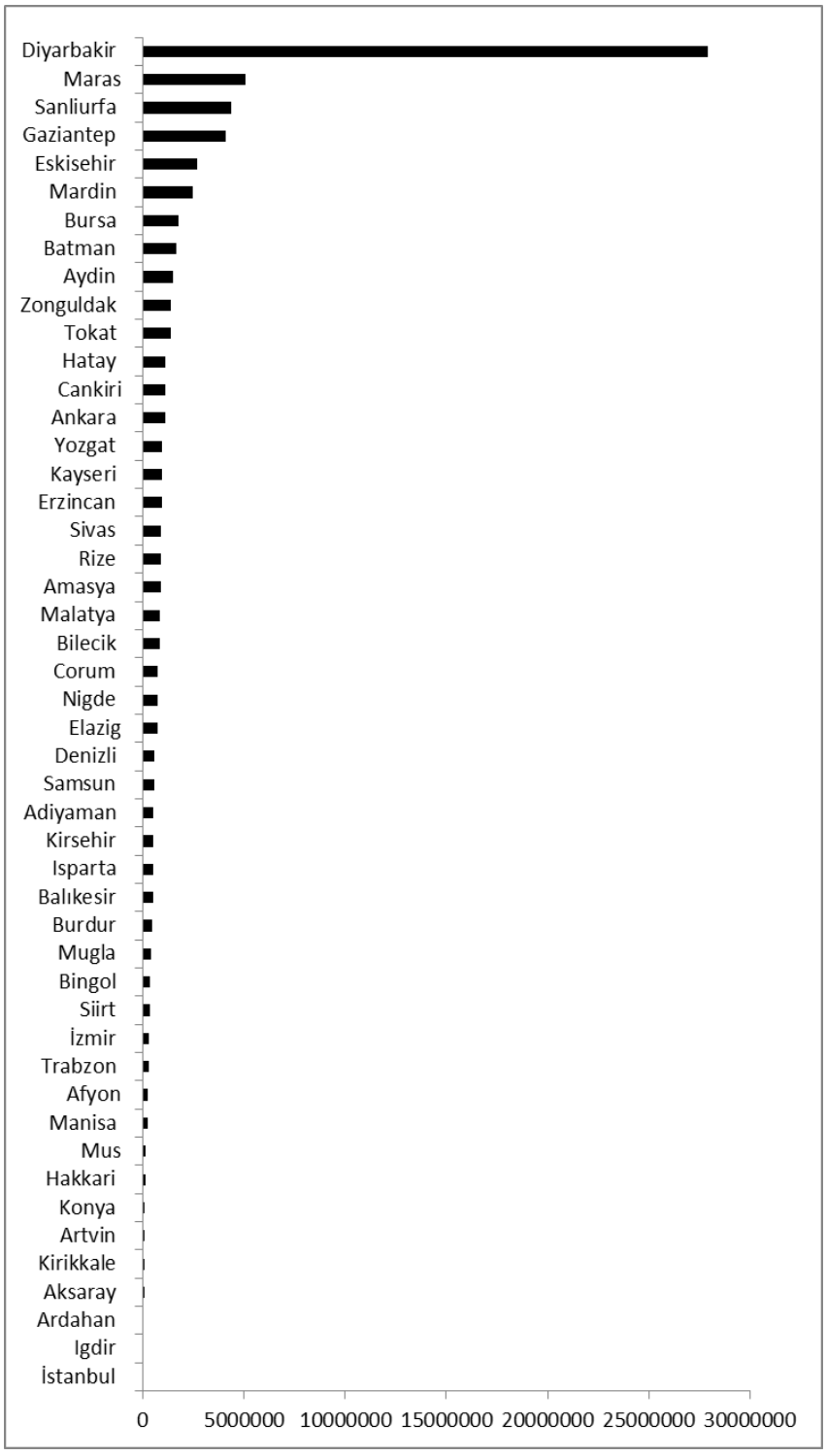

Figure F.2 Total Credit Amount Distributed by TGMP (TL), 2010

Source: (TGMP Weekly Group, Member, Microcredit Amount and Collection Table by Branches, 2011)

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