

## Microcredit and Household Poverty Reduction: The case of Algeria

القروض الصغيرة و الحد من الفقر: حالة الجزائر

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**Abstract:** Poverty is considered a major issue for the developing countries. To this end, public programs like the national microcredit management agency in Algeria are working to break the poverty cycle. The present work examines whether the beneficiaries of ANGEM microcredit truly feel an increase in their socioeconomic situation, using a sample of 150 micro lenders. The results indicate that 66% of respondents feel a change in their socioeconomic situation caused by microcredit and the activity generated by it.

**Keywords:** household-poverty; microcredit; public-programs; evaluation; Algeria.

**Résumé :** La pauvreté est considérée comme un enjeu primordial pour les pays en voie de développement. À cet effet, des programmes publics tels que l'agence nationale de gestion microcrédit en Algérie essayent de briser le cercle vicieux de la pauvreté. Le présent travail cherche à savoir si les bénéficiaires de microcrédit ANGEM ressentent vraiment une amélioration de leur situation socioéconomique, en se basant sur une enquête auprès d'un échantillon de 150 bénéficiaires de microcrédit. Les résultats indiquent que 66 % des enquêtés ressentent une évolution de leurs situation socioéconomique due au microcrédit et à l'activité issue de ce dernier.

**Mots-clés :** Pauvreté ; microcrédit ; programme-public ; évaluation ; Algérie.

**ملخص:** يعتبر القضاء على الفقر قضية أساسية بالنسبة للبلدان النامية. تحقيقاً لهذه الغاية، تحاول البرامج العمومية مثل الوكالة الوطنية لتسيير القروض الصغيرة في الجزائر كسر الحلقة المفرغة للفقر. لذلك تبحث هذه الدراسة لمعرفة ما إذا كان المستفيدون من القروض الصغيرة ANGEM يشعرون بالفعل بتحسين في وضعهم الاجتماعي والاقتصادي، استناداً إلى دراسة استقصائية لعينة من 150 مستفيداً من القروض الصغيرة. تشير النتائج إلى أن 66 % من المستطلعين يشعرون بتغيير في وضعهم الاجتماعي والاقتصادي بسبب القروض الصغيرة والنشاط الناتج عنها.

**الكلمات المفتاح:** فقر؛ قروض-صغيرة؛ تقييم؛ الجزائر.

### I- Introduction :

Micro finance has become a new economic model based on equal opportunities and the expansion of the capacities of the most deprived in society to include them in the labour market. However, there are surprisingly few credible estimates of how much microcredit actually reduces poverty. Even the results of recent, more rigorous research are not free of methodological limitations or controversies. Thus, the intense and ongoing debate on the impact of micro finance on poverty reduction is not surprising. Despite the euphoria of the Nobel Peace Prize awarded to Professor Mohammad Yunus, many sceptics still remain in the debate.

Ideally, the impact of micro finance can be assessed if the counterfactual is applied; comparing two study groups: borrowers and non-printers. But if borrowers are more enterprising than those who do not, such comparisons may considerably overestimate the effect of micro-credit, which poses an

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adverse selection problem. In an attempt to overcome the problem of self-selection two recent studies have used random sampling selection methods. In other words, participation in a program is determined essentially by chance. Contrary to the usual claims, neither study concluded that microcredit reduces poverty. Microcredit may not even be the most useful financial service for the majority of the poor. The MIT study of (Banerjee, A. V., & Duflo, E, 2009) found no impact on health measures, education or women's decision-making among slum dwellers in the city of Hyderabad, India. Similarly, the study by (Karlan, D., & Zinman, J, 2009) which measured the probability of being below the poverty line, found no discernible effect.

In this sense, (Pitt, M. M., & Khandker, S. R, 1998) examined the impact of micro finance on a number of variables using a household survey in Bangladesh. More specifically, they have studied issues such as saturation or crowding out the effects of micro finance over time, the question is whether state micro credit programs generate externalities and whether the estimated impacts are positive. They noted a decline in the long-term effect of micro finance and the possibility of a saturation of villages by micro finance loans.

This article uses the same statistical method based on cross-sectional data from a household standard of living survey, collecting 150 households. The first objective is to examine through the introduction the different foundational approaches of micro finance, as well as a literature review which includes a set of impact studies on several socio-economic variables. Second, the article assesses whether micro finance reduces poverty and, if so, what the limits are for reducing this multidimensional poverty?

Third, it examines the impact of micro finance to determine whether the program benefits households beyond those who participate. Finally, it examines the effects of micro finance on poverty in order to determine whether there is an impact on poverty reduction caused by micro-credit and the resulting activity.

The epistemological method used in this study is based on the Welfarist approach; This approach has been chosen because of its compatibility with the objectives set out in the Algerian State's policy on financial inclusion and the fight against poverty.

### **I.1. Literature Review**

The fight against poverty has always been the supreme objective of all States and in all times, the measurement of poverty causes a certain ambiguity resulting from these multidimensional facets, the latter is defined as the inability to function properly (Sen, 1992). Microcredit is considered to be the means by which the capacities of the excluded person are enhanced (Servet, 2006), this fact has been approved by several previous studies (De Aghion, 2007). But these individual success stories are described as «anecdote» for some researchers (Banerjee, A. V., & Duflo, E, 2009) to tell the truth that the objective of impact studies is to fill the gap experienced by this field of research, based on the different approaches; in fact the micro finance schism better guides the researcher in order to identify the type of impact.

Attempts to assess the impact of microcredit on the clients, businesses, households and communities in which they live are endless. As a general rule, public microcredit institutions work for a double financial and social result, unlike the typical formal financial institution that works only for a financial result.

In fact, macro-economic studies on the impact of state programs and implicitly micro-credit programs on poverty are sporadic, the majority of the research envisaged is at the micro-economic level.

In this sense, a recent theoretical body of empirical studies confirms the existence of various effects generated by microcredit, for example:

(Pitt, M. M., & Khandker, S. R, 1998) Note that the micro-credit program has a significant impact on the well-being of households and that this impact is greater when the credit is intended for women. Three other studies in Bangladesh (Goetz, A. M., & Gupta, R. S., 1996) (Schuler, S. R., & Hashemi, S. M., 1994) and (Brau, 2004). Focus on women's empowerment. All but one, finds that participation in the micro finance program has a statistically significant impact on one or more aspects of women's empowerment, such as the use of contraception or decision-making within the household. The only Bangladeshi impact study that fails to find significant impacts that finds that a

significant proportion of women's loans are controlled by men, thus limiting women's ability to develop meaningful control over their investment activities.

Outside Bangladesh, published studies have assessed the impact of micro finance programs in China (Park, 2001), Ecuador (Woller, 2002), Ghana and South Africa (Afrane, 2002), Guatemala (Kevane, M., & Wydick, B., 2001), Honduras and Indonesia (Bolnick, B. R., & Nelson, E. R., 1990), Thailand (Coleman, 2006). The results vary considerably from study to study, suggesting that the impacts are very specific to the context.

According to (MOSLEY, 2001) the Analysis of four Programs in Bolivia shows that assets and incomes that make up a large part of well-being reduce proportionately the initial levels of poverty, but also that the services of micro finance institutions can increase vulnerability if borrowers exaggerate.

(Copestake, J., Bhalotra, S., & Johnson, S., 2001) Find that borrowers who were able to obtain two loans experienced strong growth in household profits and income compared to a control sample (randomized study), but borrowers who never qualified for the second loan were worse off.

For (SMAHI, 2010) in a thesis entitled «Micro finance and Poverty: Quantification of the Relation on the population of Tlemcen» he offers a synthesis of an empirical study trying to quantify the relationship poverty - micro finance and implicitly the impact of microcredit on the multidimensional- poverty, through a survey of a sample of 429 beneficiaries of microcredit representative of the wilaya of Tlemcen. The results of the study reflect the presence of a positive impact which makes it possible to clarify the state policy on microcredit.

## **II- Methods and Materials:**

Impact studies are usually measured by two methods; the macroeconomic evaluation methods used by international agencies such as the World Bank and the micro finance institutions themselves, as well as the randomized and controlled methods of examining the micro-economic effect generated, such as impact on well-being, women's empowerment, poverty.... etc.

(Hulme, 2000) Examines methodological options for conducting impact assessments identifying three main approaches: scientific method (mainly control group surveys), humanities tradition (ethnography and other qualitative methods) and participatory learning (participatory qualitative tools including, for example, participatory rural evaluation, rapid rural evaluation and research on agricultural production systems). It concludes that an optimal impact assessment mechanism should combine the different methods depending on the appropriateness of the evaluation objectives, the context of the program, human resources and timing.

### **II.1. Data sources**

In order to test our research hypotheses, a questionnaire survey was carried out among the heads of households who were former beneficiaries of ANGEM microcredit during the period from the beginning of March to the end of April 2015 (HADEFI, 2016).

The survey is intended to determine whether households benefiting from ANGEM microcredit really feel an improvement in their standard of living, this study seeks to identify the relationship between microcredit as a financial instrument and the standard of living of households as a microeconomic indicator of multidimensional poverty, this survey is formulated on the basis of two survey models the first is entitled (Livings Standards Measurement Survey) carried out by the World Bank and the second survey model carried out by the ONS in 2011 on the standard of living of Algerian households.

The survey is analyzed by cross-sectional data collected from a sample of 150 ANGEM beneficiaries in the Wilaya of Mascara.

Sampling is based on a first step which is the quota method, since initially the sample is composed of sixteen departments distributed throughout the territory of the wilaya of Mascara and a second

step which is the simple random sampling method within each quota, through the move to the level of each departments on the premises sites granted to ANGEM microcredit beneficiaries. Simple random sampling ensures that each microcredit beneficiary has the chance to be selected with the same probability as the others.

As a matter of fact, our target population was only former beneficiaries over 3 years of age, which forced us to take the 2011 and 2012 beneficiaries of the new scheme.

### **III- Results and discussion :**

#### **III.1.Descriptive analysis**

The present study seeks to determine the impact of microcredit on the standard of living of households, for which a descriptive analysis is essential to identify the explanatory variables and the variables to be explained.

##### **III.1.1. Characteristics of the interviewees**

Our database consists of 83 men (55.3%) and 67 women (44.7%). So, we see that the participation of men is more important than women.

**Table (1):Socio-demographic characteristics**

		Number of employees	Percentage	Valid percentage	Cumulative percentage
Valid	Male	83	55.3	55.3	55.3
	Female	67	44.7	44.7	100.0
	<b>Total</b>	<b>150</b>	<b>100.0</b>	<b>100.0</b>	

The source:SPSS V25 outputs

**Table (2):Sector of activity**

		Number of employees	Percentage	Valid percentage	Cumulative percentage
Valid	Agriculture	1	,7	,7	,7
	The industry	1	,7	,7	1.3
	The trade	18	12.0	12.0	13.3
	The craft sector	113	75.3	75.3	88.7
	Public Sector	2	1.3	1.3	90.0
	Animal husbandry	1	,7	,7	90.7
	The services	14	9.3	9.3	100.0
	<b>Total</b>	<b>150</b>	<b>100.0</b>	<b>100.0</b>	

The source: SPSS V25 outputs

The analysis of the table shows us that 75.3% of the people surveyed have a craftsman's card, this high percentage is perhaps due to the amount of microcredit that suits the financial needs of the Craftsmen, the second sector represented is trade with 12%, the third is the services sector with 9.3%, the public sector consists of only 2 people, the other sectors represent only 0.7% of the total persons interviewed.

#### **III.2.Analysis of the impact of microcredit on the standard of living of households**

Before starting the analysis of the data it is necessary to know that the questionnaire has been divided into six parts, each part contains questions, the analysis of the relations between the variables is based on the factorial correspondence analysis of each part, the whole of the second part, third, fourth and fifth part formulates our proxy indicator of standard of living which helps us estimate the contribution of micro credit to poverty reduction.

The crucial question to be addressed is whether microcredit has an impact on the standard of living of households, the latter is defined as the set of socio-economic dimensions based on the deprivation approach, the poverty indicator consists of food and non-food consumption expenditure, the quality of life index and the asset ownership index.

### III.2.1. The impact of microcredit on improving consumer spending

**Table (3): Impact on monthly luxuries expenses**

		Number of employees	Percentage	Valid percentage	Cumulative percentage
Valid	Yes	134	89.3	89.3	89.3
	No	16	10.7	10.7	100.0
	Total	150	100.0	100.0	

The source: SPSS V25 outputs

According to the table above 89% of ANGEM microcredit beneficiaries interviewed find that microcredit increased their monthly spending on luxury food, which represents a positive impact on their standard of living. Different tests are available to determine whether the relationship between two cross table variables is significant. One of the most common tests is chi-squared test. One of the advantages of chi-squared is that it is suitable for most types of data. Pearson's chi-squared tests the hypothesis that the online and column variables are independent. The significance value (Asymp. Sig.) Contains the information sought. The smaller the significance value, the less likely the two variables are independent (unrelated). In order to test the relationship between microcredit and consumer expenditure the test of chi-squared is used, in line the loan amount variable and in the right the consumer expenditure variable.

**Table (4): chi-squared Tests**

	Value	ddl	Asymptotic significance (bilateral)
Chi-squared by Pearson	8.332 <sup>a</sup>	9	.501
Likelihood Report	8.689	9	.466
Linear association by linear	.071	1	.790
Number of valid observations	150		

a. 11 cells (68.8%) have a theoretical number of less than 5. The theoretical minimum number is .32.

The source: SPSS V25 outputs

According to the table records Chi-squared of Pearson's 0.501 in this case the significance value is so boundless which means that the two variables would not be related.

### III.2.2. The impact of microcredit on non-food consumption expenditure

The same test (chi-squared) will be used to determine whether there is a relationship between the microcredit variable and non-food expenditure

**Table (5): chi-squared Tests**

	Value	ddl	Asymptotic significance (bilateral)

Chi-squaredby Pearson	92.875 <sup>a</sup>	63	009
Likelihood Report	76.839	63	113.113
Linear association by linear	3.382	1	,066
Number of valid observations	150		
a. 81 cells (92.0%) have a theoretical number of less than 5. The theoretical minimum number is ,05.			

**The source:**SPSS V25 outputs

According to the table records Chi-squaredof Pearson's of 0.009 in this case the significance value is so low which means that the two variables would actually be related.

### **III.2.3.The impact of Microcredit on the ownership of housing, land and premises**

The same test (Chi-squared) will be used to determine whether there is a relationship between the microcredit variable and the ownership dimension of dwellings, land and premises

**Table (6): chi-squared Tests**

	Value	ddl	Asymptotic significance (bilateral)
Chi-squaredby Pearson	32,171 <sup>a</sup>	15	,006
Likelihood Report	36.482	15	,002
Linear association by linear	1.969	1	161
Number of valid observations	150		
a. 15 cells (62.5%) have a theoretical number of less than 5. The theoretical minimum number is ,11.			

**The source:**SPSS V25 outputs

According to the table theChi-squaredof Pearsonis 0.006 in this case the significance value is so low which means that the two variables would actually be related.

### **III.2.4.The Impact of Microcredit on Asset Ownership:**

As in previous tests, the same test (Chi-squared) will be used to determine whether there is a relationship between the microcredit variable and the asset ownership dimension.

According to the table Chi-squaredof Pearsonis 0.114 in this case the significance value is slightly higher than the standard which means the two variables would not be related

**Table (7): chi-squared Tests**

	Value	ddl	Asymptotic significance (bilateral)
Chi-squaredby Pearson	257.233 <sup>a</sup>	231	114
Likelihood Report	209.732	231	,839
Linear association by linear	1.996	1	,158
Number of valid observations	150		
a. 311 cells (99.7%) have a theoretical number less than 5. The theoretical minimum number is ,05.			

**The source:**SPSS V25 outputs

**III.2.5. The impact of Microcredit on the subjective well-being perceived by the beneficiaries:**

According to the following table 66% of those interviewed find that microcredit has improved their living standards, compared to 34% who do not see any change in the standard of living due to microcredit and the activity resulting from it.

**Table (8): Subjective well-being**

		Number of employees	Percentage	Valid percentage	Cumulative percentage
Valid	Yes	99	66.0	66.0	66.0
	No	51	34.0	34.0	100.0
	Total	150	100.0	100.0	

The source:SPSS V25 outputs

**IV-Conclusion:**

In fact,there is no single cause to poverty nor a magic potion for the damaged, the results are different in each case. Poverty varies considerably depending on the situation. Feeling poor in Canada is different from living in poverty in Algeria or Mali. The differences between rich and poor within a country’s borders can also be great.

Despite the many definitions, one thing is certain; poverty is a complex economic problem. Regardless of what we define poverty, we can agree that it is an issue that requires the attention of all.

The empirical study on the impact of micro credit on the standard of living of households and implicitly on the reduction of the multidimensional poverty of the beneficiaries of the ANGEM program at the level of the wilaya of Mascara has shown us that access to micro credit and the evolution of the latter is marked by a remarkable increase due to the high rates of coverage of the ANGEM services at the level of all the departments of the Willaya of mascara.

The majority of beneficiaries find that micro-credit and the activity resulting from it have improved the standard of living of their households, which reduces the severity of multidimensional poverty, but on the other hand the effect of microcredit cannot be totally measured because of the inter-dimensionality of the phenomenon studied.

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