



# **A Modeling Study of the Micro-finance Impact on the Economic Performance of Micro-enterprises and the Well-being of Borrowers in Morocco: Case of Tangier-Tetouan - Al Hoceima Region**

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## **ABSTRACT**

This paper aims to study the impact of microfinance on the performance of micro-enterprises and the well-being of borrowers. From a methodological point of view, we have opted for an econometric study based on a multiple linear regression model realized on a sample of 200 Microcredit beneficiaries from two reference institutions in the Tangier-Tetouan-Al-Hoceima region. The results of this research indicate that micro-credits positively and partially influence the economic performance of micro-enterprises and the well-being of beneficiaries. The linear regression model shows that the economic performance of micro-enterprises is explained by two variables, namely: Profit and savings while social performance (well-being of beneficiaries) is explained by two endogenous variables namely: Improving the level of schooling of children, as well as improving food.

**Keywords:** Microcredit, Impact, Economic Performance, Social Performance

**JEL Classifications:** G2, O1

## **1. INTRODUCTION**

In a context of growth marked by significant changes in economic and social terms, microcredit has become increasingly important since its appearance. Indeed, starting from the year 2005 in particular, declared the World Year of Microcredit by the United Nations (UN), figures and statistics show a rising trend in the number of microfinance institutions and therefore the portfolio of clients served and outstandings.

Microfinance and its very popular component (microcredit) have been largely implemented by most major international organizations and many non-governmental organizations (NGOs). The awarding of the 2006 Nobel Peace Prize allowed to Muhammad Yunus publicize widely microcredit as a tool for dual-range, social and economic development (CERISE, 2003).

The importance that economists place on access to finance partly explains the fact that microfinance has become one of the main solutions for the social failure of structural adjustment programs

in developing countries. Thus, among the incentives to remedy this failure, we note since the early 90s, the emergence of project experiences and micro-credit programs as a powerful tool for development. The purpose of these programs is to provide financial services in order to enable populations excluded from traditional financing systems to gain access to financial services with the objective of initiating or developing income-generating activities and/or improve their access to basic social services. That is to say, development is impossible without the existence of an efficient and accessible financial system (Khandker, 1998).

As Nowak points out, the main difference from conventional credit is that it is addressed to a new target: The poor and the excluded. It recognizes their talents, their needs and their ability to repay loans. Instead of eliminating them from credit customers in advance because the methods, criteria and guarantees are not adapted to their situation, he invents methods and guarantees that suit them. Instead of imposing on them the object of their loan, it is attentive to their needs. It reveals that people who are excluded from bank credit are, like the others, who

have the spirit of enterprise, the ability to judge, and that, moreover, they repay rather better than the rich category (Nowak, 2008).

Actually, microfinance has always been seen as the best solution to facilitate access to financial services for the poorest social classes, however, the impact of these services on borrowers is not always the same and as expected. Indeed, its influence can take different forms and this according to several elements like the region, the program and also the variable of interest. In this same perspective, the research work of Banerjee et al. (2015) suggests that the impact of microfinance on poor doesn't appear in the same way for all borrowers (Banerjee et al., 2015). Indeed, this heterogeneity of the impacts of microfinance may be due to the variety of loan uses and loan conditions that tend to change from one institution to another.

Although the role of microfinance is to facilitate poor people's access to financial services, its impact on beneficiaries is not always confirmed. Similarly, its influence differs from one region to another; from one program to another or from one variable of interest to another.

To this end, this paper will attempt to provide an answer to the problem of the socio-economic impact of microcredit in Morocco. Our study focuses in particular on the entrepreneurs of the Tangier-Tetouan-Al Hoceima region and traces the main objective of assessing the impact of microcredit on the performance of micro-enterprises and the well-being of borrowers.

To answer this problematic, we proceeded by an empirical study that will allow us to count the results of the testimonies of the customers beneficiaries of the microcredit in order to analyze and explain the meanings of the answers and also to be able to give comments and recommendations in order to improve the current situation. In other words, our survey attempts to measure the impact of microcredit on the performance of micro-enterprises and the well-being of borrowers perceived from the point of view of beneficiaries, based on the combination of both objectives social and sustainability goals of MFIs.

## 2. LITERATURE REVIEW

Microfinance was initially a form of assistance for the poor who were excluded from the traditional banking system, but later it developed into a crucial part of financing and development. Many authors (theoreticians, practitioners, and various international networks, international organizations) have given their theoretical and practical contributions to the functioning of microfinance and its impact on borrowers. Thus, to better understand our problematic, we will examine as a starting point the theoretical foundations through a literature review on the concept and its definition, then we will expose the studies that have seized the subject of the impact study. microfinance on the beneficiaries.

### 2.1. Theoretical Basis of Microfinance

Since the emergence of the concept of microfinance, many researchers and practitioners have tried to define the principle, understand its mechanism and analyze its impact on economic and social development. This research has been the subject of an

extensive literature that attempts to define the concept and assess the role of microfinance institutions in the economic development of a nation. In fact, the concept remains new in the economic literature dedicated to developing countries.

According to (Morduch, 1999), microfinance is the most effective way to combat global poverty and resolve financial and banking exclusion. In fact, microfinance institutions offer different practices from those of the traditional financial system for a so-called poor population.

According to CGAP, microfinance represents "the provision of a set of financial products to all those who are excluded from the conventional or formal financial system". The OECD, for its part, considers that "microfinance is about the access to finance for small projects run by marginalized people who aspire to create their own jobs, often by default of other professional opportunities and because access to traditional sources theirs is denied. UNCDF (2001) explains that "The goal of microfinance is to increase income and create jobs for the poor, through the development of local micro-enterprises, and in this process increase the financial well-being of borrowers, their families and their community at large".

Mia Adams 2003 defines microfinance as "providing access to finance for the maximum number of poor people and enabling them to use their capacities for sustainable development".

According to (Morvant-Roux, 2006), microfinance is a complement to the financial market and not a mere substitute. Beneficiary clients often take advantage of microfinance program offered in order to better manage the liquidity at their disposal and thus protect themselves from risks.

The term microfinance refers to the provision of financial services to low-income clients through several services that typically evolve into microcredit, microinsurance, micro-savings and money transfers (Van Rooyen et al., 2012).

### 2.2. Summaries of Research Work on the Impact Study

Through our research on microcredit and its impact, we have succeeded in synthesizing the main empirical works developed by different researchers. Indeed, in what follows, we will try to expose this synthesis necessary to build our research question (Table 1).

### 2.3. State of Play of the Microfinance Sector in Morocco

The microfinance sector has developed in Morocco since the 1990s with the growing number of small loan programs that finance the economic activities of low-income people.

Indeed, the sector continues to grow and reflect this evolution on several aspects, namely the main indicators: The number of clients served, the outstanding loans, the portfolio at risk and the workforce working in the sector. The results of our first study reveal that the sector is recording an upward trend in these indicators.

The sector is endowed with 13 specialized associations, these include: Al Amana, Attawfiq Foundation, Al Baraka, ARDI, Al

**Table 1: Synthesis of research on the economic and social impact of microcredit**

Author	Aim of the study	Results
Diagne and Zeller, 2001	Study on the impact of four microfinance institutions in Malaw	In terms of the impacts of agricultural loans, the authors found a negative correlation between loans and incomes. In terms of food expenditure/security, per capita food expenditure was lower for members than it was for non-members
Copestake, 2002	The data used for this study are based on a survey of 131 outgoing	Microfinance institutions tend to favor richer clients because they are more likely to repay their loans, leading to a stratification between rich and poor. The results show a decrease in poverty for people involved in the CETZAM program
Copestake et al., 2005	Study on the impact of microfinance on poverty in Peru to beneficiaries, through the test of the relationship between loans granted and per capita income	The program had a significant effect on personal and household income, but no effect on sales or commercial profits
Khan and Rahaman, 2007	Study of the impact of microfinance on living standards	The poor women beneficiaries of microcredit made a positive change in their financial and social situation and started to take an active part in the decision-making process within their families and in society in general.
Cuong, 2008	Study on the targeting of the poor by the microcredit program for the poor in Vietnam	There are positive and statistically significant results in terms of per capita consumption expenditure and per capita income
Wang, 2013	Study of the impact of microfinance on the development of small and medium enterprises in China, Taizhou region	The SMEs surveyed with a low productivity ratio and low retained earnings are those that may have problems and are more keen on the demand for microfinance, and have positive benefits and development outcomes
Mafukata et al., 2014	Survey of household beneficiaries of microcredit in Zombie.	Microfinance reduces the poverty of poor social classes
Moutassem and Hadefti, 2017	Study of the impact of microfinance through microcredit on the standard of living of Algerian households, carried out with a sample of 150 beneficiaries of Microcredit ANGEM Mascara.	The results indicate that 66% of those interviewed found that microcredit improved their standard of living, while 34% found no change in standard of living due to microcredit

Karama, Amssf, Atil, Fca, Aime, Amos, Inmaa, Agimce and Amappe.

Regarding the evolution of active customers, the sector recorded an increase of 0.7% in 2017 compared to 2016.

Outstanding loans amounted to MAD 5.69 billion, mainly distributed between Al Amana, Attawfiq Microfinance and Al Baraka Foundation.

#### 2.4. Impact of Microcredit According to MFA

It should be noted that the first reflections on impact assessments date back to the mid-1990s. At this stage, ambitions are high: It is a question of proving the impact of microcredit on the performance of micro-enterprises and well-being of borrowers and to show the donors, in particular, the rational and efficient use of the funds granted.

In what follows, we will try to present a summary of the statements of the annual activity reports of the main MFAs as well as other actors such as FNAM, Center Mohamed VI of support to microfinance solidarity, funds JAIDA.

#### 2.5. Impact at the Micro-enterprise Level

The studies carried out, the annual activity reports of the AMC attest that the impact is generally positive of the microfinance on the

performance of the micro-enterprises, in particular on the turnover, the level of the profits, the investments and the access markets.

According to the AMC, the micro-credit contributes well to the increase of the profits of the micro-enterprises having benefited from a loan.

In fact, according to the IKM impact study, a micro-credit granted of 1,000 dirhams increases profits by 6%. Better yet, an increase of 1000 dh between two credits increases the profits of the 9.5%.

Two out of four reports showed a significant impact on employment. Indeed, this result has been confirmed by the findings of the global reports. For this purpose, the differences observed from one study to another may reflect methodological differences.

Mourji (2000) in Morocco also asked the treatment and control groups why their benefits had increased or decreased. Customers reported fewer difficulties than non-customers in acquiring raw materials. This confirms the positive impact of working capital, which IKM (2005) continues to support in Morocco, where customers spoke of better relations with their suppliers.

With regard to the branches of activity benefiting from the financing, the activity reports relating to the three main MFAs that dominate the

market for the year 2015 (Al Amana, Al Baraka, Attawfik) revealed that around 70 % of sectors funded by the sector are attributed to trade, services and manual trades. Urban areas accounted for 63.6% of loans distributed, compared with 36.4% for rural areas.

### 2.6. Impact on the Well-being of Borrowers

The impact on the household budget and its overall own consumption is obviously positive. Over time, the beneficiary acquires durable goods (washing machine, television, etc.) and his savings increase. On the other hand, managerial qualities (especially among women) have been improved. The financial independence of women leads to their emancipation and a better self-esteem. The school enrollment rate also increases with the increase in personal income and is one of the strongest investments that these micro-entrepreneurs make. Finally, the state of health of individuals, education, food are personal improvements observed by the beneficiaries of microcredit.

It should be noted that several studies have attempted to demonstrate the impact of microcredit on beneficiaries. In what follows, we will present the results of two microcredit impact studies in the Moroccan context (Table 2).

## 3. DATA AND METHODOLOGY

### 3.1. Presentation of Hypotheses and Research Modeling

The research model developed on the basis of previous work and reports of microfinance associations is as follows (Figure 1).

**Table 2: Result of AFD and FNAM studies**

Elements	Study of the FNAM (Consultative Body)	AFD (Funder)
Results of the study	Microcredit favors the profit and investment of micro-enterprises (rising incomes) The creation of a new activity remains attenuated Strong perceptions (Improved nutrition and well-being within the household and increased autonomy) Moderate perceptions (Positive change in health status, education and consideration of spouse and children)	L'accès au crédit reste limité à 16% Le microcrédit a un impact sur les activités existantes (Agriculture et élevage) et sur la consommation avec un niveau faible. Le microcrédit n'a pas d'impact sur la création de nouvelles activités et encore moins sur le niveau de richesse et de pauvreté

### 3.2. Sample Frame, Population Studied and Data Collection Methodology

As mentioned in the introduction, our contribution consists of measuring the impact of the loan on the performance of micro-enterprises and the well-being of borrowers from the point of view of the beneficiaries of the Tangier-Tetouan-Al Hoceima region (in urban and rural areas).

The constitution of a representative sample of the population first requires the availability of a sampling frame. For our research, we opted for an exhaustive list of all the beneficiaries of two microcredit reference institutions located in the Tangier region (as of 31/12/2016).

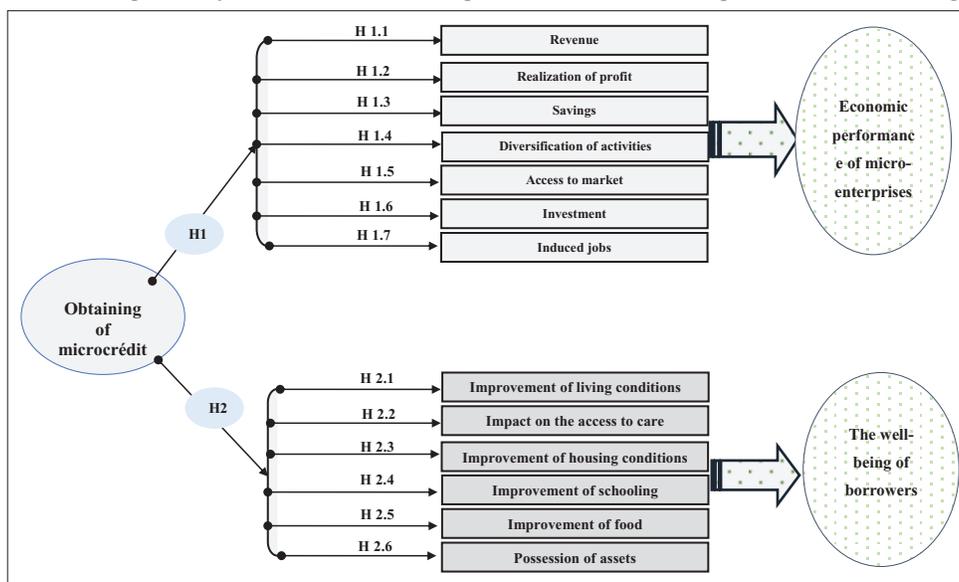
The interviewees were randomly selected from a file to centralize 4,600 borrower details without any quota or prior listing. In short, we managed to contact 200 microcredit beneficiaries.

The survey was conducted during the first half of 2017. The duration of the telephone survey is approximately 17 minutes on average per individual.

### 3.3. Econometric Modeling: Choice of a Multiple Linear Regression Model

The econometric model makes it possible to relate a set of economic variables, disturbed by a set of unobservable elements and determined by observable parameters on which we have

**Figure 1:** Microcredit impact study model on the economic performance of microenterprises and the well-being of borrowers



Source: Our own elaboration

issued a number of assumptions necessary for the estimation (Paul et al., 2016).

As noted by several scholars, the multiple regression model is a generalization of the simple regression model when the explanatory variables are finite (Abbott, 2004; Bentler and Bonett, 1980; Carricano and Poujol, 2009; Field 2013), Ganassali, 2014; George and Mallery, 2016; Huguier and Boëlle, 2013; Rakotomalala, 2015). We therefore assume that the data collected follows the following pattern:

$$y_i = \beta_1 x_{i1} + \beta_2 x_{i2} + \dots + \beta_p x_{ip} + \varepsilon_i, \quad i = 1, \dots, n$$

With:

$x_{ij}$  are known, non-random numbers. The variable  $x_{i1}$  can be 1 for any  $i$  varying from 1 to  $n$ . In this case,  $\beta_1$  represents the constant (intercept in English-language software). In statistics, this column of 1 is almost always present.

The parameters to be estimated  $\beta_j$  of the model are unknown. The  $\varepsilon_i$  are unknown random variables.

Concerning the method of selection of the regression variables chosen, we chose to opt for the method entered, which means that all variables (economic or social impact measure) are introduced in a single operation.

#### 4. EMPIRICAL RESULTS AND DISCUSSION

This part is devoted to the presentation and discussion of the results of the empirical study carried out among 200 microcredit beneficiaries of the Tangier-Tetouan-El Hoceima region (in urban and rural areas).

The following Table 3 presents the codes of the different variables of the economic and social impact of microcredit in order to identify them in the analyzes that follow.

##### 4.1. Impact of Microcredit on Social Performance (Social Indicators)

The following Table 4 verifies and examines Pearson's correlations between the dependent variable and the explanatory variables.

The results obtained allow us to conclude mainly the existence of a strong positive correlation (correlation coefficient of Pearson = 0.565) and very significant (0.000) between the variable "improvement of schooling" and the social performance.

In parallel with the correlation analysis, the colinearity coefficient makes it possible to conclude the absence of multicollinearity between the studied variables since the set of VIF values are <10.

The analysis of the data of the present research shows that the explanatory variables contribute to 34.3% in the variability of the variable to explain, namely social performance.

In our case, the explanatory variables were introduced only once as long as the value of  $R^2$  is equal to 40%. The Fisher test (variation of F) is very significant.

**Table 3: Coding of the different variables of the multiple linear regression model**

Indicators	Code
Economic impact	
The income of micro-enterprises	PerfEco
Profit realization	DiverAct
Savings	RéalProf
Induced employment (increase in the number of employees)	Eparq
Investment (increase in assets)	AccèsMar
Market access	Invest
Diversification of activities	Emplo
Social impact	
Improving living conditions	PerfSociale
Improving housing conditions	ISPossAct
Improving the schooling of dependent children	ISAméliorHab
Improving the food	ISScolar
Access to care	ISAméliorAlim
The possession of assets	ISAccSoi

The verification of the F (21,787) value for the Fisher test is very satisfactory with a significant significance level (0,000). This means that the regression equation makes it possible to justify the link between the variables (Table 5).

Thus, the five independent variables contribute in a very significant way to explain the social performance variable.

From the results obtained, it is concluded that the variable measuring the improvement in educational attainment represents the most important contributor to social performance with a standardized beta regression coefficient of 0.535, a Student t of 6.179 and a Significant significance (Sig = 0.000 <0.01).

In the same vein, the results show that the variable "improved diet" has a weak positive and significant effect. In fact, the results show, in fact, a standardized beta regression coefficient of 0.259, a Student's t with a value of 3.098 and a high level of significance (Sig = 0.001 <0.01).

Regarding other variables "ISAccSoi; ISAméliorHab et ISPossAct", they have no significant effect on our dependent variable.

The formula for the regression model is as follows:

$$\text{Dependent variable} = \text{Constant} + (\beta_1 * \text{explanatory variable 1}) + (\beta_2 * \text{explanatory variable 2}) + \varepsilon_i$$

These regression analyzes allowed us to define the parameters of the model, which is as follows:

$$\text{PerfSociale} = 0,171 + 0,535 \text{ ISScolar} + 0,240 \text{ ISAméliorAlim}$$

To this end, improving the level of social performance involves improving the level of schooling, as well as improving the nutrition that comes from obtaining micro-credits. In fact, the loans granted enabled the beneficiaries to improve their living conditions, which improvements have fostered a higher level of social performance.

**Table 4: The different correlations between the variables of the model**

Correlations	PerfSociale	ISScolar	ISAccSoi	ISAméliorAlim	ISAméliorHab	ISPossAct
Pearson correlation						
PerfSociale	1.000	0.565	0.375	0.441	0.017	0.120
ISScolar	0.565	1.000	0.724	0.497	-0.003	0.058
ISAccSoi	0.375	0.724	1.000	0.457	-0.082	-0.040
ISAméliorAlim	0.441	0.497	0.457	1.000	0.066	0.429
ISAméliorHab	0.017	-0.003	-0.082	0.066	1.000	0.029
ISPossAct	0.120	0.058	-0.040	0.429	0.029	1.000
Sig. (1-tailed)						
PerfSociale	-	0.000	0.000	0.000	0.408	0.046
ISScolar	0.000	-	0.000	0.000	0.482	0.207
ISAccSoi	0.000	0.000	-	0.000	0.125	0.288
ISAméliorAlim	0.000	0.000	0.000	-	0.175	0.000
ISAméliorHab	0.408	0.482	0.125	0.175	-	0.343
ISPossAct	0.046	0.207	0.288	0.000	0.343	-
N						
PerfSociale	200	200	200	200	200	200
ISScolar	200	200	200	200	200	200
ISAccSoi	200	200	200	200	200	200
ISAméliorAlim	200	200	200	200	200	200
ISAméliorHab	200	200	200	200	200	200
ISPossAct	200	200	200	200	200	200

**Table 5: Quality indices of the regression model**

Model summary <sup>b</sup>										
Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Standard error of the estimate	Change statistics					Durbin-Watson
					R <sup>2</sup> change	F change	ddl1	ddl2	Sig. F change	
1	0,600 <sup>a</sup>	0,360	0,343	0,374	0,360	21,787	5	194	0,000	1,786

<sup>a</sup>Predictors: (Constant), ISPossAct, ISAméliorHab, ISScolar, ISAméliorAlim, ISAccSoi, <sup>b</sup>Dependent Variable: PerfSociale

**4.2. Impact of Microcredit on Economic Performance (Economic Indicators)**

The aim is to identify the variables that influence the economic performance of micro-enterprises benefiting from microcredit.

The theory tells us that several variables can influence the level of economic performance of micro-enterprises, namely:

- Diversification of activities,
- Realization of profit,
- Income from activities after microcredit saves money,
- Market access,
- Investment (increase in assets),
- Induced employment (increase in the number of employees).

In fact, our research is to determine whether the six variables identified influence the dependent variable (economic performance ME/SE). The following Table 6 examines the Pearson correlation values and the level of significance of the relationships between the variables studied.

The results obtained show the existence of a strong positive correlation (Pearson correlation coefficient=0.574) and a very significant correlation (0.000) between the “RéalProf” variable and economic performance.

Similarly, the variable “Eparg” is moderately correlated (with a correlation coefficient of Pearson = 0.359) with the variable to be explained, this relationship is very significant (0.000).

The variable “Invest” is also moderately correlated (Pearson correlation coefficient = 0.276) with economic performance, with a very high level of significance (0.000).

The “Emplo” variable is weakly correlated (Pearson correlation coefficient = 0.154) with economic performance, and the relationship between the two variables is significant (0.015).

Also, we can notice a very weak level of correlation between the variable “AccèsMar” and “DiverAct”, this relation is significant.

We thus notice that there are several variables that are positively and significantly correlated with the variable to explain “economic performance”.

In parallel with the correlation analysis, the coefficient of colinearity indicates that the set of VIF values are <10, which allows us to note the absence of multicollinearity effect between the variables studied.

Analysis of the data in this research shows that the explanatory variables contribute 38.2% in the variable to explain, namely economic performance. In our case, the explanatory variables were introduced only once.

The verification of the value of F (21,466) and that of Fisher’s Test are very satisfactory. Also, with a significant significance level that is close to 0.000, we can estimate that the regression equation is very good. In other words, the six explanatory variables make a very significant contribution to the scores of the economic performance variable (Table 7).

It can be seen from the table that according to the value F obtained, the null hypothesis can be rejected. Indeed, the value of 21.466 is significant at P < 0.000, which indicates that we have almost

**Table 6: The different correlations between the variables of the model**

Correlations	PerfEco	RéalProf	Eparg	Invest	Emplo	AccèsMar	DiverAct
Pearson Correlation							
PerfEco	1.000	0.574	0.359	0.276	0.154	0.102	0.188
RéalProf	0.574	1.000	0.204	0.382	0.215	0.172	0.242
Eparg	0.359	0.204	1.000	0.215	0.378	0.285	0.482
Invest	0.276	0.382	0.215	1.000	0.393	0.336	0.477
Emplo	0.154	0.215	0.378	0.393	1.000	0.664	0.818
AccèsMar	0.102	0.172	0.285	0.336	0.664	1.000	0.543
DiverAct	0.188	0.242	0.482	0.477	0.818	0.543	1.000
Sig. (1-tailed)							
PerfEco	-	0.000	0.000	0.000	0.015	0.075	0.004
RéalProf	0.000	-	0.002	0.000	0.001	0.008	0.000
Eparg	0.000	0.002	-	0.001	0.000	0.000	0.000
Invest	0.000	0.000	0.001	-	0.000	0.000	0.000
Emplo	0.015	0.001	0.000	0.000	-	0.000	0.000
AccèsMar	0.075	0.008	0.000	0.000	0.000	-	0.000
DiverAct	0.004	0.000	0.000	0.000	0.000	0.000	-
N							
PerfEco	200	200	200	200	200	200	200
RéalProf	200	200	200	200	200	200	200
Eparg	200	200	200	200	200	200	200
Invest	200	200	200	200	200	200	200
Emplo	200	200	200	200	200	200	200
AccèsMar	200	200	200	200	200	200	200
DiverAct	200	200	200	200	200	200	200

**Table 7: Quality indices of the regression model**

Model summary <sup>b</sup>										
Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Standard error of the estimate	Change statistics					Durbin-Watson
					R <sup>2</sup> change	F change	ddl1	ddl2	Sig. F change	
1	0.633 <sup>a</sup>	0.400	0.382	0.358	0.400	21.466	6	193	0.000	2.025

<sup>a</sup>Predictors: (Constant), DiverAct, RéalProf, Eparg, AccèsMar, Invest, Emplo, <sup>b</sup>Dependent Variable: PerfEco

0% margin of error in saying that the model contributes to better predicting economic performance.

In what follows, we will try to present the results of our analysis and this in order to test the regression model assumptions and to verify the existence of relationship between the explanatory variables and the variable to be explained.

The coefficient table also shows that the variable “RéalProf” has a positive and significant effect on the economic performance variable with a standardized regression coefficient of 0.486, a Student t of 8.447 and a significant significance level (Sig = 0.000).

Thus, we can conclude that the variable measuring the improvement in the level of schooling (with a very high standardized Beta regression coefficient) represents the variable that contributes the most to social performance.

In the same vein, our results show that the variable “Eparg” shows a positive and significant effect with a standardized beta regression coefficient of 0.313, a Student t of 4.593 and a high level of significance (Sig = 0, 000).

The other variables “Invest; Emplo; AccèsMar; DiverAct” do not have a significant effect on economic performance.

The result of non-standardized coefficients allows us to identify the parameters of the regression model. For this purpose, the formula of the regression model is as follows:

$$\text{PerfEco} = 0,416 + 0,512 \text{ RéalProf} + 0,295 \text{ Eparg}$$

This model indicates that microloans help micro-enterprises to make profits as well as to save. These two variables contribute to the explanation of the level of economic performance of micro-enterprises.

The results of this research indicate that microcredit has a positive impact on the economic performance of micro-enterprises, as well as the well-being of borrowers (measured by social performance) from the Tangier-Tetouan-Al Hoceima region. It remains judicious to specify that the models developed in our research work and tested testify that this impact remains partial.

## 5. CONCLUSION AND FUTURE PERSPECTIVES

The objective of this study is to test the impact of microcredit on the performance of micro-enterprises and the well-being of borrowers in the region of Tangier-Tetouan-Al Hoceima.

Based on a sample of 200 individuals and opting for a multiple linear regression model, the results obtained allowed us to validate the positive and partial impact of microcredit on the beneficiaries.

Contrary to the reports of the microcredit institutions, which confirm the strong and positive impact of microcredit on the various economic and social indicators (through the improvement of the income of micro-enterprises, the realization of profit; savings, market access, investment (increase in assets), increase in the number of employees, diversification of activities, improvement of living conditions, possession of assets, improvement of working conditions housing, improving the schooling of dependent children, improving nutrition and the impact on access to care), our work has allowed us to conclude a positive, although partial, effect on economic performance and social. Indeed, the two validated regression models are as follows:

$$\text{PerfSociale} = 0.171 + 0.535 \text{ ISScolar} + 0.240 \text{ ISAmeliorAlim}$$

$$\text{PerfEco} = 0.416 + 0.512 \text{ RéalProf} + 0.295 \text{ Eparg}$$

Avec:

PerfSociale → Improving living conditions

*ISScolar: Improving the schooling of dependent children,*

*ISAmeliorAlim: Improving the food*

PerfEco → Economic performance of micro-enterprises

*RéalProf: Profit realization*

*Eparg: Income from activities after microcredit saves money*

Islamic microfinance, apart from the goal of complying with the principles of Islamic Sharia, offers great financial transparency due to the traceability of financial flows and a strong Islamic transaction structure.

As a proposal for other future research opportunities for researchers, we considered it appropriate to discuss the impact of microcredit from a microfinance institution's point of view. The aim is to further develop this study in order to identify, according to the MFIs, indicators for improving economic and social performance.

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