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The Determinants of the Sustainability of Microfinance Institutions Through the Control Systems: Case of Cameroon in Context Covid19

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Abstract: The end of decade 1990 is marked by the proliferation of microfinance institutions that constitute powerful instruments for fight against poverty and the reduction of unemployment. In the meanwhile, considering the ephemeral character of some of those institutions, the object of this study is to understand the elements that are at the basis of the life expectancy of microfinance institutions in Cameroun in covid 19 context. The literature shows that variables such as a system of internal control and financial objectives influence the longevity of microfinance institutions. The test of chi-square on 35 institutions of microfinance observed within the period of 2004-2020 in Cameroun enable to establish connexions among variables. The results obtained show that the survival of microfinance institutions in Cameroun depends on internal control systems the board of directors, the separation of functions of president and that of general manager, the frequency of meeting of the board of directors, the effective presence participation of the members of the board of directors to the meetings and the joint decision making by the boards of directors and the general management.

Keywords: control systems, covid-19, determinants, microfinance institutions, sustainability.

I. INTRODUCTION

The emergence of Covid19 in Wuhan-China in 2019 and its expansion globally affects the organizational system and the functioning (of enterprises in general and) of MFIs (in particular). Despite the intervention of states through multiple measures taken to combat the pandemic, MFIs face many difficulties at the level of internal organization. The prolonged expansion of the pandemic to date under different variants (WHO) and the failure of certain vaccines administered in different countries point to the problems of internal reorganization of MFIs and thus see their survival compromised. This crisis has led organizations and companies to equip themselves with new permanent organizational mechanisms (structure, tools, procedures, etc.) aimed at ensuring monitoring and taking appropriate action in the event of new disruptions (BENAZZOU and al 2021) [1]. The Covid-19 pandemic seems to be a catalyst for organizational reforms and also a revealer of several shortcomings (ELWARDI and al 2021) [2]. The survival or sustainability of MFIs depends on their performance and profitability. Ensuring sustainability is the main objective of any microfinance institution especially in this third millennium where microfinance is considered an essential element for the fight against poverty in the world in general and in less advantaged countries in particular. This is all the more true since the United Nations has dubbed 2005 the year of microcredit. Traditional banks have begun to take an interest in the activities of microfinance institutions, while some institutions tend to move towards traditional banks. The main objective of some institutions such as the World Bank and the United Nations is to achieve the construction of integrated financial markets in order to establish sustainable microfinance systems that affect a large number of poor(de Briey, 2005)[3]. To do this, microfinance institutions must ensure a long lifespan to ensure their viability. This study aims to identify the determinants of the sustainability of MFIs in Cameroon in the context of Covid19. There are several debates about the lifespan of institutions, such as Campion(2003) [4], which believes that the lack of effective internal controls is one of the last obstacles to the development of a sustainable microfinance sector. In the context of this article, we will take turns discussing the determinants of the sustainability of MFIs through internal control systems and the control elements that determine the sustainability of MFIs in Cameroonian contexts.

II. THEORETICAL AND CONCEPTUAL FRAMEWORK

Several studies have been carried out on the relationship between internal control systems and the sustainability of microfinance institutions. At a time when an increasing number of microfinance institutions are developing and transforming into formal financial institutions, the need for an internal control system is increasingly felt. That said, it seems necessary to us to go through the various theories which are the basis of internal control and present the debates on the relationship between internal control systems and the sustainability of microfinance institutions.

2.1- The Theory of Property Rights

The theory of property rights maintains the hypothesis that economic agents maximize their utility function and exclusively pursue their personal interest. But, unlike "standard" neoclassical theory, it relaxes the assumptions of perfect information and zero transaction costs. The relaxation of these assumptions leads the partisans of this theory to recognize that the market, with its mode of coordination by the prices, is not, in all circumstances, the ideal place of the economic activity but, that the firm can be a better alternative. Among the writings at the origin of the theory of property rights, we must cite more particularly Alchian, 1969[5]; Demsetz, 1967[6]; Furubotn & Pejovitch, 1972[7] and Alessi, 1983[8].

Property rights highlight how a given type of property right influences such and such an agent and therefore how such and such a property right system acts on such and such an economic system at the level of its functioning (Amann, 1999)[9]. The function of property rights, when properly specified and guaranteed, is to provide agents with incentives to create, maintain and enhance assets - in short, to use resources more efficiently. The studies of Demsetz (1967)show that the main cause of the emergence of property and the foundation of the theory is the internationalization of externalities. This author defines property rights as the rights allowing individuals to know a priori what they can expect from their contributions with other members of the community. In fact, the holding of property rights boils down to having the agreement of other members of the community to act in a way and to expect society to prohibit others from interfering with its own activities provided that they are not taken advantage of.

The consequence is that a change in the system of property rights will affect individual behavior and, through this change, the mechanisms of resource allocation and the distribution of income. This theory lays the foundations for a general theory of social relations.

2.2- The agency theory

It was Jensen and Meckling (1976)[10] who laid the foundations for agency theory. Originally based on the theory of property rights, the theory of transaction costs and on the notion of agency, the latter is intended to be a theory of coordination and control applied to the management of organizations and centered on leaders. .

The proponents of this theory give a central place to the "agency relationship". By analogy with the mandate contract, an agency relationship characterizes a situation in which one or more persons (called "principal") engages one or more other person (s) (called "agents") for to carry out on their behalf a task which implies the delegation to them of a certain power of decision (Jensen & Meckling, 1976). However, this theory recognizes, like the theory of property rights, the existence of information asymmetry and also assumes that agents seek to maximize their utility and hence their personal interest. They can therefore take advantage of their informational advantage to pursue their personal interests to the detriment of those of the principal (De Briey, 2003)[11].

Two agency issues are likely to occur:

- Ex-ante: individuals may not disclose information that is unfavorable to them before the contract is signed. This risk is qualified as adverse selection; - Ex-post: after the signing of the contract, one of the parties to the transaction may not respect the terms of the contract during the execution phase, because it knows that it is costly, or even impossible for the other party to see if the engagement was complete or not. This risk is qualified as moral hazard.

Consequently, individuals will seek to set up contractual structures which tend to minimize the loss of utility of agents due to the existence of information asymmetry between them. The principal will study the benefit that he can derive from the establishment of incentive structures to ensure that the agent will act in accordance with his interests and those of the control structures (De Briey, 2003).

However, the establishment of these different structures entails costs that the principal must weigh against the losses generated in the event of the adoption of opportunistic behavior on the part of the agents if these measures were not put in place. For his part, the agent may have an interest in guaranteeing the principal that he will not tend to take actions which would be detrimental to the latter. The costs incurred in this case by the agent are qualified as obligation or customs clearance costs. Despite the measures adopted by the agent and the principal, there will always remain for the supporters of this approach a divergence of interests between the two parties giving rise to an opportunity cost or residual loss. Agency costs are the sum of these three types of costs. These are the costs that should be minimized.

The separation of the function of ownership and management of enterprises entails agency costs which are the monetary and non-monetary costs borne by both parties due to the need to put in place a system of obligation and control (Jensen and Meckling, 1976). The organization must be designed in such a way as to reduce the costs that create inefficiency, by putting in place an incentive and control system aimed at aligning the behavior of the directors with the interests of the shareholders. The Board of Directors can, for example, be used to simultaneously manage conflicts of interest between shareholders and managers, but also between creditors and shareholders or between shareholders and employees.

2.3- The notion of sustainability of organizations

Sustainability in its usual sense can be defined as the character of that which lasts forever or a very long time. A sustainable company will therefore be one that takes a long time, that is to say one whose existence extends over several years. Companies are created with the aim of living a long life (99 years). If all the work in Management Sciences converges on the sustainability of the organization, the fact remains that there are very few who have directly tackled this concept. Our goal is not to seek the cause of this omission but rather to make our contribution in determining the factors explaining the sustainability of organizations and more particularly MFIs. That said, we are going to present in turn a summary of the typology and characteristics of sustainable companies.

2.3.1- The different forms of business sustainability

The forms of sustainability that exist in the literature are of two kinds: the sustainability of power and the sustainability of the project.

2.3.1.1- The sustainability of power

It covers two types of sustainability: the sustainability of control and the sustainability of management.

• The sustainability of control

The continuity of control is ensured when the capital remains in the hands of the same group of shareholders. This group of shareholders can be an individual, a family, a group of private investors or even the State. They will retain capital despite any structural-organizational change that may occur within the organization.

• The sustainability of management

The sustainability of management is ensured when the directors of the company come from the group that holds the capital and this, in a sustainable manner. So, for there to be management sustainability, the capital must first remain in the hands of a group of shareholders for a long period of time. Then, from this group, comes the leader (s) for a very long period.

The other family of sustainability relates to the nature of the activities of the firm concerned.

2.3.1.2- Project sustainability

Project sustainability also includes two types of sustainability which are among others the sustainability of activities and the sustainability of the organization.

• The sustainability of activities

The sustainability of activities is ensured when the main activity of the company is maintained despite, for example, the disappearance of the latter as an autonomous entity. This would mean that there can be a combination of the product / market couple, which defines the activity. In this case, it is advisable to proceed with a classification of activities and an isolation of the main activity which will be maintained regardless of the socio-organizational changes which may occur over the years.

• The sustainability of the organization

We will talk about the sustainability of the organization when the company has been able, throughout its history, to withstand the test of the profound upheavals of its environment and to preserve up to the present day most of its identity. It should be noted that the other forms of sustainability both in terms of control and power and in terms of activities have been the subject of numerous studies, calling on related disciplines, namely law and taxation. Organizational sustainability, on the other hand, has appeared more recently as an object of research (Tjihé, 2004)[12]. It is apparently more complex, although its study lies at the heart of management sciences which are often assimilated to disciplines dealing with the management of organizations.

From all the definitions on sustainability that we have emerged, it turns out that the sustainable company must manage a major contradiction: It must at the same time evolve and remain itself in order to be able to claim any kind of retention of identity. Analyzing the concept of sustainability therefore means arriving at the determination of a balance between change and continuity on the one hand and between tradition and innovation on the other.

2.3.2- The characteristics of long-term companies

It has been shown above that understanding sustainability depends on determining the balance between change and continuity. The general characteristics of the perennial company are centered around two headings: Stability and continuity.

2.3.2.1- The stable elements of the sustainability of organizations

These elements are of various kinds, namely: Customer satisfaction, the perpetuation of know-how, the quality and loyalty of human resources, moral variables and ethics.
Stable elements of sustainability relate to the business itself, so they do not include changes in the business environment. Apart from these stable elements, there are also elements of continuity that help achieve the sustainability of the company.
2.3.2.2- The elements of continuity that determine sustainability
Note that these elements are above all related to the business environment. There are two elements of continuity: The ability to adapt and pro-action on the environment.
The first is the company's ability to react to changes in the environment in which it operates. This is all the more important as the environment can constitute as much a threat as a source of opportunity for the company.
In pro-action, the company does not react but rather ahead of the environment. This is done through innovation. It is an element of change because it gives the firm the possibility of better positioning itself in relation to its environment and thus to achieve a set of positive margins necessary for its sustainability.
2.4 - Literature review
It emerges from the work of Campion (2003) andZANGUE (2021), [13], that effective internal control enables MFIs to improve their performance and hence their lifespan. The author believes that the risk management approach is intended to be more integrated and highlights the capacity of internal control to prevent losses and promote efficiency. To be effective, MFIs need to institutionalize the concept of risk management in their culture and organizational environment. The board of directors and management have the essential role of erasing the negative a priori of the staff vis-à-vis internal control and internal audit by explaining to them all the benefits that the institution can derive from their effective implementation. By developing control mechanisms that have an incentive and not a deterrent effect, management can create a positive control environment, in which all employees have an interest in improving the internal control system. A performance-based bonus system, a profit center organization, a culture that emphasizes problem solving and not punishment are all measures that can strengthen a positive control environment and help overcome old negative attitudes towards internal control.
The author also thinks that it is necessary to guarantee the active involvement of the board of directors in internal control because the fact is that the MFIs which are concerned with internal control often delegate this responsibility to management. For the internal control process to be effective, however, board members must play an active role in reviewing internal control reports and ensuring that management reacts quickly and in the right way to the control problem. The author concludes his remarks by saying that the absence of effective internal control is one of the last obstacles to the development of a sustainable microfinance sector; MFIs, technical assistance providers, funders, practitioner networks and regulatory authorities all have a role to play in removing this barrier.
Even if the work of Woccu (2003)[14] did not take into account the same variables as those of Campion (2003), they still lead to the same results: the elected members of the board of directors and the salaried managers must show proof of individual ethics, professionalism and appropriate skills. They must speak with one voice once decisions are made. The author also says that internal control is added to other levels of governance because of the democratic nature of cooperatives. It includes the principle "one member = one vote" and makes the general assembly the highest governing body of the movement.
For Churchill and Coster (2001)[15], for a MFI to be efficient and viable over time, certain recommendations must be considered:
- The composition of the board of directors must provide for a majority of external members with various skills and capacities necessary to administer a MFI. This composition must be balanced and take into account the dual mission of microfinance: some authors feel closer to the social mission and others closer to the commercial mission;
- The board of directors plays the role of ultimate control in a MFI. One of the important responsibilities of this board is to analyze the risks and ensure that the MFI takes appropriate control measures to minimize its vulnerability;
- It is important that the members of the board of directors dedicate a good part of their time to the accomplishment of their functions. It is not appropriate to choose an administrator for his political competence alone. While it might sound interesting to have famous people in your annual report, if they don't attend board meetings or play a meaningful role, it won't ensure good governance;
- The separation of tasks and responsibilities must be clarified between the board of directors and the management. The board must watch over the performance of executives and hold them accountable for the results. This is about setting performance standards and taking disciplinary action if necessary;
- The board must meet to better follow the organizations. During critical periods, a weekly meeting should be scheduled. In balanced and experienced MFIs, quarterly meetings are sufficient when there is an advisory office that frequents the management;

- The board of directors must also be renewed to allow new ideas to flourish and bring fresh energy into the organization. This can be done by limiting terms of office and / or by instituting a performance appraisal system that encourages inactive and ineffective directors to resign.

The French Development Agency (AFD) considers that a fundamental element of the success of MFIs is the maintenance of an effective capacity of governance after the project phase. Indeed, once the expatriate technical assistance leaves, one of the difficulties is to maintain good governance. Several solutions can be envisaged to go in this direction such as, for example, the constitution of the MFI in commercial company.

The main results that we have just presented show that there is a relationship between control systems and MFI survival. But these studies are carried out in other countries with contexts different from ours or in other sectors of activity.

In the rest of our study, we will test the following hypothesis in microfinance institutions in Cameroon: Effective internal control systems determine the sustainability of MFIs.

In view of the theoretical foundations and the main results of previous studies, we can say that control systems have an influence on the sustainability of MFIs.

III. INTERNAL CONTROL ELEMENTS DETERMINING THE SUSTAINABILITY OF CAMEROONIAN MICROFINANCE INSTITUTIONS.

Our objective in this part is double : we will present the methodology adopted by incorporating a general overview on MFIs in Cameroon; analyze and present the main results relating to the relationship between internal control and the sustainability of MFIs in Cameroon in the context of Covid19.

3.1 Methodological approach

This is to present the MFIs and proceed to the presentation of some methodological elements.

3.1.1 Organization of microfinance institutions in Cameroon

In Cameroon, there are several MFIs organized in two groups:

- MFIs formed into a network;
- Independent MFIs

3.1.1.1 Networked microfinance institutions

The network can be defined as a set of approved establishments driven by the same objectives and which have voluntarily decided to come together in order to adopt an organization of common operating rules. The network can be local, regional or national.

- The CAMCCUL network

It was in 1963 that the first funds called "credit union" were created in the Northwest. It was deemed necessary to create an umbrella body capable of consolidating the achievements by promoting the birth of new funds. This is why CAMCCUL was set up in Bamenda in 1968 to fulfill these functions. The Dutch cooperative intervened by making rural finance specialists such as inspectors and supervisors available to the network (Ngnodjom, 2006)[16].

The basic principle in the cooperatives of the CAMCCUL network is the mobilization of local resources and their use for the development of the community. Credit is linked to prior savings.

The CAMCCUL network has a total of 10 sections of credit unions located in 4 of the 10 provinces of the country. Unpaid debts within the network increased from 29.5% in 2002 to 14% in December 2003. CAMCCUL is one of the main shareholders of the union bank of Cameroon (UBC).

As of December 31, 2004, Camccul held 16,877 UBC shares with a nominal value of around 100,000 FCFA per share. It is represented on the Board of Directors of UBC by two of its members (**1**).

(**2**) presents thenumber of COOPEC members of CAMCCUL as of 12/31/2004.

Next to the CAMCCUL network is the MC2 / MUFFA network

. The MC2 / MUFFA community growth mutual network

Afriland first bank with the help of ADAF created MC2 to provide rural populations with a development instrument that promotes the development of the individual and the entire community (bomba, 2006)[17].

Community growth mutuals are mutual funds created in 1992, managed by members and sponsored by the commercial bank CCEI created in 1987. They are set up under the association's legal regime (law n090 / 053 of December 19, 1990, however freedom association). As of April 15, 2005, there were three MUFFA and 59MC2 which covered the 10 provinces of the country.

As of December 31, 2004, the network had 54,951 individual members and reached around 334,100 people with CFAF 8.76 billion in deposits (bomba, 2006). The failure rates for the entire network as of December 31, 2004 were around 8%.

The (**3**) shows the evolution of the statistics of the MC2 / MUFFA network

. The network of village savings and self-managed credit unions

The network of village banks has been developed since 1996 by Cameroonian operators supported by the International Center for Development and Research (CIDR) within the PPCRD project (decentralized rural credit pilot project). cooperative, but its methodology aims for a strong participation of members in the management of base units (4). This network has as a preliminary approach the credit. Prior savings are not compulsory. We note the multiplication of unpaid cases.

3.1.1.2 Independent microfinance institutions

They are not affiliated with the various networks mentioned and are autonomous both in terms of management bodies and control. Independent EMFs are subdivided into two groups:

-The business COOPECs;

-The tontine or rural COOPECs

. The business COOPEC

These COOPECs are qualified as mutual credit with a reinforced financial purpose and are set up by businessmen, former bankers, officials or traders and structured in such a way as to mobilize a maximum of savings.

They are organized in the form of an agency around a central COOPEC. They are mostly based in cities.

The tontine or rural COOPECs

They are organized around a particularly small group with a functioning similar to that of tontines. They grant loans and collect deposits at a monthly meeting of members.

3.1.2 Importance of microfinance institutions

The importance of MFI can be understood by its macroeconomic weight in Cameroon.

It emerges from studies by Ngnodjom (2006) that estimates show that in 2000, MFIs offered 800 collection and service points, while the 10 commercial banks offered around sixty counters to their customers. Also in 2000, the different types of MFI claimed more than 600,000 customers against 200,000 only for traditional banks. The penetration and banking rate of MFIs on the basis of a population of 6 million people (out of a total of 16 million) is of the order of 10% against 3.3% achieved by traditional banks.

The author notes that financial flows are however modest compared to commercial banks Based on a study commissioned by COBAC from CRETES on all MFIs, we note:

- CFAF 35.7 billion in deposits and savings collected, or 6.01 only of the assets of private customers held by the entire banking sector;

- CFAF 25.2 billion in outstanding customer loans, ie 4.61% of all loans granted to the private sector by banks.

Between 1998 and 2002, the MFIs distributed some 75 billion FCFA of cumulative credits.

Despite this relatively low weight in terms of financial flows, MFIs play an undeniable economic role in the financial landscape.

3.1.3 Categorization of microfinance institutions

COBAC distinguishes three categories of EMF in the CEMAC zone:

- The first category institutions

The MFIs in this category collect the savings of their members which they use in credit operations exclusively for them. The members of this category therefore make savings and credit among themselves. This is the most primary form found in villages, for example. This category does not require to have a particular capital.

- Second category institutions

All MFIs in this category are intended to collect savings and grant loans to third parties. A maximum capital of CFAF 50 million must be available in this category. It is one of the most widespread in our cities; and which offer more or less banking services.

- Third category institutions

MFIs belonging to the third category have the particularity of granting loans without, however, collecting savings. This form is made up of associations, NGOs or projects which develop in their activities a package intended for the financing of local projects.

3.1.4 Regulatory framework of microfinance institutions in the CEMAC zone

In the CEMAC zone, microfinance institutions are governed by law n001 / 02 / CEMAC / UMAC / COBAC relating to the conditions for exercising and controlling microfinance activity in the CEMAC zone. The provisions of prudential standards set by COBAC / MFI / 2002/01 regulations are applicable to all microfinance institutions. It should be noted that before the advent of these two regulations, there were already several MFIs. They have chosen as the legal framework for their existence one of the following laws:

- Law n073 / 15 of 07/12/73 on the statute of Cameroon cooperative societies and its implementing decree n074 / 784 of 19/10/1974;

- Law n ° 90/053 of December 19, 1990 on the freedoms of association;

- Law n ° 92/006 of August 14, 1992 on savings and credit cooperatives and joint initiative groups and its implementing decree n ° 08 / 300PM;
- Law n ° 98/009 and its implementing decree n ° 08 / 300PM of 09/09/1998.

3.1.5- Some methodological characteristics

Research methodology is the set of means that researchers use to provide information to the realization of a given problem. We will present in turn the sample and the data collection the study variables and the statistical test.

3.1.5.1- The sample and data collection

We will first introduce sampling and then data collection.

- Sampling

Sampling is defined as a set to be observed from a population or a universe.

The population selected for our study is made up of independent MFIs based in Yaoundé. Our study population is 54 independent MFIs.

- Data collection

The appropriate collection tool for our study is the questionnaire. The questionnaire survey allows us to interview a set of respondents. This set is more often representative of a population through a series of questions relating to the information sought. It is a data collection tool, which makes it possible to process large samples through the verification of theoretical hypotheses and statistical tests that these hypotheses require.

3.1.5.2- Study variables

The study of one phenomenon or one variable in relation to another is done by two-dimensional analysis. These variables are assumed to be related by causality.

The study involves for this purpose the determination of the factors which can influence, cause or cause the phenomenon.

In the context of our study, we have the independent variables and the dependent variables. The independent variable is the determined factor while the independent variable is the determining factor.

- Independent variables

The independent variable is also called an explanatory variable or exogenous variable. It is the one that is manipulated in order to identify the effects on the subjects.

For this part of the study, the independent variables are linked to the internal control systems for managing the risks of MFIs by general management and the board of directors. These control systems concern the control of general management by the board of directors.

The control variables that we retained in the context of our study are the distribution of capital and the control of general management by the board of directors (the composition of the board, the actual presence of the members of the board at meetings, the functions of the general manager and the chairman, the frequency of meetings, the regular renewal of members, joint decision-making by the general management and the board of directors.

• The distribution of capital

In companies with concentrated shareholding, the reference shareholders probably exercise a major role in the control of the directors. Their high share allows them to minimize the effects of free-riding, as they can make a profit from the monitoring costs incurred to control managers. In contrast, in companies with dispersed shareholding, often at the mercy of managers in relation to their strong power, the board of directors can act as a counter-power (Nlemvo Ndonzuau, 2000).[18]

• Control of general management by the board of directors

For the board of directors to effectively control the general management, it must be composed of the majority of external members, it must have a separation of functions between the chairman and the chief executive officer, the members of the board must jointly take decisions decisions to minimize risks in MFIs (Churchill and Coster, 2001; NlemvoNdonzuau, 2000).

For us, it is a question of determining among the above variables those which are discriminating and which can lead to the sustainability of MFIs.

- The dependent variables

The dependent variable is also called an explained or endogenous variable. It essentially corresponds to the effect observed following the manipulation of the independent variable.

Our dependent variable being sustainability, we will first of all try to define this notion before specifying the indicators.

The concept of sustainability is interchangeably assimilated to permanence and has a three-dimensional plan namely longevity, life span and survival and is the goal that any business wishes to achieve in the long term.

For Bates (2006)[19], the life span of an MFI does not depend on access to resources, markets, technology and training although there may be access to financial services, but it depends on management quality. He also notes that analyzing

the life span of a MFI is like looking at a normal operating cycle with its cash-flow. He concludes that a MFI that pursues both social and business goals cannot have a normal lifecycle and therefore a long lifespan.
For Zihiga (2006)[20], the sustainability of a MFI depends on the products and services it offers which ensures its sustainability.
The sustainability of a MFI is the optimal result produced by it. It is the achievement of the objectives of longevity, life span and survival.
We will now present the statistical test.
3.1.6.1- The statistical test
We will present in turn the definition of the statistical test and the decision rule.
- Definition of the statistical test
The test chosen for our study is the chi-square. It allows you to see whether or not there is a link between the variables in a contingency table. We will use it to test our hypotheses because on the one hand our data are qualitative and on the other hand given the size of our sample.
The chi-square equation looks like this:
$\mathbf{X^2 = \sum (Oi\text{-}Ti)^2 / Ti}$
Oi = observed frequency (actual)
Ti = theoretical frequency (predicted)
X2 chi-square
K = Number of categories

Ti = (Tc-Tl) / N

Tc = total of columns
Tl = total of lines
N = sample size
The chi-square calculation using the computer program gives three indicators:
- "X^2" represents the chi-square obtained with the above formula;
- "dof" represents the number of degrees of freedom;
- "prob" represents the probability of significance of X^2.
dof = (l-1) (c-1)
l and c respectively represent the number of rows and the number of columns of the contingency table.
To avoid the error of the second kind which stipulates that H_0 is accepted while it is false and also because our research is done in social sciences, we choose for this the threshold of significance or margin of error 5%.
With this significance level of 5%, we have the probability of 5 in 100 of being wrong in asserting that the alternative hypothesis is true.
B- Decision rule
If the possibility of chi-square significance is low, we conclude that there is a significant association between the two variables. Its probability of significance indicates that the answers given are different. The differences observed are too great to be due to chance. We conclude that the hypothesis formulated is accepted.
If the probability of significance of the chi-square is high, it means that the observed deviations are attributed to chance at the threshold indicated. We conclude that there is a significant independence between the two variables and we reject the hypothesis formulated.
However, the chi-square test has limitations:
- The grouping of modalities can have an influence on the test result;
- For the test to be valid, the expected size for each cell in the table must not be less than 5;
- It does not specify the degree of link between the variables because its calculation is strongly influenced by the size of the sample.
Data processing should be done using descriptive statistical techniques. We will use descriptive methods (flat sorting) and explanatory methods (chi-square) to test our hypotheses.
3.2 Analysis and interpretation of the results
In this section, we will present in turn the analysis of MFI control systems with regard to their sustainability (descriptive analysis) and the determination of the discriminating factors of MFI survival through the control systems (explanatory analysis). .
3.2.1- Analysis of MFI control systems with regard to their sustainability: a descriptive analysis

As we announced above, the control systems retained in the context of our study are: concentration of capital, composition of the board of directors, effective presence of board members at meetings, separation of the functions of director and the Chairman, the frequency of meetings, the regular renewal of board members, the collaboration between general management and the board in decision-making.

3.2.1.1- The sharing out of capital

All the 35 MFIs that answered the questionnaire state that their establishments are made up of several shareholders, that is to say 100%. The chi-square test did not analyze this variable because it is constant (**5**).

It should be noted that when the capital is concentrated in the hands of one person, the control is very effective and the company is successful.

3.2.1.2- The composition of the board of directors

Among the 33 MFIs that answered this question, 17 of them have a board of directors composed of the majority of internal members(6), i.e. 48.6%, 15 of the majority of external members, i.e. ie 42.9% and 1 of the equality of internal and external members ie 2.9%.

As Churchill and Coster (2001) note, for a MFI to be efficient and viable over time, the composition of the board must provide for a majority of external members with various skills and abilities necessary to administer a MFI. . This composition must be balanced and take into account the dual mission of microfinance: some authors feel closer to the social mission and others closer to the commercial mission.

3.2.1.3- The effective presence of board members at meetings

34 MFIs answered this question (7) and 3 affirm that the members of the council participate weakly in the meetings i.e. 8.6%, the members of the 12 other participate moderately including 34.3% and the members of the 19 others participate strongly, of which 54.3%.

It is important that the members of the board of directors dedicate a good part of their time to the performance of their duties. It is not appropriate to choose an administrator for his political competence alone. While it might sound interesting to have famous people in your annual report, if they don't attend board meetings or play a meaningful role, it won't ensure good governance (Churchill et al. Coster, 2001).

3.2.1.4- The separation of the functions of the Chief Executive Officer and the Chairman of the Board of Directors

Among the 35 MFIs that answered this question (8), 34 state that it has a clear separation of tasks between the general management and the board of directors, that is to say 97.1% and 1 says that it does not there is no segregation of duties including 2.9%.

Churchill and Coster (2001) note that the separation of duties and responsibilities needs to be clarified between the board of directors and management. The board must watch over the performance of executives and hold them accountable for the results. This is about setting performance standards and taking disciplinary action if necessary.

3.2.1.5- The frequency of board meetings

The answers to this question were given as follows: the MFI holds weekly meetings, of which 2.9%, 5 hold monthly meetings, i.e. 14.3%, 12 hold quarterly meetings, of which 34, 3%, 3 hold bimonthly meetings of which 8.6%, 12 hold annual meetings of which 34.3% and 2 hold bimonthly (other), ie 5.7%. The board must meet to better follow the organizations (9). During critical periods, a weekly meeting should be scheduled. In balanced and experienced MFIs, quarterly meetings are sufficient when there is an advisory board that frequents the management (Churchill and Coster, 2001).

3.2.1.6- Regular renewal of the members of the board of directors

2 MFIs answered this question, 15 do not renew regularly the members of the board of directors (10), ie 42.9% and 17 do not renew including 48.6%.

It appears from the studies of Churchill and Coster (2001) that the board of directors must also be renewed regularly to allow new ideas to emerge and to bring fresh energy into the organization. This can be done by limiting terms of office and / or by instituting a performance appraisal system that encourages the inactive and ineffective director to resign.

3.2.1.7- Joint decision-making by General Management and the Board of Directors

33 MFI affirm that the general management and the board of directors jointly take decisions of which 94.3% and 2 say no, ie 5.7%(11).

3.2.2- Determination of the discriminating factors of the survival of control systems: an explanatory analysis

We will interpret each variable in our table (12) by giving the chi-square value, the degree of freedom and the probability of significance.

- In terms of the composition of the members of the board of directors, the chi-square value is 13.818. The degree of freedom is 2 and the probability of significance is 0.001 below the significance level which is 5%. This brings us to the conclusion that the composition of the board of directors influences the life span of MFIs;

- Regarding the effective attendance of council members at meetings, the chi-square value is 11.353. The degree of freedom is 2 and the probability of significance is 0.003 less than 0.05 which is the significance level. We therefore conclude that the effective presence of board members at meetings has an influence on the survival of MFIs. The Covid-19 has no influence on this effective presence, as long as to comply with the barrier measures, the meetings are not canceled but are held by videoconference;

- At the level of the separation of the functions of the director general and the Chairman, the chi-square value is 31.114. The degree of freedom is 1 and the probability of significance is 0.000 below the significance level which is 0.05. The conclusion that we can draw is that the separation of tasks between the general management and the board of directors is a significant determinant of the sustainability of MFIs;

- Regarding the frequency of board meetings, the chi-square value is 21.057. The degree of freedom is the probability of significance is 0.001 less than 0.05 which is the significance level. This leads us to conclude that the frequency of board meetings has an influence on the lifespan of MFIs. Covid-19 has no impact on the frequency of meetings as some meetings can be organized face-to-face with barrier measures and others by videoconference;

- At the level of regular renewal of council members, the chi-square value is 0.125. The degree of freedom is 1 and the probability of significance is 0.724 greater than 0.05 which is the significance level of chi-square. We therefore conclude that the regular renewal of the members of the board of directors does not have an influence on the life span of the MFI;

- Regarding joint decision making by general management and board of directors, the chi-square value is 27.457. The degree of freedom is 1 and the probability of significance is 0.000 less than 0.05 which is the significance level. The conclusion that we can draw here is that the collaboration between the general management and the board of directors is a significant determinant of the length of stay of MFIs.

IV. Figures and Tables

Table 13:Evolution of the Camccul network between 1969 and 2000

Year	Number of funds	Number of members	Volume of savings and social share	Volume of outstanding loans
1969	85	5000	21,5	14
1984	225	53000	5330	3670
1989	240	72358	10580	6810
2000	348	130000	20290	13690

Source: Ngnodjom, 2006. [17]

Table 14: number of COOPEC members of CAMCCUL as of 12/31/2004.

Active COOPECs approved by COBAC	158
Sleeping COOPECs registered awaiting liquidation	26
COOPEC awaiting registration by COBAC	9
Active discussion groups awaiting registration	5
Sleepy discussion group awaiting liquidation	14
TOTAL	212

Source: CAMCCUL 2004 report.

Table 15: evolution of the statistics of the MC2 / MUFFA network

	30-06-2001	31-12-2002	31-12-2003	31-12-2004
Number of MC2 / MUFFA	38	44	54	57
Total people affected	161 694	199 264	282 523	334 100
Mobilized funds + share capital	4 287 270	6 303 669	7 283 636	8 760 510
Outstanding loans	1 723 112	2 357 583	2 863 606	3 414 712

Source: Folekeagni, 2006 [21]

Table 16: CVECA quantified balance sheet from 1999 to 2001.

Year	Deposits	Outstanding loans
1999	309,9	354,1
2000	538,7	709,9
2001	1064,4	1376,5

Source: Ngnodjom, 2006

Table 17: Existence of several shareholders within the MFI

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Oui	35	100, 0	100,0	100,0

Source : our survey

Table 18: Composition of the board of directors

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Majorityof internal members	17	48,6	51,5	51,5
	Majorityofexternal members	15	42,9	45,5	97,0
	Equality between internal and external members	1	2,9	3,0	100,0
	Total	33	94,3	100,0	
Missing	System	2	5,7		
Total		35	100,0		

Source : our survey

Table 19: Degree of participation of members of the board of directors in meetings

		Frequency	Percent	Valid percent	Cumulative percent
Valid	low	3	8,6	8,8	8,8
	Middle	12	34,3	35,3	44,1
	high	19	54,3	55,9	100,0
	Total	34	97,1	100,0	
Missing	System	1	2,9		
Total		35	100,0		

Source : our survey

Table 20: separation of duties between management and the board of directors

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Yes	34	97,1	97,1	97,1
	No	1	2,9	2,9	100,0
	Total	35	100,0	100,0	

Source : our survey

Table 21: frequency of board meetings

		Frequency	Percent	Valid percent	Cumulative percent
Valid	weekly	1	2,9	2,9	2,9
	monthly	5	14,3	14,3	17,1
	quarterly	12	34,3	34,3	51,4
	biannual	3	8,6	8,6	60,0
	Annual	12	34,3	34,3	94,3
	others	2	5,7	5,7	100,0
	Total	35	100,0	100,0	

Source : our survey

Table 22: Regular renewal of board members

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Yes	15	42,9	46,9	46,9
	No	17	48,6	53,1	100,0
	Total	32	91,4	100,0	
Missing	System	3	8,6		
Total		35	100,0		

Source : our survey

Table23: Joint decision-making by general management and the board of directors

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Yes	33	94,3	94,3	94,3
	No	2	5,7	5,7	100,0
	Total	35	100,0	100,0	

Source : our survey

Table24**:** Chi-square distribution table

	Composition of the Board of Directors	Effective presence of Board members at meetings	Frequency of Board meetings	Joint decision-making by the board and general management	Separation of the functions of Chairman and Chief Executive Officer	Regular renewal of board members
Chi-Square	13,818	11,353	21,057	27,457	31,114	0,125
Df	2	2	5	1	1	1
Asymp.	0,001	0,003	0,001	0,000	0,000	0,724

Source: by the author from SPSS software

V. Conclusion

Throughout this article, we have focused on the impact of control systems on the sustainability of MFIs. The results obtained after the analysis reveal a strong link between the control systems and the survival of Cameroonian MFIs.

For Cameroonian MFIs to ensure a long life span, they must take into account significant determinants such as the composition of the board of directors, the effective presence of board members at meetings, the separation of general management functions and those of the Chairman, the frequency of board meetings and joint decision-making by senior management and the board of directors. This confirms our hypothesis according to which MFIs with effective internal control systems ensure their sustainability.

In view of the results we have achieved, the managers of MFIs should put in place effective internal control systems to ensure their sustainability and the bodies in charge of monitoring them, such as the Central African Banking Commission (CABC) should scrupulously ensure that these control systems are respected.

However, we must not overlook the impact of the covid-19 pandemic on the activities of MFIs in the sense that the commercial sector is particularly affected, especially since the majority of their customers are traders. The closing of the borders severely influences business activities on both the import and export side.

Our study is limited to internal control systems, and the sustainability of MFIs cannot be measured solely on them. It can also be measured by auditing, overall governance, credit management, customer satisfaction and more.

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