

Full Length Research Paper

Social and financial performance of microfinance institutions: Is there a trade-off?

BEN SOLTANE Bassem

Faculty of Economics and Management of Sfax-Tunisia. E-mail: bensoltane.bassem@laposte.net.

Accepted 15 February, 2012

The simultaneous achievement of financial and social objectives assigned to microfinance institutions is a challenge. Showing good financial performance (good profitability) and having a high depth of outreach (serving the poor) may be contradictory. Therefore, these "banks for the poor" are facing a trade-off that can lead to mission drift. To verify the existence of this fact, we have analyzed the relationship between financial performance and depth of outreach from a sample of 64 microfinance institutions of the Middle East and North Africa (MENA) region, from 2008 to 2010. Our results showed that the relationship is neutral, but we were able to confirm the presence of a trade-off that stems from the desire of microfinance institutions to reduce their portfolio at risk. However, we did not find that a higher portfolio at risk is associated with poorer clients, and hence a not justified mission drift. We can therefore conclude that microfinance institutions can well and truly achieve their double objective (social and financial) and thus fulfill their "ultimate promise".

Key words: Microfinance institutions, social performance, financial performance, depth of outreach, trade-off, mission drift, panel data, Middle East and North Africa (MENA) region.

INTRODUCTION

The boom of microfinance, the hope it raises as a catalyst for sustainable economic development as well as the extent of resources invested in this sector, deserve our attention. Microfinance means the provision of financial services such as savings, loans and insurance to low-income persons carrying out productive activities, and excluded from the standard banking system because of their socio-economic profile (Labie, 1999). These low-income people are not employees, they do not offer required guarantee and are often illiterate, so they would not be profitable for the microfinance institutions (MFIs). According to the definition, microfinance is somehow a response to the debt problems and economic crisis in most developing countries. In this sense, it is seen as one of the tools intended to reduce the poverty. In addition, in contrast to the development aid policies conducted previously maintaining the poor in a state of dependence on handouts and on the provision of free social services, the experiences to empower poor to break the ties that bind them to their precarious conditions were seen by the good eye.

Therefore, the challenge of microfinance institutions

(MFIs), commonly known as "bank for the poor", consists in putting in place systems that allows the greatest number of poor people, to access to financial services and on a sustainable basis. These institutions have often found their origin in the development projects and nearby non-governmental organizations (NGOs) and their success can be attributed to the introduction of non-traditional methods of hedging against default risk such as joint liability, social pressures or personal guarantees. Indeed, it is often decentralized financial systems, aiming at providing, in an efficient and financially sustainable way, small loan without collateral to the poorest segments of the society. These microcredits are often used to finance self-employment activities for low-income people and urban and rural micro-entrepreneurs who have limited or no access to formal financial services. To achieve their objectives, MFIs need to be as competitive as possible and financially viable, that is, profitable.

Thus, in their quest to obtain additional and required financial resources to meet an increasing demand for microcredits, MFIs still face some problems such as the need to reduce operating costs to a minimum, improving

the performance of financial management and administration. In order to negotiate resources from commercial banks and receive assistance from donors, they must inspire confidence and trust, ensuring their own financial sustainability, and develop appropriate financial mechanisms to capture financial resources, allowing them to make economies of scale.

Financial performance becomes the watchword in the governance of MFIs. Everything is done to show good financial results. Nevertheless, paying too much attention to profitability is likely to move away the institution from their primary objective of delivering financial services to the poor by a too strict selection of clients (move away from their social objectives). On the other hand, an overly social vision could lead to the application of very low interest rates threatening the viability of the institution. Financial intermediation and social intermediation, double mission of MFIs, can therefore be subject to divergent priorities and expectations and therefore can easily lead to conflict.

Therefore, one wonders if the MFIs face a trade-off between achieving good financial performance (financial target) and a high depth of outreach (social objective). Many "banks of the poor", given the high risks of poorest, attempt to abandon them to the detriment of wealthy belonging to the middle class and move away from their primary objective of delivering financial services to the poor. We seek to know whether the pursuit of financial returns by microfinance institutions conflicts with their desire to provide financial services to the poorest of the poor. In other words, we want to determine whether the targeting of the poorest prove to be obstacle to the achievement of good financial performance or rather these two goals can be achieved together. To reach this purpose, we will rely on the case of some MFIs in the Middle East and North Africa (MENA) region.

The rest of this paper will be structured as follows. Subsequently, the study provides a brief overview of the microfinance schism. Thereafter, it presents the research framework, sample (data collection) and variables followed by the research methodology. The study then presents its results and discussions. Finally the study was concluded.

THE MICROFINANCE SCHISM

Microfinance is a mean of poverty alleviation in developing countries through the financing of the activities productive of incomes for poor households. However, the best way of helping the poor to have access to the financial services leads to an opposition between two approaches (Welfarist and Institutional) which Jonathan Morduch refers to as the "microfinance schism" (Armendáriz and Jonathan, 2005). Though they all share the objective of poverty alleviation, these two paradigms put microfinance at the crossroads. Each position differ on how to provide microfinance services

(NGO vs. commercial banks), the technology to be used (financial service approach or minimalist providing financial services only vs. integrated service approach), and finally the performance evaluation methods.

Protagonists of the welfarist approach (also called the direct credit approach) perceive the microfinance as an effective tool in the fight against poverty and vulnerability and improve the well-being of the poor. In addition to providing financial services, this approach favors the granting of non-financial services such as training and technical assistance to micro-entrepreneurs, literacy and so on. It is this vision that prevailed in the 80's.

The welfarist approach focuses on creating solidarity institutions such as NGOs or cooperatives which regard microfinance as a major tool for reducing the poverty of poorest (Hamed, 2004). The best-known example of the welfarist approach is the famous Grameen Bank winning the Nobel Peace Prize 2006, along with its founder Muhammad Yunus. Another example is the village banking programs developed by Foundation of International Community Assistance (FINCA) in Latin America and more recently in Africa and Asia.

Based on the logic of subsidization (interest rates were even lower than market rates), this approach led to high unpaid rates and transaction costs, resulting in the failure of many microcredit programs (Von Pischke et al., 1983; World Bank, 198; Yaron, 1994).

Partisans of the welfarist approach use "welfare studies" (also called "Household Studies") to evaluate the effectiveness of microcredit programs. The purpose is to measure the impact of microcredit on the living conditions of the targeted populations, that is, the change in terms of well-being and quality of life of the beneficiaries. They want to assess the situation before and after accession to the MFIs. Thus, they are interested about the changes in the level of income, nutrition and education of the poor as well as the access to health care services and insurance. However, institutionalists reproach this type of studies to be too subjective and lead to excessive costs in addition to the methodological difficulties that may encounter.

Supported by international organisations such as the World Bank, the United Nations, United States Agency for International Development (USAID), Consultative Group to Assist the Poorest (CGAP), the institutionalist approach (or financial market approach) try to put the microcredit programs within the logic of market. Aware of the limited capacity of donors to meet the huge demand for microcredit, protagonists of this approach insist on the will of the setting up of a sustainable microfinance system as well as the will of rendering loans within the reach of the majority of the population (De Briey, 2005). Each MFI should aim at financial sustainability by maximizing its effectiveness and its productivity, in order to reach financial self-sufficiency. As a consequence, they require from its clients very high interest rates in order to cover transaction costs related to any microcredit. The objective is not focused on improving the welfare of the very poor in general but rather on serving on clients very close to the

poverty line, geographically concentrated, having highly profitable activities with short production cycle. This approach can be observed through two great trends: We find the upgrading process of microcredit programs: process of creating certain regulated MFIs in countries (such as Peru, Bolivia) offering a regulation process of the specialized institutions in microfinance. These MFIs are NGOs moving away from their status as "Non-Profit Organization" to regulated financial institutions having the status of limited companies and which come clearly within the scope of profitability logic (De Briey, 2005). On the other hand, we find the downgrading process of microcredit programs where certain traditional commercial banks which are looking for new markets and new clients can directly grant loans to the micro-entrepreneurs or can acquire shares in the MFIs.

As regards the evaluation of microcredit programs, the protagonists of the "institutionalists" approach prefer to use proxies and carry out "institutional studies". They are interested in market variables such as the number of poor people affected, financial self-sufficiency, financial sustainability, profitability, quality of service, etc. (Otero and Rhyne, 1994). Institutionalists emphasize the performance evaluation from the standpoint of the institution to the detriment of its customers. They consider financial autonomy as a criterion that better fulfills the social mission (Cornée, 2007). The welfarists, in turn, criticize the failure of the institutionalists to take into account the effect of microcredit on the poor people.

As we can see, the debate between welfarists and Institutionalists is far from over despite their common goal of reducing poverty "to include the excluded" (Bhatt, 1997). It looked like two nations divided by a common language (Woller and Dunford, 1999). While the welfarists, anxious to serve the poorest people focus on the depth outreach, the institutionalists, seeking for financial viability, will prefer instead the breath of outreach.

Thus we wonder whether this dichotomous view of microfinance has its reason for being. Is the "best practices" recommended by the institutionalists camp are the only and unique methods for managing these microfinance institutions. According to Otero and Rhyne (1994), practitioners of microfinance, both approaches are the two ends of a spectrum within which different forms of microcredit programs fall. Therefore, there is not a single model of microfinance able to solve the various problems of development of the poor people around the world. In fact, according to Bhatt (1997) there is a place for different kinds of microcredit programs. This view is also shared by Woller and Warner (1999).

RESEARCH FRAMEWORK, SAMPLE (DATA COLLECTION) AND VARIABLES

The analytical framework we have chosen to conduct our study is that of Middle East and North Africa (MENA) region while selecting ten countries: Egypt, Jordan,

Lebanon, Morocco, Palestine, Sudan, Syria, Iraq, Tunisia and Yemen. We chose this framework because it is composed of developing countries where several successful experiments have been undertaken. As we mentioned previously, microfinance is the hope for these poor countries. Therefore, it is interesting to know whether in countries where microfinance plays an important role in the economy, MFIs are able to fulfill their dual mission and do not face a possible trade-off between profitability and social outreach.

The MFIs data are collected from individual institutions as reported to mix market (www.mixmarket.org), a non-governmental organization whose object is to promote the exchange of information on the microfinance sector around the world. This database collects information on 73 MFIs operating according to international standards from ten countries in the MENA region. This information, primarily financial in nature, is incomplete. Therefore, additional data were collected from the World Bank, World Development Indicators (WDI) and World Governance Indicators (WGI), the International Monetary Fund (IMF), various recent reports of Planet Rating, some additional reports of mix "Social Performance Standards" (SPS) and annual reports specific to MFIs.

We finally selected 64 MFIs with the highest levels of information transparency regarding their social and financial performance (three to five diamonds). The sample is composed of 14 MFIs from Egypt, 8 from Jordan, 10 from Morocco, 1 from Tunisia, 6 from Yemen, 3 from Lebanon, 8 from Palestine, 3 from Syria, 1 from Sudan and 10 from Iraq. It covers three North African countries and seven middle-east countries. The latest information for the selected microfinance institutions dates from 2008 to 2010. So our analysis will be done on this period of three years (Table 1).

From the selected sample, we will conduct an analysis of the relationship between depth of outreach and financial sustainability of microfinance institutions. The relationship between these two concepts will enable us to confirm whether or not MFIs face a trade-off. Thus, a negative link attest the presence of a trade-off in accordance with the Trade-off theory, which states that the inclusion of Corporate Social Responsibility (better social performance) involves additional financial costs, thus creating a competitive disadvantage (Friedman, 1970), which entail bad financial performance. However, a positive link may suggest a synergy and finally a neutral association refers to the absence of meaningful relationship.

Our study will be built on that made by D'Arcimoles and Trebucq (2002) in their article: The corporate social performance-financial performance link: evidence from France. We made a parallel between the FP-SP relationship in a corporate and the FP-DO relationship in MFIs. Indeed, in our research we aim to determine whether Middle East and North Africa MFIs can achieve together their two main objectives or a trade-off exists. Hence, to translate financial targets we use the financial

Table 1. Characteristics of surveyed countries in 2010.

Country	Population (millions)	Average GNI per Capita, PPP (\$)	Population below national poverty line (%)*	No. of MFIs operating according to international standards	No. of borrowers in these MFIs (thousands)	Penetration rate
Egypt	83	5,690	16.7	16	795,306	24
Jordan	6	5,840	16.7	8	197,819	54
Iraq	31	3,340	N/A	12	74,359	3
Lebanon	4	13,230	N/A	3	37,647	12
Morocco	32	4,450	N/A	10	807,090	36
Palestine	4	N/A	N/A	8	34,782	10
Sudan	42	2,000	N/A	1	3,969	2
Tunisia	10	7,820	24.7	1	191,000	46
Yemen	24	2,340	41.8	8	32,895	3
Syria	21	4,620	N/A	3	38,999	3

N/A = Not available. Source: Benchmarking Arab microfinance, World Development Indicators, Human Development Report.

performance and for social goals we have chosen the depth of outreach (meaning the levels of poverty reached) rather than social performance. Indeed, the depth of outreach is defined as efforts to expand microfinance services to populations not served by financial institutions (Lafourcade et al., 2005).

As for social performance, rather they are defined as the effects of the institution on the social conditions of its customers: effect on living standards (poverty), housing, health, education, etc. (Lapenu et al., 2004). Therefore, the depth of outreach allows us to better understand the social objectives of MFIs (providing financial services to poor, excluded from traditional banking system).

To carry out our study, we have retained two social outreach indicators, three financial performance indicators and five control variables.

Social outreach indicators

The outreach indicators include the number and the type of clients that the MFI was able to reach. In this analysis, we focus on the depth of outreach, so on the type of clients served and their poverty level rather than the number of clients that have been reached. The proxies for depth of outreach used in various studies (Cull et al., 2007; Gonzalez and Rosenberg, 2006; Olivares-Polanco, 2005) are percentage of female borrowers and the average loan size per borrower / GNI per capita. Indeed, according to Hamed (2004), microcredits programs have a positive impact not only on the micro-enterprise income but also on the female borrowers. Through microcredit, women can achieve multiple productive activities and diversify their sources of income more than men (Soulama, 2005). Thus, a higher percentage of female borrowers also indicates more depth of outreach, because lending to women generally is related lending to the poor

(Lensink et al., 2011).

As regard to the average loan size per borrower / GNI per capita, although it is relevant and can compensate for differences in monetary units, it is however debatable. Indeed, per capita GNP exceeds in some countries the poverty-line income (Schreiner, 2001). As a result, it no longer represents the correct proxy. To resolve this problem, we borrowed the index developed by Adair and Berguiga (2010) which consists of comparing the average loan size per borrower based on Gross National Income (GNI) per capita (AL) and the two poverty-lines income (1 and 2 \$per day). Thus, this social outreach index, identifying more precisely the target clients of the MFI, is a qualitative variable with three modalities, which takes respectively 1 if $AL < PL1$: the MFI targets the very poor, 2 if $PL1 < AL < PL2$ AL: the MFI targets the poor and 3 if $AL > PL2$: the MFI targets the non-poor. Consequently, the lowest average loan size per borrower based on Gross National Income (GNI), the most a MFI is moving towards the very poor.

Financial performance indicators

Concerning the financial performance indicators, we will use three accounting variables used in banks and other commercial institutions and by extension in MFIs. The commonest measures of profitability are Return on Assets (ROA), which reflects organization's ability to use its assets productively and Return on Equity (ROE), which measures the returns produced for the owners as well as the operational self sustainability (OSS). A microfinance institution is profitable and sustainable if it has a positive return on assets and equity and an operational self-sufficiency over 100%. Moreover, it also means that the MFI has managed to have a positive net income, disregarding donor support to compensate

Table 2. Descriptive statistics.

Variable	Definition	Abbreviation	Mean	Min	Max
Social range index	Average loan size per borrower based on Gross National Income (GNI) per capita (AL) compared to the two poverty-lines income (1 \$ and \$ 2 per day)	SRI	1.45	1	3
Percentage of female borrower	Number of active women borrowers / Number of Active Borrowers	PFB	65	18	100
Return on assets	Net operating income, net of taxes/average total assets	ROA	9.32	-14.01	15.46
Return on equity	Net operating income, net of taxes/average total equity	ROE	14.34	-382.27	94.90
Operational self-sufficiency	Financial revenue/(financial expense + net loan loss provision expense + operating expense)	OSS	1.32	0.07	3.94
Portfolio at risk	Outstanding balance, loans >30 days overdue/GLP	RISK	6.32	-14.01	31.68
Age	Age of MFI in years	AGE	6.32	4	17
Type	NGO vs. NON NGO	TYPE	0.84	0	1
Size	MFI's total number of borrowers	SIZE	14887	448	368333
Lending methodology	Group Lending vs. Individual Lending	LM	0.89	0	1

potential operational losses. Larger values of these three accounting measures refer to more efficient institutions.

Control variables

As for control variables, we will consider the following: the MFIs size, measured primarily by the number of borrowers and the risk, measured by the quality of portfolio. The standard international measure of portfolio quality in banking is portfolio at risk (PAR) beyond a specified number of days. In microfinance, 30 days is a common breakpoint. Indeed, $PAR > 30$ is a key performance indicator for the MFI that reflects the *risk* associated with *non-repayment of loans* and determine future revenues and thus the ability of an institution to maintain and expand its services. Thus, the highest the $PAR > 30$ is low; the more portfolio quality is good. We will include three other variables: age, type of microfinance institution (NGO vs. non-NGO) and the lending methodology which are important data to consider as shown by Cull et al. (2007) and Olivares (2003) (Table 2).

RESEARCH METHODOLOGY

By performing this regression, we want to know whether or not alink (positive, negative or neutral) exists between the financial performance and the depth of outreach of MFIs and the presence of trade-off. In accordance with D'Arcimoles and Trebucq (2002), we will set two hypotheses while assuming the existence of a

relationship between the financial performance and the depth of outreach. We formulate thus our first hypothesis while referring to the "slack resources theory" which states the positive impact of good financial performance on the social performance of a company. Our first hypothesis is:

H_1 : Higher financial performance leads to a greater depth of outreach, *ceteris paribus*.

In order to test this hypothesis, we carry out a multiple regression including lags as in D'Arcimoles and Trebucq (2002) model to address the endogeneity problems. Endogeneity implies the existence of variables in the error term that are correlated with the explanatory variables previously assumed to be exogenous. This correlation false assumption of orthogonality of residuals, which biases the coefficients of these exogenous variables. To correct this bias we need to find instrumental variables that must firstly be correlated with the variables suspected of endogeneity and on the other hand, strictly orthogonal to the random deviation (Baltagi, 1995). Furthermore, these instrumental variables must not be directly correlated with the dependent variable. We have therefore adopted, as D'Arcimoles and Trebucq (2002) recommended, the theoretical solution that consists in taking as instrumental variables, the variables suspected of endogeneity delayed by a period. So, we will have only two years for each MFI. As regard to this limited period and number of MFIs, we are going to use pooled data. We will therefore assume that there is no specific effect of time. Thus our model should include 128 observations (64 MFIs observed in two consecutive years). Our estimates are more accurate resulting in a more robust model.

To test our first hypothesis, we considered as dependent variable the depth of outreach indicators (the percentage of female borrowers and the social range index). As for independent variables, they include return on assets, return on equity and operational self-sufficiency. Finally, the type, size, age, risk and

Table 3. Correlation matrix.

	OSS	ROA	ROE	PFB	SRI	RISK	SIZE	AGE	TYPE	LM
OSS	1									
ROA	0.465***	1								
ROE	0.340***	0.238***	1							
PFB	-0.362	-0.370	0.102	1						
SRI	-0.095	0.340	0.502	-0.245**	1					
RISK	-0.039*	-0.285***	0.085	-0.349	0.126	1				
SIZE	0.078	0.070	0.021	-0.542	-0.255	-0.174	1			
AGE	0.212	0.091	0.183	0.068	0.018	0.062	0.452***	1		
TYPE	0.034	0.305**	0.058	-0.234	0.285***	0.215	-0.143	0.476	1	
LM	0.315	0.258	0.114	0.191***	0.285	0.116	0.157	0.071	0.141	1

*Significant at 10% level, ** Significant at 5% level, *** Significant at 1% level.

lending methodology will be used as control variables.

The econometric model corresponding to our analysis, with t = 2009 and 2010 and i = 1 to 64 is:

$$OUTREACH_{t,i} = f(FP_{t-1,i}, RISK_{t-1,i}, SIZE_{t-1,i}, AGE_{t-1,i}, TYPE_{t,i}, LM_{t-1,i}) \quad (1)$$

Where: $OUTREACH_{t,i}$ = Proxies for the depth of outreach [Percentage of female borrowers (PFB) and the social range index (SRI)], $FP_{t-1,i}$ = Financial performance for the previous year, $RISK_{t-1,i}$ = Proxy for the MFI risk in the previous year (PAR > 30: Portfolio at Risk > 30), $SIZE_{t-1,i}$ = Proxy for the MFI size for the previous year (number of borrowers for the previous year), $AGE_{t-1,i}$ = Age of the MFI in the previous year, $TYPE_{t,i}$ = Type of the institution (dichotomous variable: NGO vs. non-NGO), $LM_{t-1,i}$ = Lending methodology (dichotomous variable: Group vs. Individual).

As for our second hypothesis, it will be formulated while referring on the "good management theory", as in D'Arcimoles and Trebucq (2002) model. Our second hypothesis will be:

H₂: A greater depth of outreach leads to higher financial performance, ceteris paribus.

This second hypothesis will be tested in the same manner as the first but using financial performance measures as dependent variable and indicators of the depth of outreach as independent variable. Control variables will therefore remain the same. The econometric model corresponding to our analysis with t = 2009 and 2010 and i = 1 to 64 is:

$$FP_{t,i} = f(OUTREACH_{t-1,i}, RISK_{t-1,i}, SIZE_{t-1,i}, AGE_{t-1,i}, TYPE_{t,i}, LM_{t-1,i}) \quad (2)$$

All models are estimated by generalized least squares (GLS) using the STATA software rather than ordinary least squares (OLS) since we have included panel data in our models.

RESULTS AND DISCUSSION

Before proceeding with the regression analysis we calculate the correlation coefficients to give us a first look at the relationship that may exist between our variables (Table 3).

The various measures of financial performance ROA, ROE and OSS are all positively related to each other (highly significant correlation coefficients ranging from 0.238 to 0.465). The two indicators of the depth of outreach are in contrast negatively related (correlation coefficient is negative: -0.245). This is justified by the fact that a higher depth of outreach is associated with a higher percentage of female borrowers but lower SRI. At first glance, there appears a linear neutral relation between financial performance and the depth of outreach. Indeed, we do not found significant correlation coefficients between the different indicators of financial performance and those of the depth of outreach. Regression allows us to test whether these initial results are sufficiently robust.

The purpose of the regression analysis is to detect the existence of a relationship between the financial performance and the depth of outreach. This will allow us to determine the mutual impact of these concepts and whether MFIs face a trade-off or not, between providing services to the poor and achieving financial sustainability. While testing our first hypothesis, we obtain the results presented in Table 4.

While using the percentage of female borrowers as an indicator of the depth of outreach, the P-value ($Prob > chi2$) is less than 0.05, the significance level chosen. Therefore, the models are significant overall and we reject our null hypothesis. So we cannot affirm that better financial performance lead to a higher depth of outreach. The impact of FP on the DO is not positive, but it is not necessarily negative since we did not found any significant coefficient that can attest. There is no significant relationship between depth of outreach indicators and financial performance measures.

The variables that are important in determining the percentage of female borrowers are the MFI size, MFI type and lending methodology (group lending). Thus, the MFI size has a negative impact on his desire to serve female borrowers. The largest MFIs (dealing with large number of active borrowers) would tend to be less anxious to serve female borrowers and therefore a

Table 4. Regression with outreach indicators as dependent variable.

	PFB			SRI		
ROA		-0.294			3.346	
ROE			0.096			0.489*
OSS	-0.804			-0.562**		
RISK	-0.007	-0.034	0.665	1.147	1.690	0.902
SIZE	0.348	-0.112*	-0.421**	0.009	0.018*	0.002
AGE	1.235	1.286	1.371	6.438	9.567	6.123
TYPE	21.511*	13.433*	16.453 *	12.392	5.642	29.132
LM	0.348***	0.876**	0.974**	0.298***	0.967***	0.459
Constant	68.314***	56.433***	49.208***	14.437	65.116	55.081
Prob>chi2	0.038	0.028	0.043	0.423	0.732	0.234
R ²	0.534	0.765	0.767	0.024	0.072	0.032

*Significant at 10% level, ** Significant at 5% level, *** Significant at 1% level

mission drift observed as the MFI grows. Indeed, these MFIs move towards a higher target market and away from reaching vulnerable populations. As for the positive link PFB / TYPE, it means that the NGOs status is consistent with the microfinance mission (Boye et al., 2006). The institutional type influences the MFIs orientation that target primarily poor households (mostly women) and seek for greater social impact. These results confirm the NGOs effect put forward by proponents of welfarists approach and identified by previous work such as Adair and Berguiga (2010), Cornée (2007) and Gutierrez-Nieto et al. (2005) employing different method. With regard to the lending methodology (group lending), a positive effect has been identified, reinforcing this technical innovation put forward by the welfarists.

Our results show an increasingly targeting of female borrowers across the group lending methodology. Through their groups usually composed of 3 to 10 people, MFIs become more efficient and socially able to reach the largest number of female borrowers and this because the group lending is usually considered as a 'female' method (D'Espallier et al., 2009). The basic argument behind lending to women is that they are good credit risks, are less likely to misuse the loan, and are more likely to share the benefits with others in their household, especially their children (Garikipati, 2008). The solidarity lending methodology appears to boost social cohesion among its women clients. In addition, this methodology implies economies of scale and influences the success of MFIs (Navajas et al., 2003). Most of the work that has studied the impact of the lending methodology on MFIs performance (Adair and Berguiga, 2010; Mersland and Strom, 2009; Cull et al., 2007 in Aghion and Morduch, 2005) have shown that group lending has a positive impact on the social performance.

When using instead the SRI as an indicator of the depth of outreach, the P-value (*Prob> chi2*) is well above 0.05. Therefore we do not reject our null hypothesis and the models are not also significant as a whole. The low

values of R² confirm this fact. Models for which we use the SRI as a proxy for depth of outreach have low explanatory power.

Testing our second hypothesis gave the results shown in Table 5. When using OSS and ROE as measures of financial performance, the P-value models are well above 0.05. Therefore, we cannot reject the null hypothesis and the models are not also significant as a whole. In contrast, when we use ROA as an indicator of financial performance, the Prob> chi2 is less than 0.05. We therefore reject the null hypothesis which states that better financial performance generate a depth of outreach. Good financial performance did not have a positive impact on the depth of outreach. This impact is still negative because we did not find a significant coefficient that attests.

We detected the risk as the only variable that can strongly influence the financial performance of MFI (the correlation coefficient is negative and statistically significant at 1%). This negative relationship attests that a higher portfolio at risk (the risk measure used) would block good financial results. MFIs can therefore be concerned to improve the portfolio at risk to ensure their sustainability.

This reveals the existence of a trade-off between improving the portfolio at risk (which implies the search for better financial performance) and better targeting of the poorest populations (better depth of outreach). Indeed, by seeking to minimize the risk, MFIs move a part the poorest people because they are a priori more risky. However, this mission drift has no reason to be because we did not find significant relationship that can demonstrate a negative association between risk and the various indicators of depth of outreach.

Conclusion

This study attempted to answer an important question in the microfinance field: if there is indeed a trade-off

Table 5. Regression with financial performance indicators as dependent variable.

	OSS		ROA		ROE	
PFB	-0.041		-0.002		0.007	
SRI		-0.038		0.007		0.094
RISK	-0.532*	-2.180**	-0.315**	-0.356***	-1.226	-0.362
SIZE	-0.013	-0.017	-0.005	-0.002	-0.005	-0.006
AGE	1.325	0.855	0.234	0.005	2.664	7.125***
TYPE	9.852	5.548	5.122	4.865	-12.466	-8.765
LM	0.134	0.289	0.145	0.421	0.532	0.576
Constant	73.234***	97.535***	-3.457	-4.432	-41.834	-44.544***
Prob>chi2	0.345	0.243	0.004	0.002	0.479	0.176
R ²	0.018	0.115	0.434	0.556	0.045	0.088

*Significant at 10% level, ** Significant at 5% level, *** Significant at 1% level.

between financial performance and the depth of outreach (social performance) and therefore to know the validity of mission drift. The analytical framework chosen is that of the Middle East and North Africa (MENA) region, where it is crucial to know whether the hopes raised by MFIs in poverty reduction have its reason of being. To test our hypotheses on the MENA region data, we estimated two types of models while referring to D'Arcimoles and Trebucq (2002) study dealing with the link between corporate financial performance and social performance in a French context.

In accordance with the correlation coefficients we found, the results that flow from our regressions show a link neutral between the financial performance and the depth of outreach. Indeed, despite the fact that we have rejected all our hypotheses, we did not found significant negative relationship between the financial performance and the depth of outreach.

Nevertheless, we could detect the existence of a trade-off between these two concepts that can be done by the MENA region MFIs. Indeed, while seeking to improve their portfolio at risk to have better financial performance MFIs tend to deviate from the most disadvantaged populations. This mission drift is not justified. Our results did not prove that having good financial performance and serving the poorest were contradictory. Although the pursuit of a better portfolio at risk is laudable, we have not detected that it is associated with lower depth of outreach and therefore with poorer clients.

The variables that can influence the percentage of women borrowers are MFI size, MFI type and lending methodology (group lending). Our results indicate that the MFI size has a negative impact on his desire to serve female borrowers. The institutional type (NGOs) influences the MFIs orientation that target primarily poor households (mostly women) and seek for greater social impact. With regard to the lending methodology (group lending), our results show an increasingly targeting of female borrowers across the group lending methodology. Through their groups usually composed of 3 to 10

people, MFIs become more efficient and socially able to reach the largest number of female borrowers and this because the group lending is usually considered as a 'female' method (D'Espallier et al., 2009). Our study indicates also that risk plays an important role in determining social performance. The question is how to improve its portfolio at risk in order to show better financial results. As we have seen, remove the poorest people do not seem to be the only solution nor the best. Poor people can post good repayment rates. For example, in early 2007, Grameen Bank reported almost 7 million borrowers 96% of them poor, illiterate women from remote villages. And since 1976, it says, \$6 billion has been lent, with a repayment rate of 98%.

Finally, although we recognize that the trade-off between financial performance and the depth of outreach (social performance) does exist, it does not mean that achieving the double bottom line, the ultimate promise of microfinance is impossible although it is difficult to achieve. Microfinance institutions can simultaneously achieve their financial goals (to be financially viable) and their social objectives (providing financial services to the poor, excluded from traditional banking system). These findings agree with those of Cull et al. (2007) that also attest the existence of a trade-off between profitability (financial performance) and serving the poor (depth of outreach). Their results showed that even though they are probably very few, some MFIs have been able to reconcile the good financial results with a good social impact.

REFERENCES

- Adair P, Berguiga I (2010). Les facteurs déterminants de la performance sociale et de la performance financière des institutions de microfinance dans la région MENA: une analyse en coupe instantanée. *Région et Développement*. 32: 91-119.
- Armendáriz B, Jonathan M (2005). *The Economics of Microfinance*. Cambridge, MA: MIT Press.
- Baltagi BH (1995). *The Econometrics of Panel Data*. John Wiley & Sons.
- Bhatt N (1999). *Delivering Microfinance in Developing Countries*:

- Controversies and Policy Perspectives. *Policy Stud. J.*, 29: 319-333.
- Boye S, Hajdenberg J, Poursat C (2006). *Le guide de la microfinance: microcrédit et épargne pour le développement*. Paris : Éditions d'Organisation, p. 304.
- Cornée S (2007). Une proposition d'évaluation conjointe des performances sociales et financières en microfinance. Document de travail SPI 3. CERISE.
- Cull R, Demirguç-Kunt A, Morduch J (2007). Financial performance and outreach: a global analysis of leading microbanks. *Royal Economic Society*. 517: 107-133.
- De Briey V (2005). Plein feu sur la microfinance en Regards Economiques, 28: 1-14.
- D'Espallier B, Guérin I, Mersland R (2009). Women and repayment in microfinance. Working Paper. Available online at: <http://www.microfinancegateway.org/gm/document1.9.40253/Women%20and%20Repayment%20in%20Microfinance.pdf>
- Garikipati S (2008). The impact of lending to women on household vulnerability and women's empowerment: evidence from India. *World Dev.*, 12: 2620-2642.
- Gonzalez A, Rosenberg R (2006). The State of Microfinance. Outreach, Profitability and Poverty: Findings from a Database of 2600 Microfinance Institutions. Paper presented at the conference "Access to Finance: Building Inclusive Financial Systems" Washington D.C. World Bank Group Brookings Institution.
- Gutierrez Nieto B, Serrano-Cinca C, Molinero CM (2005). Microfinance Institutions and Efficiency. *Omega Int. J. Manage. Sci.*, 35: 131-142.
- Hamed Y (2004). Microcrédit et financement de la microentreprise au Maghreb. Thèse de Sciences économiques. Université Paris 12.
- Labie M (1999). La microfinance en questions: Limites et choix organisationnels. Bruxelles: Editions Luc Pire, p. 116.
- Lafourcade AL, Isern J, Mwangi P, Brown M (2005). Etude sur la Portée et les Performances des Institutions de Microfinance en Afrique. Available online at: http://www.mixmarket.org/medialibrary/mixmarket/MIX_Etude_Afrique_Fr.pdf.
- Cécile L, Zeller M, Martin G, Chao-Béroff R, Koenraad V (2004). Performances sociales: Une raison d'être des institutions de microfinance et pourtant encore peu mesurées. *Quelques pistes*. *Monde en développement*, 126 : 51-68.
- Mersland R, Strøm R (2009). Performance and governance in microfinance institutions. *J. Bank. Financ.*, 4: 662-669.
- Friedman M (1970). The Social Responsibility of Business is to Increase its Profits. *The New York Times Magazine*.
- Morduch J (2005). The microfinance promise. *J. Econ. Lit.*, XXXVII: 1579 -1614.
- Morduch J (2005). The microfinance schism. *World Dev.*, 4: 617 -629.
- Navajas S, Conning J, Gonzales-Vega C (2003). Lending Technologies, Competition and Consolidation in the Market for MicroFinance in Bolivia. *J. Int. Dev.*, 15: 747-770.
- Olivares-Polanco F (2005). Commercializing microfinance and deepening outreach: Empirical evidence from Latin America. *J. Microfinance*, 7: 47-69.
- Otero M, Rhyne E (1994). *The new world of microenterprise finance: Building healthy financial institutions for the poor*. West Hartford. CT: Kumarian Press.
- Schreiner M (2001). Seven Aspects of Loan Size. *J. Microfinance*, 2: 27-47.
- Soulama S (2005). Microfinance, pauvreté et développement. Agence Universitaire de la Francophonie. Archives contemporaines.
- Trebucq S, D'Arcimoles CH (2002). The Corporate Social Performance-Financial Performance Link: Evidence from France. *Univ. Bordeaux*. pp. 02-01.
- Von Pischke JD, Adams DW, Donald G (1983). *Rural financial markets in developing countries: their use and abuse*. Baltimore; London: Published for the Economic Development Institute of the World Bank by the Johns Hopkins University Press.
- Woller GM, Dunford C, Woodworth W (1999). Where to microfinance. *International J. Econ. Dev.*, 1: 29-64.
- Yaron J (1994). What Makes Rural Finance Institutions Successful? *World Bank Res. Observer*, 9: 49-70.