Sustainability of Microfinance Institutions in Togo

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List of abbreviations and acronyms

AMAF	Africa Microfinance Action Forum
BCEAO	Banque Centrale des Etats de l'Afrique de l'Ouest
BOAD	Banque Ouest Africaine de Développement
CASIMEC	Cellule d'Appui et de Suivi des Institutions Mutualistes ou Coopératives d'Epargne et/ou de Crédit
CGAP	Consultative Group to Assist the Poor
DFSs	Decentralized Financial Systems
FUCEC	Faitière des Unités Coopératives d'Epargne et de Crédit
IMCEC	Institutions Mutualistes ou Coopératives d'Epargne et de Crédit
MDGs	Millennium Development Goals
MFIs	Microfinance Institutions
OSS	Operational Self-sufficiency
ROA	Return on Assets
ROE	Return on Equity
UMOA	l'Union MonétaireOuestAfricaine
USAID	United States Agency for International Development

Abstract

For several years now, microfinance has become an important tool in the fight against poverty. That is why this study sought to analyse the sustainability and success of the microfinance institutions (MFIs) in Togo, and to identify explanatory factors for this sustainability and success. The study is based on data obtained from 63 MFIs,and covering the period from 2002 to 2008. It used two indicators to measure MFI financial sustainability: the operational self-sufficiency (OSS) and the subsidy-dependence index (SDI). It found that, overall, the MFIs studied were not financially high-performing and still depended on subsidies: their OSS was, on average, below acceptable standards. Several factors were found to be statistically significant in terms of explaining the variation in those MFIs' performance. Among them are the MFIs' number of beneficiaries, the number of years they have been in business, their labour productivity, observance of prudential rules, and the existence of a relationship between the MFIs and banks.

Key words: *Sustainability, operational self-sufficiency (OSS), subsidy-dependence index (SDI), Microfinance institutions (MFIs).*

1. Background to the study and statement of the problem

Background to the study

In a number of sub-Saharan African countries, the emergence of microfinance institutions (MFIs) was remarkable during the 1990s following the demise of development banks and commercial banks, whose mode of functioning hardly promoted entrepreneurial activities on the part of small economic operators, especially those operating in rural areas (Nsabimana, 2002). To illustrate the emergence of MFIs, they rose from 618 in 1997[1] to 3,316 in 2006, which is a 20.8% annual increase on average (Wele, 2008). Within the framework of the Millennium Development Goals (MDGs) and the fight against poverty, the year 2005 was declared the "International Year of Microcredit" by the United Nations. It is this interest in the microfinance sector that fostered the development of "decentralized financial systems" (DFSs). These grant credit essentially to the loan applicants who cannot get it from the traditional banking system. The majority of these applicants are microenterprises.

Taking full advantage of the notoriety of Professor Muhammad Yunus[2], who created, in 1974, the Grameen Bank in Bangladesh, the microfinance sector has undeniably led to the birth and development of numerous microenterprises whose founders did not have access to the traditional banking system, for obvious reasons, namely high transaction costs, especially due to the low amount of credit applied for, and the lack of loan guarantees. Another factor behind the traditional banks' low level of participation in financing small enterprises is the fact that micro and small enterprises do not usually have a legal status, and are thus not in a position to produce the administrative documents required, and, even more worryingly, can disappear any time without the lending institution being able to take legal action against them.

The microfinance sector has spread in countries where there are few banking facilities, which is the case in most countries in Africa, Asia, Latin America, and Eastern Europe, where, in some cases, less than 20% of the population hold a bank account.

However, to ensure that microfinance does not deviate from its original mission, that of enabling the poor populations easy access to financial services, particular attention has been paid to the MFIs' capacity to be sustainable in their activities aimed at improving these populations' well-being, and to the assessment of these activities by using impact measures. So, drawing lessons from the failures of the previous development structures, and in view of the economic and social stakes encapsulated in the microfinance sector's mission, emphasis has been laid on MFI sustainability. The theoretical arguments for this sustainability have been corroborated by several decades of field experience in the

sector. Indeed, the successes recorded by some MFIs throughout the world have helped to give a fresh look at the classical banking logic. According to this logic, lending to micro-entrepreneurs is a non-profitable move because of the very high cost of small loans and the lack of guarantees, a lack considered to be the source of default risks. However, today, there is unanimity among authors (e.g., Otero and Rhyne, 1994; Robinson, 1998; Christen, 1998; Morduch, 1999) about the following assertion: "Not only is it possible to lend to poor households and microenterprises, but also the technology that is specific to microfinance allows this lending to happen on commercial and sustainable bases" (Rosengard, 2004: 28). For Khandker (1998), microfinance can be a development tool that is more profitable in rural area than the alternative, including the conventional financial intermediaries. Using data on 124 MFIs from 49 countries, we found that it was possible to make profits while at the same time serving the poor. To measure MFI sustainability, the authors used the traditional ratios, such as the operational self-sufficiency (OSS) and the return on assets (ROA).

Statement of the problem

In view of its dynamism observed over time, the microfinance sector in Togo is today an important link (in the economy) whose strengths, weaknesses, and opportunities need to be studied. Thus, it was only appropriate for the present study to seek to assess the achievements and future prospects of the MFI sector in Togo. The study's results are expected to show that the government should not ignore the microfinance sector while devising its development policies because the sector is, to date, the best channel for credit for destitute segments of the population.

Today, the microfinance sector is the subject of sustained attention, not only from the traditional stakeholders (NGOs and savings and cooperative societies), but also from the other economic actors (commercial banks, international institutions, development organizations, and insurance companies) and governments. In the case of Togo, for example, the National Microfinance Strategy Paper[3] states that "the development of the microfinance sector is considered an essential pillar of the strategy to fight poverty and the implementation of various policies." The sector has seen remarkable development: in September 2009, it boasted a clientele estimated at 748,668 customers and 400,000 active borrowers (20% of whom were micro and small enterprises); its financial needs, in the form of loans, amounted to more than CFAF 50 billion, and it had created 4,500 direct jobs. Despite all this, microfinance institutions are, on the whole, faced with increasingly acute financial problems. A combination of inadequate funding and the irregularity in receiving the financing granted to them increases the MFIs' dependence on foreign donors, which in turn hinders long-term planning and the realization of projects with a high impact on development. This causes the MFIs to adjust their strategies and activities to the donors' intervention philosophy. This instability in financial resources limits the MFIs' sustainability, as they do not have the means to keep the competent staff they need to achieve their goals. Further, the MFIs' dependence on their donors' strategies reduces their field efficiency and the impact of their interventions on the living conditions of grassroot communities.

Against such a background, the issue of sustainability of MFIs in Togo becomes particularly relevant. This is because, not only are their gains to be maintained, but they

also have to be high-performing and viable so as to sustain their development activities and protect the stakeholders who depend on them. That is the main justification for the present study. In view of the important role the microfinance sector is expected to play in the fight against poverty, there is need to raise the issue of MFIs' sustainability and to identify the factors that are likely to contribute to enhancing this sustainability or to detract from it. Hence the following research question: Are the MFIs in Togo sustainable both operationally and financially? Research on the sustainability of MFIs in Togo has involved more descriptive analyses than analytical ones. As a result, the explanatory factors for their operational and financial sustainability have not been identified yet. It is this gap that this study sought to fill.

Objectives of the study

The study's aim is to examine the sustainability of the microfinance institutions in Togo. Its specific objectives are:

- To analyse the sustainability of microfinance institutions in Togo; and
- To determine the influence of governance mechanisms and other factors on this sustainability.

Research hypotheses

The study's hypotheses are:

- Microfinance institutions in Togo are financially sustainable.
- Governance mechanisms vary but produce a positive effect on MFI sustainability.
- For-profit microfinance institutions are more sustainable than not-for-profit MFIs or the NGOs.

The significance of the study

Given the significant number of economic actors who depend on the MFI sector, a better understanding of the explanatory factors for MFIs' sustainability and success is likely to protect these economic actors and to assist in the implementation of policies aimed at promoting their activities. More specifically, the present study will help to identify the promotion and resistance factors that limit MFI sustainability. Its results will enable MFIs to enhance their performance in order for them to face an increasingly competitive market and to resist the pressure on interest rates and thus stay sustainable. Finally, the same results are likely to enlighten decision makers and sensitize them on the necessity for putting in place or strengthening already defined strategies within the current framework of developing or implementing programmes already contained in the Togo Poverty Reduction Strategy Paper (PRSP), and the need to strengthen the plan of action for the National Strategy for Microfinance (Stratégie Nationale de Microfinance, SNMF).

2. Literature review

Microfinance as explained by contract theories

For a long time, numerous micro-entrepreneurs have been rejected by the traditional banking system and have had to turn to alternative sources of financing. This section aims, first, to understand why, until recently, commercial banks did not want to grant credit to micro-entrepreneurs with modest income or be involved in small-scale activities: and, second, to look at the alternatives that are available for small producers. The section will refer to contract theories, which form the traditional theoretical framework used in the literature to explain the phenomenon of excluding micro-entrepreneurs from the credit market and the emergence of alternative modes of financing.

In contract theories, emphasis is on the contracts between individuals. The contract, which is a way of coordinating an alternative economic market activity, is characterized by an agency relationship: one or several people (the principal) employ(s) one or several other people (the agent(s)) to execute, in his/her/their name, a task that involves delegating some decision making power to the latter (Jensen and Meckling, 1976).

Any agency relationship often leads to an information asymmetry between individuals because, on the one hand, the agents usually know more about the task to be accomplished than the principal and, on the other hand, it is often difficult and expensive for the principal "to appreciate the efforts made by an agent in the realization of his/her obligations and, as a result, to specify, by contract, what the latter must be" (Charreaux et al, 1997). Yet, the same theories equally assume that individuals have substantive rationality: the agents will seek to maximize their preference. In addition, they are supposed to be opportunists. The agents are thus inclined to benefit from their informational advantage in order to pursue their own personal interests at the expense of those of the principal. The banks' refusal to finance, until recently, micro-entrepreneurs stems from the screening problem and the contract enforcement problem (Hulme and Mosley, 1996).

The credit-based relationship can indeed be considered as an agency relationship by which the lender (the principal) "rents" part of his/her wealth to micro-entrepreneurs (the agents) who commit themselves to reimbursing the principal and paying him/her interest charges at the expiration of the contract and under the conditions set in the contract. An agency problem arises because it is certain that in any credit-based relationship, the interests of the borrower and those of the lender differ: while the former is essentially concerned about the profitability of the borrowed capital, the latter is concerned about the borrower's solvency (Jullien and Pallanque, 1995) and the profitability of the borrowed money.

Since Stigler (1967), and especially Stiglitz and Weiss (1981), the imperfect functioning of the credit market has largely been demonstrated. It results from the existence of information asymmetries between the lenders (the principal) and the borrowers (the agents), thus rendering, before it has taken place, difficult the assessment of the applicant's quality (adverse selection risk) and, after it has taken place, the verification of the observance of the terms of the contract (moral hazard risk). That is why banks tend to "block" the interest rates at a cost that does not satisfy the demand. What follows from this is a situation of credit rationing.[4]

While it is true that any credit-based relationship is characterized by uncertainty, this is even greater in poor countries. Indeed, in developed countries, banks attempt to reduce the adverse selection risk by collecting data on the loan applicant, and to reduce the moral hazard risk by requiring collateral, both physical and financial, which will be seized in case of non-repayment. In poor countries, on the other hand, accounting books (when they exist) cannot provide the banks with reliable information on the potential clients' quality and solvency because most of the time a significant part of the sales are not declared. It is thus very difficult for the lenders to gather data capable of determining the debtors' quality. For the lenders, such a data collection process will lead to unnecessarily high costs, compared to the low amount of loan applied for. As a result, the adverse selection risk is a reality in poor countries. Moreover, the lenders cannot protect themselves from the moral hazard risk essentially for two reasons: First, the borrowers' poverty is such that they are not in a position to offer the physical collateral that is traditionally required by the financial institutions; and second, the judicial system in poor countries is usually too weak to play its role effectively (e.g., to recover the secured property, etc.). In view of all that is said above, it is only appropriate that alternative financing mechanisms should be put in place. According to Stiglitz and Weiss (1981), such mechanisms should reduce the information asymmetry that exists between economic agents.

It clearly transpires from the literature that microfinance institutions' sustainability is the most important condition that needs to be observed in the contract between lenders and borrowers. A sustainable institution must be able to manage the problems of information asymmetry and adverse selection risk. That is why an empirical study on the sustainability of the microfinance sector is necessary.

The notion of sustainability

What does the notion of sustainability encompass? For Schreiner (1998), it is difficult to measure it. Sustainability is a cross-sectional theme which enables us to refine our thinking about the sustainable performance of organizations. Achieving sustainability is both a medium and long-term goal.

Even if its application to microfinance is often reduced to its financial dimension, the notion of sustainability has a more encompassing meaning and presupposes a balance between its financial and organizational aspects.

Like the notion of corporate failure, the complexity of which has been highlighted by Langrand-Escure and Thielart (1997), sustainability has a multidimensional character arising from the many variables that are likely to explain it and from the interdependence between them. However, it seems that beyond this multiplicity of dimensions,

sustainability symbolizes the very essence of an organization. Indeed, according to the proponents of the systemic thesis, "the only goal pursued by an organization is its sustainability, and there are certain characteristics that are supposed to distinguish between efficient or high-performing organizations and those that are not" (Morin et al, 1994: 38).

The notion of sustainability is often perceived as a research theme that is relatively complex, while the study of it is, today, at the very heart of management science. This issue has been relatively little addressed in the literature, except for recent studies by Morin et al (1994), de Geus (1997a, 1997b) and Mignon (1998,1999, 2000, 2002), who have tackled it from several angles. However, it should be noted that before them there had been studies by Larçon and Reitter (1979) and Sutton (1990). This means that there is still much to be researched about organizational sustainability.

According to Morin et al (1994: 81), sustainability reflects "the degree to which stability and, ultimately, an organization's growth, stand the chance of being maintained in the test of time". Similarly, according to Arie de Geus, sustainability is achieved "when the company has, in the course of its history, managed to withstand the test of deep upheavals in its environment and to preserve, up to today, the most part of its identity" (de Geus, 1997a: 13-14). What can be learnt from these two convergent approaches is that sustainability is a reflection of the company's ability to maintain itself in business, and, beyond this, to sustain its growth rate in the long term. From a study done on a sample of companies which, from their past (several decades of existence), could be considered as sustainable, de Geus (1997a) pointed out "four principal elements that have characterized sustainable companies". They are:

- the sensitiveness to the environment, which has to do with the company's ability to learn from the environment and to adapt to it;
- the twin notions of cohesion and identity, which reflect the company's innate disposition to form itself into a community and to acquire its own personality;
- tolerance and its corollary, namely decentralization, which are the symptoms of the company's "ecological" conscience, that is, its ability to establish constructive links with other entities both within and outside; and
- financial prudence, which today appears to be a dimension of a company's indispensable ability to steer its expansion and its evolution" (de Geus, 1997a: 20).

In relation to microfinance institutions, a significant body of research has been carried out as part of empirical studies on sustainability in South America, in Asia, and Africa: Khan (1979), Bell (1990), Siamwalla et al (1990), Aleem (1990), Besley (1994), Yaron (1992a, 1992b, 1994), Chavez et al (1996), Navajas et al (2000), Schreiner (2001), Nawaz (2010), etc. Two indicators have emerged regarding MFI sustainability. Yaron (1994), in a study on MFIs in rural Indonesia and Bangladesh, used the following two measurement criteria: (i) financial autonomy, and (ii) penetration rate. It transpires from the literature (e.g.,Yaron 1992a, 1992b; Schreiner, (2001), Yaron and Schreiner, 1999; etc.) that a number of researchers have used the Subsidy Dependence Index (SDI) as an indicator of MFI sustainability.

Hulme and Mosley (1996), in their study of 13 MFIs from seven countries, used the following indicators to measure financial autonomy: real interest rate, six-month

outstanding loans, voluntary available savings and debt repayment incentive measures. So, low levels of arrears, a high repayment rate, and the existence of debt repayment incentive measures were all signs of a microfinance institution's performance. Moreover, in the same study the SDI ratio was used as an indicator of an institution's financial sustainability. The study also concluded that the MFIs that were financially sustainable were capable of significantly improving their beneficiaries' income.

There is often a direct relationship between the challenges of institutionalization and sustainability that are faced by MFIs, and those related to the quality of governance (CMEF, 2006). A study by Mersland and Strom (2007), which reviewed a sample of 266 MFIs from 57 countries, among them five UEMOA countries (Benin, Burkina Faso, Mali, Senegal, and Togo), found that there was a positive relationship between governance quality and MFI performance, a relationship which can serve as a lever to increase their efficiency (Labie, 2001).

It transpires from all that precedes that, beyond financial aspects, MFI sustainability is also a governance issue.

The governance of microfinance institutions

Governance is an important issue in microfinance. It is a recent issue in this sector, but it has become one of the central themes of discussion around MFI sustainability (Wele, 2009).

The literature shows that on a theoretical level, bank governance is usually studied from three points of view: Advice management, regulations and supervision, and market pressure. Recently, some specific studies on microfinance governance have been conducted. Consultancy reports, for their part, have followed a traditional approach by transposing bank governance and, to a certain extent, NGO governance, onto the microfinance sector. The aim of such studies was first of all to identify the governance mechanisms that influenced the microfinance institutions' financial or social performance. It is interesting to note that the same studies encountered difficulties in identifying the important mechanisms and that those they have recommended in the microfinance sector's guidelines are often of no significance. For example, Hartarska (2005) and Mersland and Strom (2009a) explored the effect of the mechanisms of traditional governance, such as the composition and size of the management board, managerial incentives, type of property, and regulations. However, the findings of the two studies are divergent, and both studies encountered difficulties in identifying a significant influence on the part of governance. Mersland and Strom (2009a) found that, when the position of chief executive officer and that of internal auditor reporting to the board were occupied by a woman, that led to better financial results, while the presence of international directors on the board led to an increase in costs and reduced the operational independence. Other governance variables were found to be non-significant or inconsistent. For its part, Hartarska's (2005) study provided data in favour of independent management boards with limited participation from the employees.

Hartaraska (2005) and Mersland and Strom (2009a) found that neither the regulations nor the structure of profit-oriented property improved MFI performance. Hartarska and Nadolnyak (2007) corroborated the observation that the regulations did not have any effect

on performance, while Mersland and Strom (2009) corroborated the observation that the type of MFI property was not very significant. Hartaraska (2005) and Mersland and Strom (2009a) concluded that governance had significance, but also showed that the traditional mechanisms of governance seemed to have less significance in the microfinance sector than in the enterprises operating on mature markets. The authors recommended that better data should be obtained and that a study on substitute governance mechanisms should be carried out in order to better understand the effect of corporate governance on the microfinance sector.

Another study was done by Mersland and Strom (2009b), starting from the assumption that governance mechanisms could be substituted with each other or could complement each other (Desmetz and Lehn, 1985). Mersland and Strom were thus looking for interconnections between governance mechanisms and expected to find different modes of governance in non-profit-making and the profit-making MFIs. Wele (2009), using an aggregate index of governance applied to the MFIs based in Benin, found that the quality of the governance system varied significantly depending on the institutional form observed. Nsabimana's (2009) article, which analysed the incidence of the banks' entry into the microfinance business against MFI governance and performance, showed that this entry could contribute to professionalizing management and control structures.

Characteristics of the credit market in Africa

Credit markets in Africa have been mainly characterized by instability in meeting the existing demand for credit. However, while for the informal sector, the main reason for this instability is inadequate resources, for the formal sector, it is an inadequate base for loans (Aryeetey, 1996). For Nissanke and Aryeetey (1995), credit markets are also characterized by information asymmetry, agency issues, and the fragile mechanisms of contract enforcement. These markets are mainly fragmented due to the fact that different segments serve clients with distinct characteristics.

According to Aryeetey et al (1997), there are two principal theoretical paradigms for explaining the existence of this fragmentation: one, an explanation based on the policy followed; and two, structural and institutional explanations. In relation to the first paradigm, the fragmented credit markets (on which privileged borrowers get credit at subsidized interest rates while others look for credit on the more expensive informal markets) develop because of repressive policies that increase the demand for credit. An unmet demand for financing leads to credit rationing through the use of criteria other than the interest rate since an informal market develops through uncontrolled interest rates. Abolishing these restrictive policies should thus enable the formal sector to expand and, hence, eliminate the need for an informal sector. In relation to the second paradigm, imperfect information on solvency, selection cost, and management and enforcement of the contract between the lenders result in market failure due to adverse selection and moral hazard, both of which hinder financial market operations.

3. Microfinance in Togo

Trends in the microfinance sector in Togo

The microfinance sector in Togo has quite a long history marked by the creation of the biggest financial cooperative (FUCEC) in 1969. It has developed, thanks to the following principles and traditional values: Confidence, ethnic or religious affiliation, belonging to the same corporate group, and even belonging to the same geographical space. In the face of the commercial banks' inability to offer financial services to the people (composed of micro-entrepreneurs who cannot afford reliable loan guarantees) excluded from formal types of financing, local community-based microfinance institutions have developed in the last decade in Togo. So, the formal financial system is complemented by microfinance institutions' activities. These have developed thanks to development aid organizations' desire to assist non-governmental organizations, the government, and other local initiatives in providing financial systems that are better suited to the populations excluded from the traditional banking system. This has fostered the emergence of new institutions and the strengthening of existing microfinance activities in the recent years. Microfinance in Togo is composed of a large number of initiatives of various sizes and varied forms. It has been developing in an increasingly fashionable way, a development which has been attributed partly to the consequences of the social and economic crisis of the 1990s, which engendered all sorts of initiatives: "The economic situation is difficult and each person is trying to find how to cope", say informal sector micro-entrepreneurs. It has also been attributed to the people's desire to have institutions that are capable of satisfying their savings and credit needs.

As with the rest of the West African Monetary Union (Union Monétaire Ouest Africaine, UMOA), in Togo, MFIs can be classified into three main categories:

(i) savings and credit cooperatives – these require savings before allowing access to credit; the priority given to savings tends to make these MFIs suitable for those people (such as farmers and traders) who can afford savings and thus somewhat excludes the very poor populations;
(ii) exclusively lending institutions – these are just concerned with lending, without requiring prior savings; and,
(iii) donor-funded projects with a microfinance component – these institutions, which often require savings, do microfinance activities in addition to development ones.

Generally speaking, the microfinance sector in Togo presents the following characteristics: The supply of credit is highly concentrated in the hands of some institutions and one network, specifically the FUCEC-TOGO network (which holds more than 64% of the market share), and in some regions only. The sector is represented mainly in three regions of the country — Maritime, Plateaux, and Savanes. These three represent 81% of authorized MFIs. Credit, which is basically short-term credit, is predominantly granted to finance small businesses, notably those run by women. The sector comprises other decentralized financing activities which are not likely to be sustainable and which are not recognized officially.

Table 1: Trends in MFIs in Togo from 1999 to 2008

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Number of MFIs	50	50	63	53	59	58	57	52	56	65

Source: CASIMEC, as of 31 Dec. 2008, and the BCEAO Monograph on the Decentralized Financial Systems for 2001/2002/2003/2004.

Table 1 shows that the number of MFIs had dropped from 59 in 2003 to 56 in 2007; this followed restructuring that occurred at some microfinance institutions. At the end of 2004, there were 145 retail microfinance institutions authorized across the three categories, and a total of 238 sales outlets. This number had risen to 257 in 2007. The number of service outlets increased over the 2003-2007 period, rising from 203 to 257; that is a 27% increase. On the one hand, this meant a reduction in the overall number of MFIs but, on the other hand, an increase in service outlets for each MFI. With more than 300,706 direct beneficiaries in 2003 (against 277,895 in 2002, i.e., an 8.2% increase), the MFIs mobilized from their customers, more than CFAF 20.6 billion in 2003 (against CFAF 17 billion in 2002 — a 21.18% increase). The funds mobilized during this year corresponded to about 9% of the deposits for Togo's entire financial intermediation sector, banks and MFIs (against 10% in 2002). The MFIs thus injected into the economy more than CFAF 18.8 billion (against CFAF15.5 billion in 2002 — a 21.3% increase). These funds from the MFIs constituted a little over 10% of all the credit granted by the financial intermediation sector.

The MFIs contribute to financing activities (mostly in the informal sector) in all three economic sectors: primary, secondary, and tertiary sectors. In 2003, they contributed to the creation of 983 direct jobs (against 885 in 2002). The penetration rate among households rose from 36% to 43% between 2003 and 2009, which is a 21% increase. Over the same period, other indicators saw a significant improvement. Among them are the number of service outlets (with a 169.45% increase), the number of users or beneficiaries (with a 142.36% increase), the amount of outstanding deposits (with a 265.90% increase), the amount of shareholders' equity (with a 183.77% increase), and the amount of outstanding debt (-73.38%) (see Table 2).

The performance of the microfinance sector in Togo can be summarized as in Table 2.

Table 2: Some statistics on microfinance in Togo

Indicators	Situation in 2003	Situation in (Dec.)2009	Progress since 2003
Number of MFIs	59	74	25.42%
Number of service outlets	203	547	169.45%
Number of users	300,706	728,813	142.36%
Household penetration rate	36%	43%	21%
Outstanding deposits (CFAF millions)	20,262	74,139	265.90%
Outstanding debt (CFAF millions)	16,997	4,524	-73.38%
Outstanding portfolio	10%	7.16%	-28.42%
Shareholders' equity (in CFAF millions)	1,670	4,739	183.77%

Source: SNMF (2007)and CASIMEC-2009.

Legal framework governing the MFIs in Togo: PARMEC Law

The supervision of the microfinance sector is the responsibility of the Ministry of Finance, in conformity with the law governing Mutual Institutions or Savings and Credit Cooperatives (Institutions Mutualistesou Coopératives d'Epargne et de Crédit, IMCEC), also known as the PARMEC Law, in UEMOA countries. The PARMEC Law was promulgated in Togo in July 1995 (Law No. 95-014). According to this law, only independent financial cooperatives, their regional unions and their network federations can be granted full authorization. The other MFIs are allowed to operate within a regulatory framework defined by an agreement signed with the Ministry of Finance for a period of five years, renewable by mutual consent. The PARMEC Law exempts small informal microfinance structures; it provides for their voluntary official formalization and their registration through a "recognition" process. This provision does not, however, apply to groups organized into savings and credit cooperatives. In addition to carrying out controls based on documents received from the MFIs about their financial situation, CAS-IMEC has the responsibility of inspecting all authorized institutions once a year.

After a decade of implementing the PARMEC law, it should be noted that the BCEAO, in collaboration with CGAP, the donor community, the main microfinance institutions and professional associations in the UMOA region, has now effected some changes to the law and prudential regulations so as to render them more compatible with the best international practices. But the amended law has not been enforced in Togo yet.

Banks' involvement in the microfinance sector in Togo

Private banks are increasingly showing interest in the microfinance sector (Nsabimana, 2009). Research carried out by CGAP (2003) showed that, at the time, 225 commercial banks and other financial institutions operated in the microfinance sector throughout the world. In several countries in Latin America, one bank or financial institution in three, granted small loans or intended to enter the microfinance market (USAID, 1998). In Africa, about 20 commercial banks were involved in microfinance (AMAF, 2008).

It transpires from the literature that the relationship between banks and MFIs is no longer limited to customer relations on the basis of which MFIs deposit their excess

liquidity with banks (Nsabimana, 2009; USAID, 1998; Seck, 2009). In addition to the management of the cash surplus and refinancing, the business relations between the two have, in the recent past, also concerned other types of services, such as money transfers, staff training, and the use of information technology in innovative ways. The use of this technology can enable the institution to handle huge volumes of small transactions at a low cost and to provide a wide range of financial services, thus contributing to enhancing the MFIs' efficiency and the commercial banks' interest in poor customers.

According to CGAP (2006), thanks to the lowering of the prices of the required hardware and the putting in place of support infrastructure, information technology has been spreading rapidly. For example, according to Santanu Mukherjee, the country desk officer at VISA International (South Asia), the price of a debit and credit card reader only costs US$125 and can be used with a wireless connection. Between 1999 and 2004, the number of mobile phone subscribers in Africa rose from 7.5 million to 76.8 million. Using mobile phones reduces banking charges and, because of the low cost and convenience, mobile phone use will no doubt be the preferred mode of doing business for poor populations. It will enable a large number of people who currently do not have access to the traditional bank facilities to do so for the first time.

According to Nsabimana (2009), the following are some of the reasons why banks enter the microfinance business: Competition in the traditional banking market, excess liquidity, profitability of some MFIs, microfinance productivity, access to technical assistance and image effect. On the whole, banks in Africa are profitable, with a profitability ratio of 10.5% in 2008 within the UEMOA area (BCEAO, 2004; they consider the microfinance market as a source of additional costs and a drop in profitability. Their entry into the market is mostly motivated by the image effect. For Seck (2009), following the spectacular success of microfinance, an increasing number of commercial banks have entered this new market, being motivated, on the one hand, by the ever-growing competition within the banking sector (Bell et al, 2002; Westley, 2006) and, on the other hand, by the pressure from governments in some countries.

There are two principal paths through which a bank can enter the microfinance market: the direct path, known as "downscaling", and the indirect one, through "partnership relationships with microfinance institutions". Four models have been used by banks to enter the microfinance market (Lopez and Rhyne, 2003): as a special unit within the bank, as a branch of the bank, as part of a strategic alliance with microfinance institutions, and a service company.

In Togo, the business relations between MFIs and banks have markedly increased in recent years. Data exchanges and the availability of loan guarantees have led to an increase in bank financing of MFIs. The adoption by banks of specific policies for microfinance and the creation of the Regional Solidarity Bank gave new impetus to refinancing. There have been strengthened links between MFIs, banks and other financial partners, thus facilitating MFIs' access to the loan guarantee mechanisms and the sources of refinancing they need to meet the loan applications they receive, thus achieve effective integration into an inclusive financial sector. Banks and microfinance institutions mobilize resources, grant loans, and offer financial services to different but complementary market segments.

The traditional areas of business relations between the two are the following:

- MFIs are often clients depositing money with banks (whether fixed-term deposits

or other);
- Banks do money transfer operations for the MFIs (e.g., Western Union);
- MFIs use services offered by banks (e.g. bonds, securities, etc.) for their operations in the financial market.

The specific areas are the following:
- MFIs have access to bank credit lines (existence of guarantee funds).
- Banks serve as contracting authorities mandated by donors to grant financial assistance to MFIs;
- Banks also offer the following services to MFIs: technical assistance, training, and institutional development.

While the MFIs' overall goal is social outreach within the constraints of sustainability, the traditional banks' goal is the search for profitability and sustainability. And while the two sectors are different, they are essential components of an integrated and high-performing economy. Despite a certain lack of knowledge of the microfinance sector by banks, there is a business relationship between the two which, today, basically rests on the following points:
- The management of cash surplus;
- Refinancing (even though still at modest levels); and
- The provision of services such as money transfers and staff training.

Table 3: Amounts of MFI deposits with banks and of MFI refinancing by banks from 2000 to 2008 (in CFAF billions)

Year	The MFIs' deposits with banks	The banks' refinancing of the MFIs
2000	3.75	2.24
2001	4.38	1.9
2002	5.22	1.86
2003	4.87	2.39
2004	0.61	2.74
2005	6.67	3
2006	8.86	4.63
2007	14.02	5.84
2008	14.64	6.44

Source: Ministry of Economy and Finance – CASIMEC, 2009.

Table 3 shows that the amount of debt MFIs received from the banking sector saw a relative decline between 2001 and 2002 (-15.20% in 2001 and -2.03% in 2002), which is a reflection of the MFIs' difficulties in having access to bank refinancing and of the banks' low levels of financial intermediation. The MFIs' level of indebtedness increased progressively from 2003 to 2008. Their deposits with banks increased exponentially (by 991%) in 2005; in 2008, their deposits had reached more than CFAF 14 billion. Commercial banks have begun to show interest in microfinance and, just like donors, are increasingly getting involved in the activities of this key sector like in the case of Ecobank-Togo. In addition, some banks have set up units and branches specialized in granting microcredit and collecting small-amount savings. The MFIs need training and technical assistance. Already, banks in Togo have been offering their expertise to MFIs,

especially through the training programme offered by the Banking Training Centre in Togo, and which leads to a qualification.

MFIs and banks also have business relations in terms of financial services for their customers, in particular in relation to the use of modes of payment, money transfer, and electronic banking. So, there is a privileged partnership between MFIs and banks due to the nature of the latter's core business and regulation constraints. This partnership allows the banks to collect savings from the market segment considered as "micro", and MFIs to secure the savings they have collected. A closer relationship between the two sectors will lead to an enhanced resource mobilization and refinancing (with external financing), with expected multiplier effects.

With regard to resource mobilization, MFIs collect small savings, which they deposit with banks with the aim of achieving security, liquidity, and profitability. Regarding refinancing, they need resources to finance their customers' projects. In this regard, the banks' degree of intervention remains low due to MFIs' financial structure, financial sustainability, the institutional framework that governs them, the cost of credit, and the guarantees required to secure the loans applied for. It should be pointed out that, in Togo, the banking sector still has an inadequate knowledge of microfinance. Still on refinancing, a close relationship between the two sectors should set up a risk unit and institute credit lines meant to secure loan guarantees allocated to the microfinance sector. In relation to services and training, the current cooperation between banks and MFIs should be strengthened through:

- Improved quality of the services offered by the banks to the MFIs, and
- Better knowledge of MFIs by banks and the general public.

4. Methodology

Theoretical framework

Microfinance is a means to fight poverty in a sustainable environment. The fight against poverty and the sustainability of MFIs have been analysed theoretically using two approaches: The welfare approach and the institutional approach. The former is based on the theory of social responsibility vis-a-vis clients in order to meet their expectations (Caroll, 1979). This school of thought measures an MFI's performance from the point of view of the client, by assessing the MFI's outreach and its impact. It considers microfinance a key means of reducing poverty. Thus, a microfinance institution's efficiency is measured by its ability to reduce poverty and improve its beneficiaries' welfare.

However, this approach has been the subject of much criticism because of its subjectivity, its very high cost and the methodological difficulties that go with it (it is also faced with the issue of viability and sustainability. While, from a welfare approach point of view, an MFI is able to trigger a process by immediately providing relief to the poorest populations, from an institutional approach,only a widening of its sources of financing will enable its sustainability.

The institutional approach stands out in the literature and places greater emphasis on the measurement of performance from the point of view of the institution rather than of the clients. It is based on contract theory, which considers that the non-fulfilment of contracts can lead to opportunistic behaviours on the part of credit applicants (Ghatak and Guinanne, 1999). The proponents of the institutional approach measure performance from the point of view of the institution by targeting the clientele of poor households and aiming at financial sustainability. In view of what precedes and the fact that the institutional approach seems to be the most used in academic research (Brau and Woller, 2004), it has been used in the present study.

According to Morduch (1999), sustainability is generally analysed from two aspects: first, there is operational sustainability, which refers to an institution's capacity to generate enough revenues to cover operational costs; second, there is financial sustainability, which has to do with whether the institution requires subsidies in order to carry out its operations. Financial sustainability is essentially measured by financial and operational self-sufficiency. Traditionally, the following three sustainability indicators have been used in research: operational self-sufficiency (OSS), return on assets (ROA) and return on equity (ROE).

However, it should be pointed out that these indicators are generally applicable to any company. For example, they do not include subsidies and are not re-adjusted to the cost of resources. Yet, we know that MFIs can be highly subsidized and at the same time achieve a high level of profitability. It is for this reason that another indicator of financial management has been used, namely the subsidy-dependence index (SDI), which was defined by Yaron (1992a, 1992b). This other indicator measures the social cost of subsidized MFIs and indicates the increase in the percentage of the interest rate required for a given MFI to operate without any kind of subsidy. The heart of the matter for the standard SDI framework is to measure subsidies.

So, following Hartarska (2005), Mersland and Strom (2007), Cull et al (2007), and Nawaz (2010), the present study chose to use two indicators, namely the operational self-sufficiency (OSS) and subsidy-dependence index (SDI), to measure and identify the determinants of MFI financial sustainability. The OSS enables us to measure an MFI's sustainability over time, to the extent that when financial profits cover all the costs, it can be deduced that the MFI can do without subsidies and can have recourse to markets for its financing needs. As pointed out by Manos and Yaron (2009), sustainability is essential in the long term to improve an MFI's profitability. However, in the short term, an MFI's performance reflects its best use of knowledge, technology and operational modes by serving a target clientele. For its part, the SDI enables us to answer the following question: How can an MFI become capable of paying the market price for all its resources in the long term?

Empirical framework

Several studies have used the two indicators described above to analyse MFI sustainability. By using them, the present study sought to model and to test the relationship between MFI performance and a certain number of economic, financial and governance factors. To this end, a linear regression model was used. It was borrowed from Woller (2003). It is expressed in the following equation.

$$Y_{it} = X_{it}\beta + u_{it} \quad (1)$$

where, Y_{it} measures both the operational and financial sustainability (that is, the OSS and SDI, respectively) of MFI i for period t; X_{it} represents the financial, economic and governance indicators of MFI i for period t; u_{it} the error term defined by: $\mu_{it} = \mu_i + \lambda_t + v_{it}$ where $i = 1,\ldots..,N$; $t = 1,\ldots,T$ where μ_i represents the individual non-observed effects, λ_t the temporal effect, and v_{it} the usual stochastic distribution term.

The dependent variables are the OSS and the SDI.[5] As for the explanatory variables, they are represented by the MFIs' economic and financial indicators. These are the age of the MFI, the total number of its beneficiaries, labour productivity, the number of years the MFI has been in business, and the proxy variables for governance. Why these explanatory variables?

- **Age of the MFI (Ageimf)**
  A long-established institution is expected to perform better than a newly-established one. An MFI's "life cycle" represents an ideal path to reach financial equilibrium and, hence, sustainability. This is because it will have changed from a support institution into a real financial intermediation one, if we consider access to financial autonomy as a decreasing function of subsidies (Otero and Rhyne, 1994, cited in Labie, 1996). So, during an MFI's life cycle, different variables should have evolved positively: its status, clientele, sources of financing, way of providing financial services, financial management, autonomy, and its staff (Otero and Drake, 1992 cited in Labie, 1996; Counts et al, 2006).

- **Number of its beneficiaries (BENEFI)**
  Big institutions make economies of scale that can reduce their operating costs.

- **Labour productivity (PROTRAV)**
  Good productivity from the staff will enable the institution to generate enough profits to cover the costs, and will thus contribute to achieving sustainability.

- **Governance variables**
  The literature has identified several indicators to describe the variables "outreach" and "good governance". Those that are the focus of attention in the present study are: the size of the workforce, a variable which the present study borrowed from the methodology used by Buchanan and Tullock (1962); the size of the board of directors, a variable used in Mersland and Strom (2007); managerial autonomy; the institution's belonging (or not) to a network; prudential standards; and the MFI's managing director's years of experience. All these variables were chosen from a set of variables that are discrete in nature. For Armendariz de Aghion and Morduch (2005), MFIs, as providers of banking services, are subject to adverse selection and moral hazards on the part of their clients who have a very small guarantee or none at all. This adverse selection and moral hazard affect both the MFIs and their clients. That is why, according to Macey and O'Hara (2003), a bank's relationships with both depositors and borrowers are as important for its success as those between an MFI's managers, its board of directors and owners.

With regard to the variable "governance" in particular, the literature has revealed that a certain number of indicators can be taken into account individually or simultaneously. That is why, following Hastarska (2005) and Mersland and Strom (2007), variables such as the size of the board of directors, turnover of the principal managers, duration of the term of office of the members of the board, as well as the separation of powers between the managing director and the chairman of the board, have all been used in the present study as proxies for the "governance" variable. Buchanan and Tullock (1962) indeed showed that one essential factor, specifically the size of the board of directors, had an effect on performance: they found that a board composed of a small number of members needed less time to take a decision than one composed of a greater number. This observation was corroborated by those made by Yermack (1996), Eisemberg et al

(1998), and Bohren and Strom (2005), who reported that larger boards of directors were associated with lower levels of performance as measured by Tobin's Q or the return on assets. For Mueller (2003), another essential factor is the degree of heterogeneity of the board of directors: the author reported an association between larger and more heterogeneous boards and high decision costs.

Other authors, e.g., Briceno-Garmendia and Foster (2007) and Mbangala (2007), have suggested an aggregate index to measure the quality of governance. This index comprises a series of criteria that are essentially binary data. Among them are the following:

- the respect for the law, which takes the value 1 if the MFI has an operating licence, and the value 0 if not;
- managerial autonomy vis-a-vis the government and donors; it takes the value 1 if it has this autonomy, and 0 if it does not;
- the board of directors' control of power; this is measured using two indicators: the separation (equal to the value 1) and the concentration (equal to 0) of powers between the managing director and the chairman of the board of directos.

Table 4: Summary of the dependent variables and explanatory variables

Variables	Definitions of the variables
Dependent variables	
Operational self-sufficiency (OSS)	Total trading profits/Total operating costs
Subsidy-dependence index (SDI)	Subsidies/revenues from the loan
Explanatory variables	
Experience	Number of years of experience of the MFI's managing director/manager
Beneficiaries	Number of the MFI's beneficiaries
Age of the MFI	Number of years during which the MFI has been in business
Labour productivity	Ratio of the borrowers who are in employment to the total number of employees
Size of the board of directors	Number of members on the board of directors
Managerial autonomy	Autonomy vis-a-vis the government: it takes the value 1 if the MFI is independent from the government, and 0 if not
Prudential standards	Observance of prudential standards: it takes the value 1 if yes and 0 if no
Cooperation with banks	Dummy variable: it takes the value 1 if there is cooperation with a bank and 0 if not
Belonging to a network	It takes the value 1 if the MFI belongs to a network and 0 if not

Estimation techniques

Two econometric estimations were done for Equation 1, given the two dependent variables. Since the data used in the present study were from a non-cylinder panel, both the fixed-effects and the random-effects model were used for the two estimations. The results of the Hausman test enabled the study to use the random-effects model.

The models used in the present study have the specificity of comprising a composite error term with two elements: a usual symmetrical error term and a positive error term representing the specificity of countries. The estimation techniques of this type of model, when estimated with panel data, are of two sub-types: the "within" estimator and the generalized least squares estimator. According to Hausman (1978), the choice of the specification of the individual effect rests on two considerations: logical and statistical. The logical consideration is the manner in which μ_i can be considered random and is drawn from the *iid* distribution. For its part, the logical consideration consists of comparing the statistical quality of the estimators obtained in the two cases. It is this latter that was followed in the present study. That is, in order to choose the best specification, the Hausman test had to be used. This test opposes the compound-errors model, where the specific effect is random, and the fixed-effects model, where the specific effect is certain.

In the case of the first model, there is a strong likelihood that the random specific effect is correlated with the explanatory variables. In this case, the estimators obtained from the generalized least squares method are biased and only those based on the "within" estimator are unbiased and effective. The estimators of the generalized least squares will only be effective if the independence between the specific effect and the explanatory variables are proved. The principle of the Hausman test is to make one choose between an estimator that is convergent and effective under a null hypothesis, but non-convergent under an alternative hypothesis, and an estimator that is convergent under the two hypotheses.

Moreover, data based on a non-cylinder panel, as is the case for those used in the present study, can suffer a selection bias if the missing observations are not randomly distributed. In such a case, the estimators usually applied may not be effective. To correct this type of bias, Verbeek and Nijman (1992) have suggested that a model should be added which will estimate one of the following variables to verify the existence or otherwise of selection bias. The variables in question are: the variable *PRES*, representing the number of years of the presence of MFI *i* over the entire period; the variable *VPA*, which is a dummy variable equal to 1 if MFI *i* was observed over the entire period and equal to 0 if not; and the dummy variable VDD_t, equal to 1 if MFI *i* was observed over the preceding period and 0 if not (on the assumption that $VDD_0 = 0$). Verbeek and Nijman (1992) suggest that testing the significance of one of these variables can be a reasonable procedure for controlling a possible selection bias. The variable *PRES* was used in the present study's estimations, given the availability of data.

Nature and source of the data

The data used in the present study came from the microfinance institutions database set up by *CASIMEC* at the Ministry of Economy and Development. They cover the period from 2002 to 2008. The database in question comprises 63 MFIs, which can be

put into three categories: the first category comprises savings and credit cooperatives that were legitimized at the national level by being granted an operating licence and at the local level by an acknowledgement from the Ministry of Finance. In Togo, this type of cooperatives dominates the market. As of 31 December 2004, they owned 58% of the sales points (139 out of 238), boasted 89% of the clients (212, 451 people), had mobilized 82% of the deposits (CFAF 21,484 million, corresponding to US$39 million), and had granted 79% of the loans (CFAF 16,867 million, corresponding to US$31 million).

The microfinance institutions whose mission is solely to offer credit make up the second largest category in Togo in terms of the amount of loans granted. As of 31 December 2004, they owned 2% of the sales points (4 out of 238), had 6% of the clients in the sector (14,681 people), had granted 12% of the loans (CFAF 2,621 million, corresponding to US$4.8 million), and had mobilized 6% of the deposits (CFAF 1,675 million, corresponding to US$3 million) in the form of forced savings.

The third category is composed of donors' projects that have a microfinance component. As of 31 December 2004, this category owned about 40% of the sales points (95 out of 238), had 14% of the clients (38,299 people), had mobilized approximately 12% of deposits (CFAF 3,054 million, corresponding to US$5.5 million), and had granted about 8% of all the loans (CFAF 1,773 million, corresponding to US$3 million).

5. Data analysis

Descriptive analysis

This analysis concerns the general characteristics of MFIs and the interpretation of the means and standard deviations of the dependent and the explanatory variables.

MFIs' sustainability related to the indicators of their size and outreach

An analysis of Table 5 shows that the number of beneficiaries of the MFIs' services over the study period was 3,181 members, on average. The standard deviation for this variable is quite high, compared to its mean, which can be explained by the heterogeneity of the MFIs.

The variable "labour productivity" was found to vary from one MFI to another, and a comparison with the productivity standards set by the PARMEC Law shows that the productivity ratio, which was found to be 112.580%, is just about those standards. In general, the higher this indicator, the higher the MFI's productivity.

The MFIs in Togo are relatively young, with five years' experience, on average. An analysis of the standard deviation indicates that most of them were created in recent years. According to the MIX market, an MFI is considered "mature" when it has more than 8 years of experience, "young" when it has between five and eight years, and "infant" when it has less than five years.

With the exception of *FUCEC-Togo*, the largest and oldest microfinance institution in the country, most of the other MFIs in Togo mushroomed towards the end of the 1990s, as a consequence of the worsening of living conditions and the negative effects of crises.

Table 5: Some descriptive statistics on the indicators of MFI size and outreach

Variables	Mean	Std. Dev.	Min	Max
Total number of beneficiaries	3,180.76	13,901	40	173,323
Labour productivity	112.580	278.539	20	2,795.532
Number of years in business	5.441	3.407	1	18
Size of the board of directors	6.941	1.914	3	13
Total employees	21.708	16.644	10	110

Source: Author's computations.

MFIs' sustainability related to their financial perfomance

In the present study, sustainability was measured on two variables: the operational self-sufficiency (OSS) and the subsidy-dependence index (SDI). The OSS indicator means that the operating costs were covered by the trading profits, while the SDI measures the significance of subsidies in the profits made from the loans granted by an MFI.

Table 6: Descriptive statistics

Variables	Mean	Std. Dev.	Min	Max
Operational self-sufficiency (OSS)	0.812	0.418	0.019	2.718
Subsidy-dependence index (SDI)	0.492	1.655	0.000	15.256

Source: Author's computations.

Table 6 shows that the mean for the OSS for all the MFIs studied by the present study was 81%, which is a reflection of their weak performance, if this ratio is compared with the threshold, which is 100%. According to the expected standards, it is from 100% that an MFI begins to make profits that will enable it to consolidate its equity. According to the CGAP standards, the ratio is often compared with the expected norm, which is 130%. It should be noted, though, that the standard deviation for the SDI variable is high, compared to the mean, which can be explained by the heterogeneity of the MFIs. Further, the SDI indicator shows that subsidies represented, on average, 49.2% of the profits made from the loans granted.

For the MFIs-cum-projects, subsidies were found to be, on average, higher than the profits made from the loans, with a percentage of 128.4% (see Table 7). This means that those MFIs only survived thanks to the subsidies received and thus were not expected to easily achieve their sustainability. According to the literature, when the SDI is equal to 100%, this means that the MFI is heavily dependent on subsidies and should increase its interest rate by 100% so that it is no longer dependent on them; when it is between 50% and 100%, the MFI is (relatively) dependent on subsidies; and when it is between 0% and 50%, the MFI is sustainable and independent.

A performance-based classification of MFI categories shows that the credit-oriented MFIs perform the best. The NGOs perform less well (see Table 7) but, surprisingly, they were found to have an operational profitability (OSS) (of 71%), very close to that of the regulated MFIs (81.72% and 97%), despite the fact the NGOs often charge lower rates. One reason for this could be that the regulated MFIs tend to operate on competitive markets, where portfolio returns are lower. On the other hand, the savings-and-credit MFIs were found to have a lower SDI, which suggests that they could do without subsidies and still survive for a long time. This category of MFIs is often staffed with skilled personnel and equipped with adequate technological means and is managed in a modern way.

Table 7: Sustainability indicators according to categories of MFIs

Variable	Obs.	Mean	Std. Dev.	Min	Max
The credit-oriented MFIs					
Operational self-sufficiency (OSS)	14	.970	.242	.557	1.452
Subsidy-dependence index (SDI)	15	.147	.228	0	.839
The savings-and-credit MFIs					
OSS	244	.817	.423	.112	2.718
SDI	269	.405	1.304	0	10.125
The MFIs-cum-projects					
OSS	34	.710	.419	.0198	1.312
SDI	36	1.284	3.342	0	15.256

Source: Author's computations.

Presentation and analysis of the results of the econometric estimations

An analysis of the results of the econometric estimations (Table 8) shows that variables such as an MFI's number of beneficiaries and number of years in business account for MFI sustainability in Togo: the coefficients for the two variables were found to be positive and statistically significant. This means that the higher an MFI's number of years in business, the higher its level of operational and financial self-sufficiency. Similarly, the higher the number of an MFI's beneficiaries, the higher its ratio of operational and financial self-sufficiency.

Even though for the whole of the sample, the coefficient for the "labour productivity" variable was not found to be significant in relation to the operational self-sufficiency, when the same variable interacted with the type of MFI, then the coefficient became significant. This means that the productivity of savings-and-credit MFIs was higher than that of the other types of MFIs. The particularity of savings-and-credit MFIs is that they are equipped with adequate technological means and enjoy a management system likely to enhance their productivity. This result can also be explained by the fact the the labour-productivity factor has always been a criterion for the granting of subsidies to MFIs by the majority of donors. It is also an important criterion when it comes to banks giving loans to the MFIs.

In order to better understand MFI sustainability, the present study's analysis takes into account, beyond subsidies, other indicators of sustainability such as governance indicators. In this connection, the study found that with regard to the variables related to governance and the MFIs' relationship with banks, the number of the members of the board of directors was found not to have a statistically significant effect on the MFIs' financial performance indicators. However, the observance of the limit on loans for the managers was found to have a significant effect on MFIs' operational and financial self-sufficiency. Indeed, the estimated coefficients showed that when this rule was observed, the MFIs' financial performance was higher than when it was not. A similar result was found concerning liquidity standards. The existence of a relationship between an MFI

and banks had a positive and significant effect on the MFI's operational and financial sustainability: the estimated coefficients indicate that this sustainability was higher for the MFIs that had developed this relationship than for those that had not. This relationship enabled the MFIs concerned, normally the regulated ones, to have access to sources of financing, which in turn produced a leverage effect which enabled them to enhance their returns on equity.

Table 8: Summary of the econometric results

Dependent variable	**OSS**		**SDI**	
Explanatory variables	**Coefficient**	**P>z**	**Coefficient**	**P>z**
MFI characteristics				
Number of beneficiaries	0.311**	0.012	0.555**	0.043
Number of years the MFI has been in business	0.013**	0.014	0.861***	0.000
Labour productivity	1.355	0.122	0.136	0.201
Belonging to a network (=1 if yes; 0 if not)	0.135	0.101	0.015**	0.010
Savings-and-credit MFI (=1 if yes; 0 if not)	0.136**	0.036	0.150**	0.036
Number of years in business*Being a savings-and-credit MFI	1.204***	0.006	0.095**	0.017
MFI's beneficiaries*Being a savings-and-credit MFI	1.287**	0.029	2.340**	0.037
Labour productivity*Being a savings-and-credit MFI	1.088**	0.030	1.832*	0.053
Governance and relationship with banks				
Board of directors	0.100	0.134	0.085	0.167
Limit on loans for managers (=1 if yes; 0 if not)	0.555***	0.002	0.022	0.165
Liquidity standards (=1 if observed; 0 if not)	0.106**	0.043	0.241*	0.053
Relationship with banks (=1 if yes; 0 if not)	0.443*	0.069	0.344**	0.022
PRES (number of years of the presence of MFI I over the entire period)	0.037**	0.039	0.925**	0.027
Consistency	1.725	0.130	3.150	0.101
Number of observations	285		285	
R-sq: within	0.124		0.102	
R-sq: between	0.170		0.124	
Wald Chi2	98.35		21.21	
Prob>Chi2	0.0002		0.045	

*significance at the 10% level; ** significance at the 5% level; *** significance at the 1% level
Source: Author's estimations.

6. Conclusion

The present study sought to analyse the sustainability and the success of microfinance institutions in Togo, and to identify the explanatory factors for them. It applied an econometric analysis to data from a non-cylinder panel composed of 63 MFIs, data covering the period from 2002 to 2008. This analysis showed that, on the whole, the MFIs did not perform well financially and were still dependent on subsidies. Their operational self-sufficiency ratio was found to be below the accepted standards. Several factors were found to be statistically significant in terms of explaining the variation in this performance. These are: an MFI's number of beneficiaries, the number of years it had been in business, its labour productivity, its observance of prudential regulations, and its having a relationship with banks.

It follows from the study's results that, by way of economic policy, there is need to promote MFIs by carrying out reforms aimed at rendering the financial environment within which they operate more conducive. What is needed, in particular, is specific measures that will enable MFIs to achieve their economic and social performance in order for them to continue offering financial services to people and thus contribute to fighting poverty. Such measures can consist of not only technical assistance, but also capacity building for the actors operating in the MFI sector with the aim of improving labour productivity and making government subsidies available to the best-performing MFIs and those best established in the country; all this with a view to encouraging MFIs that are not high performing to become so. To consolidate the existing business relations between MFIs and banks, the government will also need to set up an MFI guarantee branch at commercial banks, just like the BOAD's current MICROFUND project.

Notes

1. 1997 was the year of the launch of the first Global Microcredit Summit Campaign.

2. The winner of the Nobel Peace Prize for 2006.

3. *SNMF* 2008-2012, November 2007, page 8.

4. Stiglitz and Weiss (1981) have demonstrated that this equilibrium interest rate corresponds to an interest rate from which the returns expected by lenders begin to decrease because the interest rate is going to attract loan applicants whose projects are riskier, since these applicants need to be able to compensate for higher costs of interest.

5. Data obtained from the computation method developed in the Appendix.

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Appendix: How to compute the subsidy-dependence index

Schreiner (1997) distinguishes between subsidized resources and subsidies proper. He explains that subsidized resources are given to MFIs at a price lower than the market price, and that the difference between the market price for these resources (m) and what the MFI really pays (c) is the subsidy. He thus differentiates between the explicit subsidized resources (donations in cash or in kind) and the implicit ones (loans at a reduced rate, staff training and consultancy services). Schreiner and Yaron (1999) computed implicit subsidies for the SDI in the following way:

SDI = *Subsidies/Revenues from the loan portfolio*
$= (S + k - P) / (LP \times i)$

where:

S: implicit subsidies

k: explicit subsidies

P: profits before taxes and before subsidies

i: the overall effective rate offered by an MFI to its clients; this is a rate determined by dividing the revenues from the loan portfolio by the net credit outstanding

m: an MFI's opportunity cost, which is the discount rate defined by MIX as the lending rate offered by the central bank to banks while assuming that it is the interest rate that would be paid by the MFI if it did not have access to concessionary funding

c: the interest rate paid by an MFI

E: equity

A: concessionary loan

LP: loan portfolio

The explicit subsidies (k) for the sample are equal to the amounts of operating subsidies (Schreiner and Yaron, 1999), which MFIs receive from time to time from donors to cover part of their costs and which are reported in their income statement.