

**Charles University in Prague**

Faculty of Social Sciences  
Institute of Economic Studies



MASTER THESIS

**Microcredit in Developed Countries: the  
Case of Quebec**

Author: **Bc. Nicolas Griss-Trempe**

Supervisor: **Prof. Ing. Karel Janda M.A., Dr., Ph.D.**

Academic Year: **2012/2013**

## **Declaration of Authorship**

The author hereby declares that he compiled this thesis independently, using only the listed resources and literature.

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Prague, May 17, 2013

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Signature

## **Acknowledgments**

I wish to thank Mrs. Marie-Maude Chevrier from the RQCC in Quebec for her tremendous help in supplying the data and answering my questions. I also wish to thank Mr. Karel Janda, my supervisor, who took great amounts of his time to advise me and contribute to my progress.

## Abstract

Microcredit in developed countries behaves in a different way than in developing countries. Not only are there bigger obstacles to surpass, like regulation and heavy competition, but also the main driver for microcredit, peer pressure, is almost inexistent. Microcredit institutions turn to a different technique to ensure high repayment rates; they follow the loan using training and weekly meetings. However, this procedure has high costs and the institutions must plead for donations from public and private figures. Ensuring these donations come with higher repayment rates. Thus, we will observe which characteristic of a group loan has a positive or negative impact on the repayment rates using data from the Quebec institution of the RQCC. These variables range from gender to training hours and will be regressed using stata.

**JEL Classification** D14, E62 G21, P13

**Keywords** micro finance institutions, personal finance, public expenditures, investment, finance, cooperative enterprises

**Author's e-mail** nicolas.griss@hotmail.com

**Supervisor's e-mail** Karel-Janda@seznam.cz

## Abstrakt

Mikroúvery se ve vyspělých zemích chovají jinak, než v zemích rozvojových. Nejen kvůli větším překážkám, jako je regulace a těžká konkurence, ale také kvůli hlavnímu způsobu vymáhání mikroúveru a tlaku okolí, který téměř neexistuje. Institut mikroúveru se obrací k odlišné technice k zajištění vysoké míry splácení; řídí pujky pomocí školení a týdenních setkání. Nicméně, tento postup má vysoké náklady a instituce musí žádat o dary z veřejných nebo soukromých zdrojů. Zajištění těchto darů s sebou nese vyšší sazby splácení. Proto budeme sledovat, která vlastnost skupiny puček má pozitivní nebo negativní dopad na splácení sazeb na základě údajů Quebecké instituce RQCC. Tyto proměnné se pohybují od pohlaví k výcvikovým hodinám a vrátí se použitím stata.

**Klasifikace JEL** D14, E62 G21, P13  
**klíčová slova** mikro finanční instituce, osobní finance, veřejné výdaje, investice, finance, družstevní podniky

**E-mail autora** nicolas.griss@hotmail.com  
**E-mail vedoucího práce** Karel-Janda@seznam.cz

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# Acronyms

**FCAC** Financial Consumer Agency of Canada

**GINI** a measure of statistical dispersion

**LICO** Low-Income Cut-Off

**MFI** Microfinance Institution

**MIV** Microfinance Investment Vehicle

**RQCC** Réseau Québécois du Crédit Communautaire

# Master Thesis Proposal

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<b>Author</b>	Bc. Nicolas Griss-Trempe
<b>Supervisor</b>	Prof. Ing. Karel Janda M.A., Dr., Ph.D.
<b>Proposed topic</b>	Microcredit in Developed Countries: the Case of Quebec

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**Topic characteristics** We will try to observe the reasons why microcredit exists in developed countries and if it is effective. Our following interest in the sphere of microcredit is cast upon the developed countries. The existence of microcredit in developing countries is no mystery and has a solid motivation, but there are many microfinancial institutions that are spread out in the developed countries where their economic effectiveness should be questioned. Thus, we will gather information about the economic environment and banking system. Moreover, we will analyze the effect of the various characteristics that compose a group loan over their repayment rates. Data will be taken from multiple organisations within the province of Quebec (RQCC) and Statistics Quebec.

**Hypothesis 1** Microcredit has a place in developed countries due to a percentage of population that are excluded from formal institutions.

**Hypothesis 2** Services provided by these institutions are effective cost wise.

**Hypothesis 3** Business training hours have a positive effect on repayment rates for group loans.

**Methodology** We will mostly gather data from various organisations and compile them. Data about average revenue, GINI coefficient, percentage of low income households, wealth by region disparity, etc. As well as some data on the standard banking system and brief explaining on minimal standard requirements for credit loans. We will also gather data on group loans in Quebec

with various characteristics and regress the variables over the repayment rates for the groups.

**Outline** For this thesis, we will begin by analyzing the aspects of microcredit in developed countries. We will enumerate and expand on these characteristics that are crucial for the structure of microcredit. After a brief introduction to the province of Quebec, we will apply these aspects for Quebec and gather the necessary information to analyze. This data is important to understand and observe the mechanism of microcredit in Quebec. For example, the portion of population that does not have access to formal credit and reasons that explains why. We will also look into the viability of microcredit by gathering data on numerous institutions across Quebec. We will evaluate their returns, costs, subventions and effective rate that will be built upon many other points such as: employment creation, loan sizes, default rates, etc. An important term that we will try to portrait within the scope of effectiveness is sustainability, which is the lingering effect of creating businesses through microcredit. We will then estimate the effects of each variable on the reimbursement rate for every group loans and conclude with our results.

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4. Réseau Québécois du Crédit Communautaire, <http://www.rqcc.qc.ca/contact/>.
5. International Association of Investors in the Social Economy, <http://www.inaise.org/>.

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Author

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Supervisor

# Chapter 1

## Introduction

To begin, we will define the subject at hand. This definition should be referred to whenever it is mentioned. Microcredit has a long history, and therefore we will only be using its current and latest form as it stands today. Microcredit can be described as multiple small loans to individuals that are refused access to formal credit. The following interest in the sphere of microcredit is cast upon the developed countries; since, it is effective worldwide and is most popularly known in developing countries to alleviate poverty. We will investigate into the work of microfinancial institutions within developed countries.

The existence of microcredit in developing countries is no mystery and has a solid motivation, but there are many microfinance institutions (MFIs) that are spread out in the developed countries where their economic effectiveness should be questioned. Their mission is seen by many as charity work instead of proper microfinance. We will be presenting some developed countries' profiles for the matter, but mostly analyze the Canadian province of Quebec as a proxy. Quebec has had a long history of cooperative credit and microfinance. The community that surrounds it is stable and provides sound data for analysis.

The aim of this paper is twofold: first to assess the direct and indirect impact of microcredit in Quebec and second to observe the effects on reimbursement rates of business training hours, amongst other characteristics, over group loans in Quebec. We will take a look at the developed countries Achilles' heel: group-based schemes and more specifically, group homogeneity factors, such as: age, gender, income, language and education. Thus, acknowledging if groups loans made of individuals with different levels of income, education, training hours, etc. are more effective in terms of reimbursement rate than other groups. Various languages within the borrowing community of microcredit seem to be

a unique factor, since it can only be found in countries with high immigration levels and a diversified population that correspond to Canada and the United States.

Microcredit in developed countries has a vastly different structure than in the developing ones. This is due to the distinctive economic environment and the different type of clientele. The original microcredit model takes up many challenges when adapting to the new environment.

In order to observe and configure the whole output of microcredit in Quebec, we will structure this paper in the following way: starting with a quick overview of the population of Quebec in order to understand the stemming of microfinance institutions, then an outline of the data that support the micro-financial sphere of developed countries and followed by a report to define the body of formal credit. Furthermore, we will present the collection of current literature that is in line with the subject.

Ensuing this, we will verify our main hypothesis that business training hours have a positive impact over reimbursement rates in group-lending schemes. Do to so, we will estimate every group factor over the reimbursement rates using the statistical program Stata. The data is provided by the “Reseau quebecois du credit communautaire” or RQCC, which collectively represents all of the microcredit institutions in Quebec. We will then conclude with our results and findings.

## Chapter 2

# Quick Population Overview, Province of Quebec

Starting with a population overview to validate the environment in which the microfinancial institutions are working with. All the population data in the following section comes from the “Institute of Statistics of Quebec”. Since the modern microfinancial institutions in Quebec started growing around the year 2000 according to the RQCC, we selected the span of years from 2000 to 2009.

Figure 2.1: Revenue and Spending for the province of Quebec in 2011,  
in M\$

<b>Quebec administration</b>	<b>2011, M\$</b>	<b>%</b>
<b>Taxation</b>	90,621	100%
Direct taxes, and contributions to social insurance schemes	27,734	31%
Direct taxation of companies and public enterprises	5,847	6%
Indirect taxation	26,998	30%
Current transfers from individuals	3,554	4%
Investment Income	7,655	8%
Current transfers from Federal Administration	18,741	21%
Current transfers from local governments	92	0.1%
<b>Spending</b>	89,087	100%
Current expenditure on goods and services	44,419	50%
Current transfers to individuals	14,531	16%
Current transfers to enterprises	6,169	7%
Transfers to the Federal government	684	0.77%
Transfers to local governments	10,930	12%
Interest on public debt	12,354	14%

Source: author's research.



To give a good idea of where funds come and go from, using the assumption that the data is similar, give or take 2 years, the table above shows where the Quebec government makes its revenue and where it spends it. The total of 90.6 bn\$ taken from various sources has 31% of it coming from individual direct taxation, 30% from indirect taxation and 4% from individual current transfers. This revenue mostly represents the tax burden from the middle and rich classes of the society. Even though the poor pay taxes, their contribution is understandably very low. Moreover, if we look at the spending, we can see that 16% of the 89 bn\$ spent are redirected in current transfers to individuals. Again, by inference, these funds are generally absorbed by the lower class. We can come to a broad conclusion that about 10% of the revenue generated by taxes from the population is dedicated directly to the poor. Meaning that the province of Quebec has a strong sense of equality amongst classes.

Figure 2.2: GINI Coefficient for all households in Quebec from 2000-2009, in %

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
<b>GINI coefficient, %</b>	36.3	36.5	36.4	35.9	36.3	37.1	36.3	36.1	36.7	36.3

*Source:* author's research.

As we can see, the province of Quebec has a fairly low GINI coefficient which proves that the state has a strong approach in wealth transfers. The lower the coefficient, the higher the total wealth is equally divided amongst the population.

Figure 2.3: LICO after tax per individual in Quebec from 2000-2009, in \$CAD

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
<b>LICO after tax, CAD\$</b>	11,937	12,559	13,191	13,502	14,031	14,614	14,888	15,795	16,278	16,859

*Source:* author's research.

The LICO represents the threshold of low income cut-off after tax per individual. Meaning that every individual that has an after tax income lower than the LICO for the respective year are considered poor. We observe a huge increase over 10 years, which proves that, withholding inflation, the government adjusted its measure to consider the overall increase in real income for all the

population. In 2000, if your income was 11 000\$ you were considered poor; but in 2009 with an income of 16 000\$ you are considered poor.

Figure 2.4: Rate of low income for the province of Quebec from 2000-2006, in %

Year	2000	2001	2002	2003	2004	2005	2006
Rate of low income, %	15.7	14.9	15.3	15.2	15.2	15.1	15.2

Source: author's research.

These figures represent the rate of low income in percentage points for the province of Quebec. In other words, we observe that around 15% of the population in Quebec is considered poor. This figure was stable over a 7 year span. We can ask ourselves: are microfinancial institutions ineffective or did they help keep these figures low?

Figure 2.5: Average yearly employment for the province of Quebec from 2000-2009, in 1000

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Average yearly employment, in 1000	3,402	3,440	3,565	3,620	3,673	3,701	3,743	3,834	3,880	3,848
Increase over preceding year, in %	-	1.12%	3.63%	1.54%	1.46%	0.76%	1.13%	2.43%	1.20%	-0.82%

Source: author's research.

We have decided to observe employment figures instead of unemployment since it is a better indicator for economic policies. Simply put, there was a positive increase in employment every year, except for 2009 when the financial crisis hit Canada.

The numbers above show the after tax disposable income per household for each region over a 3 year span. During these 3 years, we observe a steady increase in income for all regions. The poorest region, Gaspesie-Iles-de-la-Madeleine, is formed by a small population that subsists mostly on tourism and fishing. Otherwise, all regions in Quebec have very similar income levels. We can find one surprise by looking at the year 2008 for the region Nord-du-Quebec. The disposable income per household for that region in 2008 is abnormally high (47,729\$). This is explained by the fact that in 2008 the Canadian government gave 1.1 bn\$ to the native "Cree" regional administration in order to settle the question of the implementation of the James Bay agreement.

The microfinancial institutions which are active in Quebec function in a financially healthy environment where the government makes a sustainable ef-

Figure 2.6: Disposable income per household within administrative regions of Quebec from 2007-2009, in \$

<b>Year</b>	2007	2008	2009
<b>Administrative region, disposable income, in \$</b>			
Bas-Saint-Laurent	19,937	20,954	21,456
Saguenay–Lac-Saint-Jean	21,221	21,849	22,566
Capitale-Nationale	24,103	24,920	25,706
Mauricie	20,819	21,464	21,960
Estrie	21,343	21,978	22,250
Montréal	24,988	25,643	25,528
Outaouais	22,638	23,392	24,506
Abitibi-Témiscamingue	22,584	23,781	24,308
Côte-Nord	23,037	24,077	24,739
Nord-du-Québec	21,468	47,729	23,619
Gaspésie–Îles-de-la-Madeleine	18,901	19,736	20,516
Chaudière-Appalaches	22,264	23,067	23,616
Laval	24,313	25,237	25,344
Lanaudière	22,794	23,511	23,900
Laurentides	23,902	24,614	25,043
Montérégie	24,303	24,932	25,487
Centre-du-Québec	21,227	22,065	22,333
Entire Québec	23,480	24,347	24,606

Source: author's research.

fort to reduce poverty. Although there appears to be a reasonably prosperous atmosphere, in which transfers are significant, there is 15% of the population that seems to stay under the LICO. Knowing that microfinancial institutions receive capitalization from various sources, are those investments being used properly and effectively?

# Chapter 3

## Microcredit in developed countries

In this part, we will try to paint a portrait of the overall influence and size of microcredit institutions that operate in developed countries. Although we are using a Canadian province instead of the country itself, we will use it as a proxy for developed countries. The reason behind this choice is because Canada is too large as a country on a geographic scale. Its population is scattered around and is very heterogeneous. Also, the province of Quebec is mostly appealing since all of its microfinancial institutions are regrouped under one entity that manages all the data collected. In addition, Quebec possesses a strong history of financial solidarity that dates back to the famous “Caisse populaire Desjardins” which is now the largest association of credit unions in North America. Furthermore, Quebec represents a perfect cultural and financial mix between the American and European theatre.

### 3.1 Canadian Profile

Microcredit in Canada began under the form of credit unions at the start of the 20th century. It was initiated by cooperatives that provided saving and credit services to people who did not have access to formal financial services. Nowadays, there are 2 major microcredit institutions that operate in Canada: Alterna Savings and VanCity. “Alterna Savings is a member-owned provider of financial services serving nearly 120,000 members with an asset base now exceeding \$2 bn. Participants of the program generally have poor credit ratings or no credit history, and the majority have a personal annual income or assets of less than \$30,000 a year. Loans offered range from \$1,000 to \$15,000 and the average loan disbursed is about \$5,000. Alterna charges borrowers an interest

rate equivalent to 6% over their prime lending rate and an administration fee of 6% of the total amount borrowed. To date, Alterna has granted over \$1.5 million in loans to more than 340 entrepreneurs with an average default rate of a little over 9% per year”<sup>1</sup>. On the other hand, VanCity is Canada’s largest credit union with assets of over \$14.4 bn and serves more than 414,000 members. “In 2009, their Community Leadership portfolio, consisting of personal and business loan products and socially responsible mutual funds and real-estate development was valued at \$1.15 bn, 4.7% of total assets/funds under administration in that year”<sup>2</sup>.

Many commercial banks are developing new products for the low-income entrepreneurs’ sector; however, of Canada’s four major chartered banks, only Scotiabank has been directly involved in microfinance and its activities are concentrated exclusively in the developing world. A sustainable initiative independent of government has yet to emerge for other microfinance institutions to emulate. Most microfinance institutions still operating today are alive at the grace of government subsidies. Therefore, Canadian microfinance ventures still have the opportunity to learn from the mistakes of their predecessors and to conceive an alternative program that provides a sustainable response to the poverty of access and opportunity (Reynolds 2011).

## **3.2 European country profiles, source: Eurostat**

### **3.2.1 France**

With a population of 13% below the poverty line, France finds itself to be the country in Europe where microfinance activity is the most developed. Various foundations were created during the 80’s to facilitate local business development. In the past twenty years, the legislative and regulatory framework set evolved to allow a more consistent growth of microfinance in the country. In line with one of the main obstacles of microfinance in developed countries, France has implemented the “Law for the Economic Initiative” in 2003 and the “Law for small and medium enterprises” in 2005 that simplify registration procedures for the status of self-employment. France also recognizes the importance of the process of self-entrepreneurship and aims to further promote access to support job creation as a way of returning to work.

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<sup>1</sup>www.alterna.ca

<sup>2</sup>Vancity, “We Can All Be Wealthy: 2008-2009 Accountability Report,” 2009.

### 3.2.2 Great-Britain

In Britain, the population below the poverty line is drastically high with 19%. All financial activity is governed by the Financial Services Authority where they do not list microfinance as a specific sector. Seemingly there is a general lack of control on the price of credit since there is no wear rate defined in the UK. The government's interest in microfinance as a tool to fight against social exclusion is also done through a number of programs implemented in recent years. These include the "Small Firms Loan Guarantee Scheme" which provides benefits for banks lending to people that are normally excluded from the system and the "Community Investment Tax Relief" that encourages investment in "Community Development Finance Associations" through tax benefits. Unfortunately, there has been a decrease in microloan funding and their total volume in recent years, mainly due to the financial crisis hitting Europe.

### 3.2.3 Germany

The economic powerhouse of Europe is not spared from total poverty. With a similar figure to Quebec's, Germany has 15% of its population below the poverty line. In Germany, the microfinance sector is developing gradually, but only the banking sector is authorized to provide credit, which forces MFIs to enter agreements with banks to make loans. The industry is changing, even if microfinance is still a young business. The lack of funding and a general lack of resources affect the overall activity, especially private organizations. In addition, the lack of regulatory framework makes it difficult to access comprehensive data on lending volumes, objectives and performance.

### 3.2.4 Czech Republic

Comparing to other countries, the Czech Republic has only 10% of its population below the poverty line. But it does not look good with 17% of its population financially excluded. The concept of micro-enterprise does not exist as such and are not covered by specific legislation. In financial procedures, conditions and legal framework are the same as for small and medium enterprises. These regulations are not very favorable, whether it is for accounting procedures or regulation over contracts. As of today, there is dim hope for small businesses that seek funding.

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Table 3.1: Challenges in the European Union

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- Competition from well-developed private sector, making chances of survival of a small business much lower than in developing contexts.
  - Functional, but poorly designed welfare system and specifically lack of incentives for people to graduate off welfare into self-employment.
  - Low levels of financial literacy (linked with higher risk of over-indebtedness), lack of specialized skills to run a small business.
  - Excessive regulation on the microenterprise level as well institutional level (for MFIs) making the entry barriers for MFIs much higher than in the developing countries. At the MFI level, the legal and regulatory obstacles make lending to micro-enterprises inefficient (Romania) or impossible (Germany, where only banking institutions can engage in provision of credit).
  - Excessive regulation on the microenterprise level as well institutional level (for MFIs) making the entry barriers for MFIs much higher than in the developing countries. At the MFI level, the legal and regulatory obstacles make lending to micro-enterprises inefficient (Romania) or impossible (Germany, where only banking institutions can engage in provision of credit).
  - Availability of consumer finance often at very high interest rates.
- 

*Source:* Microfinance Center, <http://www.mfc.org.pl/>.



# Chapter 4

## Formal Banking

In this section, we will go through the formal credit and loan application restrictions. This is necessary, in order to understand why microcredit is growing in developed countries. Credit restrictions are different in every country, but mostly similar in developed countries. Most of the information in this section was taken directly from “Low Income Entrepreneurs and their Access to Financing in Canada, especially in the Province of Quebec/City of Montreal” by Chantelle Reynolds and Christian Novak.

Recipients of microcredit loans tend to be small entrepreneurs who need credit to implement or expand their business but lack credit because the loans required are too small for conventional institutions, they have poor credit histories, lack necessary collateral, or are recent immigrants.

In order to understand microfinance in Canada, it is necessary to study the general business climate and demand for small loans. As microfinance targets low-income entrepreneurs, it is interesting to determine what their needs are and whether they feel they are underserved. A 2010 study<sup>1</sup> of current and future entrepreneurs in Canada noted that 63.4% of ventures cite current financial obstacles as one of their main obstacles to creating or taking over a business. The fear of future financial obstacles, such as going into debt or losing regular income, was also cited by 35.2% of respondents as a major obstacle. According to this study, the “Anatomy of the Canadian Entrepreneur” is a man between 35 and 54 years who is well off financially and more educated than the general population. Only about 20% of respondents declared their personal income to be below \$20,000 (the approximate Canadian poverty line for a family size of 1-2). It is this 20% that microfinance should target, and although The

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<sup>1</sup>BDC and la Fondation de l'Entrepreneurship, “Canadian Entrepreneurship Status 2010”, July 2010.

Anatomy of the Canadian Entrepreneur is generally outside this range, it is helpful to recognize that access to financial resources is a problem among small and medium-sized entrepreneurial population. A demographic breakdown of serial entrepreneurship (those involved in more than one entrepreneurial phase: venture, ownership, closure) reveals that younger entrepreneurs have a higher demand for financial resources to grow their business as well as greater intent to grow (Reynolds 2011).

In 2005, the Financial Consumer Agency of Canada<sup>2</sup> (FCAC) conducted a survey to determine reasons individuals may not have a chequing or savings account and their experiences in being rejected for an account from a financial institution. Of the 5,000 people surveyed, 4% said they have been refused an account by a financial institution in aggregate. This probability is highest among:

- those with lower educational attainment (peaking at 8% among those with an education level below a high school diploma)
- those with lower household incomes (peaking at 8% among those who earn less than \$30K annually)
- younger Canadians (peaking at 6% among those between the ages of 18 and 34)
- men (5% among all surveyed men) relative to women (4% among all surveyed women)
- residents of Alberta (6% among all surveyed Alberta residents), BC (5%), and Ontario (5%), compared to those in Saskatchewan/Manitoba (3%) and Quebec (3%)

When posed the question “which of the following types of accounts is closest to the kind you were rejected?” with the ability to cite more than one account, the most common responses were credit cards (41%), followed by chequing accounts (24%), lines of credit (18%) and savings accounts (18%). Another ten percent of those who were rejected an account by a financial institution have been applications for a mortgage while 6% have been for a loan.

The most common justification for account refusal was “poor credit rating/had declared bankruptcy” is, with 35% of total refusals on this basis. Other

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<sup>2</sup>Financial Consumer Agency of Canada, “Public Experience with Financial Services and Awareness of the FCAC ,” March 24th , 2005

reasons given include: “not employed/inadequate income” (13%) and “don’t have proper identification/driver’s license” (5%). Almost one in ten (9%) say they were given no reason for being refused an account at a financial institution while the remaining 28% cited “other” and “don’t know” (Reynolds 2011).

Once an individual has exhausted the options offered by traditional financing institutions, in the absence of microcredit programs, many must turn to loan sharks to meet their financial needs. Payday loans are short-term consumer loans for small amounts. The client’s next paycheck is treated as collateral. Borrowers give payday loan companies a post-dated check for the amount of the loan plus any associated fees and interest. The average loan in Canada is approximately \$300 for a term of two weeks. As payday lenders do not check credit history, and as clients are typically financially vulnerable, loans often result in a perpetuation of debt and increased risk of insolvency (Reynolds 2011).

# Chapter 5

## Literature Review

### 5.1 Challenges

Modern microfinance in developed countries has well been established for over a decade now. Since its implementation there has been various theories about its efficiency. Upon further research, the stigmatism remains in the challenges provided by its implementation. These challenges mostly revolve around the general lack of funding and the lending process that is mired by its particular diversification. In other words, the individuals or groups that borrow from this system are very different and do not fastidiously promote solidarity. And as we know, the concept of solidarity is the one that drives the model of microcredit in developing countries. This is why the microcredit model in developed countries is different than in developing countries and is adapted to its environment. As it turns out, one of the main reasons why microcredit in developed countries does not have high repayment rates is the deficiency of social capital (Gomez & Santor 2003). Likewise, the disparity in funding is a surprising factor for developed countries since skepticism towards efficiency drives away donations. With this in mind, microfinancial institutions strive towards sustainability and social assistance, but there seems to be a woeful tradeoff between the two. In transition, the savings segment is more sensitive than the lending due to the association of costs and regulations within depository institutions (Fiebig M. Hannig & Wisniwski 1999). Due to the individualistic state of developed countries, there has been competition that pressures efficiency and cost reduction and as a result, adaptation and innovation flourish (Christen & Drake 2001).

There has been some criticism towards the major challenges that have been

brought up. It is mainly argued that microcredit could be a result for a failed credit market and that individualism breaks away solidarity in group schemes. However, microfinancial institutions that use individual based lending instead of group based generate more profit, but are not as focused on the poor (Hermes & Lensink 2007). Being an important goal for microcredit to alleviate poverty, it seems to be another tradeoff that should be circumvented. In the same line of thought, there is another competitor to microcredit in developed countries, as it is seemingly easy to obtain a credit card and make reasonably small loans with it. And if microfinancial institutions in developed countries did not have enough problems as it was, there are regulatory constraints that cap interest rates and limit potential profitability (Morduch & Schreiner 2001). There is proof that interest rate caps can do more harm than good when banks must publish percentage rates, especially when they charge the poor more than the rich (Krahnert & Reinhard H. 1994).

Following the group dynamics, in developed countries, lenders fail to manage groups properly and the opportunity cost of group participation is high (Morduch & Schreiner 2001). “If group members doubt that programs will really make them pay each other’s debts, they will shirk the unpleasant task of pressuring delinquent borrowers, and program staff must do most enforcement” (Hung 2001). “Microfinance works best when the individual actors involved have a self-interested reason to make it work. For example, unless borrowers repay their loans as promised, microfinance is little more than a thinly veiled cash-transfer program—a First Way solution. And although most borrowers who repay their loans probably do so more because they are honest than because they fear the costs of default, incentives that increase the cost of default and/or increase the benefit of repayment can only improve repayment” (Morduch & Schreiner 2001).

Previous studies have shown that group lending schemes in developing countries have both positive and negative effects on repayment rates. The positive effect is due to successful group members who will have the incentives to help out unsuccessful group members to make repayment worthwhile. As for the negative effect, it will arise when the whole group defaults. The group lending scheme produces what is called social collateral that helps mitigate the negative effect. The key feature in group lending is joint liability. This means that all group members are treated as being in default if any one of the members does not repay his loan. We find out that penalties that stem from defaulting cause fear within the group at an individual level and thus causes a peer pressure

trigger system upon those who wish to fail strategically or accidentally (Besley 1991).

Furthermore, a study from the Bank of Canada proves that group lending improves borrower performance. Microfinance institutions have been successful because of innovative use of peer group lending. There was little evidence to suggest that group-lending schemes outperform individual borrowers, but the study showed that group lending lowers borrower default rates more than individual rates. The effect is channeled through the selection process and the greater group borrower effect. The positive effect of selection does not eliminate the significance of the peer group effect, which indicates that greater effort (not sorting) is the dominant channel by which group lending improves borrower performance (Gomez & Santor 2003).

Although without having to show the data to support this statement, microcredit is more effective in developing countries for obvious reasons. But, nevertheless, it is rapidly growing in developed countries and continuously adapting to fit the market. Furthermore, we can identify its progress in terms of group based lending schemes, business teachings, savings as funding and financial stability.

## 5.2 Differences

Moreover, the microfinancial institutions in developed countries should be analyzed separately from the ones in developing countries and should not be compared, as we have previously stated (Painter & Tang 2001). In order to understand this conundrum, data from third world institutions have shown that group based lending increases household production and consumption (Anderson & Locker 2002). But, research shows that group based lending in developed countries is unsuccessful due to problematical group dynamics (Morduch & Schreiner 2001). In other words, the original microcredit peer pressure concept is flawed because of the individualistic behavior that the developed world environment creates. Thus, group schemes are less interesting since they are almost ineffective. The developed world and third world microcredit are distinct and should not be compared. However, we will go through the arguments that will clarify the concept of microcredit in developed countries. Starting with a simple notion: the size of the microenterprise sector or the potential market for microfinance, is much smaller in developed countries, which creates a problematic in reaching a larger scale than in developing countries (Hung

2001). Additionally, scaling programs reduce costs per transaction and have broader impacts. Furthermore, microenterprises are a lot more common in developing countries, where only a small percentage of micro borrowers decide to be self-employed (Bates 1997). This is mainly due to the working poor class in developed countries who turn to wage jobs because self-employment has longer hours, higher risk and less pay (Schreiner 1999). Another reason behind this factor is owed to public safety nets that serve as an alternative to self-employment which make the incentives to go in self-employment weaker. “The safety net, like the abundance of wage jobs, places a floor on the reservation wage of potential micro entrepreneurs. It may even sap entrepreneurial spirits as people learn not to look to self-employment for their livelihoods in bad times” (Novogratz 1992).

### 5.3 Progress

Therefore, a novel approach is converging towards an intricate market commercialization being the only long term answer in a viable industry. Light is shed on the leading institutions which use this approach (Christen & Drake 2001). Precariously, the institutions that rely solely on private and public funding are at the mercy of market fluctuations. Thus, to gain a strong foothold in stability, commercialization is the solution for sustainability (Christen & Drake 2001).

With that said, the economic environments and cultures have a significant impact on the mechanics of the microcredit model. Solidarity is overestimated in developed countries, but poor individuals will always try harder to contribute in their way to the economy. “In developing countries, microfinance has been the darling of the development community, and in developed countries, microfinance fits well with Third Ways ideas’ (Morduch & Schreiner 2001). In general, since microcredit in developed countries is so different than in developing ones, their goal should be different. In other words, instead of helping poor people start businesses they should concentrate efforts on existing ones: “Public efforts to assist entrepreneurs should not attempt to increase the number of business starts but instead should concentrate on reducing failures among those already operating” (Morduch & Schreiner 2001). Having the two possibilities, choosing to invest effort in people who already have small business training (i.e.: self-employed) is more effective than fostering someone that has none. Otherwise, costs of training and staff hiring are greater. “As poverty increases, cost in-

creases, and so at some point, the benefit that a poor entrepreneur might derive from microfinance is smaller than the cost” (Morduch & Schreiner 2001). The latter being true nevertheless, microfinance does not exist to make profits, but as a redistribution tool that can cause positive spill overs (Morduch & Schreiner 2001). Institutions that work with donations can only prove the direct effect of their work, but it is implausible to encompass the total indirect effect it has on its respective society.

While analysing the repayment performance in developing countries, we can induce a logical pattern that can be applicable to developed countries. We find out that higher repayment rates will cut interest rates to borrowers, which will in turn create a higher resource allocation and reduces dependence of subsidies that will improve sustainability. Usually, donors will attribute funds depending on repayment rates. Thus, in the institutions interest, special mechanisms should be in place to increase this rate, i.e.: larger loans to borrowers with low risk and attempts to reduce delay in repayments. Major factors that influence repayment rates are mostly due to information asymmetries (adverse selection and moral hazard) or adverse shocks affecting borrowers. Credit rationing and collateral requirement should be necessary to protect institutions against asymmetry, but are rendered invalid by the state of the borrowers. In other words, jointly liable lending groups help enforce repayment as social interactions make strategic default costly (Besley 1991). Social ties and group homogeneity represented by a default probability are also indirectly linked to repayment performance as they facilitate peer monitoring, since there happens to be an effective peer selection of group members. The increase of homogeneity in a group in terms of risk, interests and economic power should increase repayment rates. Although we would think that heterogeneity in the risk level of a group should push towards a diversification pattern and thus lower the overall risk, it is not true. Group homogeneity of age and education in developing countries have no apparent significant impact on repayment performance (Wydick 1999). On the contrary, group homogeneity in terms of risk as a result of peer selection has a negative impact on repayment (Zeller 1998).

Furthermore, we investigate the funding proportion of microfinance institutions. Donations and loans are made directly to the institutions, but there also exists what we call microfinance investment vehicles or MIV's that act as an intermediary between investors and the final microfinance institutions (Janda & Svarovska 2012). “While many investors choose to invest into MIV's because of their socially responsible character, these investors also have to take



into account the financial returns of their investment into MIV's"<sup>1</sup>. There are two prospects that are analyzed in respect to a good investment: fund returns and risk diversification potential. With more funding, evidently, microfinance institutions can expand and improve their services (Janda & Svarovska 2012). Investors will prefer to invest in MIV's than directly into the microfinance institutions. "Some funds, therefore, suggest that the investment in funds' shares should be viewed as a medium to long-term investment. Bearing in mind the still rather high specific risk of microfinance investment, an inclusion of microfinance assets intended to lower portfolio's overall market exposure is desirable when the current portfolio is already well diversified against the unsystematic risk"<sup>2</sup>.

## 5.4 Training

Microfinance institutions in developing countries do not have the experience nor expertise in business training, as most large third world institutions make loans but do not offer training (Morduch & Schreiner 2001). The business training is derived from the fact that in developed countries, human capital constraints are more important than financial constraints. "The service sector offers more opportunities for microenterprises, although service firms may still not provide a steady income. In promising news for microenterprises, as households become richer, they tend to demand more customized services. Many service jobs require little human capital and so may be within the reach of poor, unskilled people, but this also means that they do not pay well' (Morduch & Schreiner 2001).

Since the debate on microfinancial institutions in developed countries revolves around business training, there is much research that has been done on their particular effect. We may ask, *ceteris paribus*, a simple question: should we subsidize the loans or the business training? The developed countries have institutions and organizations that propel innovation and production, but also cause hindrance to the skill-less population. For example, you need a permit to start fishing and selling it on your own in most developed countries. Having concluded that training is essential in developed countries, it is not easy

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<sup>1</sup>Janda, Rausser and Svarovska (2012). Can investment in Microfinance funds improve risk return characteristics of a portfolio? Institute of Economics.

<sup>2</sup>Janda, Rausser and Svarovska (2012). Can investment in Microfinance funds improve risk return characteristics of a portfolio? Institute of Economics.

to distinguish which type. There are two main types of training that can be given, which are considered polar opposites. The first and simplest technique is to have guest speakers or general entrepreneurship classes that can explain the risks that are associated with small businesses. These will most of the time have an effect of discouragement and bad businesses will be dropped. “Evidence suggests that the main effect of general entrepreneurship classes may be to warn potential entrepreneurs of the risks that they may face. Good general classes may discourage small ventures more than they encourage them” (Schreiner, 1999). On the other end of the spectrum we can find customized help on stand-by. In other words, when people encounter a problem they can have someone help treat it. This is the most cost efficient approach, but this will have the effect of leaving the borrowers with less preparation. There exists a balance between the two, but in this type of venture, being cost efficient is most important.

A study on business training for microfinance emerged in 2011. Basically, a training program for groups in developing countries was set-up using the credit with education model. Clients were assigned to treatment or control groups, in which treatment groups received between 30 to 60 minutes of training session every week and control groups had standard meetings solely to make payments. The intention to treat led to higher repayment rates and client retention levels, but also increased the groups’ revenues and reduced fluctuations (Frisancho V. & M 2008).

Morduch & Schreiner (2001), states three questions about the optimal supply of microfinance; First, given that resources are scarce and that funds used for microfinance could benefit the poor in alternative uses, does the sum of the direct and indirect benefits indeed exceed the cost of supply? In answering this question, a second question must be asked: how valuable to society are the benefits that accrue to the poor? Are funds spent cost-effectively relative to alternative social investments? Third, if microfinance is worthwhile, then how can society ensure that the supply is efficient and that programs work hard to experiment to improve quality and reduce costs?

# Chapter 6

## Microcredit in Quebec

After approaching the largest institution of microcredit in Quebec (RQCC), we received crucial data and information about the working mechanisms of microcredit in the province of Quebec. The RQCC is basically a regrouping of the multiple microcredit institutions in almost every region of Quebec, which has been active for over the past 10 years. The RQCC explains itself: community credit is, in this sense, a last resort for people excluded and / or marginalized and who want to take their place in society through an entrepreneurial project. However, this last resort often becomes a first leverage mechanism, which then gives them access to other sources of funding because the money from the microcredit can be considered as a personal investment. “Our funding is necessarily coupled with individualized support that is required to guarantee repayment. This support combines support for the individual and his project. The clientele served acquires the skills related to the business in terms of life skills and know-how. Our support secures the period before starting a well-crafted project and shaping a competent contractor, as well as after the beginning of the repayment of debt and the sustainability of the company”.

Most of its activities are produced by its 346 volunteers and 64 employees. The data presented henceforth describes the total activity of microcredit within the province of Quebec in the past 10 years, otherwise specified for the current year of when the data was harvested in 2011-2012.

### 6.1 Representation of borrowers

The main source of income for individuals that demand loans stem from financial assistance of last resort, which explains why these individuals would

Figure 6.1: Main source of income of individuals who seek loans in Quebec over 10 years

Main source of income	Cumulative	
	Number	%
Financial assistance of last resort	5753	29.36%
EI (unemployment)	3767	19.22%
Pension Board, CSST, SAAQ	332	1.69%
Part-time employee	1174	5.99%
Full-time employee	2724	13.90%
Self / Entrepreneur	2702	13.79%
seasonal worker	88	0.45%
student	297	1.52%
no income	2135	10.89%
Data not available or Other (specify)	626	3.19%
total	19598	100%

Source: author's research.

be refused credit in formal institutions. Furthermore, there are 20% of loans that are made to people that rely on unemployment security, followed by full time employees (13.90%) and autonomous employees (13.79%), which makes up about 50% of the clientele. The rest of the sources are less significant. Most importantly, this table paints the same portrait of the typical individual who will be refused credit in the standard institutions that we discussed earlier on.

Figure 6.2: Gender of individuals who seek loans in Quebec over 10 years

Gender	Cumulative	
	Number	%
women	11151	56.90%
men	8433	43.03%
Data not available	14	0.07%
total	19598	100%

Source: author's research.

Almost 57% of all loans are made to women and only 43% to men. This

statistic seems balanced, knowing that the institutions in developing countries show a stronger percentage towards female borrowers.

Figure 6.3: Age bracket of individuals on arrival in Quebec over 10 years

Age (on arrival)	Cumulative	
	Number	%
18/25	1677	8.56%
26/35	6894	35.18%
36/49	8667	44.22%
50 + years	2194	11.20%
Data not available	166	0.85%
total	19598	100%

Source: author's research.

The majority of loans are made to people between 26 and 49 years old. Once more, the profile of the standard borrower is proven with the data.

Figure 6.4: Family status of individuals in Quebec

Family status (on arrival)	Cumulative	
	Number	%
Single-parent	4751	24.24%
Alone (single, separated, divorced)	6071	30.98%
Couple with children	4974	25.38%
Childless couple	2730	13.93%
Data not available	1072	5.47%
Total	19598	100%

Source: author's research.

We also provide the familial status of individuals who seek loans. The borrowers are fairly divided in multiple groups from single parent to single, couple with children and childless couple.

Clearly, 80% of the borrowers are either citizens or permanent residents. This is due to the fact that because of regulations, it is difficult to set up a business in Canada without the proper documentation provided.

Almost all of the data that represents ethno cultural community is not available. This is probably due to the fact that when compiling data, the

Figure 6.5: Status of borrowers in Quebec

Legal status	Cumulative	
	Number	%
Canadian citizen	8621	43.99%
Canadian citizen born outside Canada	901	4.60%
Permanent resident	7030	35.87%
Immigrant with temporary work permit	200	1.02%
Data not available	2846	14.52%
	19598	100%

*Source:* author's research.

Figure 6.6: Ethnicity of borrowers in Quebec

Ethnocultural community	Cumulative	
	Number	%
Native	37	0.19%
Asia (including Indonesia)	12	0.06%
Middle East	10	0.05%
Africa - Maghreb	86	0.44%
North American	3018	15.40%
South America (including Mexico and	92	0.47%
European	57	0.29%
Australia (including New Zealand)	0	0.00%
Data not available	16286	83.10%
Total	19598	100%

*Source:* author's research.

cultural background of individuals was not taken into account before a certain year.

Figure 6.7: Spoken language of borrowers in Quebec

Mother tongue	Cumulative	
	Number	%
French	14727	75.15%
English	2245	11.46%
Spanish	581	2.96%
Other (Specify)	712	3.63%
Data not available	1333	6.80%
Total	19598	100%

Source: author's research.

The main language spoken is French with 75%, followed by English with almost 12%. Within the province of Quebec there is 85% of its population that are Francophone and only 15% who are Anglophone or Allophone.

Figure 6.8: Level of education of borrowers in Quebec

Education (on arrival)	Cumulative	
	Number	%
Secondary not completed	724	3.69%
Completed secondary	4144	21.15%
Diploma of Vocational Studies	1208	6.16%
Collegiate	4896	24.98%
University	5469	27.91%
Data not available	3157	16.11%
Total	19598	100%

Source: author's research.

Surprisingly, 53% of borrowers possess a college or university education. Only 21% only have a high school education. This information can prove that individuals who request a loan already possess the aptitudes and knowledge to perform better than individuals in developing countries, where education is less accessible. From the point of view of the RQCC, the education level should have an impact on reimbursement rates, but there is no study or data that directly supports this.

Most of the people have an income between 10 000\$ and 20 000\$ with 35%, followed by 20 000\$ to 30 000\$ with 23%. Interestingly, even with a mid-range

Figure 6.9: Income level of borrowers in Quebec

Individual income (on arrival)	Cumulative	
	Number	%
0 to \$ 5,000	942	4.81%
From \$ 5,001 to \$ 10,000	1873	9.56%
From \$ 10,001 to \$ 20,000	6959	35.51%
From \$ 20,001 to \$ 30,000	4542	23.18%
\$ 30,001 to \$ 40,000	604	3.08%
\$ 40,001 and more	617	3.15%
Data not available	4061	20.72%
Total	19598	100%

*Source:* author's research.

income level these individuals seek microcredit loans. This component shows that income is not necessarily the driving force behind refusal of credit in formal institutions.

We clearly can depict the population that seeks microcredit. It is obviously entwined with the standards of other Canadian microborrowers, which proves that the individual profile of borrowers is very similar in each case. When asked what are the most common reasons why individuals seek microcredit? The RQCC answered, "People come to us because they do not have access to conventional bank loans (due to lack of collateral, non-existent or flawed credit, need for small amounts, lack of business experience, etc.). Often they do not have access to the standardized programs of institutions that support entrepreneurship (do not have the minimum amount to deposit, does not fit with the geographical areas and sectors, or either certain groups of age are prioritized by the government bodies, etc.)".

## 6.2 Representation of loans

The total amount of loans made out over the years is of 1698 and equivalent to 9 980 447\$ with the average loan around 5878\$. There is a huge discrepancy when observing total project costs and total loans (principal only). This is explained by the RQCC: Loans from members of the RQCC often come as seed funds or loan guarantee. The participation of community credit allows a more important contribution than of financial arrangements. The local support offered often ensures the success of the company. Overall, every dollar invested



Figure 6.10: Loan distribution for 2011 and all active years in Quebec

Loans: loan, loan guarantee or loan bridge	Current year	Cumulative
Number of Loans bridges	17	144
Total amount of loans granted bridges	193,425 \$	1,915,087 \$
Number of individual loans	157	1368
Total individual loans	909,972 \$	4,923,936 \$
Number of group loans (SOEs)	10	186
Total amount of loans granted collective	165,790 \$	1,285,501 \$
Total number of loans	184	1698
Total loans (principal only)	1,269,187 \$	9,980,447 \$
Average loan	6,898 \$	5,878 \$
Number of active loans at September 30	-	461
Loan balances for active projects Sept. 30	-	1,979,197 \$
Total project costs (start, leverage)	6,120,165 \$	57,308,643 \$

Source: author's research.

by the RQCC has attracted investments of \$ 5.74 from other socio-economic actors in the environment, which increases the real impact of community credit and proves its complementarity and its roots in the medium.

Figure 6.11: Refinanced loans for 2011 and all active years

Refinancing	Current year	Cumulative
Number of projects refunded	40	172
Amounts of refinancing	269,402 \$	1,344,044 \$

Source: author's research.

Projects that need refinancing are explained by the RQCC: "The main reasons are the purchase of equipment to meet the increasing demand, the need for cash or working capital or project diversification. Sometimes even once started, the contractor still has no access to alternative sources of credit. Sometimes the relationship of trust with the counselor encourages the contractor to remain within the RQCC. The Contractor must still provide a business plan and forecasts. It remains the same style of accompanying from the 1st time".

In this table we can see the creation of new businesses and jobs as well as the maintenance of existing businesses and jobs. The RQCC explains the concept of maintenance: "Among the clients served in our bodies, some have an idea or business plan and are at the stage of the structuration. We then accompany to validate the project, assess the viability and finalize the business plan. From the point of view of compilation, we contribute to the creation of

Figure 6.12: Direct effect of loans in Quebec

Breakdown of loans: Business / Jobs	Current year	Cumulative
Number of businesses created (with loan)	111	1095
Number of jobs created (with loan)	249	2316.5
Number of jobs maintained (with loan)	195	1893.5
Number of companies maintained (with loan)	66	433

*Source:* author's research.

a new company (with or without loan). In addition, when a customer arrives to our members and is already in business, he is also entitled to the support for his consolidation project or development for his existing business. That is why, from the point of view of compilation, we say that our work has helped to maintain existing businesses. So you can see that companies created and maintained are not the same”.

Figure 6.13: Direct number of businesses created with loans invested in every sector in Quebec for 2011 and all active years

Breakdown by sector of activity with loan	Current year	Cumulative
Agriculture	7	39
Artistic and cultural	27	263
Retail business	28	165
Manufacturer	17	116
Catering and food industry	20	137
Service	71	664
Tourism and leisure	3	33
Other (Specify)	6	51
TOTAL	179	1468

*Source:* author's research.

There is no surprise that most of the loans convert into the service sector. According to studies, the other sectors have higher competition and are harder to breakthrough. The service sector on the other hand can be very specialized and thus create a niche demand that is sustainable and profitable. A large proportion of entrepreneurs assisted by community credit have chosen self-employment, presuming that the services sector is more appropriate for this category of self-employed entrepreneurs.

In this case, most of the individual loans are used for self-employed businesses, with the rest scattered around.

This is an interesting take on microcredit in developed countries. It shows

Figure 6.14: Direct number of businesses created with loans under every type of form in Quebec for 2011 and all active years

Breakdown Form with loan	Current year	Cumulative
Cooperative	4	55
Registration (individual, self-employed)	105	870
Incorporation (legal entity)	44	257
Non-profit organization	9	100
Partnership (group of individuals)	15	65
No legal form to date	2	18
<b>TOTAL</b>	<b>179</b>	<b>1365</b>

Source: author's research.

Figure 6.15: Indirect effect of loans in Quebec for 2011 and all active years

Jobs - without loans	Current year	Cumulative
Number of businesses created (no loan)	150	821
Number of jobs created (without a loan)	151	946
Number of jobs retained (without a loan)	198	617
Number of businesses retained (without a loan)	117	830

Source: author's research.

that the institutions will do more than just provide loans. They provide support in other forms and this helps to create and maintain jobs and businesses. Individuals that do not necessarily require a loan for the growth of their business and other effects can seek advice and training from their respective institution. Under this form, it may seem like a simple training institution, but without it there would be a hole to support the lacking demand where it stands.

Figure 6.16: Indirect number of businesses created without loans for 2011 and all active years

Breakdown by sector of activity - without loans	Current year	Cumulative
Agriculture	4	34
Artistic and cultural	26	138
Retail business	32	113
Manufacturer	27	73
Catering and food industry	22	89
Service	156	562
Tourism and leisure	6	54
Other (Specify)	10	329
<b>TOTAL</b>	<b>283</b>	<b>1392</b>

Source: author's research.

If we compare the conversion of loans into sectors of activity, we can note that the trickle down effect of loans follow the same pattern within the service sector for the same reasons we mentioned previously.

Figure 6.17: Indirect number of businesses created without loans for 2011 and all active years

Breakdown Form - without loans	Current year	Cumulative
Cooperative	3	23
Registration (individual, self-employed)	201	836
Incorporation (legal entity)	38	139
Non-profit organization	6	13
Partnership (group of individuals)	10	23
No legal form to date	25	448

Source: author's research.

In the table above, we simply have the same pattern for the majority of loans who are directed in self-employment and have not required any loans. It follows the two previous tables and is recognition of the greater mission that the RQCC gives itself.

Figure 6.18: Reimbursement and survival rate of businesses created for 2011 and all active years

Rate	Current year	Cumulative
Reimbursement rate	91%	95%
Survival rates (past 5 years)	-	69%

Source: author's research.

The RQCC explains the 69% survival rate and the follow up period: “In Quebec, the average survival rate after 5 years is 34% (data from the Government of QC). We believe that the local support that we provide before and after the loan makes the entrepreneur better equipped and stronger to get through the difficult period of the first business year, which explains our high survival rate. Indeed, a company or individual is followed on a regular basis throughout the term of the loan, but then it is more sporadic (not mandatory) as required. These customers are often invited to participate in networking activities, or they are asked to share their experiences and their journey during special events.” In other words, it remains in contact with the contractor, but in another form.

The data for the year 2011-2012 appears in previous tables. The jobs created and maintained are summed up for all active years with and without the use

Figure 6.19: Total jobs created and maintained as well as total sales for all active years

	Current year	Cumulative
Jobs	-	3343
Jobs maintained	-	2349
Total sales (\$ thousands)	-	6,161,689 \$

Source: author's research.

of loans. The total sales simply represent the total financial package of all the projects that have been funded for the year 2011-2012.

Figure 6.20: Rate of integration for each loan in 2011

Rate of integration	Current year	
	Number	%
Start-up	570	29.83%
Consolidation	386	20.20%
Back to school	17	0.89%
Job Search	61	3.19%
Return to work	146	7.64%
Pre-boot	393	20.57%
Abandonment of the project	116	6.07%
Other (Specify) Ex: extinct	222	11.62%
Total	1911	100.00%

Source: author's research.

The integration rate shows how microcredit collaborates with society. This rate is only available for the year 2011-2012 where we observe that the loans converge into 3 main categories: start-ups, consolidation and pre-boot.

### 6.3 Representation of formation and business training

In this section we cover data that show the formation facet of microcredit in Quebec. The RQCC explains its view on training: "In our jargon, we speak of advisors and not teachers. Community credit is not an approach to classroom training, but support for every customer from a support plan based on the needs and the person / project consistency. Once the business plan is completed, a loan committee analyzes it. In our analysis process, we consider

conventional indicators, while adding specific parameters from our institution. Our commitment to inclusion should not alter our analytical rigor. Our operating budget (including salaries) is largely funded by the Quebec government, particularly the Ministry of Finance and Economics. This statement recognizes our specialized expertise, which combines support for people in impoverished areas and entrepreneurial development. The RQCC is a leader in social and economic development in Quebec”.

Figure 6.21: Representation of hour repartition at the starting level of a loan

Start (before loaning)	Number of people	Number of hours	Number of projects	Average of hours/project
Telephone and email reference	3859	1979	2972	0.666
Systematic group meeting	1209	549.5	787	0.698
Systematic individual meeting	868	1601.25	643	2.490
Total	-	4129.75	-	-

Source: author's research.

We want to pay attention to the number of average hours per project. We can observe that there is little time attributed to telephone, email and group meetings before lending and 2,5 hours attributed to individual meetings even before a loan has been contracted.

Figure 6.22: Representation of hour repartition at the business plan level of a loan

Business plan (before loaning)	Number of people	Number of hours	Number of projects	Average of hours/project
Analysis and development of business plan loan without individual support	1267	10237.9	1154	8.87
Analysis and development of a business plan for the loan with individual support	204	5172.54	180	28.7
training provided	567	5112.65	464	11.0
training received	627	10850.4	453	24.0

Source: author's research.

Again, while observing the average hours per project during the business plan session before lending, we realize a huge increase in hours. Not only do the number of projects decrease, but also the number of hours increases vastly. This session represents the most important part of the structure as it will map out the rest of the proceedings.

Figure 6.23: Representation of hour repartition at the follow-up level of a loan

Follow-up (after the loaning)	Number of people	Number of hours	Number of projects	Average of hours/project
individual monitoring (current year)	632	6997.75	539	13.0
total		31995.75		

Source: author's research.

The average number of hours per project proceeds with a slight decrease during the period after the initial loan. This session is viewed as the support and monitoring of the loan. It plays a crucial part in the progression of the reimbursement rate.

Figure 6.24: Representation of hour repartition by various HR sections

Tasks performed by the human resources hours	Internal resources		Promoting institution		External resources	
	Number 1	%	Number 2	%	Number 3	%
Promotion, recruitment and communications	8728.41	10.97%	283	14.14%	203	4.08%
Animation economic, social life and community involvement	5047	6.34%	296	14.79%	606.5	12.18%
Seeking capital (capitalization)	2625.8	3.30%	105	5.24%	164	3.29%
Seeking funding for the operation	3339.5	4.20%	130	6.49%	106	2.13%
Preparation (training, coaching)	3922.5	4.93%	200	9.99%	170	3.41%
training	2859	3.59%	128	6.39%	172	3.45%
Employee Training	2471.75	3.11%	134	6.69%	13	0.26%
accompaniment	25546.05	32.11%	55	2.75%	575	11.54%
management	19079.75	23.98%	650	32.47%	607.5	12.20%
Self-financing (subcontracting)	1434.95	1.80%	21	1.05%	0	0.00%
Board and Committees loans	2604	3.27%	84	4.20%	2351.25	47.20%
Hours granted to the associative life of RQCC	1902.5	2.39%	200	9.99%	13	0.26%
total	79561.21	100%	2002	100%	4981.25	100%

Source: author's research.

We can observe in the table above the complete partition of the hours in various sectors. We want to draw your attention to the division of the resources; most of the internal resources are concentrated on accompaniment and management, which represent the training hours. The promoting institutions spend their time typically in management, with some time spread out to promotion and animating socio-economic life. And as for the external resources, they are spent on board and committee loans. The RQCC describes this separation: "Overall, 40% of the time is devoted directly to contractors. However, member organizations are independent entities; they must devote time to task management and marketing communications. Most of our member organizations are very small teams and each must put their shoulders together to carry out these tasks".

## 6.4 Representation of funding

As explained many times previously, the funding of the institution is what makes it strive. Usually, funds are received based on the effectiveness of an institution, but in some cases, other reasons are used to receive funds. In the case of the RQCC: "The RQCC receives an operating grant from the Ministry of Finance and Economy for the operations of member organizations and

permanence. This funding covers a good part of the operations, but members must balance their budget by seeking other sources of funding, each in its region. Furthermore, as the money lent to entrepreneurs does not originate from grants, our members are constantly raising funds in their respective communities. Religious communities are interested in the dimension of 'poverty reduction' or 'care of the person itself (empowerment)' in our mission. This is why many members can strive".

Figure 6.25: Repartition of funding for 2011 and all active years from various categories

Funding	New money	Amount (\$)	%
Amount of total capitalization (previous year)	-	4,490,041 \$	-
Amount of total capitalization (year)	-	4,535,895 \$	-
available funding	-	899,432 \$	-
donations	130,387 \$	1,797,680 \$	36.51%
Interest on investments	1,210 \$	24,707 \$	0.50%
Interest on loans to developers	42,885 \$	149,589 \$	3.04%
Investments without interest	216,100 \$	802,891 \$	16.30%
Investments with interest	(1,124) \$	1,409,232 \$	28.62%
External funds available	63,500 \$	695,135 \$	14.12%
TOTAL	452,957 \$	4,924,235 \$	100.00%

Source: author's research.

The technical costs or fixed costs are covered by the government as stated above, but for the rest of the funding, the amounts come from four major sources with donations leading at 36,5% of the total funds. The investments can sometimes be volatile and unstable depending on the markets. Although for 2011-2012, the amount of new money levied was 452 957\$ with investments without interest being the most prominent.

This table represents an interesting take on the source of donations. Religious communities are the most generous, as explained previously, followed by financial institutions and other sources.

The amount of accumulated loans is bigger than the donations since the institutions sometimes must meet some threshold to hold certain standards of funding.

All of these numbers represent the structure of who borrows loans, why they do it, where do the funds come from and where do they go. It is an important picture that explains the essence of microcredit in Quebec. We want to show why individuals need loans in Quebec and we want to understand why the funding is necessary and at what level. It exemplifies the attributes from the previous literary review for institutions in the structural way.



Figure 6.26: Source of funds for 2011 and all active years from various sectors

Source of funds	New money	Amount (\$)	%
religious communities	24,800 \$	586,686 \$	30.73%
financial institutions	52,254 \$	412,360 \$	21.60%
NPO	5,320 \$	183,696 \$	9.62%
private sector	2,668 \$	89,531 \$	4.69%
unions	25,000 \$	57,284 \$	3.00%
individuals	17,844 \$	155,466 \$	8.14%
interests	44,095 \$	166,695 \$	8.73%
Loans written off (subtract)	(6,500) \$	(136,961) \$	-
Other, specify:	24,000 \$	411,593 \$	21.56%
<b>TOTAL</b>	<b>180,545 \$</b>	<b>1,908,952 \$</b>	<b>100.00%</b>

Source: author's research.

Figure 6.27: Source of loans for 2011 and all active years from various sectors

Source of loans	New money	Amount (\$)	%
religious communities	- \$	295,000 \$	13.34%
Financial institutions, specify:	(10,500) \$	511,000 \$	23.10%
NPO	140,986 \$	387,143 \$	17.50%
private sector	62,962 \$	263,835 \$	11.93%
unions	- \$	236,413 \$	10.69%
individuals	(7,500) \$	195,472 \$	8.84%
Interest paid to lenders (subtract)	28 \$	(519) \$	-
Other members of RQCC	- \$	45,000 \$	2.03%
Other, specify:	19,000 \$	282,685 \$	12.78%
<b>TOTAL</b>	<b>199,976 \$</b>	<b>2,212,123 \$</b>	<b>100.00%</b>

Source: author's research.

# Chapter 7

## Data analysis

In this part we will try and determine if there is causality between the multiple human factors and the reimbursement rate of group lending schemes. We will be using the data from the RQCC's database over group loans. This data ranges over multiple years and represents a cross sectional data selection of the detailed characteristics of each of the group loans. The data was received under multiple forms from various members of the RQCC and consolidated. Because of this, some of the group loan data have only one main individual who represents the group and in some cases the number of individuals forming the group is of 1, since the data for other group members was unavailable. This causes a weight attribution problem to the group loans, with some loans that have more impact on final results. The number of group loans available is 65. This is due to the fact that the data was manually harvested and quite difficult to gather from the multiple bodies that create the RQCC. Therefore, we have decided to merge the data accordingly and proceeded to create an average that represents the individuals in every loan. We believe that this will prove a more significant dataset to observe the real variations of each characteristic on the repayment rate.

The variables included for each group loan are (see raw data in appendix):

- The year the loan has been obtained
- The duration of the loan in months
- The amount of the loan in CAD\$
- The reimbursement rate of the loan in %
- The number of individuals participating in the loan

- The age of every member participating in the loan (when available)
- The gender of every member participating in the loan (when available)
- The yearly income of every member participating in the loan (when available) in CAD\$
- The spoken language of every member participating in the loan (when available)
- The education level of every member participating in the loan (when available)
- The total number of training hours given to the whole group for the loan

However, as explained, we will be using a modified dataset of merged averaged attributes consisting in every loan (see modified data in appendix):

- The year, duration, amount, reimbursement rate, number of individuals and total number of training hours do not change
- The age of every member is averaged
- The yearly income is averaged
- The spoken language keeps its value for the majority of the group
- The education level is changed to the average of the years of education every member possesses
- The gender is specified as such:
  - with proportion of women 50% or more
  - with proportion of women less than 50%

## 7.1 Model

We apply standard OLS regression with robust standard errors using the following variables in stata:

- rate: reimbursement rate
- dur: duration

- lamount: log amount of loan
- nind: number of individuals
- age: average age of individuals
- female: 1 if group female, 0 otherwise
- lgwagey: log of average gross yearly income
- lang: language of group (1,2,3)
- edu: average years of education
- thours: number of training hours

Table 7.1: OLS Regression

<i>Case</i>	Coefficient	P-value
Duration	-0.35	0.083
Log of amount	8.11	0.008
Number of individuals	-0.8	0.000
Age	0.2	0.381
Female	-3.81	0.383
Log of yearly income	-2.71	0.335
Language		
—English	6.03	0.266
—Spanish	-15.65	0.092
Education	-1.03	0.198
Training hours	0.06	0.306

*Source:* author's computations.

We observe that the higher the duration is for the group loan, the lower the repayment rate will be. Thus, for every extra month the loan is carried on there appears to be a reduction in the repayment rate of 0.35 percentage points. It does not seem to have a big effect, but considering how long most of the loans are, there can be a decrease in reimbursement rate by almost 10 percentage points on average. This is probably due to the fact that groups, who repay loans faster, already have the attributes to repay a loan in full; as for groups that linger probably have difficulty in reimbursing the loan.

The logged amount of the loan has a positive effect on the repayment rate, as for every percentage increase for the loan, there seems to be an increase of

8.11 percentage points in the repayment rate. This can be explained by the circumstance that groups who ask for bigger loans are well prepared in advance to repay it and have passed the necessary criteria, which are tougher, in order to receive such a loan.

The number of individuals within a group has a negative impact on the reimbursement rate. For every extra member in a group, there is a sensible decrease in repayment rates of 0.8 percentage points. We wish to confirm that this is not necessarily the case for NGO's or small firms, but only majorly applies to group loans consisting of a few individuals, due to the nature of the data.

The average age of a group seems to increase the repayment rate by 0.2 percentage points. It follows previous literature that describes an increase in age should have a positive effect on repayment rate, but also considers the age parsimony within a group. We will consider this variable insignificant, since we cannot incorporate the value for the age of each group member.

Being in a group that consists mostly of females has a standard negative effect on the repayment rate by 3.81 percentage points. As explained earlier, it would have been more interesting to view the effect of each individual male or female variable on the total repayment rate, but was considered insignificant due to the nature of the data. Therefore, this variable will be considered insignificant.

For every increase in percentage on the average income of the group, there seems to be a decrease in repayment rates. This factor does not seem to correspond to the present literature. Higher income should represent a higher repayment rate. Since the group's income is averaged, there is a possibility that some members with low incomes do not perform well within the group and therefore drags the results downwards. We will be considering this variable insignificant due to the fact that we cannot differentiate the repayment weight of each individual.

We can observe that the language variable has two effects. First, the groups that speak English have a 6 percentage points better reimbursement rate than French speaking groups. And second, the groups that speak Spanish have a decrease of 15.65 percentage points in their reimbursement rate compared to French speaking groups. Although very impressive, it is insignificant since there are too few individuals that speak English or Spanish in the dataset. We will also drop the average education years because we consider it insignificant for the same reasons we omit the income variable.

The training hours have a positive effect on the repayment rate of 0.6 percentage points per hour. This has also been reported in tests done in developing countries, where the business training caused higher repayment rates and better businesses. We can confirm our main hypothesis that training has a positive effect on repayment rates for group loans.

We re-estimate the model using only the duration, the amount, the number of individuals and the number of training hours, since they represent the characteristics of a group loan and not the individuals.

Table 7.2: Re-estimated OLS Regression

<i>Case</i>	Coefficient	P-value
Duration	-0.38	0.055
Log of amount	6.52	0.005
Number of individuals	-0.64	0.000
Training hours	0.08	0.111

*Source:* author's computations.

Our results are based on the fact that our data has been averaged in order to get reasonable results over group loans. These loans, however, span over 7 years and were randomly selected from various regions around Quebec.

After omitting some insignificant variables we can observe a decrease for the duration and the amount, but an increase for the number of individuals and the number of training hours. The variables become slightly more significant in our model, but our R-squared has decreased by 0.10 (see appendix).

We then proceed to generate a fully repaid variable that will take the value of 1 if the repayment rate is 98% or higher and 0 otherwise. We want to see the marginal effects of each variable on the repaid binary variable.

We apply a probit fit on our model.

Table 7.3: Probit

<i>Case</i>	Coefficient	P-value
Duration	-0.016	0.105
Amount	0	0.002
Number of individuals	-0.037	0.170
Training hours	-0.007	0.162

*Source:* author's computations.

The increase in probability attributed to a one-unit increase in a given predictor is dependent both on the values of the other predictors and the starting value of the given predictors. Thus, the duration coefficient decrease means that the higher the duration, there is a decrease in the predicted probability of 0.016 for full repayment. With the amount increase, there is an increase in the predicted probability of full repayment by 0.0002. The number of individuals has the same effect as its OLS counterpart: with every increase of individuals there is a decrease in predicted probability of full repayment by 0.037. As for the number of training hours, it has a decrease in predicted probabilities of full repayment by 0.0073 for every increase in terms of hours.

We now apply a logit fit on our newly generated variable.

Table 7.4: Logit

<i>Case</i>	Odds Ratio	P-value
Duration	0.974	0.115
Amount	1	0.003
Number of individuals	0.939	0.178
Training hours	0.987	0.159

*Source:* author's computations.

If we observe the odds ratio for every variable, we can see that they are all very close to 1. The odds ratio for the duration is 0.97, thus increasing the number of months for a loan will decrease the probability of full repayment by 3%. The amount variable has too little variation in its odd ratio; therefore there is not much difference on the full repayment probability. The odds ratio for the number of individuals is 0.939, which means that increasing the number of individuals will decrease the probability of full repayment by 7%.

# Chapter 8

## Conclusion

As mentioned previously, microcredit in developed countries face different challenges than in developing countries and these challenges are to use funds received effectively in a way that benefits the poor directly and indirectly whilst not exceeding cost of supply, to be an alternative social investment and to implement programs to improve quality and reduce costs. “Microfinance has the potential to reduce the consequences of financial crises and increase stability”<sup>1</sup>.

The objective of this paper was to observe the impact of microcredit and to confirm the effect of the multiple factors as well as business training over the reimbursement rate. Following the current mentality of microcredit in Quebec, it will not be self-sustainable in a near future, since it is strongly supported by the government in its costs. Nevertheless, we observe the need and demand for microcredit in Quebec. The data on the portrayal of individuals who seek loans explain this need. Poverty is still an issue and there is a limit to what charity can do. The RQCC completes its mission to assist the poor in offering them the tools to construct and participate in the society. The data on the loans and funding reflect the direct and indirect impact on society. It has become an alternative investment for socially conscious bodies that wish to promote empowerment and solidarity. As mentioned previously, MIV’s can also be a healthy investment choice regarding return and risk. Microcredit has proven itself to be efficient in its sphere and provide extra support to society. Its main factor, training, is not only a monitoring recourse, but also an implementation that levels up society.

The group lending schemes analysis provides information with which char-

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<sup>1</sup>Dalan, G.R.E. & Srnec, K. (2010). The Scenario of Microfinance in Latin America Against the International Financial Crisis. *Agricultural Economics* “Czech, 56(12): 583-590.



acteristics the repayment rates should increase. We differentiated from previous studies by analyzing the effect of group loans in a developed country. We can also consider the fact that the data for group loans in Quebec is scarce and there are noticeably fewer group loans compared to individual loans in developed countries. For a more significant study we would require very precise data on the group loan members repayment share in addition to more observations.

For efficient repayment rates, group loans should be of shorter duration, of bigger sizes and with fewer individuals. The training hours that accompany the loans are always welcome, although there should be a cost effective implementation. The cost of training and monitoring individuals should not surpass the return of a loan, even when the government covers these costs. We wish to stress out that these results should be taken lightly, because of the nature of the data and small amount of observations used in this research.

As seen with the probit and logit models, the probabilities of full repayment of a loan are characterized by the same variables that can be found in the re-estimated model.

Finally, we cannot make sound conclusions about group loans mostly because of the small size of the data, but we can make assertions on the fact that microcredit in Quebec has positive effects on the society that can be enhanced by socially responsible investments. It is too early to say if a commercialization model would be beneficial for microcredit or if it would hinder its mission. We can ask furthermore to extend this research, if the transformation of a funding based on donations to one that is based on investments would be good for the community.

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# Appendix A

## Questions

Questions asked to the RQCC institution; answers directly translated by the author from French to English.

**1—What are the most common reasons why individuals come to seek a loan with microcredit? (i.e.: why do they see you instead of a bank?)**

People come to us because they do not have access to conventional bank loans (due to lack of collateral, non-existent or flawed credit, need for small amounts, lack of business experience, etc.). Often they do not have access to the standardized programs of institutions that support entrepreneurship (do not have the minimum amount to deposit, does not fit with the geographical areas and sectors, or either certain groups of age are prioritized by the government bodies, etc.).

Community credit is, in this sense, a last resort for people excluded and / or marginalized and who want to take their place in society through an entrepreneurial project. However, this last resort often becomes a first leverage mechanism, which then gives them access to other sources of funding because the money from the microcredit can be considered as a personal investment.

Our funding is necessarily coupled with individualized support that is required to guarantee repayment. This support combines support for the individual and his project. The clientele served acquires the skills related to the business in terms of life skills and know-how. Our support secures the period before starting a well-crafted project and shaping a competent contractor, as well as after the beginning of the repayment of debt and the sustainability of the company.

I invite you to read the first pages of our annual report (<http://www.rqcc.qc.ca/images/rqcc/p>

20Report%25 20annual%25 2011-12-web.pdf) detailing more features of Community credit. Also, a short video produced by the RQCC explains very well the principle of Community Credit (<http://www.youtube.com/watch?v=gtmkSttqlwM>).

**2—Why is there 83% of the data missing for the ethnocultural community?**

It is new data we started compiling 2 years ago. Previously, the only data we had on the subject was of Native ethnicity.

**3—Do you notice a difference in reimbursement rates from individuals with higher education?**

When my member organizations of the RQCC make their accountability, they send me the overall data as you can see in the file. It is not as a PivotTable. So I cannot do a correlation on an individual basis. According to the flexibility of their database, some members may be able to hold this information.

**4—In the distribution of the loans, we observe the cumulative total amount of loans to be 9 980 447\$, but under total project costs we see 57 308 643\$. There seems to be a huge difference in loans and costs, is this normal?**

Loans from members of the RQCC often come as seed funds or loan guarantee. The participation of community credit allows a more important contribution than of financial arrangements. The local support offered often ensures the success of the company. Overall, for every dollar invested by the RQCC has attracted investments of \$ 5.74 from other socio-economic actors in the environment, which increases the real impact of community credit and proves its complementarity and its roots in the medium.

**5—What are the main reasons a project needs refinancing and what are the criteria that need to be passed for this to be approved?**

The main reasons are the purchase of equipment to meet the increasing demand, the need for cash or working capital or project diversification. Sometimes even once started, the contractor still has no access to alternative sources of credit. Sometimes the relationship of trust with the counselor encourages the contractor to remain within the RQCC. The Contractor must still provide a business plan and forecasts. It remains the same style of accompanying from the 1st time.

**6—The number of businesses created versus the amount maintained is rather low (40%). Can you explain why businesses fail so much? (i.e.: Is it because a lack of training?)**

Among the clients served in our bodies, some have an idea / business plan and are at the stage of the business plan. We then accompany to validate the project, assess the viability and finalize the business plan. From the point of view of compilation, we contribute to the creation of a new company (with or without loan). In addition, when a customer arrives to our members and is already in business, he is also entitled to the support for his consolidation project or development for his existing business. That is why, from the point of view of compilation, we say that our work has helped to maintain existing business. So you can see that companies created and maintained are not the same.

**7—The job retention rate is higher than the business retention rate. Can you explain why?**

The same logic applies to jobs created and maintained as for businesses created and maintained. The new jobs are not the same as the maintained ones. The loans will either help in creating a job or help to maintain a job. There is no type of tracking when it comes to newly created jobs.

**8—Most of your loans convert into the service sector. Can you explain why there are so little in other sectors?**

A large proportion of entrepreneurs assisted by community credit have chosen self-employment. I presume that the services sector is more appropriate for this category of self-employed entrepreneurs.

**9—How do you evaluate the retention rate and creation rate of businesses and jobs that do not require a loan?**

The same principle as in question 6 applies here.

**10—Can you explain the 69% survival rate?**

In Quebec, the average survival rate after 5 years is 34% (data from the Government of QC). We believe that the local support that we provide before and after the loan makes the entrepreneur better equipped and stronger to get through the difficult period of the first business year, which explains our high survival rate.

In general, how long you continue to follow a company / individual after their loan is reimbursed?

Indeed, a company or individual is followed on a regular basis throughout the term of the loan, but then it is more sporadic (not mandatory) as required. These customers are often invited to participate in networking activities, or they are asked to share their experiences and their journey during special events. In other words, it remains in contact with the contractor, but in another form.

**11—What do the total sales of 6 161 689\$ represent exactly?**

This is the same as question 4, but only for 2011-2012 (\$ 57M is the cumulative 13 years). This is the total financial package of all the projects we have funded.

**12—How does formation really work? How much are “teachers” paid and what are the costs of preparing an individual for a loan?**

In our jargon, we speak of advisors and not teachers. Community credit is not an approach to classroom training, but support for every customer from a support plan based on the needs and the person / project consistency. Once the business plan is completed, a loan committee analyzes it. In our analysis process, we consider conventional indicators, while adding specific parameters from our institution. Our commitment to inclusion should not alter our analytical rigor. Our operating budget (including salaries) is largely funded by the Quebec government, particularly the Ministry of Finance and Economics. This statement recognizes our specialized expertise, which combines support for people in impoverished areas and entrepreneurial development. The RQCC is a leader in social and economic development in Quebec.

**13—According to the human resource hours, there aren’t many hours given to training compared to the other categories. Can you explain why?**

Overall, 40% of the time is devoted directly to contractors. However, member organizations are independent entities; they must devote time to task management and marketing communications. Most of our member organizations are very small teams and each must put their shoulders together to carry out these tasks.

**14—We observe various sources of funding. How does this system**

**work? Do you pitch to institutions every year to secure donations? Can you especially explain the donations from the religious entities?**

The RQCC receives an operating grant from the Ministry of Finance and Economy for the operations of member organizations and permanence. This funding covers a good part of the operations, but members must balance their budget by seeking other sources of funding, each in its region. Furthermore, as the money lent to entrepreneurs does not originate from grants, our members are constantly raising funds in their respective communities. Religious communities are interested in the dimension of 'poverty reduction' or 'care of the person itself (empowerment)' in our mission. This is why many members can strive.

**15—In what way does the provincial and federal government support you? What is their current stance on microcredit from your point of view?**

Part of the answer lies in the question above: The RQCC receives an operating grant from the Ministry of Finance and Economy for the operations of member organizations and permanence. This funding covers a good part of the operations. Community credit as we do (microcredit and support) is recognized in government strategies because it responds to a vacuum of services and funding. It is therefore a complementary and an essential actor on the board in support of entrepreneurship and poverty reduction.

You responded to the provincial government, but what will it federal? Do you deal with it?

Some federal agencies fund some of our members through certain programs, including through the Canadian Women's Foundation (for my organizations exclusively women), Canada Economic Development (for my organizations wishing to develop services in English to English-speaking clients in their territory) and Industry Canada (through a revitalization program for the territories).

This funding reflects the desire of improvement and diversification of sources of income for our members.



# **Appendix B**

## **Raw Data**

Loan number	Year	Duration (months)	Amount (\$)	Repayment rate (%)	Number of individuals	Age (years)	Sexe (M/F)	Income (yearly \$)	Language	Education	Training hours
1	2006	36	2000	100	4	34	M	25000	French	University	20
1	2006	36	2000	100	4	35	F	25000	French	University	20
1	2006	36	2000	100	4	34	M	15000	French	University	20
1	2006	36	2000	100	4	30	M	7500	French	University	20
2	2011	36	10000	45	65	39	M	45000	French	High school n/c	19
3	2011	4	10000	100	7	49	F	25000	French	University	5
4	2011	8	10000	100	3	39	F	35000	French	University	5
5	2010	13	2000	100	3	50	M	45000	French	College	5
6	2010	12	1000	80	3	30	M	25000	French	University	64
7	2010	94	6500	20	1	31	F	35000	French	University	6
8	2010	3	10000	100	7	48	F	25000	French	University	5
9	2009	2	10000	100	7	47	F	25000	French	University	5
10	2009	7	5000	100	3	36	F	35000	French	University	6
11	2009	63	8000	50	4	40	F	15000	Spanish	University	12
12	2009	4	10000	100	7	46	F	25000	French	University	6
13	2009	36	10000	100	7	52	F	35000	French	College	15
14	2008	6	5000	100	3	37	F	35000	French	University	5
15	2008	2	5000	100	5	22	F	15000	French	College	7
16	2008	7	3000	94	1	28	F	25000	French	University	7
17	2008	24	2500	100	1	44	M	15000	French	University	18
18	2008	39	1000	80	2	45	M	35000	French	University	14
19	2007	36	10000	94	2	27	F	35000	French	University	11
20	2007	4	7500	100	3	39	F	15000	Spanish	University	103
21	2007	2	2200	98	2	26	F	10000	French	College	6
22	2007	2	2250	100	3	38	M	15000	French	College	48
22	2007	2	2250	100	3	35	F	25000	French	College	48
22	2007	2	2250	100	3	50	M	15000	French	College	48
23	2007	10	10000	100	1	35	F	15000	French	University	7
24	2006	7	7500	100	1	26	F	10000	French	High school	49
25	2006	7	10000	100	1	34	F	35000	French	University	3
26	2006	7	3800	100	3	35	F	35000	French	University	9
26	2006	7	3800	100	3	34	M	15000	French	College	9
26	2006	7	3800	100	3	40	M	25000	French	College	9
27	2006	3	10000	100	6	35	F	15000	French	College	19
27	2006	3	10000	100	6	34	M	15000	French	College	19
27	2006	3	10000	100	6	40	M	10000	French	College	19
28	2006	76	8700	100	4	34	M	15000	French	University	90
28	2006	76	8700	100	4	40	F	15000	Spanish	University	90
29	2006	36	10000	100	8	23	F	12500	French	University	63
29	2006	36	10000	100	8	25	M	15000	French	High school	63

Source: author's research.

30	2005	13	10000	100	18	34	F	10000	French	College	9
31	2005	7	10000	100	4	33	M	15000	French	University	5
32	2005	14	5000	100	3	33	M	22000	French	University	25
33	2006	6	2986	35	2	47	M	20000	French	University	23
33	2006	6	2986	35	2	33	F	15000	French	College	23
34	2008	36	5000	100	2	42	F	2000	English	University	50
34	2008	36	5000	100	2	36	F	5000	English	University	50
35	2009	36	3000	100	2	29	M	15000	French	University	48
35	2009	36	3000	100	2	55	M	15000	French	College	48
36	2010	36	5000	100	2	30	F	10000	French	College	58
36	2010	36	5000	100	2	30	F	10000	French	University	58
37	2012	29	5350	46	2	38	M	15000	Spanish	University	32
37	2012	29	5350	46	2	53	F	5000	French	College	32
38	2009	36	8000	100	2	36	F	20000	French	College	39
38	2009	36	8000	100	2	42	M	25000	English	High school	39
39	2009	36	5000	100	2	41	F	5000	French	High school	35
39	2009	36	5000	100	2	25	F	5000	French	High school	35
40	2010	48	8000	100	3	29	M	10000	French	College	49
41	2010	36	9250	100	2	34	F	30000	French	College	47
41	2010	36	9250	100	2	35	M	20000	French	High school	47
42	2011	24	4540	100	2	25	M	24000	French	University	50
42	2011	24	4540	100	2	26	M	36000	French	High school	50
43	2011	36	7000	100	2	38	F	24000	French	High school	57
43	2011	36	7000	100	2	34	M	27000	French	College	57
44	2011	36	11000	100	2	34	M	42000	French	College	78
44	2011	36	11000	100	2	42	M	25000	French	College	78
45	2012	36	5900	100	2	36	F	15000	French	College	40
45	2012	36	5900	100	2	31	F	5000	French	University	40
46	2013	60	15000	100	2	55	F	10000	French	High school	25
46	2013	60	15000	100	2	53	M	40000	French	High school	25
47	2004	36	5000	88	2	25	F	10000	French	High school	33
47	2004	36	5000	88	2	29	M	10000	French	College	33
48	2005	14	5000	73	2	40	F	15000	Spanish	University	12
48	2005	14	5000	73	2	25	F	5000	French	High school	12
49	2005	36	6000	97	3	33	F	10000	French	College	214
49	2005	36	6000	97	3	27	M	5000	French	High school	214
49	2005	36	6000	97	3	34	M	15000	French	College	214
50	2006	24	7000	93	7	18	M	8000	French	High school	129
50	2006	24	7000	93	7	19	F	5000	French	High school n/c	129
50	2006	24	7000	93	7	22	F	7000	French	High school n/c	129
50	2006	24	7000	93	7	24	F	12000	French	College	129
50	2006	24	7000	93	7	23	F	9000	French	College	129

Source: author's research.

50	2006	24	7000	93	7	22	M	10000	French	College	129
50	2006	24	7000	93	7	21	M	9000	French	College	129
51	2006	12	2000	96	2	44	M	20000	English	University	37
51	2006	12	2000	96	2	48	F	24000	English	University	37
52	2007	29	7500	88	2	22	M	15000	French	University	73
52	2007	29	7500	88	2	22	M	15000	French	University	73
53	2008	36	2000	88	4	24	M	7000	French	High school	66
53	2008	36	2000	88	4	23	M	8000	French	High school	66
53	2008	36	2000	88	4	33	M	5000	French	High school n/c	66
53	2008	36	2000	88	4	24	M	6000	French	High school n/c	66
54	2008	36	5000	98	2	29	F	11000	French	College	12
54	2008	36	5000	98	2	30	F	12000	French	College	12
55	2009	29	5350	98	3	33	F	18000	French	College	5
55	2009	29	5350	98	3	34	M	22000	French	College	5
55	2009	29	5350	98	3	35	F	34000	French	University	5
56	2009	17	7500	98	2	26	F	15000	French	University	23
56	2009	17	7500	98	2	27	F	17000	French	University	23
57	2009	7	3000	98	1	47	M	12000	Spanish	High school	6
58	2009	3	2500	90	2	32	F	11000	French	University	1
58	2009	3	2500	90	2	33	F	13000	French	University	1
59	2010	42	8600	90	2	32	M	23000	French	University	117
59	2010	42	8600	90	2	22	M	16000	French	University	117
60	2010	12	6000	90	2	29	M	19000	French	College	23
60	2010	12	6000	90	2	35	M	13000	French	College	23
61	2010	17	3000	90	1	27	F	14000	French	University	19
62	2010	18	2300	90	1	26	F	16000	French	University	26
63	2010	36	4730	90	2	24	M	29000	French	University	17
63	2011	36	4730	90	2	32	M	33000	French	University	17
64	2011	12	5000	90	2	30	M	22000	French	University	41
64	2011	12	5000	85	2	30	M	23000	French	College	41
65	2011	18	3800	85	2	40	M	28000	French	College	27
65	2011	18	3800	85	2	31	M	19000	French	College	27

Source: author's research.

# Appendix C

## Modified Data

idnumber	year	Duration	Amount	Repayment rate (%)	Number of individuals	Age	Female	gwagey	Language	Education years	Training hours
1	2006	36	2000	100	4	33	0	18125	1	16	20
2	2011	36	10000	45	65	39	0	45000	1	9	19
3	2011	4	10000	100	7	49	1	25000	1	16	5
4	2011	8	10000	100	3	39	1	35000	1	16	5
5	2010	13	2000	100	3	50	0	45000	1	13	5
6	2010	12	1000	80	3	30	0	25000	1	16	64
7	2010	94	6500	20	1	31	1	35000	1	16	6
8	2010	3	10000	100	7	48	1	25000	1	16	5
9	2009	2	10000	100	7	47	1	25000	1	16	5
10	2009	7	5000	100	3	36	1	35000	1	16	6
11	2009	63	8000	50	4	40	1	15000	3	16	12
12	2009	4	10000	100	7	46	1	25000	1	16	6
13	2009	36	10000	100	7	52	1	35000	1	13	15
14	2008	6	5000	100	3	37	1	35000	1	16	5
15	2008	2	5000	100	5	22	1	15000	1	13	7
16	2008	7	3000	94	1	28	1	25000	1	16	7
17	2008	24	2500	100	1	44	0	15000	1	16	18
18	2008	39	1000	80	2	45	0	35000	1	16	14
19	2007	36	10000	94	2	27	1	35000	1	16	11
20	2007	4	7500	100	3	39	1	15000	3	16	103
21	2007	2	2200	98	2	26	1	10000	1	13	6
22	2007	2	2250	100	3	41	0	18300	1	13	48
23	2007	10	10000	100	1	35	1	15000	1	16	7
24	2006	7	7500	100	1	26	1	10000	1	11	49
25	2006	7	10000	100	1	34	1	35000	1	16	3
26	2006	7	3800	100	3	36	0	25000	1	14	9
27	2006	3	10000	100	6	36	0	13000	1	13	19
28	2006	76	8700	100	4	37	1	15000	3	16	90
29	2006	36	10000	100	8	24	1	13700	1	14	63
30	2005	13	10000	100	18	34	1	10000	1	13	9
31	2005	7	10000	100	4	33	0	15000	1	16	5
32	2005	14	5000	100	3	33	0	22000	1	16	25
33	2006	6	2986	35	2	40	1	17000	1	15	23
34	2008	36	5000	100	2	39	1	3500	2	16	50
35	2009	36	3000	100	2	42	0	15000	1	14	48
36	2010	36	5000	100	2	30	1	10000	1	14	58
37	2012	29	5350	46	2	46	1	10000	3	15	32
38	2009	36	8000	100	2	39	1	22500	2	12	39

Source: author's research.

39	2009	36	5000	100	2	33	1	5000	1	11	35
40	2010	48	8000	100	3	29	0	10000	1	13	49
41	2010	36	9250	100	2	34	1	25000	1	12	47
42	2011	24	4540	100	2	25	0	30000	1	13	50
43	2011	36	7000	100	2	36	1	25500	1	12	57
44	2011	36	11000	100	2	38	0	33500	1	13	78
45	2012	36	5900	100	2	33	1	10000	1	15	40
46	2013	60	15000	100	2	54	1	25000	1	11	25
47	2004	36	5000	88	2	27	1	10000	1	12	33
48	2005	14	5000	73	2	33	1	10000	3	14	12
49	2005	36	6000	97	3	31	0	10000	1	12	214
50	2006	24	7000	93	7	21	1	8500	1	11	129
51	2006	12	2000	96	2	46	1	22000	2	16	37
52	2007	29	7500	88	2	22	0	15000	1	16	73
53	2008	36	2000	88	4	26	0	6500	1	12	66
54	2008	36	5000	98	2	29	1	11000	1	13	12
55	2009	29	5350	98	3	34	1	25000	1	15	5
56	2009	17	7500	98	2	26	1	16000	1	16	23
57	2009	7	3000	98	1	47	0	12000	3	11	6
58	2009	3	2500	90	2	32	1	12000	1	16	1
59	2010	42	8600	90	2	27	0	29500	1	16	117
60	2010	12	6000	90	2	32	0	16000	1	13	23
61	2010	17	3000	90	1	27	1	14000	1	16	19
62	2010	18	2300	90	1	26	1	16000	1	16	26
63	2010	36	4730	90	2	27	0	31000	1	16	17
64	2011	12	5000	90	2	30	0	22000	1	15	41
65	2011	18	3800	85	2	35	0	24000	1	13	27

*Source:* author's research.

# Appendix D

## Stata Output

Figure D.1: OLS regression with robust std. All variables included

Linear regression		Number of obs = 65				
		F( 10, 54) = 9.03				
		Prob > F = 0.0000				
		R-squared = 0.3898				
		Root MSE = 14.194				
rate	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
dur	-.3535324	.1999213	-1.77	0.083	-.7543506	.0472858
lamount	8.115054	2.969911	2.73	0.008	2.160742	14.06937
nind	-.8003788	.1374609	-5.82	0.000	-1.075971	-.5247863
age	.2083434	.2358277	0.88	0.381	-.2644627	.6811495
female	-3.811293	4.332225	-0.88	0.383	-12.49688	4.874296
lgwagey	-2.717709	2.793142	-0.97	0.335	-8.317622	2.882204
lang						
2	6.032363	5.368017	1.12	0.266	-4.729863	16.79459
3	-15.65704	9.123291	-1.72	0.092	-33.94813	2.634061
edu	-1.034542	.793948	-1.30	0.198	-2.626312	.5572276
thours	.0609763	.0590397	1.03	0.306	-.0573912	.1793439
_cons	69.56462	33.80476	2.06	0.044	1.79016	137.3391

Source: author's research.

Figure D.2: OLS regression with robust std. significant variables included

Linear regression		Number of obs =		65	
		F( 4, 60) =		14.69	
		Prob > F =		0.0000	
		R-squared =		0.2820	
		Root MSE =		14.607	

  

rate	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
dur	-0.3800012	.1941258	-1.96	0.055	-.7683107	.0083083
lamount	6.520277	2.210965	2.95	0.005	2.097688	10.94287
nind	-0.6444593	.1217508	-5.29	0.000	-.8879972	-.4009214
thours	.0827877	.0512295	1.62	0.111	-.0196866	.1852619
_cons	44.81966	20.32326	2.21	0.031	4.167091	85.47223

Source: author's research.

Figure D.3: Probit with significant variables included

Iteration 0:	log likelihood =	-42.805426
Iteration 1:	log likelihood =	-35.103789
Iteration 2:	log likelihood =	-34.987617
Iteration 3:	log likelihood =	-34.987607
Iteration 4:	log likelihood =	-34.987607

  

Probit regression		Number of obs =		65	
		LR chi2(4) =		15.64	
		Prob > chi2 =		0.0035	
Log likelihood = -34.987607		Pseudo R2 =		0.1826	

  

repay	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
dur	-0.0162836	.0100318	-1.62	0.105	-.0359456	.0033783
amount	.0002219	.0000714	3.11	0.002	.000082	.0003618
nind	-0.0376771	.0274779	-1.37	0.170	-.0915327	.0161786
thours	-0.0073906	.0052826	-1.40	0.162	-.0177444	.0029632
_cons	-0.1524169	.4192378	-0.36	0.716	-.9741078	.669274

Source: author's research.



Figure D.4: Logit with significant variables included

```

Logistic regression                Number of obs =      65
                                   LR chi2(4)      =     15.38
                                   Prob > chi2     =     0.0040
Log likelihood = -35.117303        Pseudo R2      =     0.1796

```

repay	Odds Ratio	Std. Err.	z	P> z	[95% Conf. Interval]	
dur	.9743045	.0161069	-1.57	0.115	.9432416	1.00639
amount	1.000369	.0001263	2.92	0.003	1.000122	1.000617
nind	.9398655	.0432505	-1.35	0.178	.8588066	1.028575
thours	.9876253	.0087235	-1.41	0.159	.9706747	1.004872
_cons	.7606973	.5282785	-0.39	0.694	.1950209	2.967171

*Source:* author's research.