

Microcredit in the developed countries: the case of Barcelona

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Microcredit has typically been linked to developing countries. However, in recent years, it spread to other parts of the world – many times intended to be a tool to face some of the social problems brought by the economic crisis. This paper gives some insights about the impact of a microcredit program implemented in the metropolitan area of Barcelona as a representative case of the developed countries. The result of this study suggests a positive impact of receiving a microloan on registered economic activity and on other family income, but non-significant coefficients are obtained for personal income, monthly billing or self-confidence.

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INTRODUCTION:

When thinking about microcredit most people would have in mind a woman in a developing country trying to raise her family out of poverty through self-employment.

This would be the case of Albertina in Maputo, Mozambique, a struggling woman who managed to support her family thanks to a microcredit program.

Albertina's family had depended on the salary of her husband until he was fired. It was really difficult for them to cope and meet the basic needs of the family. That is why Albertina decided to start her own business selling fruit in order to increase family earnings.

However, she needed money to buy the merchandise. She was told to visit Mr. Joau, who gave loans to poor to enable them to run their own businesses. Despite the fact that he was an informal lender charging very high interest rates, Albertina accepted and started her activity with difficulties. The annual interest rate amounted to 3,600% which meant that a great deal of benefit was lost in the form of interest. She found herself in an abusive situation, but she had no other choice for financing her activity.

Some months later, the Tchuma organization came into the market offering microcredit with an annual 60% interest rate – much lower than before. Thereafter, Albertina joined Tchuma, which helped her to improve not only her financial situation, but also the quality of life of her family. She was able to earn enough money to her children to attend schools and to enhance the family diet, thereby overcoming the most extreme forms of poverty.

However, there is also another profile of women receiving microcredits in developed countries. This would be the case of María, who arrived in Barcelona searching for a job in order to try to earn some money to raise her girl, still living in Ecuador with María's mother.

With the arrival of the economic crisis in Spain it was almost impossible for her to make ends meet and send money to her home-country with an irregular job as a cleaning lady; then, she decided to create a small business by selling clothes to her acquaintances.

The problem was that she needed money for buying merchandise, and she would finance these purchases by asking for a loan to a high-interest informal lender. Despite the high interest rates – and the fact of being excluded from the regular banking system for not having any collateral –, this allowed her to continue running her business with many difficulties to repay her debts.

Again, microcredit appears to be a beautiful idea for solving this kind of problem, even if the context of María is very different from that of Albertina.

The history of microcredit can be traced back to 1974, in Bangladesh. Professor Muhammad Yunus was visiting a Bangladeshi village, when he realized how many difficulties women were facing in order to conduct their small economic activities – mostly bamboo crafting. They did not have enough money to buy raw materials, so they ended up buying them from the same traders who later bought their manufactured goods under wildly unequal conditions. Such abuse absorbed most of the benefits they earned. That is why he proposed the following experiment.

He estimated that a small amount of money, equivalent to \$27, might be enough to help all of them to improve their standards. Thus he created a small credit fund which distributed money among more than 40 women with few resources and no possibility of accessing credit through the traditional banking system. The positive results of this experiment served to lay the foundation of Grameen Bank, one of the organizations specialized in microcredit that serves a greater number of clients in the world, reaching more than \$1,100 million of outstanding loans and 8,800,000 users (Grameen Bank, 2015).

One of the reasons why that much hope was placed on the idea was having a background on economic theory: joint liability or social capital and trust could, to certain extent, substitute the physical collateral when the poor access financial services (Stiglitz and Weiss, 1981; Stiglitz, 1990 and Besley, 1994) and different authors suggest that when a factor – say, capital – is scarce its marginal returns will be higher (Mundell, 2003).

Nonetheless, microfinance also involves incentive problems and transaction costs issues, provided that poverty is correlated with many other factors that would undermine the effectiveness of financial access increase in raising income. Apart from that, there is still a lot of controversial evidence and recent studies have found non-transformative effects on borrowers and/or their communities, that is, reductions in poverty or substantial improvements in living standard have not been shown (Banerjee, Karlan & Zinman, 2015). Therefore, nowadays researchers are no longer that enthusiastic about the idea.

Finally, another criticism to this idea focuses on the risk of forgetting about broader needs of the low-income households, that do not necessarily have to do with running small businesses, but with covering basic needs or raising income from other sources (Collins, Morduch, Rutherford & Ruthven, 2009).

MICROCREDIT IN DEVELOPED AND DEVELOPING COUNTRIES

Microcredit programs have been implemented in developing countries such as Bangladesh, India or Cambodia since 1976. Microfinance institutions (MFIs) usually lend small amounts of money given to impoverished people, especially women, so as they can start their own business and become employed. At the beginning, the only role of developed countries inside this initiative was being a mere sponsor, but they quickly started subsidizing the microfinance operations, which suggest the fact that most MFIs had problems of economic self-sustainability. This would be an issue for the outreach of the intervention, since it would involve high costs and its impact will completely depend on charitable contributions.

Nowadays, there exists a debate between the poverty lending approach – focused on overcoming poverty through the use of credit with subsidized interest rates, affordable for the poorest – and the financial systems approach – which emphasizes the ability to cover the cost of lending money . These are opposite views, because there is a trade-off between sustainability and outreach.

There is evidence showing that only 1-2% of all MFIs worldwide are currently financially feasible and 8% almost are. And their main goals are sustainability and profitability, due to being for-profit organizations. Another group, still not sustainable, consists mostly of NGOs, representing approximately a 20%. The rest would be completely dependent on subsidies and would generally have a small size (Hermes & Lensink, 2009).

Microcredit started to be used in developed countries since 2000s, where their importance has been gradually growing as they could serve as a tool to help fighting unemployment, as well as social and financial exclusion. In fact, during the economic crisis, those countries with a larger increase in unemployment – such as the Mediterranean countries – showed an important increase in microcredit outreach (Morón Rodríguez, 2013).

Differences between microcredit in the developed and underdeveloped countries have many dimensions, to begin with its definition. The European Commission defines a microloan as a loan up to €25,000 and a Micro-enterprise as an enterprise including a self-employed person that employs fewer than 10 people and whose annual turnover does not exceed the €2 million (EU Commission, 2013). While the United States has generally defined them as loans of less than \$50,000 to people — mostly entrepreneurs — who cannot, for various reasons, borrow from a bank (Shaila Dewan, 2013).

On the contrary, the wider used definition in developing countries, such as India or Bangladesh, is the one of the Grameen Bank, which definition is based on non-monetary considerations: promoting credit as a human right, helping to overcome poverty, being mainly targeted to poor women and not being based on any collateral. (Grameen Bank, 2016).

Apart from that, in developing countries, female borrowers appear to be the most addressed group of the microfinance sector – 84% of borrowers are women – according to the 2017's Microfinance Barometer. This is not the case for the developed countries, where female importance is much lower. For instance, according to the last Aspen Institute study, women represent 62% of Microcredit programs' customer base (Client Outcomes Survey Highlights, 2015).

The highest growth of microcredit is still found in developing countries. According to the 2017 Microfinance Barometer, microfinance institutions of developing countries reached a total of 132 million low-income clients with a loan portfolio worth 102 billion dollars.

On the other hand, according to the The European Microfinance Network (EMN) and Microfinance Centre (MFC) Survey Report 2014-2015, the MFIs disbursed in the EU a total of 552,834 microloans , reporting 747,265 total active borrowers, with a gross microloan portfolio outstanding of 2.95 billion dollars. Instead, in Ecuador alone there were 1.3 million borrowers in 2016 with a portfolio of 5.1 billion dollars.

Many MFI also report very high repayment rates. Grameen Bank reports that the repayment rate for “the poorest of the poor” reaches 98.6% (Yunus, 2009), in spite of the fact that most of them are not used to deal with banks. The case for developed countries is quite similar, although it does not attain the 90% (Jayo, 2009).

Nevertheless, we should be careful when interpreting these numbers, since despite reporting such general high repayment performance, some economic studies mention that Grameen have faced repayment problems and that there is “a negative relationship between repayment performance and age of membership” (Hossain, 1998). Evidence suggest that keeping relatively low interest rates becomes a critical issue to be discussed that has implications on repayment numbers and that some MFIs have “pushed far ahead of the evidence” and that “critical empirical gaps” exist on this matter (Morduch, 1999).

The purpose of this paper is to analyse the situation of the microcredit programs in the developed countries using Barcelona as an example. After making a theoretical approach to this topic, we will focus on a statistical analysis using data for microcredit programs in the city of Barcelona in order to assess the impact of microcredit in this specific case.

The study will be structured as follows. In the first part we are going to describe the data analysed as well as the methodology followed for conducting the research. We will focus on the different features characterizing each microcredit group – later explained – which will help us, to some extent, to draw conclusions since each group peculiarity will say a great deal about entrepreneurs' behaviour. In the next section we analyse five individual OLS regressions that are aimed to explain the impact of receiving a microloan on different socio-economic indicator. Lastly, in the third part we will report some conclusions and suggestions according to our findings.

CASE STUDY:

DATA SET AND METHODOLOGY

In our study, we are using data from a foundation known as Servei Solidari, whose goal is to overcome social exclusion. The data collected belongs to their *Programa Confia*, which is being implemented in Barcelona and Granollers. The areas in which the entrepreneurs households are located are illustrated in Figure 1, in which the size of each dot proportionally represents the amount of entrepreneurs concentrated in the same neighbourhood of Barcelona. Notice that these are both metropolitan areas with a population of more than 1 million and a half and more than 60 thousand respectively, and whose main economic activities are professional services and retail (Council of Barcelona, 2017).

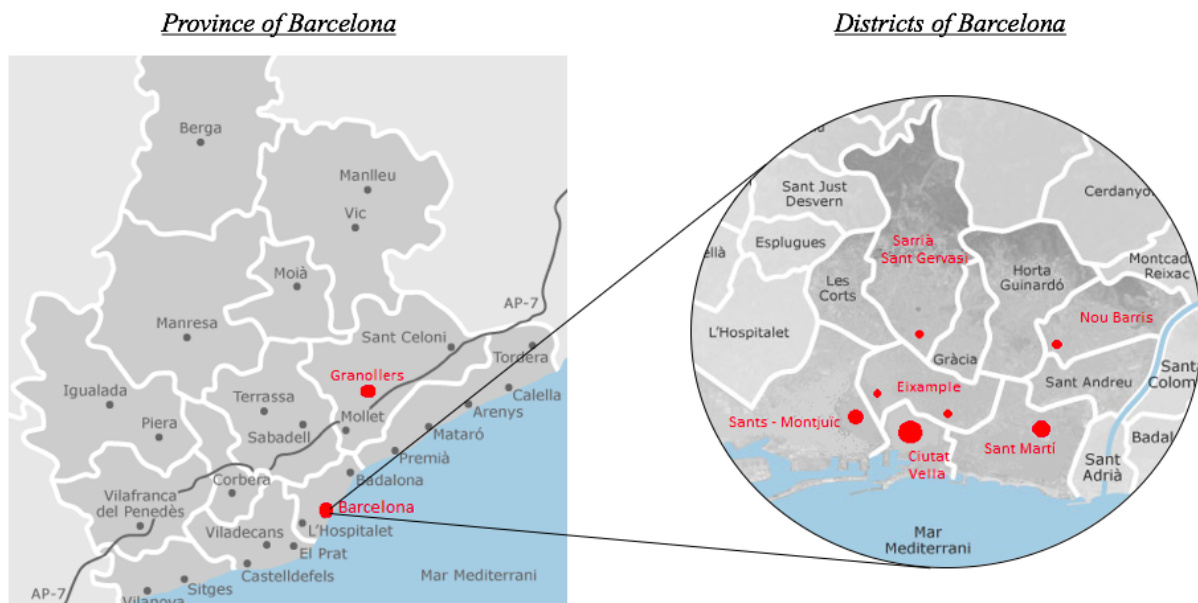


Figure 1. Study Areas

We used two surveys to conduct the analysis, one taken when the potential entrepreneurs got their first loan or joined the program for the first time and another one in October 2017. Notice that we are using the date of joining the program for some of the entrepreneurs because they did not receive a loan yet. Figure 2 shows the distribution of these first survey dates.

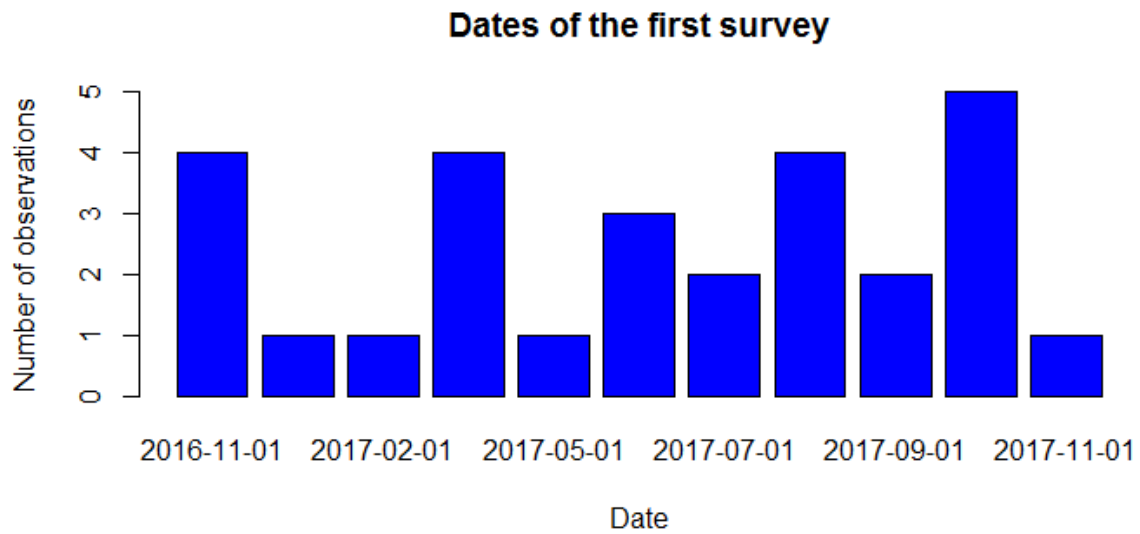


Figure 2. Distribution of the first-survey date

Each of the surveys has been taken by interviewing 28 households and they were intended to conduct an impact evaluation, by serving as baseline and endline.

As it can be seen in the previous figure, the time passed since these people received their first microloan or entered the program was very short, meaning that the impact of the intervention in such a small period is expected to be low. However, we expect this paper to give a first insight on how it is working, and make a “follow-up” that could ideally be updated later on.

As mentioned before, in the sample both microloan beneficiaries and potential beneficiaries are included. Therefore, we will use the first as a treatment – corresponding to the 57.14% of the sample – and the second as a control group – representing a 42.86%.

Received a loan



Figure 3. Distribution of the sample between the control and treatment group.

Nevertheless, there will be limitations when analyzing the results of our analysis since it is neither an experiment or a quasi-experiment, since the events that made some entrepreneurs to be given the microloan already or not are non-random.

The primary purpose of this program is promoting the entry into the labour market to fight poverty in the area of Barcelona. Groups of borrowers are created by the technicians of the institution and their members will be jointly liable for microloans repayment and will jointly manage their own money according to conditions that they agreed on. For receiving a microloan the group members will publicly agree on the amount of money needed and what for, while the rest of the team will decide whether the loan is given. It only targets women, since they are more “propense to invest wisely and look after their families and communities” (Rankin, 2001) and have higher barriers to access financial services.

Coaching group sessions between the different participants are organized twice a month, one to work the most social side – to enhance the links among them – and the other focused on the business side – in which follow-ups of business projects and credit approvals are carried out, besides a basic training on accountancy, bureaucratic administration of the company and other business-related issues are discussed.

The entrepreneurs profiles differ across the groups since the users comprise a wide range of ages and they come from different countries: Bolivia, Brazil, Bulgaria, Senegal, Colombia, Ecuador, Italy, among others.

In the *Programa Confía*, there exist 3 different groups formed from 6 to 13 entrepreneurs – henceforth, we will name them Group 1, Group 2 and Group 3. Potential users should perform a series of steps for joining one of these groups.

They first is attending a briefing, which is normally in groups. In these sessions, they are informed about how the program works. Furthermore, coordinators record data about entrepreneurs’ profiles, which are filed and often updated. The next step that follows is an individual interview between the entrepreneurs and coordinators to evaluate each profile. They assess both psychosocial factors of the candidates as well as an economic analysis of their business plan.

Once technicians have collected this data, they appraise the group in which each woman would fit better accordingly to psychosocial criteria and the group needs. Thus, coaching group and individual sessions – the latter focusing on each candidate’s business prospects and evaluations – are ready to be implemented twice a month. They barely organize individual sessions once the business is already set up; it is a complex issue to be taken on board for the future.

It is important to mention that once a month, during these collective meetings, the coordinator is in charge of gathering the money entrepreneurs invest as shares (1 share equates to €10) and record this information in the specially designated software.

The dataset that we are using for our study is formed by 28 observations, corresponding to entrepreneurs from the three different groups mentioned above. All the members of the group together are the ones deciding the specific requirements for the microloans concessions and, as it typically occurs in microcredit programs, they would be liable for each other in case someone inside the group does not pay.

In the following table the particular characteristics of microloans for each group are shown:

	GROUP 1	GROUP 2	GROUP 3
Number of members	13	9	6
Maximum microloan value	€ 1,000 ¹	€ 800 ²	€ 600 ³
Average microloan value	€ 724	€ 600	€ 0
Time limit for repayment	10 months	6 months	6 months
Interest per month	0.50 %	0.50 %	0.00%
Interest for late payment	1.00 %	1.00 %	0.00%
Rate of microloan-contribution ⁴	x5	x4	x4
Penalty for delay	€0.00	€1.00	€0.00
Penalty for non-attendance	€0.00	€2.00	€0.00

Table 1. Microloans characteristics for each group

¹ € 17,000

² € 11,000 and € 15,000

³ € 800, € 1000 and € 1500

⁴ It refers to the relation between the contribution made to the group in form of shares and the amount of microloan they can obtain.

Some of the entrepreneurs have received microloans from another financial institution which is the MFI branch of CaixaBank, called MicroBank. Nonetheless, they are still within the framework of the *Programa Confía*, which allowed for accessing them. In the same way, some others directly borrowed money from Servei Solidari, outside of the scope of their groups.

The footnotes specify the values of microloans which were not given in the conventional manner. It is important to highlight that those values were not taken into account when computing the average microloan value in the Table 1. We did not consider them for the table values computation to be consistent with the characteristics of each group

Finally, we would like to point out that the average microloan value is 0 for the third group. However, all of them have received a microloan either from MicroBank or Servei Solidari, with an average value of € 870.

As previously mentioned, entrepreneurs profile differ from one group to another. Technicians are the ones in charge of assessing and evaluating candidates in order to allocate them in the proper group. Having collected data from entrepreneurs – including nationality, the year of birth, reasons for immigration, marital status, etc – it is quite easy to identify common attributes, such as cultural issues, among users of the same group which could determine their performance in the program. A general description of each group is detailed below.

All the entrepreneurs have in common the sector or industry in which they operate: beauty salons, selling clothing, sale antiques, small restaurants among others. Group 1 and Group 2 share many similarities which could be reflected on a similar entrepreneurs' performance and behavior. Members of the first group are the most veteran ones in the program, which might help us to draw a better evaluation. However, as already mentioned, this is still a short time to make precise conclusions about the effectiveness of the program. On the other hand, the third group can be considered as the most novice one as well as a really interesting group.

Group nationalities (shown in Figure 4) seem to vary widely between countries being most of them from Europe – Italy, Spain, Bulgaria – and South America – Ecuador, Colombia, Brasil, Mexico, Argentina. All members of Group 3 (and a few of Group 2) are from Africa – Senegal, Guinea, Mali. This makes cultural differences to play a crucial role in our study. The fact of homogeneous nationality in Group 3 might affect on the similar way individuals think, act and care for others. This fact can be clearly shown in Table 1, where this latter group is not setting neither penalties nor interest rates. Besides, there is a remarkable difference in terms of repayment capacity between the first two groups and the third one, whose debt-to-income ratios are on average 21.2405%, 20.8395% and 14.7935% respectively. This difference can be explained with 0% interest

rate they decide to set since it makes monthly debt payment lower than other groups in spite of earning the same personal monthly income in some cases. Another meaningful feature of Group 3 is that all of the members have received a microloan for continuing with the activity of their businesses.

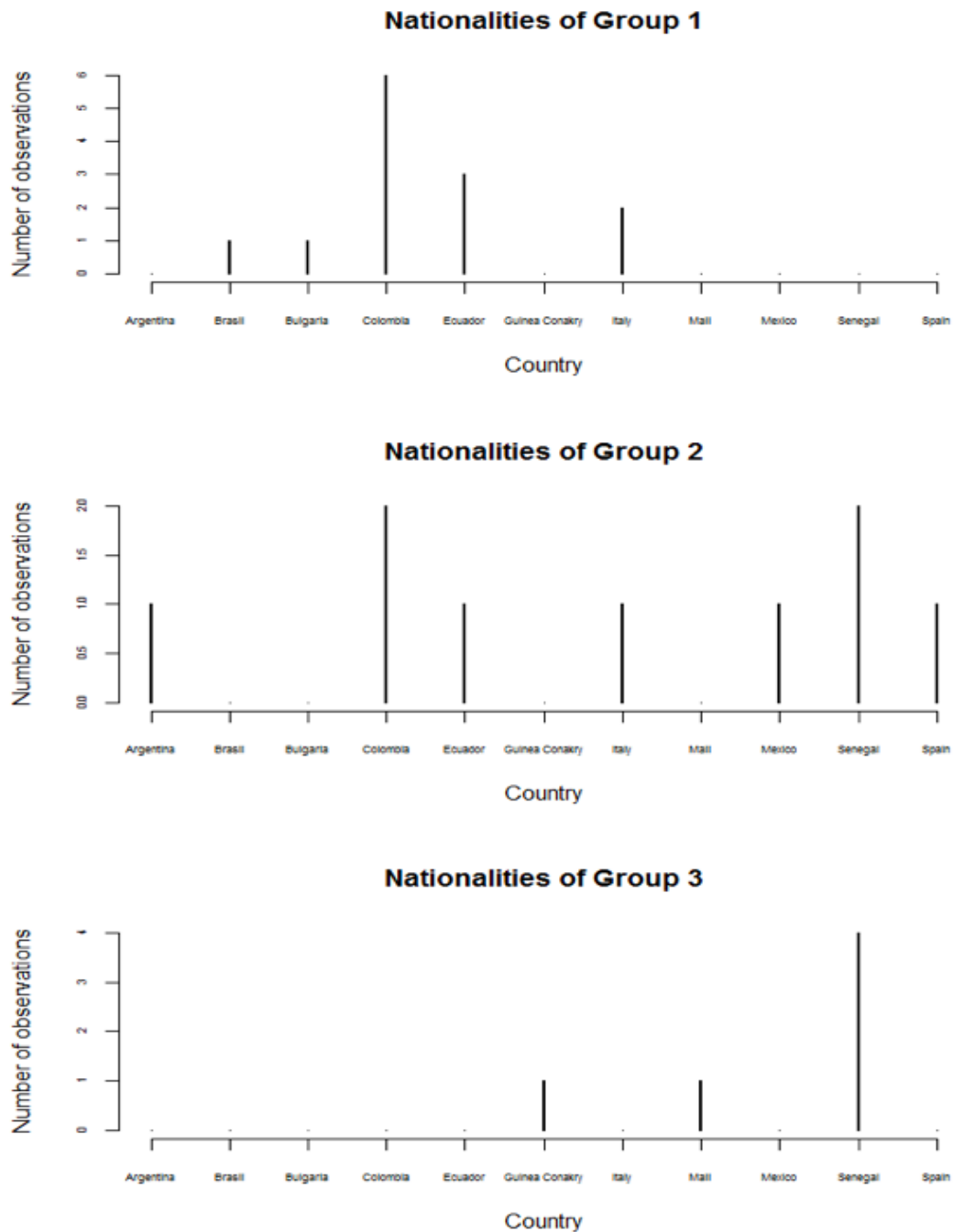


Figure 4. Distribution nationality across groups

DESCRIPTIVE ANALYSIS AND RESULTS

When analyzing the impact of a program, ideally, we would like to have data from a randomized controlled experiment or from a quasi-experiment; valid standard errors; a sufficiently large number of observations across different individuals and different time periods (panel data); and a multivariate multiple regression model that explains the different impacts of the program.

Nevertheless, as it was already commented, this dataset has very few observations, what makes it complicated to run a multivariate regression. This also entails problems for calculating valid standard errors, as well as for assessing their homoskedasticity.

Furthermore, only data from two periods is available and with a very short time in between; thus, across-time comparisons are difficult. And the non-random assignment of the individuals to the treatment and control groups would lead to biased and inconsistent regression coefficients.

Despite of all these limitations, we will present a modest analysis of the data, which instead of a multivariate regression will consist on separate OLS regressions for each outcome variable. This would mean that the individual coefficients – and their standard errors – will be the same as the ones obtained from a multivariate regression; but we will not be able to test coefficients across equations.

Regression	Intercept	Coefficient for explanatory variable	Coefficient for control variable	R-squared
Personal income on receiving a microloan and having dependant relatives in Spain	2.8509 (0.3780)***	0.4123 (0.3959)	-0.4342 (0.2352)	0.1053
Increase in monthly billing on receiving a microloan	191.67 (132.96)	-98.23 (175.89)	-	0.01185
Increase in other monthly family income on receiving a microloan	-566.7 (332.9)	490.0 (372.2)	-	0.1176
Increase in self-confidence on receiving a microloan and increasing monthly billing	-0.0412306 (0.2042314)	0.2305057 (0.2615376)	0.0006499 (0.0002899)*	0.1129
Change in whether the economic activity is registered on receiving a microloan and and years in Spain	-0.77217 (0.28633)*	0.55282 (0.23839)*	0.03165 (0.01438)*	0.1567

Table 2. Individual OLS regressions showing different impacts of receiving a microloan.

*Notice, that the standard errors of the coefficients are shown in parenthesis below them and that the symbols * signal the coefficients with statistical significance for the 95% confidence level.*

For all the regressions it is important to mention that significant coefficients are complicated to achieve with such a small dataset. Therefore, other analytical tools, like graphs, can be very useful for understanding the interactions between variables.

The personal income of the users of the program shows no significant relation with whether receiving a microloan, even if we control for the dependent relatives that the women have in Spain, whose coefficient is significant with a 90% of confidence level.

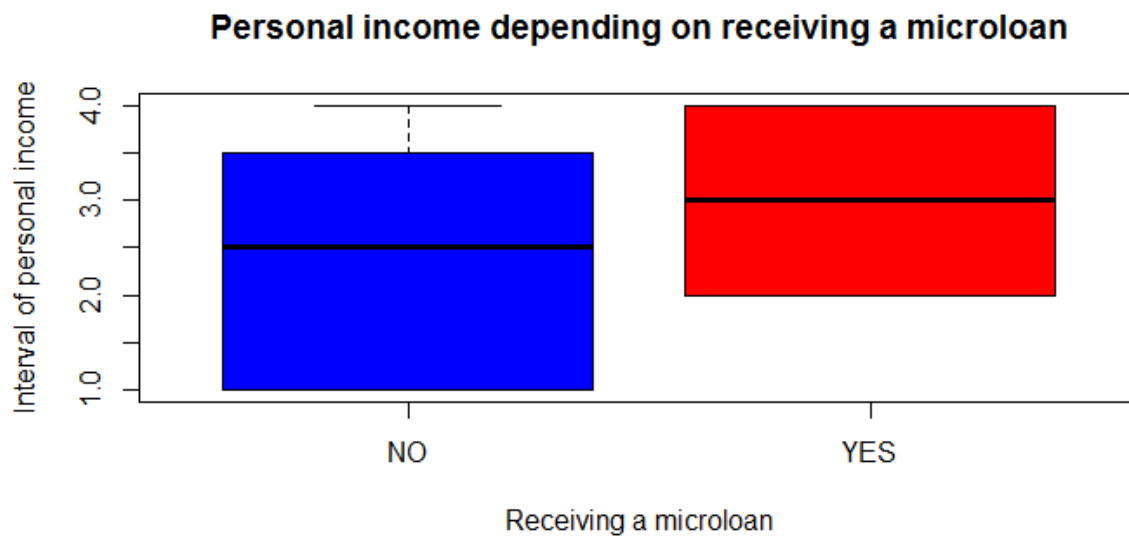


Figure 5. Difference in distribution of personal income depending on receiving a microloan

Even though, a 0.1053 R-squared suggests that it could be interesting to go further on the analysis. In fact, when we look at the boxplots for the two cases – receiving or not a microloan –, we can graphically observe a difference in the distribution. Notice, for the interpretation of both the regression coefficients (Table 2) and the graph (Figure 5) that the variable “personal income” is categorical and is formed by four intervals: [0,300], [300,600], [600,900] and [900,1500], that correspond to the numbers 1 to 4 respectively.

There is no significance on the regression of monthly billing on receiving a microloan, meaning that we cannot conclude that there is a relationship between these two variables. This shows no clear effect of getting a microloan on the profits or the invoicing of the business. Apart from that, the R-squared of the regression is close to zero.

Nevertheless, if we wanted to, at some point, interpret the regression coefficients, it must be taken into account that those with a higher monthly billing in the moment of entering the program were most of the ones receiving a microloan. Therefore, due to already having an existent

monthly billing – higher to those that still have not received a microloan – could make it difficult to increase monthly billing in a greater extent than those not having an open business at the moment of entering the program. This would occur in cases of decreasing returns to scale, meaning that for those starting their business the increase in billing is much higher than for those that were already collecting some money from their entrepreneurial activities. It is simple to see that it is much easier to increase monthly billing for those that did not have an open business than for those already selling some products on their own.

In conclusion, our statistical analysis suggests that receiving a microloan does not promote the improvement of the firm results, it is, getting a microloan does not foster an increase in the companies turnovers. Conversely, as observed in the following graph and in the second regression of the table, a slightly significant negative effect on monthly billing evolution is observed when the beneficiaries receive a microloan. This does not mean that there exists such a relationship, but reinforces our hypothesis of the non-existent connection between the two.

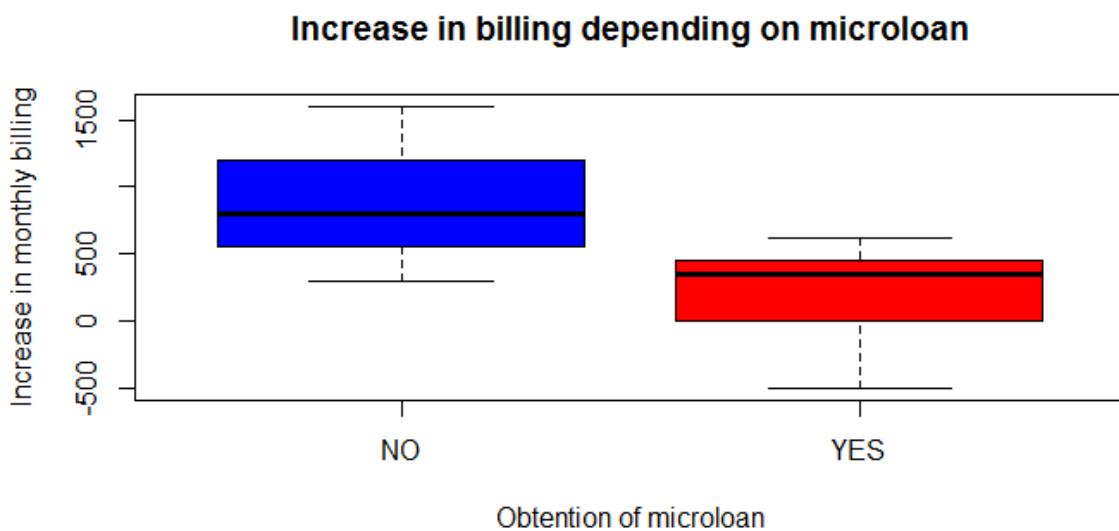


Figure 6. Improvement in business performance depending on the concession of a microloan.

The data shows a significant relationship – at the 90% of confidence level – between the income of members of the family, other than the users of the program. An average decrease for the income of other family members from the first to the second survey time period is observed. However, the relatives of the women receiving a microcredit show a lower average decrease in their income.

Notice, that the general decrease in income of “other family members” might have to do with the creation of enterprises from the program users – even if they have not received a microloan

yet –, leading to an increase of the users’ actual or potential personal income, what might have relaxed the incentives of their relatives to work extra-hours or accept additional employments.

There is no statistical significance for the coefficient of the variable “increase in self-confidence” when regressed with respect to whether receiving a microloan, although making their standard errors smaller when controlling for the increase in monthly billing, that is both correlated with the response variable – with a correlation of 0.3913042 – and with the explanatory variable of - 0.1088745. Nevertheless, we do observe a positive impact on self-confidence for those users that managed to open a microenterprise or maintained their business open since they arrived to *Programa Confia*

In the regression of increase in self-confidence on business status, the event of having an open business increases the self-confidence on average 0.933 points out of 3 compared to do not have opened it yet and 1.388 with respect to have closed the business.

When analysing whether the entrepreneurs activities are registered after receiving the microloan, a positive impact towards regularization is identified if a microloan is received and the more years the women has been in Spain for. With a 95% of confidence level all the regressors’ coefficients are significant.

Regression	Intercept	Slope	R ²
Self-confidence on the business state	2 (0.2706)***	Not open yet: 0.4545 (0.2941)	0.4006
		Open: 0.9333 (0.2881)**	
Monthly billing on sector of the activity	987.5 (266.3)**	Retail: - 482.5 (326.1)	0.5791
		Services: 979.2 (406.7)*	

Table 3. Other complementary OLS individual regressions

Finally, we have already mentioned that professional services and retail are the main economic activities in the metropolitan areas in which our studied is implemented. This final complementary regression shows that there are differences regarding the sectors in which the entrepreneurs perform their activities, being retail the less successful category among entrepreneurs. The category of services to what they belong are not professional services such as

architects, auditors, engineers, doctors and lawyers; they instead devote their businesses to simpler activities that do not need a degree such as hotel or beauty.

Therefore, this suggests the idea that the competition that retail companies face could negatively affect the firm results.

Performance across sectors

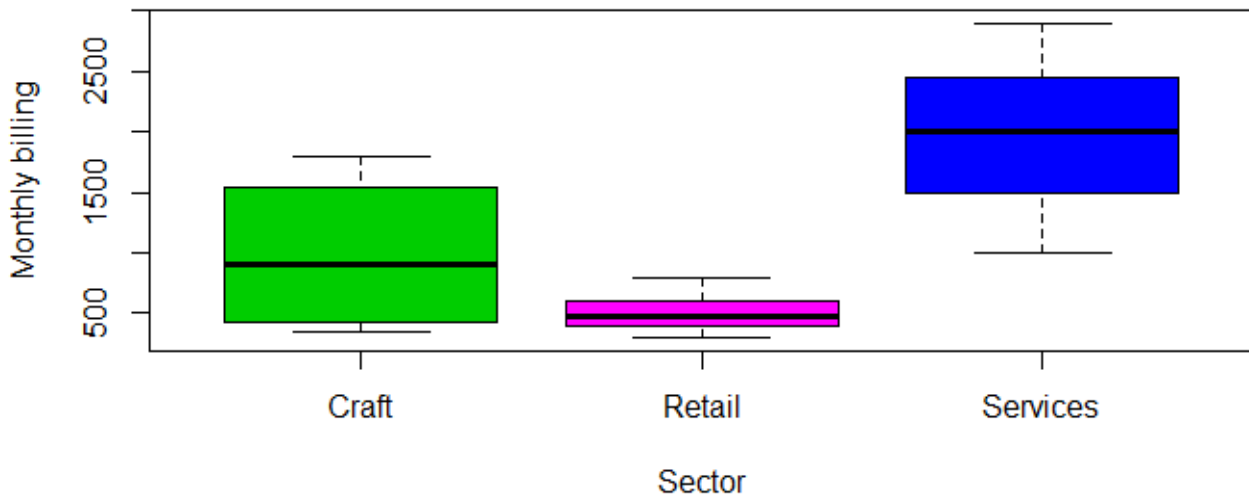


Figure 7. Business results depending on the sector of activity.

Furthermore, the ANOVA test for assessing if the monthly billing means differ across sectors is statistically significant, with a value of 8.255 for the F-test, meaning that we reject the hypothesis that these three means are equal – what supports our previous conclusion.

CONCLUSIONS

Along this paper we have given a brief definition and background of the concept of microcredit. Then, we outlined some of the economic theory behind it – both for and against – and illustrated the existence of an important trade-off between sustainability and outreach, from which evidence suggests that outreach is being the focus at the moment, while sustainability seems very difficult to achieve.

After that, we listed some of the main differences between microcredit in developed and developing countries. Some of them would be the broader definition of the concept applied in developing countries compared to developed, the wider reach or the higher importance of women as a target.

Finally, we also analyzed the impact of receiving a microloan on different socio-economic variables for the specific case of the users of *Programa Confia* in Barcelona and Granollers, which main purpose is to promote the entry of its users into the labour market in order to fight poverty through microcredit.

Servei Solidari is one of the few organizations in Barcelona implementing a microcredit program with features such as joint liability or targeting women, as it was first described by Yunus. Like the rest of the institutions doing so in this area, it has very recently started to work on this matter. Therefore, drawing conclusions or assessing the impact of the action is still very complicated.

Apart from that, the fact that this is such a short-scale program, with only 28 users at the moment, also makes it difficult to have the necessary conditions for an adequate statistical evaluation. Nevertheless, we present this report as a case study, that might give some insights of what is starting to be done in Barcelona in this respect.

Our findings suggest that there is no significant impact on receiving a microloan on the personal income of the program users, neither on the monthly billing of their businesses, being these two results consistent. Besides, there is a significant positive impact – at 90% confidence level – on the salaries of the family members of the users receiving a microloan, even if in general the average salaries of the users' relatives seem to decrease. This means that their wages will exhibit, on average, a lower decrease, other things equal.

Furthermore, the self-confidence of the entrepreneurs is apparently not affected by the fact of whether receiving a microloan. Nonetheless, there is a significant positive impact on the self-esteem of these users that either managed to open their business and maintained it open until now. And a positive impact on regularization of the business activity is also hinted by the data when

controlling for the number years that the user has been in Spain, that also plays a role in the possibilities for businesses regularization.

We would like to stress that this study has many limitations. It lacks of external validity and the internal validity is also unclear since there is room for biases and inconsistency in the regressor coefficients.

Having randomly distributed individuals across treatment and control groups, valid standard errors, a large enough number of observations and data collected over time would be ideal elements in order to analyze the impact of the program.

We would also like to have had a different treatment and control groups, by including in the treatment group all the users of the program not depending on whether they have or not received a microloan yet; and in the control group, individuals with similar characteristics that did not entered the program. All of this, assuming that we had no option to run a RCT or a quasi-experiment.

Additionally, instead of focusing on the users households analysis, it would have been better to consider the impact on the whole community around them – such as their neighbourhoods or districts. Nevertheless, it must be kept in mind that this becomes very difficult when talking about metropolitan areas, in which these microenterprises represent a very low much lower relative importance compared to the total economy than in rural areas – less populated and with fewer big companies.

To conclude, we will suggest some additional information that the foundation running this program could start to collect in order to follow its impact over time. Some of the key indicators when we talk about fighting poverty would be nutrition, productivity, households income, education, empowerment – specially for women – and the regularization of economic activities.

Some of them have already been mentioned in this study and data on their evolution is already being collected by the institution. However, in the context of a developed country some of those are difficult to measure and it is even more difficult to have an objective proxy for them, that can be considered reliable by third parties and cannot easily be altered with a specific purpose.

Therefore, we would like to recommend some indicators that may be useful for the assessment of the prom impact on nutrition of the users' households and education of their children.

In developing countries, anthropometric, biochemical and clinical measures are normally used to assess the quality of the nutrition of impoverished people. Nevertheless, an easier and cheaper-to-obtain proxy for the alimentation of minorities and people at risk of poverty could be the number of times per month that a family consumes junk or ready-made food. Notice, that this is an

issue highly related to poverty in the developed countries, where numerous economic studies have shown that “unhealthy foods are mostly consumed by the less educated and/or poorest households” (Gil, López-Casasnovas and Mora, 2013).

Besides, the educational level could be measured through the so-called ‘*reválidas*’ - in Spanish. They are standardized assessment tests set by the LOMCE at different specific levels during the learning period. This kind of tests would objectively assess the educational level of children and teenagers since they are consistent for all the schools. This allows for comparisons across children in different academic institutions; and the fact that they are ran at different moments throughout the study plan allows for comparisons over time.

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