The Causes that Influence the Delay of Payment at Due Date Among ENDAI-A in Tunisia

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Abstract

This research studies the relevance of explanatory factors of the lack of reimbursement in microfinance conceived in the side of the socio-economic and demographic characteristics of micro-borrowers. In other words, the aim of this work is to identify the characteristics that are specific to micro-borrowers on the probability, so that an individual carries out a lack of reimbursement.

To study the determinants of reimbursement rate of micro-borrowers, this paper is divided into three main parts. First of all, on the basis of the theoretical framework, we will particularly focus ourselves, on the explanatory factors of the lack of reimbursement in microfinance which are related to the particular characteristics of micro-borrowers, and we will try to formulate the fundamental assumptions of our research. Then, we will discuss our sample and our results of estimations in order to treat our fundamental question of research. At this level, we will try to empirically analyze the validity of the assumptions by the presentation and the analysis of the principal results, in order to identify the explanatory factors of the lack of reimbursement on the side of micro-borrowers.

Keywords:*: Lack of reimbursement, Microfinance, micro-borrower, Tunisia, microcredit, organization, social economy, poverty.

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1. Introduction

The international organizations tried a variety of models in the research of sustainable development. Microfinance is an example that has seduced a good number of developing countries. The experiments are proliferating and the phenomenon grows since the 1980s. The definitions assigned to this financial activity are differentiated according to what one wishes to put the emphasis on : its economic aspect, financial or social. In a more general way, microfinance refers to any activity related to financial services and social partners to the benefit of the excluded, persons such as microcredit, life insurance, training, education... These benefits are targeted to men and women in low-income in order to improve their material and social conditions of life (Ziadi, 2005).

Tunisia has also shown interest in this approach of sustainable development. Many institutions, working in different areas (urban and rural development, the creation of jobs and financing of micro-projects) have emerged. The Tunisian Solidarity Bank (BTS) and other non-governmental organizations, in particular, constitute the core funders of microcredit and occupy a decisive role in micro-financing of low-income people. In fact, microcredit helped people with productive and creative capacities and who are long excluded from the conventional financial system, to be able to access the credit market and become active agents in the economy. This component of microfinance, has been long unknown, and today is exposed in sudden way to the headlights of the news.

Since the first international conference of Washington in1997; summits, seminars, conferences, declarations and publications on this theme are successive. The Nobel Peace Prize for 2006 was awarded to Muhammad Yunus assumed founder of microcredit and the Grammen Bank. In the same perspective, the year 2005 has been decreed by the United Nations as" International Year of Microcredit". The microcredit is today considered as a privileged instruments for the achievement of the objectives of the millennium since it becomes a major tool for poverty reduction.

Microcredit allows a poor man, who has neither the means nor the guarantees, to undertake an activity. Nevertheless, a poor can improve his situation, if he has the will and the Spirit Creator, he triggers a process of capital accumulation, economic success and social advancement.

Several theorists and researchers have put the emphasis on the safeguarding of these tools, to improve its intervention and to enable the agencies that manage it to continue and develop. It is essentially seeking the best ways to ensure the sustainability of the institutions offering this service. In this context, a lot of research works have been carried out on the organization of microfinance institutions (MFIS) and their operation in terms of structure, contractual relations between donors, managers and beneficiaries, of the regulatory framework, applicable the wear rate and management practices. There by, our work is part of the research framework of financial viability of MFI. To ensure the sustainability and the survival, an IMF must be able to thwart more the risks to which it is submitted and in particular the risk of non-repayment of granted credit.

The micro-finance is a new field of research developed during these last twenty years and gradually taking a more and more increased importance in the level of the theory of corporate finance and finance in general. It includes a range of financial services to the layers of disadvantaged populations, such as microcredit, small savings, micro-insurance as well as transfers of funds. This sector is experiencing an extremely rapid growth in the world.

It is obvious that this new approach to finance has known success through countries such as India, Pakistan, Bangladesh, Latin America, Africa and the Middle East. We can cite the studies made by Shahidur Khandker (2005), Mark Pitt & al. (2006), Abhijit Banerjee and

Esther Duflo (2007) and Matthew Path (2008). These new approaches of financial analysis of microfinance institutions will be developed based on a practical case as it happens in Tunisia and this is through the first non-governmental organization : ENDA (Environmental Development Action in the third world) for the Arab world. The objective of this Article is to assess the risk of non-repayment of the clients of an institution of microcredit and optimize the decisions for granting loans, so it is to show *the main causes that influence the delays of payment at due date among IMFs and mainly among the NGO Enda inter-arabe in Tunisia*. In fact, the good management can only improve the profitability and effectiveness of the institution, which is of such a nature as to ensure its sustainability. This choice is dictated by the role of these institutions in the development of the economy of the country. To respond to our main question " *What are the explanatory factors of the delay of payment at due date among IMFs?"*, we move forward as follows. Section 1, will be reserved for a review of the literature with microcredit, its characteristics and its types. In the second section, we will study the microfinance in Tunisia and more specifically the non-governmental organization (NGO) Enda i-a. Finally, microcredit in Tunisia (of ENDA I-A of Sfax) will be the subject of the last section; in which we will analyze the determinants of default in repayment and this will be through an empirical study of Enda inter-arabe in Tunisia (Sfax). Therefore, our objective is to identify the causes that influence the delay of payment.

We conclude this work in synthesizing its theoretical contributions and the implications that may be deducted. We highlight the main challenges and theoretical and methodological limitations of this work which allow us to emphasize a few prospects for future research.

2. A summary of Theoretical Literature

The micro-finance is a means of fight against poverty in the developing countries, through financing income-generating activities for poor households. However, the best way to help the poor to have access to financial services opposed the approach of welfarists to that of institutionalists. Although they share the objective of poverty reduction, these two approaches place the micro finance at crossroads. The welfarists are based on the theory of social responsibility against the customer in order to meet his expectations (Carroll, 1979). This school of thought evaluates the performance of the MFIS from the point of view of the client through social scope (*outreach*) and the analysis of impact (assessment impact). It targets the poorest whose incomes are 50% lower than the poverty threshold (1$ per day) and aims to improve their conditions of life. It is mainly composed of institutions of solidarity - NGOS or cooperatives-which consider the micro-finance as a key means to reduce the poverty of the poorest. Although it insists on the rational management of resources and does not exclude that the IMF can conduct a profitable activity at the end of a period of 5 to 12 years, this school of thought advocates an offer of financial services with relatively low interest rates and a wide use of the subsidies.
The institutionalists are rather based on the theory of contracts; which considers that the incompleteness of contracts can lead to opportunistic behaviors of applicants of credits (Ghatak and Guinanne, 1999). The institutionalists evaluate the performance of the point of view of the institution by targeting a clientele of poor households and the financial sustainability of the MFIS. They have designed a set of "best practices" (Best banking Practices) in order to increase the effectiveness of management systems (finance and accounting, marketing, delivery of services, etc.), its adoption is an essential step to achieve financial self-sufficiency to the industrial scale and have access to the financial market. They consider the financial autonomy as a criterion which fills better the social mission. Essentially, they represent Financial Institutions: either of specialized agencies in regulated micro finance (NGOS, non-bank financial institutions and associations of microcredit) which clearly fall in a logic of profitability, either of the

village cash register or some banks of traditional commercial who are more recently involved in micro-finance.

Welfarists and institutionalists have been the subject of number of criticisms. The first approach is facing the problem of viability and sustainability induced by the grants, the weakness of the rates of repayment and the increase of the costs of operation. The second approach has, as clientele of predilection, the micro-entrepreneurs are very close to the poverty line (2$ per day) and are applied to high interest rates to ensure the financial autonomy of the MFIS.

This "schism of micro-finance" (Morduch, 1998) refers to the arbitration between targeting of the poor and profitability of the MFIS. Coleman, B (2006) has shown that the effect of distance "caisse-home" is positive for men and negative for women. The negative result of the feminine gender can be explained by the absence of means of moving among these latter. Later, Albert and N.Honlonkou (2006) show that the remoteness of microborrowers of its fund could negatively affect the repayment at due time. The positive influence of the distance caisse-home is unexpected, but may be justified. Since, the previous discussion materialized by the monitoring of micro-projects, the geographical area, the amount of the loan, the sector of activity, the nature of the project and the distance IMF-home of client, suggests that these factors influence significantly and positively the delay (Zeller., 2003; Labie, 2004). Our goal is to check this influence.

Servet (2006)[7] and Sajeda & al (2003) found that the risk of non-repayment also depends on the geographical location of the concerned economic project. In rural areas in particular, the microborrowers can be distant from the counters of the MFIS. The more this remoteness is important, the more the credit risk is high; in the measure where the follow-up of the loan is less rigorous due to the fact of the cost generated (control of the correct allocation of granted funds, health of the financed economic activity…). Moreover, according to Adams, D.W (1994) and Morduch (2005)[8] in rural areas, the financing of agricultural projects is facing specific risks related to the economic context (increase in course) and natural (drought, diseases…). We can conclude that the urban area decreases the likelihood of delay.

In addition, in studying the influence of the geographical expansion on the efficiency of banking, Bedecarrats, F. and Marconi, R (2009) show that, it is more delicate to remotely control the micro projects which are geographically distanced in relation to headquarters. In the case where the microprojects are located far from the MFI or their headquarters, the cost of the information would be increased by the costs of travel and communication both for the bank and for the microenterprise (Fielden, S. L., Davidson, Mr. J. and Makin, P. J., 2000).

There by, the geographical distance causes a problem for collection, control and verification of this information. As well, the acuteness of the asymmetry of information increases with the geographical distance. In fact, Paxton (1996) and Navajas & al (2000), also show that access to other sources of credit, the presence of market and urban location help to obtain a better performance of refund. However, in many configurations the IMFs seeks the clientele in farther geographic areas, where consequences in terms of travel, and also in term

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[7] For a perspective of microfinance in the general context of development and globalization, see, J.-M. Servet (2006) and J. Fernando (2006).

[8] According to Magill (1994, p144). Credit unions represent one of the most important sources of financing for smallscale entrepreneurs in developing countries. This finding, made soon, there were fifteen years, always seems to news: Armendariz and Morduch, (2005, p74) insist "Credit unions are playing an increasingly active role in the microfinance market today. "

of repayment because the beneficiaries do not have bank accounts and therefore must move to repay (Singh, S., Corner, P. and Pavlovich, K., 2007).

In addition, Khandker & al (1994 and 1998) arise as well the question of whether the delay of reimbursement are influenced by local characteristics that may affect the conditions of local production or the effectiveness of the branch.

Their empirical tests on overdue loans of the Grameen Bank appear to confirm this last hypothesis "the Rural Electrification, the size of the roads, the infrastructures of primary education and the density of commercial banks as well as the pay check of the manager of the branch are positively correlated with a low rate of non refund".

Finally, the urban environment compared to the rural areas has some benefits, in particular : a population generally more literate and more concentrated in advance favors the proximity between the institution and its customers, a possible sharing of information between the IMF and the formal financial institutions, which allows you to limit the hazards, more developed infrastructure promoting communication and diversified sectors of activity limiting the risk of neglected concentration (Adair.,2001; Adair P. and Hamed, Y., 2004).

2.1 Characteristics of micro borrows

- Size of household
- Age
- Civil status
- Level of Education
- Activity

With regard to the relationship between the age of the micro borrower and the delay, Valérie de Briey (2005) and Servet (2006) found in several investigations that young people are assimilated to very risky micro-borrowers. Thereby, the delay decreases with the marriage of micro-borrowers and therefore, a married client is less risky than a single one. In fact, it is the stability of the family of the groom who pushes this last to be efficient in his rebate. It is logical to think that experience also is in favor of micro borrowers and therefore to provide a lower TR for micro borrower younger people. In fact, this criterion of age has been frequently used by the BTS for the choice of micro borrower Benarous (2004). This bank prefers to grant credits to young people, it is an important criterion in the measure where the bank seeks a population of young, courageous, and motivated entrepreneurs. Of this fact, the project is the only guarantee for the banker. It is an objective element and it is a meaningful index of its profitability. Furthermore, the criterion of age is important in the strategy of ENDA because young people have an important role in the development of the societies of which they are not only the recipients but also potential actors.

On its side, Enda considers that the woman repays better her appropriations. Vincent (2005) and Hofmann and Kamala (2001) specify that programs of micro-finance show wisdom of the poor and particularly women who are considered as excellent beneficiaries and are sometimes better than the other micro-borrowers (men). In addition, this criterion may have a higher weight at the time of arrival of an event: marriage, death of a spouse, divorce, savings or women's activities (private schools, nurseries, associations, craftswomen…). The financing of women seems to be less risky. In addition, the woman, and more specifically the mother, lives more in an uncertainty of its perception (Guérin., 2000). She is probably more in need to the credit. At this level, Servet (2006) and Pitt and Khandker (1995)[9] indicate that, this differentiation between the two genders is all the more asked in micro-finance that is stated than that is exclusively addressed to women. Two reasons are advanced according to these authors. In fact, women reimburse better than men and operate over the resources of microfinance to the benefit of the family and children. The authors argue that this is not to say that women are poorer than men but their incomes are lower than those of men. This overwhelms their management capacity which varies depending on the context. For this, the affirmation of the poverty of the woman only has meaning, according to Lapenu, C., Zeller, M., Greeley, M., Chao-Béroff, R and Verhagen, K (2004), if she is guided by determined circumstances. Therefore, we consider the gender as a determinant of the delay of reimbursement.

Also, cling & al., (2004) using 2349 observations corresponding to 485 loans from the 3RAC (Bangladesh Rural Advancement Comitée), 430 loans of the BRDB (Bangladesh Rural Development Board), 1081 Loans from the Grameen Bank and 353 loans issued by other suppliers, discover that access to literacy and health services exerts a significant and positive impact on the performance of refund. Similarly, the borrowers who have access to the literacy have probably more access to more profitable projects or are better to grow their money, (Thakor and Udell., 1991; Lahna., 2002 and Paxton & al., 2000). The positive effect of literacy on the TR is even more significant that the access to health services. The evolving nature of the educational system (for children and adults) in function of universal mutations and which is proposed by these IMFs may explain this result. The education program of the BRAC, for example, focuses primarily on the education of girls in rural areas, giving them the advantage of following Senior Levels lessons thanks to flexible schedules and assigning them scholarships depending on their school results. Since, the previous discussion materialized by the kind, age, family situation, the number of dependent child, the level of education and previous experience with the IMF, suggests that these factors influence positively the delay of reimbursement. Our goal is to verify this observation.

Zeller, M and Sharm, M (1998), have conducted a study on the performance of reimbursement of appropriations of group in Bangladesh and have shown that the TR is high when the micro borrowers does not practice agriculture as the main activity, their non-farm incomes as being more risky. In addition, Zeller (1994) and Chao-Beroff & al (2000) have analyzed the rationing of credit in proving that it is dependent on a set of determinants to know in particular the SA to finance. These authors also advocate that needs and financing risks differ according to the SA of micro borrows. At this level, Zeller, M., Schrieder, G; Von Braun, J and Heidhues, F (1993) stipulate that agricultural loans are risky, costly and particularly difficult to be put in place. Conversely, Zeller, M; Schrieder, G; Von Braun, J and Heidhues, F (1997) believe that, the practice of ranching combined with agriculture increases the risks and makes the likelihood of repayment uncertain. The results of these studies confirm that these two activities which are part of the exposure to risks affect negatively the TR.

Hypothesis 1: *There is a positive relationship between the characteristics of borrowers represented by the size of household, age, marital status, level of education, activity, with the delay of payment at due date.*

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[9] Pitt and Khandker (1995), Hashemi and Schuler (1997), Hossain (1998) present a more detailed description and an empirical assessment of the Gramen Bank of Bangladesh.

2.2 Characteristics of the agents of Microcredit

- Experience (more than a year)

In regards to the relationship between the nature of the project of micro borrows and delay, we find that the frameworks of the IMFs consider that the projects of creation are profitable projects. They indicate that extension projects stand out with a TR of 61,70% against 38,29% for the creation (Khandker, S. R; Khalily, B and Khan, K., 1995).

Hypothesis 2: *There is a positive relationship between characteristics of lenders represented by experience (more than a year) of the agents with the delay of payment at due date.*

2.3 Type of guarantees

- Individual guarantee
- Guarantee of group

Honlonkou, A., (2006) ; Acclassato, D., Quenum, V-C., 2001; Khandker (1998) and Meehan (2000), have led to the results according to which the lack of monitoring of the financed projects, the periods of inappropriate disbursement, the diversion of appropriations for the consumption or the reimbursement of loan sharks and perception of the public funding said "cold money" are all decisive factors for a delay of reimbursement. In addition, Morduch & al (2002), have also shown that frequent visits of the staff of the IMF had a positive impact on the rebate, even if Zeller and Meyer (2002) and **Maria Nowak** (2005), find that the visits of the members of staff could lead to an increase in transaction costs. Therefore, the latter believe that, since the increase in transaction costs may be related to the costs of transport, these latter will have a negative impact on the TR. But, the IMF can revive its rate by the adoption of adequate supervision after obtaining the credit through monitoring the borrower at home and on his place of work by an agent who plays the role of management advisor; and the application of penalty and moratoria interest; the suggestions of dissuasive penalties such as the publication of photos and names of defaulters; the letter of congratulations to the term of repayment (Zeller et alii and Sharma Mr., 1998; Zaman., 2000; Boden R. J. and Nucci A. R., 2000; Casson, Mr C., 2000).

Hypothesis 3: *There is a positive relationship between characteristics of the guarantees represented by type of guarantee (individual or guarantee of group) with the delay of payment on due date.*

2.4 Characteristics of Microcredit

- Loan consumption
- Commercial Loan
- Amount of the loan
- Number of monthly fees
- Number of the loan

Honlonkou & al., (2006)[10] ; Littlefield & Al., (2003); Morduch & al., (2002) have found that the inadequacy of the amounts of credit to finance the projects is a decisive cause of a poor performance of refund. Similarly, Sharma and Zeller (1997), have found that the coefficient of the amount of the loans is significant and negative. This result has been confirmed also by Labie, M and Mees, M (2005) and Labie, Mr. and Sota, J (2004, p.19).[11] In fact, the negative sign is theoretically explained by the fact that the amount of loans increases the gain associated with the moral hazard. However, Hartarska, V and Nasdolnyak, (2007) have shown that most of the loans not repaid at due date were fully reimbursed a year later. In this context, the moral hazard is interpreted as the choice

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[10] Honlonkou (2006) has designed his research on the contractor in bringing together the microemprunteurs with the characteristics of a microcredit. He stressed the importance of the microemprunteurs to explain the delay in payment.
[11] The work of Sharma and Zeller (1997) and Godquin (2004) show that, the likelihood of delay of payment increases with the size of the loan granted to the borrower in accordance with the theory of banking.

of a project with a longer maturity (and an expected value higher) than that of the loan, it is rather the choice of a more risky project.

Main characteristics of Microcredit

The microcredit are distinguished from conventional credits granted by commercial banks. The microcredit differ from one institution to another and from one country to another. In fact, the microcredit is designed as a loan of low amount, short reimbursement duration, granted to the poor often to women who are devoided from material guarantees to supply a generating activity revenue.

(a) The low amount of Microcredit

The low amount requested by the poor is a cause of their banking exclusion. In fact the monetary needs of this population are modest in the light of their precarious situation which does not allow them to think of projects with high capital intensity. This is because they are not only certain that nobody grant them a high amount due to their vulnerability, but also by aversion of big projects that are above their capacity, and desire to invest in micro enterprises that are not too risky. This amount differs from one country to another, if in developing countries the value of microcredit may not exceed twenty dollars, it can reach in industrial countries thousands of dollars.

(b) the short duration of reimbursement

The microcredit are credits of short term. This characteristic of short duration of repayment is one of the origins of success of micro-credit programs. Indeed, the fact of having close deadlines, means that the difficulties of reimbursement are detected earlier, which facilitates the recovery. In fact, repayments can be made monthly, weekly or even daily, but generally the overall average duration is 6 months and rarely exceeds the 18 months.

C) the clientele

Microcredit is emerged in response to the needs of financing of a specific category. It was created to serve the poor who are excluded from the traditional banking system. However, there is no strict definition limiting the extent of microcredit to the poor in the strict sense of the word (living with less than 1 dollar or 2 dollars per day, for example). Therefore, it can be said that microcredit targets any client who wants to fit an income-generating activity, but who lacks capital, which does not hold material guarantees, and who is found to be insolvent by the commercial banks. Therefore, this kind of appropriations is directed to the poor assets. Seventy per cent of the poors in the world are women. However, traditionally, women are disadvantaged in terms of access to credit and other financial services because the commercial banks often prefer to operate with men, and the companies belonging to the formal sector neglect women who represent a significant and growing proportion of the informal economy. In contrast, several studies find that microfinance, which is directed to those who are excluded from the traditional banking system, often target women or sometimes even exclusively. In fact, the microcredit key sectors weakly capitalized often employ a workforce of women. Elsewhere the history of Mohammad Yunus and the Grammen Bank began with women who represent 97% of the borrowers of the Bank, and the microcredit programs continue to favor women. Indeed, the report of the Summit on microfinance 2007, declares that until the end of 2006, microfinance had affected more than 79 million women among the poorest in the world.

D) The rate of interest

The rate of interest (price of the service of microcredit) is at the center of the debates that take place around the microfinance. It is the main point of divergence between the two theoretical visions. The institutional vision proposes to set the interest rate to a level that allows the IMF to ensure its financial self-sufficiency and to be profitable to be able to continue independently of grants and donations. And the welfarist vision considers that the search for financial performance will result intuitively the omission of the social mission which is the ideological foundation of the concept of microcredit. Of this fact, the arguments of the current emphasis on the institutional vision depart from the idea that the microcredit is very expensive for the IMF, and that it must fix the rate of interest in order to be able to cover its costs in a perspective of financial viability. The study of the cost structure of a microcredit supported by an institution providing this service shows that a high

wear rate is necessary to cover these costs and to ensure the viability of the system and the sustainability of the institution.

Therefore, microcredit is deemed to be very expensive compared to conventional credits offered by the traditional financial system. However, contrary to what many people think, force is to see that the difference in the cost between the credit and microcredit does not lie in the risks associated with the financing of the poor population, because the rate of reimbursement of the poor in many microcredit programs managed to exceed that of the commercial banks

E) The destination of microcredit

Although these last years due talk about microcredit to consumption, and microcredit for housing improvement, the principal and fundamental destination of the program of microcredit is creation or extension of income-generating activity. Therefore, it is a professional credit, favoring economic insertion of deprived persons in professional life. This producer destination allows the recipient to make profits allowing him to repay the granted loan, to improve the generated income by its activity and to promote the conditions of life of his household. This is what helps to promote his better integration in the economic process.

F) the techniques for the granting and recovery

The success of microcredit to overcome the obstacles related to the characteristics of borrowers that are excluded from traditional banking system, resides in its mode of operation. In the face of the absence of guarantees, the MFIS put in place a system based on substitutable techniques to the actual safety such as :

· The relationship of proximity:

In fact, the main characteristic of microcredit lies in the relationship of proximity which connects the institution and the borrower and gives rise to a climate of mutual trust between the two stakeholders.

The decision of granting the credit is decentralized within the MFIS. Each institution puts at the disposal of customers that it wants to target antennas in the regions where it wants to mount its intervention's programs. It is on the basis of personal contacts and visits to places of operation that the agents of appropriations evaluate their customers before the granting. They control and follow to ensure the proper refund. *" The proximity increases the confidence, reduces information asymmetries and mitigates the social barriers between the clients and the institution* " (Servet, 1996). On the other hand, the IMF can fill the lack of hardware warranty by another moral guarantee, it lies in the use of a technique called " solidarity group credit".

· solidarity group credit:

This technique used by the Grammen Bank consists in the granting of credit of group. The members of small groups of 4 or 5 persons undertake jointly and severally on the basis of the confidence and mutual knowledge to repay the credit of the whole group. Within the same group, the credit is granted in Tours of role, a first person is served, and when it reaches to repay the loan, a second member enjoys another loan and so on. This is a binary relationship between the MFI and the group and not between the institution and the members. The Bank grants the credit that will be reimbursed by the whole group. In the event of the failure of one of the members, the others must remind him with his obligations and where appropriate substitute for him to ensure the completeness of the refund. As well, if the group does not reimburse the loan, it is the whole of the group which is derived from future loans, and that is where lies the joint and several liability of the group on which account the lender for the good refund. Another alternative of incitement to reimbursement exists for the individual microcredit, it is of the progressive appropriations.

· The technique of progressive Credit:

The progressive credit is a technique used by the IMF to motivate the borrowers to repay to term. It is based on the principle that if the client repay the loan in the predefined deadlines at the conclusion of the contract, he has the right to another credit of a higher amount. Of this fact, the borrowers are encouraged to be regular to be able to benefit from the renewal of the credit, and access to larger amounts.

Hypothesis 4: *There is a positive relationship between the characteristics of the loans represented by, ready consumption, business loan, the loan amount, number of installments, monthly fees number of loan with the delay of payment on due date.*

2.3 Conceptual Framework

Based on the arguments presented above, the conceptual model proposed in this study is presented in Figure 1.

Figure 1. **Conceptual Model of study**
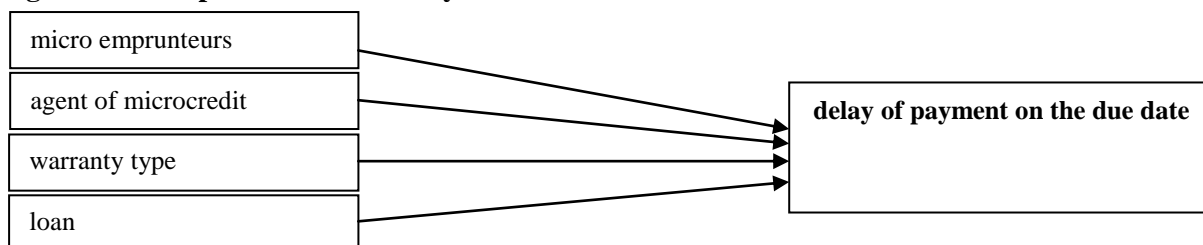
3. Methodology of research

The objective of our study is to identify the causes that influence the delay in payments to the maturity among the NGO Enda i-a. Thus, the methodological approaches of this study are based on statistical techniques for the analysis of data from the survey. Indeed, several tools in the collection of information are used in this memory. It is primarily the interviews and the literature review.

2.1. The interviews

The interviews allow to inform and also to verify using questions, specific points related to the research proposal. This interview allows us to use a series of questions open enough to let the interviewees express themselves freely and spontaneously, but all with the possibility of refocusing the interviews, in case of need, toward the objectives of our research. The interview also allows to have answers, in own words of the interviewees, both very specific and general. Then it is necessary to proceed with the analysis of the main elements that we can stand out of these interviews. This method has allowed us to have an exchange with the interlocutors. Thus we have been able to ask them to explain or to deepen some points. Finally, we held that interviews are conducted in a climate of shared confidence in guaranteeing to the respondents the confidentiality of the comments collected and anonymity.

2.2. Compilation of existing data

The documentary analysis is the second tool for collection of data on which rests this work. The documentary analysis is important to the extent that it allows us to complete and verify the data obtained during the interviews. Indeed, the documents that we have analyzed relate mainly to the official documents such as credit files, reports on activities, publications, etc.

2.3. Sampling

In order to constitute our sample, we randomly selected records belonging to clients of the NGO Enda i-a.

The selected sample is composed of 250 customers who have obtained one or more loans with Enda I-A:

Table 1. *Presentation of the sample*

Number of targeted customers	250
Number of men	50
Number of women	200

2.4. Method of Operating Data

Once the data is collected, the process of counting the results must be initiated and prior to starting in the capture and analysis. It is advisable to choose the right tool for the processing of inquiry which is a specialized software for the capture and analysis of data.

- **Software Used**

To treat the information collected during the course of investigation we have chosen to use the Software SPSS 11.0. This software provides you with :

- Basic edition of flexible and easily accessible data
- Presentation of the results in the form of swivel tables easily interpretable and presenting all the necessary statistics
- Development of interactive curves
- Analysis of complex relationships between the variables by means of a sophisticated set and complete statistics (the correspondence analysis, the factorial analysis, the study of time series…)
- Construction of linear models.

- **Coding and analysis of data**

The coding of responses is a critical step in the measure where it result of qualitative responses to digital data. For this, we used the Likert scale in order to identify the criteria, from the records of appropriations, which has the most influence on the delay of payment on due date.

3.5. Measurements of the variables

In this framework there is place to separate the endogenous variables of those exogenous.

- **The Exogenous Variables**

We have **four** exogenous variables to know: the characteristics of the borrower, the characteristics of the lender, the guarantees and finally the nature of the loan.

Table 2. *The model*

Items	The Exogenous Variables	Endogenous variables
1. Size of the household	The borrower	**The delay of payment on due date**
2. Age		
3. Civil status		
4. Level of Education		
5. Activity		
6. Experience (more than a year)	The Lender	
7. Individual	The Guarantees	
8. Guarantee of group		
9. Consumption Loan	The loan	
10. Commercial Loan		
11. Amount of the loan		
12. Number of Monthly fees		
13. Number of Loan		

- **Endogenous variables: the decision to accompany/support a project**

It was a single endogenous variable noted Y and represents the delay of payment to "maturity". In fact, the objective of our study is to show what are the main causes that influence the payment of clients of ENDA I-A to maturity.

Presentation of the model :

$$Y = \alpha_0 + \alpha_1 \, EMP + \alpha_2 \, pre + \alpha_3 \, GAR + \alpha_4 \, Ready + \xi$$

Y : *Is the delay of payment at maturity.*

EMP : *measure the personal characteristics of the client/borrower.*

PRE : *This variable refers to the characteristics of the lender who is the agent of the credit, it is him who has estimated the real need of the client.*

GAR : *allowing to present the different guarantees required by Enda i-a.*

Ready : A *measure of the importance of the nature of the loan which can be a loan to commercial use or consumption.*

ξ : *error term*

The methodology is to proceed by two steps. In a first time, we test the validity. In the second time, the logistic binaries regressions will be carried out to judge the explanatory nature of the different variables when they are introduced simultaneously. In what follows, we describe in detail the different tests that are made.

4. Application and results

After exposing the methodological foundations of our research, we will analyze the delay of payment. We purify measurement scales of model research variables through validity tests (exploratory factorial analysis). We submit to the recommendations of Churchill (1979) in order to improve the quality of the measures produced. In this section, it is to test and analyze the validity of measurement scales deductions through the principal components analysis (PCA). The purpose of this analysis is to replace the original variables by a limited number of composites variables or factors.

3.1. The analysis of the main components: ACP

These different tests will treat all the items which are 12.

- **Kaiser-Mayer test-Olkin**

The KMO is a real between 0 and 1. A KMO acceptable higher than 0.5 ensures that the partial correlations are not too important in relation to simple correlations. The KMO is essential to obtain an interesting CPA. In the negative, it may be necessary to remove some of the variables.

Table 3. *KMO of the model*

KMO index and Bartlett's test		
Measuring accuracy of the sampling of Kaiser-Meyer-Olkin		,595
sphericity of Bartlett's test	Khi-Two approximated	468,189
	Ddl	66
	Meaning of Bartlett	.000

In our case, the KMO = 0.595 which is higher than 0.5.

- **Bartlett's test**

A high value with a meaning close to 0 allows you to reject the non global correlation of the variables, i.e. that the variables are sufficiently correlated between them to allow a significant reduction of the dimension. An essential condition to make an ACP. In our case, the meaning of Bartlett is equal to 0 this means that the variables are correlated between them.

3.2. Empirical Validation of the model

Now, as the validity of our investigation is verified, it is appropriate to test the empirical validity of the model. We want to know through an econometric model what are the variables that has the most influence on late payment at maturity.

- **Empirical tests to perform**

It has opted for the binary logistic regression on the different variables: it is to explain the delay of payment on due date by calling to different variables. This test uses as independent variable **y** which represents the delay of payment on due date by taking into account the different variables.

- **Results and Discussion:**

This model aims to show and explain the delay in payment at maturity through the variables foreseen previously.

Table 3. *Result of the delays in payment on the due date*

The variables	Beta	Meaning	Relationship Found	Result
Constant	6.434	0.021**	+	
MT ready	0.001	0.043*	+	Not Delay
N Mens	-0,375	0.011**	-	Delay

N ready	-0,277	0.168	-	Delay
Size	0.122	0.451	+	Not Delay
AGE	-0.003	0.898	-	Delay
State	0.740	0.020**	+	Not Delay
Level	0,259	0.468	+	Not Delay
Sector	0,396	0.273	+	Not Delay
P Cons	-2,596	0.000***	-	Delay
P CCIAL	-0,126	0.549	-	Delay
GAR	-1,446	0.002***	-	Delay
EXP	0.275	0.628	+	Not Delay
R^2 of Cox & Snell				0,471
N				250

*, **, ***, significant respectively to 10%, 5% and 1%.

On the whole, the variables explain an acceptable part of delays in payment on due date, (R^2 = 47.1%).

5. Discussion and Implications

- **The amount of the loan**

The examination of the results shows a positive and significant relationship between the amount of the loan and the delay of payment (β= 0.001; p= 0.043), a significant negative relationship between number of monthly payments and delay of payment (β= -0,375; p= 0.011) and finally a negative relationship and non-significant between the number of the loan and delay of payment (β= -0,277; p= 0.168).

The monetary poverty is the lack of money, often resulting in difficulties, improviding food, clothing, shelter and this, more or less intensely, as we have eventually access to natural recoverable resources. The monetary poverty or monetary income is estimated by means of poverty rates (an individual is considered to be poor when his level of life is lower than the poverty threshold chosen). In this perspective, obtaining microcredit from NGOS as Enda I-A proves to be a solution for this population to reduce poverty. In effect, the monetary needs of this population are modest in view of their financial situation. The cumulation of debts and loans granted by Enda i-has added to the burdens of the borrowers and prevent them from repaying the debts to the maturity. This burden of debt includes in our study the amount of the loan, the number of monthly payments and the number of loans obtained.

The monthly payments of the rebate may be the number of a single term, as they can reach 18 deadline. We have noticed that the risk of delay increases with the number of monthly fees. This finding is consistent with the idea that short term is one of the factors of the success of microcredit, the fact that time itself is a risk factor. In addition, the amount of the granted loan varies between 200 DT and 5000 DT. An increase of one additional monetary unit of the amount of the claimed credit, leads to an increase of the delay of payment. A higher granted amount breeds of more rigorous operations of coaching and follow-up to ensure the proper refund. Generally, the more the amount is important, the more it is assigned to the financing of more profitable project. This profitability allows you to repay without flaws.

Concerning the number of loans, we have observed that each time the borrower proceeded to another credit, by keeping the same characteristics as the previous loan, the probability of achieving a delay increases.

Therefore, by increasing the number of monthly payments and the number of loans, the debt burden is amplified; therefore the delay of payment on the due date becomes higher. By contrast, the increase of the amount of the loan does not enhance a considerable delay thanks to the use of these large amounts in profitable projects.

- **The size of the household of the customer**

According to the table we note a positive relationship and non-significant between size of household of the customer (β= 0.122; p= 0.451), a positive and significant relationship between family situation and the delay of payment (β= 0.740; p= 0.020), still a positive relationship and not significant between level of education and delay of payment (β= 0,259; p= 0.468) and a negative

relationship and non-significant between age of the client and delay of payment (β= -0.003; p= 0.898). In this sense, we propose the following explanations.

The possibility of delay decreases with the marriage of the borrower. A married client is less risky than a single one. In fact, it is the stability of the family of the groom which is at the origin of his performance of refund.

The **level** of instruction indicates the last level of the borrower, so for an individual at the level of higher education, the refund will be much better than an individual at the secondary school level and so on. This explains the positive relationship between the delay and the level of instruction.

Age influences negatively the risk of payment on due date. A borrower who is older than another one and with the same other characteristics has a likelihood of delay less than the probability of the other client.

Therefore, when the family situation of the borrower is stable, there will not be a late repayment at maturity. Despite the fact that age negatively affects the rebate, this influence is not significant and does not cause, only rarely, a delay of payment.

- **The commercial loan**

These results show a negative relationship and not significant between the commercial loan and the delay of payment (β= -0,126; p= 0.549), a significant negative relationship between the loan of consumption and delay of payment (β= -2,259; p= 0.000) and finally a positive relationship and non-significant between sector of activity and delay of payment (β= 0,396; p= 0.273).

A consumer credit, it is the provision by a financial institution (the lender) of a sum of money which will be repaid in time by the client (the Borrower). It is intended to finance a service (education) or a property of equipment.

The credit of consumption such as "eddar" or "taalim" and still "solfa", affect the repayment of credit. The use of these types of appropriations increases the chance of delay. These types of appropriations are too risky because their granting does not require selective conditions. There is no possession of an activity, or viability of a project such as the case of the credit of company that certainly will be used for financing an income-generating activity. This type of credit, the commercial, negatively affects but not significantly the delay. That is to say that the customer is does not face difficulties of reimbursement only in economic crisis or a major force for the seasonal activities, for example.

Therefore, the consumer credits, often used by the popular classes, are one of the key elements leading to the debt overhang and by following the non-repayment at maturity. This results delay of payment on due date.

- **The Guarantees**

The results show a significant negative relationship between the safeguards and the delay of payment (β= -1,446; p= 0.002),

The security for the creditor will be possibly reinforced by THE guarantees which it will be eventually obtained in the form, of personal security or real which will be granted or presented by the debtor.

The joint and several guarantor of an individual can be accepted in guarantee of a credit by some lenders. The person who is a guarantor undertakes to pay in the place of the person who is sanctioned, in case of failure of reimbursement of deadlines of the latter. Enda I-A follows this strategy. In fact, there are two types of guarantees, the guarantee of group and the individual guarantee. Despite the existence of these guarantees, we note that there are delays in reimbursement to the maturity and especially for the individual guarantee. The guarantee of group allows you to protect the NGOS through the collective nature of the loan, a group of three or more, which obliges the participants of a same group to pay the part of the third insolvent person. The individual guarantee achieves a significant delay because of the individual nature of the loan, the person who benefit from the credit is found alone and free to repay on deadline; not as the case of the guarantee of group, where the pressure of solidarity is exercised, all participants are diligent to repay at maturity.

Therefore, the warranty required by the NGO Enda I-A are not sufficient enough to avoid the delay of payment at maturity. Despite the presence of individual guarantee and guarantee of group, there are delays in payment at maturity.

- **The variable experience**

A positive relationship but not significant is present between variable experience and delay of payment (β= 0.275; p= 0.628)

A loan granted by a more experienced credit officer is less risky. It presents a probability of repayment at maturity and an improvement of the quality of the portfolio. Thanks to their competence and experience, the agents of appropriations are interested in the qualitative aspects and conduct rigorous studies.

The Organization is requested to strengthen the knowledge of these agents and do not limit themselves to their experiences. The mission suggests to revise the mode of training provided to officers of credit. Currently, too much of round-trips between the theory and the field are a source of confusion for newcomers. It is recommended to begin with a theoretical approach based on learning the manual of procedures before putting into practice these knowledge on field. A Work in pairs on the ground can be envisaged. Finally, it is important to limit the number of interlocutors intervening on these formations.

The mission of the agent of credit is to closely study the credit demands presented to the NGO. Thanks to his experience, his knowledge and skills, the agent chooses the customers who do not pose a risk of payment. Among his qualities, we note that the experience of the credit officer positively influence the payment and allows to avoid the delay of payment at maturity.

6. Conclusion

In the context of this paper, relating to the empirical validation of the model of our research, we have positioned our research approach in a perspective borrowing a quantitative approach. Then, we have outlined the method of data collection with the NGOS. The exploitation of these data and their analysis have been carried out to test the assumptions and the model of research. In the first place, by appealing to the purification of the different scales of measurement which has been carried out in a classical way, thanks to principal-components analysis (ACP), and the reliability of the measurements of the tested variables from the estimation of the Cronbach alpha values and a new ACP States on the selected items. In a second place and taking into account the whole of the results of the carried out analysis of purification, we have begun statistical tests through an econometric model. In fact, this model has allowed us to enlighten some of the relationships between the exogenous variables and the endogenous ones. In other words, the causes of delay in payment to the NGO Enda I-A are mainly influenced by eight variables, mainly the characteristics of the borrower, lender, safeguards as well as the nature of the loan.

The current debate concerning the impact on microfinance of the financial and economic crisis which has been raging since the end of the year 2008 in the world, does only start, and it is not ready to reach an unanimous conclusion.

Some researchers think that the crisis will not affect the microfinance sector. This idea was defended by Muhammad Yunus, the father of microcredit, who said, during a press conference given on the occasion of a symposium on microfinance organized at the headquarters of the International Labor Office (ILO) in Geneva in October 2008, that the system of microfinance is not affected by the crisis; " ***There is a good news in the middle of the bad news: microfinance continues to operate in a manner as good as it worked in the past, it has not been affected by the process of disintegration*** ".

However, many other economists, researchers and even officials of IMFs believe that the impact of the financial crisis began to be felt in the sphere of microfinance. They argue particularly two arguments to support their thesis:

On the one hand, they think that the economic crisis will increase the demand in the field of microcredit, given that it has resulted in the mass destruction of millions of jobs, the resurgence of

unemployment, and therefore, increases poverty and the number of those excluded from the banking system.

On the other hand, and due to the lack of cash at bank and the climate of distrust that characterizes the world of finance since the beginning of the crisis, the cost of refinancing of MFIS with banks and donors will increase- even if there is decline of the main guiding rate - which will not fail to be translated into an increase in the rate of interest that the applicants of microcredit will not be able to withstand.

The microfinance institutions that will be able to better control their costs, and properly manage the risk of the appropriations as well as those which already benefit from a financial autonomy, especially if they collect deposits, have more chances to consolidate their positions and to get out of the crisis more experienced and stronger.

In this context, Enda Inter-Arabe, continue to make progress and further improve its remarkable performance, and consolidate the place of choice that it occupies in the fight against poverty in Tunisia. It is called to undertake its transformation in financial institution and be sure to prepare the appropriate instruments, mechanisms and procedures to best succeed this mutation.

It is a vast program. But it is a new challenge more mobilize than exciting...

7. References

Abdou, H., Pointon, J., El Masry, A. (2008). Net neural versus conventional techniques in credit scoring in Egyptian banking, *expert systems with applications,* Vol. 35(3), pp. 1275-1292.

Agarwal, S., Liu, C and Rhee, S, G., (2008). Investor Demand for IPOs and Aftermarket Performance: Evidence from the Hong Kong Stock Market, *Journal of International Financial Markets, Institutions & Money,* vol. 18, No. 2, p. 176-190.

Agier, I and Assunção, J., (2011). The role *of* credit officers in the performance of micro loans: evidence from Brazil, *book of research, GIREF, 02-2011.*

Agier, I., and Szafarz, A., (2012). Subjectivity in Credit Allocation to Micro-Entrepreneurs: Evidence from Brazil, *Small Business Economics*, pp.1-13.

Albert N. Honlonkou, Denis H. Acclassato and Célestin from C.Quenum (2006). Determinants of performance of refund in microfinance institutions in Benin, *Annals of Public and Cooperative Economics* 77:1, pp 53-88.

Alonso, P., Palenzuela, V., A and Merino, E., (2009). Determinants of nonprofit board size and composition the case of Spanish foundations, *nonprofit and Vo/untary seetor quarter/y*, Vol. 38, no. 5, p.784- 809.

Basel Committee on Banking Supervision (2010). Microfinance activities and the Core Principles for Effective Banking Supervision, *Bank for International Settlements*, August 2010.

Bedecarrats, F. and Marconi R., (2009). The influence of the Regulation on the contribution of microfinance to development: the case of Bolivia, *Third Party Review- world n°197,* Paris, Armand Colin/ IEDES, 240 p.

Bedecarrats, F., angora, R.W., (2009). Method of statistical analysis to understand the links between social performance and financial performance, *SPI3 Discussion Paper* No. 6.

Bellucci, A., Borisov, A., Zazzaro, A., (2010). Does gender matter in bank-firm relationships? Evidence from small business lending, *Journal of Banking and Finance,* Vol. 34, pp. 2968-2984.

Bhagavatula., et alii., (2010). How social and human capital influence opportunity recognition and resource mobilization in India's handloom industry? *Journal of Business Venturing,*

Brennan, J. M, and W. N. Torous., (2009). Individual Decision-Making and investor welfare, *Working Paper, UCLA*. Benchmarking and analysis of microfinance in the Arab region.

Brigitte Helms., (2007). Berguiga, J., (2007). Social Performance versus financial performance of the IMFs," *http://www.gredeg.cnrs.fr/colloquesINFIIpapers/papier on line/berguiga.pdf.*

Campion, A. and Linder, C., with K. Knotts (2008). Putting the 'social' into Performance Management: a Practice-Based Guide for Microfinance, Brighton: Imp-Act *Consortium, Institute of Development Studies*

Caudill, S., Gropper, D., Hartarska, V., (2009). Which microfinance institutions are becoming more cost effective with time? Evidence from a mixture model, *Journal of Money, Credit and Banking,* Vol. 41, pp. 651-672.

Charness, G., and Gneezy, U., (2010). Portfolio Choice and Risk Attitudes: year experiment, *Economic Inquiry*, Vol. 48(2), pp. 233-246.

Chuang, C. L., and Lin, R. H. (2009). Constructing a reassigning credit scoring model, *expert systems with* applications, Vol. 36(2), pp. 1685-1694

Croson R., and U. Gneezy (2009). Gender differences in preferences, *Journal of Economic Literature*, Vol. 47, pp. 448-474.

Daniel Kahneman and Amos Tversky., (2012). Prospect Theory: an analysis of Decision under Risk, *Econometrica, vol. 47, No. 2, March 1979, p. 263-291*.

Daniel Kahneman., (2011). Thinking, fast and slow, Allen Lane, coll." ALTPB", *November 3, 2011,* 1st ed., 512 p.

Of Andres, P. and Valledo E., (2008). Corporate Governance in Banking: The Role of the Boards of Directors, *Journal of Banking and Finance,* vol. 32, No. 12, p2570-2580.

Remains, V., Bonnefon, J.F., & Raufaste, E., (2009). Politeness and Conditional reasoning: interpersonal cues to the indirect suppression of deductive inferences. *Journal of Experimental Psychology:* Learning, memory, and Cognition, 35, 260-266.

Farsi J.Y., Imanipour, N., Mahlouji, S. (2012). Effects of experience on applying entrepreneurial decision heuristics, *Global Journal of Human Social Science*, Vol. 22(3), pp. 43-50.

Feroze, S.M., Chauhan, A.K., Malhotra, R., Kadian, K.S. (2011). Factors influencing group repayment performance in Haryana: Application of Tobit Model, *Agricultural Economics Research Review*, Vol. 24(1), pp. 57-66.

Foliard, S. (2012). The contractor and the banker: The first impression and its consequences on the decision to finance, *international review of SMES, special number entrepreneurial finance*.

G.Gloukoviezoff, J. Bearing, J. Lazarus., (2008). evaluation of impacts of project credits staff of the Catholic Relief Services, Final Report to the Catholic Relief Services, Global network Caritas, Mission Solidarity Economy.

Galema, R., Plantinga, A and Scholtens, B., (2008). The Stocks at stake: Return and Risk in Socially Responsible Investment, *Journal of Banking and Finance,* vol. 32, No. 12, p. 2646-2654.

Giné, X., Jakiela, P., Karlan, D., Morduch, J., (2010). Microfinance Games, *American Economic Journal: Applied Economics,* vol. 2(3), pp.60-95.

Guerin Isabelle, bearing Jane and Prevost Benoit., (2009). Women and microfinance: hopes and disappointments of the Indian experience, BIM n°08 December 2009

Hartarska, V., Nadolnyak, D., (2008). Does rating help microfinance institutions raise funds? Crosscountry evidence, *International Review of Economics and Finance* 17 (4): 558-571.

Hertzberg, A., J. M. Liberti and D. Paravisini (2010). Information and Incentives inside the firm: Evidence from loan officer rotation, *Journal of Finance*, Vol. 65(3), pp.795-828.

Katsushis. I., Thankom. A., Samuel. K.A., (2010). Microfinance and Household Poverty Reduction: New Evidence from India, Working Paper.

Kono, H and Takahashi, K., (2010). Microfinance Revolution: its effects, innovations, and challenges, *developing economies*, Vol. 48(1), pp. 15-73

Mersland, R. and Strøm R., (2008). Performance and Trade-Offs in Microfinance Institutions- does ownership matter? *Journal of International Development,* vol. 20, No. 5, p. 598-612.

Nawai, N., and Shariff, M.N.M., (2010). Determinants of repayment performance in microcredit programs: A Review of Literature, *International Journal of Business and Social Science*, Vol. 1(2), pp. 152-161.

Patrick Behr, Annekathrin Entzian b, Andre Güttler (2011). How do lending relationships affect access to credit and loan conditions in microlending? *Journal of Banking & Finance,* vol.35(8), pp. 2169-2178.

Richards, J., Lee, F., Kim, I., (2010). The entrepreneurial opportunity recognition: Does anything change with the Internet and information technology? *International Journal of Strategic Management,* vol.10 (2), pp. 70-77.

Riopel, M., (2008). epistemology and science teaching. *Retrieved on 11/11/09 on* the URL:http:/ /www.er.uqam.ca/Nobel/R20507 /epistemology/.

Servet, J.-M., (2009). Social responsibility *versus* social performance in microfinance, *review Third World, No. 197, January-March.*

Servin, R., Lensink, R., Van den Berg, M., (2011). The Impact of Loan Officers on Relationship Lending in Microfinance: empirical evidence from PROMUJER-Mexico, *Working Paper.*

Shimon. K., (2009). Distinguishing the effect of overconfidence from Rational Best-Response on Information Aggregation*, The Review of Financial Studies*, Vol. 22(5), pp. 2889-2924.

Simbaqueba, L., Salamanca, G. & Bumacov, V., (2011). The role of credit scoring in micro lending Advanced Technologies in Microfinance: Solutions and challenges, in Ashta, A. (ed.1), Advanced Technologies for Microfinance: *Solutions and challenges*, pp. 250-266, IGI-Global 2011.

Unger, J.M., A. RAUCH, Mr. Frese and N. Rosenbusch., (2011). Human capital and entrepreneurial success: a meta-analytical review, *Journal of Business Venturing*, Vol. 26, No. 3, p. 341-358.

Van Gool, J., Verbeke, W., Sercu, P., Baesens, B. (2011). credit scoring for Microfinance: is it worth it?, *International Journal of Finance & Economics*, Vol.17(2), pp. 103-123.

Vliamos S.J. And Tzeremes N., (2011). Factors influencing the entrepreneurial process and firm start-ups: Evidence from Central Greece, *Journal of the Knowledge Economy, (2011) DOI:* 10.1007/s13132-011-0043-x.

Zeller, M. and Meyer, R. L. (2002). The Triangle of Microfinance*: financial sustainability, outreach and impact*. Baltimore, MD: John Hopkins University Press for IFPRI.

Zghal, R. (2004). Research in Entrepreneurship: diversity of approaches and emerging issues, *Entrepreneurship Summer University*, 9/24-1/10. Paris Dauphine