Volume 42, Issue 3

The Impact of competition on the social performance of microfinance institutions in Cameroon

Kadandji André
Saint Jerome Management Sciences and Business School (SJMB)

Abstract

The objective of this article is to analyze the effect of competition on the social performance of microfinance institutions in Cameroon. In order to do so, we employ the Structure-Conduct-Performance paradigm. For the empirical analysis we use panel data for 19 microfinance institutions extracted from MIX MARKET database for the period 2002 to 2012. We used the institution-centered approach for social performance. The method of generalized estimating equations allowed us to test the robustness of our results. Our results show that the Lerner index is positively and significantly related to the degree of social significance at the 5% threshold. Thus, increasing competition reduces the degree of outreach. In view of these results, it is important to regularly audit the social performance of MFIs in a competitive context such as that of Cameroon. Furthermore, it appears that for the improvement of the social framework, special monitoring is needed for large MFIs.

1. Introduction

Microfinance requires the presence of two fundamental dimensions: the profitability of institutions and the principle of solidarity that it conveys. For this to happen, microfinance institutions must be financially and socially competitive. A company's competitiveness corresponds to its ability to compete and make a profit in the markets in which it operates (Ngok Evina, 2014). Thus, in addition to the financial framework, the social aspect must be taken into account in the competitiveness of microfinance institutions (MFIs). Social performance is the approach to performance developed by the human relations school. According to Lapenu and al (2004), microfinance is perceived as a tool for including those excluded from the traditional banking system by offering services to the unbankable. The evolution of microfinance over time shows the desire of its promoters to integrate the poor into the financing circuit and to fight against poverty. These motivations can be found in the first experiments in microfinance conducted by the Franciscans in the 15th century and in the 1970s with the Grameen Bank of Muhammad Yunus. Institutions were created to provide the poor with livelihoods and the tools to manage the risks associated with them. According to data from the Ministry of Finance in Cameroon, in 2018 microfinance institutions contributed 11% to the financing of the national economy.

For several years, we have been witnessing a profound transformation of the microfinance sector. Today, microfinance is largely absorbed by the forces of the capitalist system and contributes in some cases to new forms of exploitation (Guérin, 2015). Indeed, the demand for financial profitability that characterizes investors, forces most MFIs to engage in a frantic race for growth that is often not compatible with the social mission of the MFI. Several studies (Adair and Berguiga, 2010; Messomo Ellé, 2017) have focused on the social performance of MFIs. For Adair and Berguiga (2010), the drivers of MFI social performance can be internal and external. Focusing on the influence of microloans on social performance, Messomo Ellé (2017) finds that the activities funded weakly explain social performance. Furthermore, the influence of competition on social performance has been examined by some studies and in a context other than Cameroon. Wondirad (2020) finds that competition has a positive effect on the relationship that can exist between the financial performance and social performance of MFIs in India. The same is true for Fatururimi (2010) who finds that competition is beneficial to MFIs in Burkina Faso. On the other hand, Assefa and al (2013) find that intense competition negatively influences the performance of MFIs. The same results are found in Hossain and al. (2020) who find that competition has a negative effect on the economic viability of MFIs and that competition harms the scope of their activities while improving the depth of the activities of these institutions. These divergent results keep the debate about the relationship between competition and performance alive. In addition, the methods used for the analysis must be taken into account. Indeed, the analysis of the results of the fight against poverty by MFIs makes it possible to evaluate their social performance. To do so, two complementary evaluation approaches can be adopted: the client-centered approach and the institution-centered approach. For this article, we choose the institution-centered approach, which focuses on social impact. To do so, we ask the question: in a competitive context, what is the effect of competition on the social performance of MFIs? The rest of the article is organized around the Structure-Behavior-Performance paradigm to understand the link between competition and social performance and the empirical analysis in the Cameroonian context.

2. Social Performance: a consequence of market structure

The idea that there is a relationship between market structure and market power was taken up

by the structuralist school, which developed in the 1950s and 1970s with authors such as Joe Bain and Edward Mason. According to these authors, the more concentrated a market is, the greater the profits made by firms (Wondirad, 2020).

The Structure-Behavior-Performance (SBP) approach tends to show that imperfect competition produces suboptimality. Indeed, the level of production of firms is not at the point of maximum efficiency. The existence of a long-run profit encourages the producer to produce at a cost higher than its most efficient level. The forces of supply and demand are believed to determine market prices and output levels. The competitive state of the market acts as a restraining force, preventing one of the two components from imposing its terms on the other. However, when there is at least one fixed cost and a constant marginal cost, the average cost of production will decrease as the volume of output increases. Thus, applying the reasoning of the SCP approach, we conclude that the existence of increasing returns facilitates the detour of part of the consumer surplus to producers.

Several theoretical analyses have shown that competition has a negative impact on the performance of socially motivated MFIs (Wondirad, 2020). However, the classical economic approach describes competition as a mechanism that ensures efficient management of resources, encourages innovation and therefore produces a positive result for the community. This dogma is used as an argument by authors of the Chicago school such as Friedman (1971) who assert that the sole responsibility of the MFI is to be profitable for its shareholders, since a competitive market ensures the convergence between the maximization of the MFI's long-term value and the maximization of social welfare (Jensen, 2001). Indeed, when there are many MFIs in the market, customers are willing to borrow from multiple lenders and, therefore, incentives do not work well (Fatururimi, 2010). The dynamic incentive is used by MFIs to enable their clients to repay their loans (Adair and Berguiga, 2010). This is because they can only have loans in the future if borrowers repay their original loans. Yet, if clients can get future loans from other lenders, their incentive to pay would decrease. Recall that in order to expand their outreach, socially motivated MFIs take advantage of the earnings of profitable borrowers to subsidize loans to unprofitable borrowers (McIntosh and Wydick 2005). Thus, socially motivated MFIs use the earnings of wealthier borrowers to subsidize loans to poorer borrowers. This is called cross-subsidization. Competition among MFIs negatively affects cross-subsidization and the profitability of MFIs. In this context, it is difficult for MFIs to outreach a wide audience. In addition, some empirical studies have shown that there are statistical correlations between S and P, as well as between market power, defined as the relationship between market price, marginal cost, and the profit level of firms.

3. Empirical analysis in the Cameroonian context

The issue of the social performance of MFIs in Cameroon has emerged since the early 2000s with the demands of the monetary authorities to formalize microfinance activities. Indeed, in order to protect the clients of these institutions, the authorities have improved the legal framework for the exercise of this activity by adopting several texts by the regulator. Thus, the regulation of the Economic and Monetary Community of Central Africa (CEMAC) No. 01/02/CEMAC/UMAC/COBAC of April 13, 2002 defines the profile of MFI managers and the conditions for carrying out microfinance activities. However, the standards of the Banking Commission of Central Africa (COBAC) have a broad scope on financial and social governance. Very often, there is the apprehension that financial performance is in competition with social performance.

For Lafourcage and al (2005), MFIs in Africa are less profitable than MFIs in other continents.

Moreover, at the continental level, MFIs in East Africa are the most profitable, followed by those in West Africa and finally those in Central and Southern Africa and the Indian Ocean. However, microfinance appears to be the key element of the Cameroonian government's poverty reduction strategy. In April 2001, the government of Cameroon issued a national microfinance policy statement with the objective of bringing MFIs and producer organizations closer together. The government, with the support of the International Fund for Agricultural Development (IFAD), has also launched a project to consolidate and develop microfinance with the mission of facilitating access to local financial services for all disadvantaged categories of the population.

For the purposes of this article, we use the MIX Market database, which is the most reliable international database for information on MFIs. It classifies MFIs into star categories based on their performance and social indicators. For this analysis, we selected 19 MFIs in Cameroon that regularly provided information. In Cameroon, MFIs are classified into three (03) categories. For MFIs in the first category, clients are also members. Second category MFIs collect savings and grant credit to third parties, who are not required to be members. The third category includes MFIs that grant loans to third parties without carrying out the savings collection activity. Thus, our sample consists of 19 MFIs, 9 in the first category, 8 in the second category and 2 in the third category, taken over the period from 2001 to 2012, i.e., 12 years for a panel data model.

As for the dependent variable, it should be noted that in the absence of harmonized social indicators, most studies use proxies as an indicator of social performance. Indeed, the social performance of MFIs goes beyond targeting the poor and focuses more broadly on the integration of the excluded, the improvement of clients' living conditions, and the integration of the institution within the community where it operates (Lapenu and al., 2004). It should be noted that social performance is measured in terms of improving the living conditions of the poor, adapting services and products to the target clientele, and providing economic and social benefits to the clientele (Messomo Ellé, 2017). It is within this broader framework that Lafourcade and al. (2005) use the concept of outreach to measure the social performance of MFIs. They define outreach as efforts to extend microfinance services to populations not served by financial institutions. Outreach can be measured in terms of extent or degree. The indicator of outreach can be the number of clients served. For example, outreach can be measured by the number of active borrowers (NEA). This is because an MFI that provides credit to a large number of borrowers plays an important role in reducing poverty, even if most borrowers are not poor (Adair and Berguiga, 2010). While the degree takes into account the socio-economic level of the clientele served by MFIs. According to Guérin (2015), women's access to credit would also pave the way for their emancipation. For this reason, many MFIs target women as a priority. Some believe that since women are more discriminated against by commercial banks, they have a greater need for financial services. It also turns out that women are more concerned about family welfare. Women's access to financial services will have a greater social impact on their communities. While these proxies remain debatable (Adair and Berguiga, 2010), given the nature of the indicators published by MIX Market, we select outreach (Wondirad, 2020) and degree of outreach as an indicator of social performance for this study.

The indicators for measuring competition developed for the most part by the theory of industrial economics can be grouped according to the structural or non-structural approach. Those developed by the structural approach are based on market concentration criteria. The indicators developed by the non-structural approach, based on the new theory of industrial organization, are based on market power on the one hand and the behavioral character of the MFI on the other. In the context of our study, we use the Lerner Index (IL) to measure competition, which is the most widely used non-structural indicator in the literature. It measures the market power of the MFI by the difference between price and marginal cost. It is inversely related to

competition. A low Lerner index represents a high level of competition and vice versa. Indeed, the presence of a large number of firms would push them to price at the marginal cost, which would decrease the market power of each firm (Wondirad, 2020). It allows us to study the evolution of the MFI's behavior over time by measuring its market power. In addition, it can be calculated with a limited number of MFIs. To calculate the Lerner index, we use the intermediation approach, which accounts for the MFI's production by considering deposits, physical capital and labor as inputs, and loans and investments as outputs. For this purpose, we take the ratio of interest income to total loans as the price, and the costs are the ratio of interest income to total deposits and the ratio of overhead costs to total assets. We include size as a control variable. Indeed, Wijesiri and al. (2017) show that larger MFIs tend to have better financial and social efficiency. Because MFIs are deployed across the country, the macroeconomic framework remains the same. All face the same realities. For this, we retain the country's economic performance assessed by the growth rate of the gross domestic product (GDP) for what concerns the macroeconomic framework (Kadandji and Djekna, 2018). In order to cover their operating expenses and outreach break-even point, MFIs charge much higher interest rates than the conventional banking sector. Regulation No. 04/19/CEMAC/UMAC/CM of August 10, 2020 on the overall effective rate and the repression of usury and the publication of banking conditions in CEMAC gives MFIs the possibility to set their interest rates. Indeed, the maximum lending rate has been abolished since July 2, 2008 by the resolution of the monetary policy committee. However, the minimum lending rate is maintained and reviewed each time by the regulator taking into account the evolution of the economic situation. In addition, the requirement for MFIs to display their terms and conditions makes the information available to customers who are free to make their choice. To protect MFIs and their clients, COBAC requires compliance with several prudential standards. Most of these prudential requirements are based on capital adequacy. Thus, to represent the regulation, we use a capitalization variable which is represented by a ratio that is based on equity and provides information on the capacity of the MFI to absorb possible losses. For this purpose, we use the debt/equity ratio.

Table 1: Summary of model variables

Variables	Names	Formulas or details	Coding	Expected sign
Variables to explain	Social performance	Degree of outreach as measured by the percentage of women borrowers	PFE	
		Extent of outreach measured by the natural logarithm of the number of active borrowers	LNEA	
Interest Variable	Competition	Lerner index = (price - marginal cost)/price	IL	(+)
Control variables	Macroeconomic framework	Cameroon's GDP growth rate	TPIB	(+)
	Regulatory framework	Debt-to-equity ratio	REG	(-)
	Size	The size measured by the natural logarithm of the asset total	LTA	(+)

Source: Author

Given the characteristics of the variables explained, we use linear regression models in panel data. To reduce and harmonize the unity of the values of certain variables, we apply the natural

logarithm to the nominal values (Messomo Ellé, 2017). Thus, the structures of the models we use for the analysis are as follows:

$$PFE_{it} = \alpha_0 + \alpha_1 IL_t + \alpha_2 REG_{it} + \alpha_3 TPIB_t + \alpha_4 LTA_{it} + \varepsilon_{it} \qquad (1)$$

$$LNEA_{it} = \beta_0 + \beta_1 IL_t + \beta_2 REG_{it} + \beta_3 TPIB_t + \beta_4 LTA_{it} + \varepsilon_{it} \qquad (2)$$

4. The positive influence of competition on social performance: a paradox in the Cameroonian context

For the degree of outreach, we find that on average 10.2% of women obtain a loan from MFIs in Cameroon. For the extent of outreach, we use the natural logarithm of the number of active borrowers. On average there are 14295 active borrowers per MFI in Cameroon. The descriptive analysis of the Lerner index shows that the microfinance sector in Cameroon is competitive (average of -0.028). For missing data, we use the multiple imputation method, which is the most efficient way to generate these data.

Table 2: Descriptive statistics of the variables

Variable		Mean	Std.Dev	Min	Max	Observations
LNEA	Overall	3.114	4.221	0	11.247	N=228
	Between		2.356	0	8.268	n=19
	Within		3.540	-5.154	10.867	T=12
PFE	Overall	0.102	0.200	0	0.980	N=228
	Between		0.084	0	0.327	n=19
	Within		0.182	-0.225	0.986	T=12
IL	Overall	-0.028	0.415	-5.329	0.948	N=228
	Between		0.157	-0.568	0.226	n=19
	Within		0.385	-4.790	0.801	T=12
REG	Overall	1.584	10.321	-119.940	37.230	N=228
	Between		1.970	0	7.448	n=19
	Within		10.141	-121.925	35.245	T=12
LTA	Overall	8.416	10.800	0	25.706	N=228
	Between		6.647	0	20.683	n=19
	Within		8.638	-12.267	26.820	T=12
PIB	Overall	0.036	0.008	0.021	0.047	N=228
	Between		0	0.036	0.036	n=19
	Within		0.008	0.021	0.047	T=12

Source: Author

It is important to note that our sample is composed of three types of MFIs: non-governmental organizations, non-bank financial institutions and credit unions. Therefore, for the remainder of our study, we assume that our sample is heterogeneous. To do so, we perform the Hausman test. For the litter size model, the test has a p-value (0.995) above the 10% significance threshold, as shown in Table 3. Consequently, the test does not allow us to differentiate the fixed effects model from the random effects model. Thus, in order to choose our model, we rely on the comparison of the within variation of the variables with that of the between variation. Since the between variation is greater, the fixed-effects model is therefore more appropriate than the random-effects model. This leads us to choose the fixed-effects model to estimate the coefficients. Furthermore, for the scope model, the test presents a p-value (0) below the 10% significance threshold, which leads us to choose the fixed-effects model for estimating the coefficients. We choose the robust option to correct the heteroskedasticity by White's method. For the robustness of our results, we estimate by the Generalized Estimating Equations (GEE) Method.

Table 3: Synthesis of results

PFE	Estimation 1 (OLS)	Estimation 2 (GEE).	LNEA	Estimation 3 (OLS)	Estimation 4 (GEE)
IL	0.068	0.065	IL	-0.176	-0.118
	(2.28) **	(2.33) **		(-0.46)	(-0.32)
REG	0.002	0.002	REG	-0.012	-0.009
	(1.99) **	(1.98) **		(-0.82)	(-0.62)
LTA	0.009	0.008	LTA	0.331	0.33
	(6.34) ***	(3.02) ***		(18.84) ***	(21.68) ***
TPIB	-1.384	-1.429	TPIB	-12.510	-12.144
	(-0.93)	(-0.98)		(-0.65)	(-0.64)
Constant	0.078	0.081	Constant	0.801	0.787
	(1.34)	(1.42)		(1.06)	(1.05)
R-squared	0.226		R-squared	0.655	
Number of obs	228.000	228.000	Number of obs	228.000	228.000
Prob (F-stat)	0.000 (14.925)	0.000 (74.582)	Prob (F-test)	0.000 (97.139)	0.000 (510.368)
Hausman test Chi2 (4)	0.202 (0.995)		Hausman test Chi2 (4)	0 (37.339)	

*Note: Values in parentheses represent calculated Student's statistical t and *** p<0.01, ** p<0.05, * p<0.1, OLS: Ordinary Least Square, GEE: Generalized Estimating Equations*

Source: Author

Estimates 2 and 4 allow us to test the robustness of our results using the generalized estimating equations method. The analysis of the globality test performed for these estimates shows that the models as a whole are good (Fisher tests are significant at the 5% level). However, the coefficient of determination is low (0.226) for the model explaining the degree of outreach. On the other hand, this coefficient is 0.655 for the model explaining the extent of outreach, which suggests a good quality of fit. In addition, we find in two estimations that the influence of the competition variable on the social performance of MFIs in Cameroon is significant at the 5% level for the degree of outreach and insignificant for the extent of outreach. Since competition is inversely related to the Lerner index, thus, an increase in competition significantly reduces the degree of outreach. Our results partially corroborate the result obtained by (Fatururimi, 2010) regarding the influence of the number of competitors on social performance. The same is true for the results of Hossain and al. (2020) regarding the degree of outreach. However, with respect to the extent of outreach, the negative effect of competition is not significant in Cameroon. Indeed, given the context, competition was expected to have a negative effect on the social motivation of MFIs (Assefa and al., 2013). As for the effect of size on social performance, the expected positive influence is confirmed by the empirical analysis. Indeed, in both models, we find that the size of the MFI has a positive and significant effect at the 5% threshold whether for the degree or the extent of outreach. This result confirms the positive effect of size on MFI performance obtained by Wijesiri and al. (2017). In addition, we find that MFI regulation and size significantly improves the percentage of female borrowers at the 5% threshold. Moreover, in the second model only the size variable is positively and significantly related to the number of active borrowers at the 5% threshold. Furthermore, we note that for the GEE method, several results obtained by the OLS remain.

5. Conclusion

The theoretical basis of this work is the SCP paradigm. For the empirical analysis, we used data from the MIX MARKET database for 19 MFIs in Cameroon. To estimate the coefficients of the regression, we used the ordinary least squares method. The Hausman test and the analysis of inter-individual and intra-individual means allowed us to retain the fixed effects models. The robustness of our results was assessed by the GEE.

The results of the analysis show that the Lerner index has a positive and significant influence on the percentage of women borrowers. That said, competition is inversely related to the Lerner index, significantly reducing the degree of outreach of MFIs. On the other hand, competition as perceived by the Lerner index does not have a significant effect on the number of active borrowers. There is also a clear positive effect of size on social performance as measured by the percentage of women borrowers and the number of active borrowers. In light of these results, it is important to regularly audit the social performance of MFIs in a competitive context such as Cameroon. In addition, it appears that for the improvement of the social framework, special monitoring is needed for large MFIs.

References

Adair, P. and Berguiga, I. (2010) "Les facteurs déterminants de la performance sociale et de la performance financière des Institutions de microfinance dans la région MENA : une analyse en coupe instantanée", *Région et développement*, **32**, 92-119.

Assefa, E., Hermes, N. and Meesters, A. (2013) "Competition and the performance of microfinance institutions", *Applied Financial Economics*, **23** (9), 767-782.

Fatururimi, F. (2010) "Les conséquences de la concurrence sur le marché des services microfinanciers : cas du Burkina Faso", *Mondes en développement,* **4**, 152, 57-68.

Friedman, M. (1971) *Capitalisme and Liberté*, Paris, Robert Laffont, traduction française.

Guérin, I. (2015) *La microfinance et ses dérives : émanciper, discipliner ou exploiter ?*, Paris, Editions Demopolis.

Hossain, S., Galbreath, J., Hasan, M. and Randoy, T. (2020), "Does competition enhance the double-bottom-line performance of microfinance institutions?", *Journal of Banking and Finance*, **113**, 1-17.

Jensen, M. C. (2001) "Value maximization, stakeholder theory, and the corporate objective function", *Journal of Corporate Applied Finance*, **14**, 3, 8-21.

Kadandji, A. and Djekna, V. (2018) "The Influence of loan portfolio quality on sound banking in CEMAC: the importance of bank's internal and external environment", *International Journal of Economics and Finance,* **10**, 7, 136-149.

Lafourcade, A. L., Isern, J., Mwangi, P. and Brown, M. (2005) "Étude sur la portée et les performances des institutions de microfinance en Afrique", *Market Information Exchange*.

Lapenu, C., Zeller, M., Greely, M., Chao-Béroff, R. and Verhagen, K. (2004) "Performances sociales : une raison d'être des institutions de microfinance et pourtant encore peu mesurées. Quelques pistes", *Mondes en développement*, **2**, 126, 51-68.

McIntosh, C. and Wydick, B. (2005) "Competition and Microfinance", *Journal of Development Economics*, **78**, 271-298.

Messomo Ellé, S. (2017) "Microcrédits et performances financière et sociale des institutions de microfinance au Cameroun", *La Revue Gestion et Organisation,* **9**, 2, 79-91.

Ngok Evina, J. F. (2014) "La compétitivité des entreprises africaines : le cas du Cameroun", *La Revue des Sciences de Gestion,* **3**, 267-268, 51-58.

Wijesiria, M., Yaronb, J. and Meolic, M. (2017) "Assessing the financial and outreach efficiency of microfinance institutions: Do age and size matter?", *Journal of Multinational Financial Management,* **40**, 63-76.

Wondirad, H. A. (2020) "Competition and microfinance institutions' performance: evidence from India", *International Journal of Corporate Social Responsibility*, **5**, 6, 1-19.