Ownership Forms and Costs of Operations of Microfinance Institutions in Cameroon

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This paper investigates on the relative costs of operations of microfinance institutions (MFIs) in Cameroon with regard to their ownership forms. We extracted data from MIX Market which included 31 MFIs over the period 2001-2017. On processing data though a multinomial logistic regression, we found out that affiliated Credit Unions were the most cost-efficient organisational form, but the portfolio efficiency was nearly the same all across ownership patterns. Affiliated Credit Unions underwent the lowest operating expenses whereas Microbanks significantly reported the highest financial expenses. Also, we did not find any significant differences between personnel productivity across ownership forms.

Keywords: microfinance, performance, organisation ownership form, transaction costs, Cameroon

Microfinance activity took precedence over the gap left by banks (Fall, 2009), but scarred by informal practices of finance all the same. The development of Cameroonian microfinance industry in early 1990s sounded as a regeneration of the financial intermediation market wounded by massive bankruptcies, and thereof left banks more reluctant to deal with low but also intermediary income earners who could not provide sound sureties. However, from the multiple failures reported in late 1990s, the incorporation of informal and formal practices into financial intermediation gave rise to weak organisations in microfinance. A legal frame initiated by COBAC[1] in 2002 sounded in the industry by delineating the business scope. Through the ambition to foster strong institutions in microfinance, the regulation should care not to bitterly wound unbanked people who could be worse off than ever and would injure the stability of an already suffering financial system.

This paper investigates on the relative performance of Cameroonian MFIs ownership forms from an organisational outlook. Then, our main concern is: How cost-efficient are these financial intermediaries' types in meeting people's needs? We extracted from MIX Market database, ratios related to personnel allocation, the cost of loans, operating and financial expenses as well. The dataset included 31 microfinance institutions (MFIs) in Cameroon over the period 2001-2017. Sampled MFIs encompassed 51.1% of Cameroon gross loan portfolio and we got in our analysis 170 observations. On processing data through the multinomial logistic regression, we found out that affiliated Credit Unions were the most cost-efficient organisational form, but the cost per borrower was nearly the same all across ownership forms. We are going to develop on the regulatory framework and scrutinize the literature. Then, we are explaining the methodology that allowed the results

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[1] COBAC is the banking superintendent for all Central Africa countries.

obtained. Finally, the conclusion will summarize the work achieved.

The Regulatory Framework

On focusing on savings and loans activity while allowing partnerships and network umbrella, three categories with a delimited scope and structure emerged from the regulation No. 01/02/CEMAC/UMAC/COBAC on the conditions of operations and control of microfinance activities in Central Africa Economic Community[2]:

• The First-Class MFIs include Mutuals, Credit Unions, and Cooperatives[3]. They are deposits-taking firms but they can only operate loans with members. Those institutions are also allowed to operate independently or within a network.

• The Second-Class MFIs can be regarded as Microbanks. Alike First-Class, they can collect deposits while they can operate loans with the general public.

• The Third-Class MFIs are credit-only institutions. They are largely owned as non-banking financial institutions (NBFIs), projects financing and non-government organizations (NGOs). Those firms are non-deposits-taking institutions. They can only operate loans with the general public.

Factually, the new microfinance-specific regulation defined them functionally and institutionally (Merton, 1995a; 1995b) with respect to their ownership form, scope of operations, and prudential ratios. Figure 1 exhibits the connection between ownership forms and their scope.

The ensuing entities departed from initial credit and agricultural cooperatives, as well as subsidized credit programs that had been prevailing till date. Startlingly, the subsequent rush to regulate resulted in the preference of the First-Class. Either in Cameroon or in the whole CEMAC Zone Commission Bancaire de l'Afrique Centrale (COBAC), reports have been showing that Credit Unions have always been the dominant form, then followed by Microbanks. In Cameroon, out of licensed 521 MFIs in 2016, far ahead 468 Credit Unions outnumbered 49 Microbanks and four Third-Class reported. Otherwise, about 90% of founders were fond of the First-Class, whereas 9.40% went for the Second-Class. The Third-Class, the least observable form, has been selected by less than 1% of promoters. Echoing Coase (1937) and Fama and Jensen (1983b), Hansmann (1996) submitted that "if we observe that a particular form of ownership is dominant in a given industry; this is a strong indication that the form is less costly than other forms of ownership would be in that industry" (p.22). In this study, we intend to shed light on the cost of internalizing financial intermediation within these firms, consonant with—not the management but—the type of institutional arrangement (Coase, 1937; 1998; Demsetz, 1967; Williamson, 1985; 1988). As such we intend to build financial institutions worth to efficiently outperform the market. Put otherwise, this paper is a comparative institutional analysis oriented toward the cost of doing business in microfinance, i.e., how does each ownership pattern internally allocate resources and remunerate production factors? (Williamson, 1971).

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[2]We are going to use the French acronym Communauté Economiqueet Monétaire de l'Afrique Centrale (CEMAC Zone) thereafter when referring to Central Africa Economic Community.

[3]For simplification sake, Mutuals, Credit Unions, and Cooperatives are used here interchangeably.
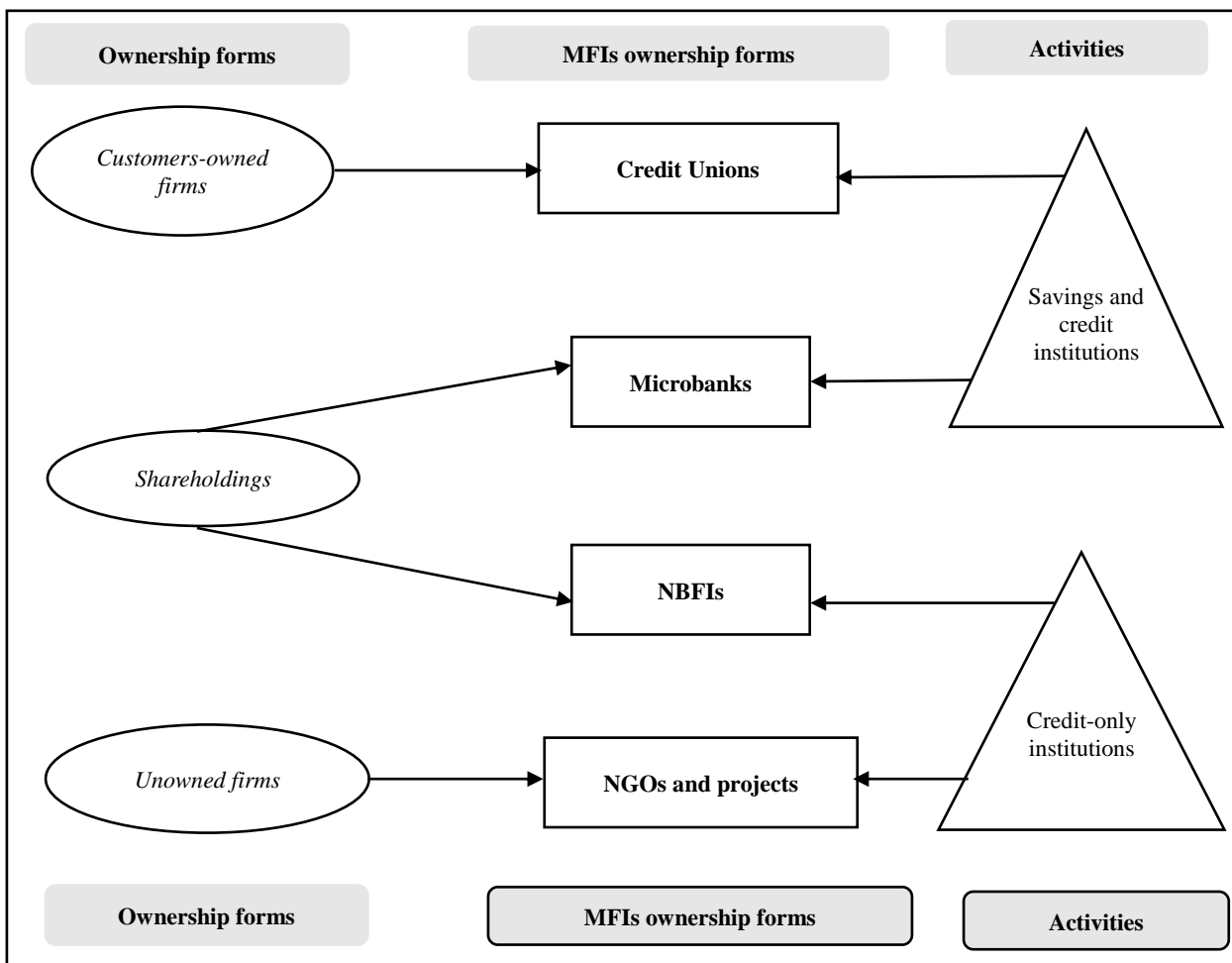
*Figure 1.*Coordination between ownership forms and microfinance activities (Source: The author readings compilation).

Literature Review

In fact, for the law restricts and rules individuals' freedom, in contractual relationships, the legal frame turns to define internally and externally the firm scope and the conditions of the contract outcomes performance. Ledgerwood (2013) suggested that:

> a financial institution's structure is determined by its legal form, its ownership and governance structure, the degree to which it is supervised by the state, and the type of clients it serves. These in turn, influence an institution product offering, financial management, reporting needs, funding sources, and overall financial sustainability and independence. (p.172)

But the legal form brings on ownership and governance structure, the degree of supervision by the state, and the type of clients served. In the same wavelength, Amadou Barry and Tacneng (2014) argued that "MFIs with different ownership structures are expected to behave differently from each other because of their variations in terms of legal status, financing structures, level of regulation, objectives and subsequently how they are governed" (p.3).

Beyond the endogenous nature of ownership forms with regard to the law, it also sounds well to point out that ownership forms are exogenous institutional arrangements to the law. Being institutions, they "are the written and unwritten rules, norms and constraints that human devise to reduce uncertainty and control their

environment" (Ménard& Shirley, 2008, p.1). Except the owner's desire to be himself master, owning is better than outsourcing because the firm internalizes the market transaction costs, i.e., the costs of observing and adjusting to market price mechanisms but also the costs involved by contracts incompleteness, by information asymmetry, by misalignments of contracting parties' interests, and by designing equitable incentive schemes (Coase, 1937; Williamson, 1971; Alchian & Demsetz, 1972; Grossman & Hart, 1986; Holmstrom & Tirole, 1989) namely when the legal system is perceived to inefficiently enforce contracts (Casas-Arce & Saiz, 2006; 2010). Accordingly, the various institutional arrangements have been crafted so as to benefit from economies of scale (Coase, 1937) and of specialisation (Sraffa, 1926; Fama & Jensen, 1983a). Better than a causal agent, the firm informational advantage is compounded by the benefits earned from the reputation effects induced by the specialisation on a niche of an imperfect market (Sraffa, 1926; Klein, Crawford, & Alchian, 1978) or by fiat through an internal division of labour (Coase, 1937; Alchian & Demsetz, 1972).

Ideally, the entrepreneur is well-suited to act for the best interest of the firm; but the sole proprietorship form does not tell us all about the firm. The modern firm is an organisation wherein individuals combine various resources (information, know-how, capital, etc.) but amongst the human resource cannot be fully controlled. Internally, transactions are organized between the funders and the board of directors, managers, workers, clients, suppliers, etc. The organisational contract specifies the right of each agent, the performance measurement criteria and the payoff functions (Demsetz, 1967; Fama & Jensen, 1983a). Alike an internal market, agents with conflicting objectives contractually exchange resources (Alchian & Demsetz, 1972) that may not always maximize the output obtain but rather their individual utility functions. On account of the divergent aspirations of these patrons of the firm, "the [property] rights should be assigned to those who can use them most productively" (Coase, 1992, p.718) but with subsequent incentive structures implied by the associated governance costs (Coase, 1960; Hansmann, 1996). Factually, contracts incompleteness gives rise to positive transactions costs; and the arising ownership forms strive to fill the gap left by incomplete property rights allocation (Allen & Lueck, 2008). Thus, it is not strange to observe in microfinance various ownership forms, such as Credit Unions (customers-owned firms), Microbanks, and NBFIs (suppliers-owned firms) and non-government organisations (ownerless firms) but never employees owned firms. And henceforth, we can reasonably expect that each organisational pattern will induce different costs of operations because of different information flows used in making decisions and shaping alternative incentives schemes (Holmstrom & Tirole, 1989).

Somehow, both regulation and ownership forms restrict the firm scope and subsequently the performance. This struggle about the legal form of microfinance institutions is far from being innocent since many scholars found kind of harmony between the legal status and the performance, but without consensus. Tchakounte Djoda, Djaowe, and Ngomign (2015) put that a sound regulation of microfinance activities results in disciplining informal investment and henceforth capital allocation. This point is challenged by Cull, Demirgüç-Kunt, and Morduch (2009a; 2009b) who advocated that the additional costs induced by prudential supervision compliance dampen the profitability and are compensated by lower outreach. But with regard to return on assets (ROA) and organizational performance, Tchakouté Tchuigoua (2010a) did not find any superiority of Shareholders firms on NGOs, although Cooperatives seem to more performant than Shareholders firms. Contrasting with Tchakouté Tchuigoua (2010a), Araújo da Costa (2017) found that worldwide, NGOs and Cooperatives showed lower cost of credit portfolio. Tchakouté Tchuigoua's (2011) research conducted in sub-Saharan Africa (SSA) MFIs revealed that operating expenses ratio was far below (23.7%) investors-owned firms (44%) and NGOs

(62.2%). However, Tchakouté Tchuigoua (2011) found the cheapest loan cost among NGOs and followed by Cooperatives, in spite of their so-claimed social vocation. By contrast to Tchakouté Tchuigoua (2010a; 2010b), Amadou Barry and Tacneng's (2014) findings are supportive of sub-Saharan NGOs. Alternative research in East Africa highlighted that Microbanks and NBFIs were more efficient than Cooperatives and NGOs (Kipesha, 2012). They found that from the financial (with regard to the ROA and cost per loan) and social (as for loans size and share of female borrowers) performance standpoints, sub-Sahara African NGOs outperformed shareholdings.

Significance of the Study

Our study will perform a comparative analysis of MFIs organisational performances but with respect to their legal status. The issue of ownership forms of firms is not a novelty, but in Cameroon, this research is the first that considers costs of operations of MFIs with respect to their organisational patterns. Our research builds on bold generalisations about the suitability of ownership forms in carrying out some specific business transactions (Demsetz, 1967; Alchian & Demsetz, 1972; Fama & Jensen, 1983b; Hart, 1995; Hansmann, 1996). Hence, we attempt an answer to Coase (1937) questioning about the best institutional arrangement that minimises cost. This questioning brings about how well institutions can boost economic development and how policy decisions meet institutional change (Holmstrom & Tirole, 1989).

Beyond the economic analysis of MFIs allowed here, this study departs from the other studies which have been merely analyzing the effect of ownerships forms in MFIs. To the best of our knowledge, many international researches in microfinance have appreciated ownership forms effect on performance but without any reference on a specific law (Hartarska, 2005; Mersland & Strøm, 2008; Caudill, Gropper, & Hartarska, 2009; Mersland, 2009; Tchakouté Tchuigoua, 2010a; 2010b; 2011; Hermes, Lensink, & Meesters, 2011; Kipesha, 2012; Amadou Barry & Tacneng, 2014). Our investigation uniqueness stems from COBAC specific law externalities in Cameroon and the multinomial logistic regression data processing. In fact, our framework is delineated by the implied ownership forms of COBAC regulation on microfinance activity in CEMAC Zone. The expected outcome is the resulting externalities from the sub-regional regulation in Cameroon where microfinance activity is the most prosperous within the area. As such investors should be well aware of the constraints as well as the pay-offs of each ownership form. We concur that "policy-makers can surely make more informed decisions about the regulation of banks when they know the likely effect of those decisions on bank performance" (Barth, Lin, Ma, Seade, & Song, 2013, p.2879). From a different stance, this paper goes further to analyze the business models, induced by each ownership form. This business model is likely to show some convergences between MFIs costs patterns as a common response to their environmental constraints. Likewise, the study is pregnant of implications as for shaping the policy design of MFIs regulation in CEMAC Zone.

Methodology

With regard to the methodology, we shall consider: the variable selection, the regression model, descriptive statistics, and then the sample description.

Variables Selection

Efficiency is apprehended here by related ratios to: portfolio efficiency, scale economies effects, financial activity, and the personnel productivity.

Portfolio efficiency. We proxy portfolio efficiency by the cost per borrower. The cost per borrower (CPB) is the total operating expense distributed among average number of borrowers. It represents the average cost of maintaining an active borrower. This ratio appraises average operating cost incurred when dealing with a borrower.

$$Cost\ per\ borrower = \frac{Operating\ expenses}{Number\ of\ active\ borrowers}$$

Tchakoute Tchuigoua (2010b; 2011) pointed out that shareholdings evidenced cost inefficiencies on their cost per borrower. Araújo da Costa (2017) rather found that the cost per client was insensitive to the legal form, but instead, the MFI size directly commensurate with the cost per borrower while inversely with the cost of credit portfolio. From a macroeconomic perspective, the cost per borrower is found to be positively and strongly associated with the level of income in the country, but negatively associated with manufacturing share in gross domestic product (Ahlin & Lin, 2006). The reason lies on the fact that cost per borrower mostly owes to labour costs. For that matter, Cooperatives and NGOs have shown lower levels compared to Microbanks. The labour force in NGOs and Credit Unions is cheaper than in Microbanks (Ahlin & Lin, 2006; Tchakoute Tchuigoua, 2011). In addition to volunteer and semi-volunteers workers, the firm is run by borrowers themselves through liability groups.

Scale economies effects. The size of the firm matters and can be proxied here by the total assets, the loan or deposits portfolio, and the number of clients (Araújo da Costa, 2017). We have chosen the most inclusive indicator across ownership types: the total assets. NGOs subsidization may enable a greater operational leverage because high structural costs are already absorbed by donations and subsidies. Hermes et al. (2011) observed that the total costs slope downward owing to technological changes and learning curve effects.

The operating expenses to assets (OPEXP_ASSETS) is helpful in determining the proportion of total operating expenses incurred to support core microfinance activities of the financial institution. This ratio balances total operating expense against average assets.

$$Operating\ expenses\ to\ assets\ ratio = \frac{Operating\ expenses}{Total\ assets}$$

Kar and Swain (2013) were positive that higher operating expenses are linked to reduced profitability. However, the effects of operating expenses to assets variable with regard to lending methods underline somewhat different pictures in their statistically insignificant results. The operating expenses coefficients for village bank lenders are negative, but insignificant in the ROA and financial self-sufficiency (FSS) models, showing that reducing operating costs for this type of lender is important for their profitability. The operating expenses coefficients for solidarity lenders are positive across all models. Thus, for solidarity group lenders, containing operating costs is not very important.

Financial activity. The financial activity encompasses any transactions that supply financing within the firm. As such, the corresponding effects of those expenses should be regarded. Likewise, should be considered inflows from any savings generated by financial transactions. Tchakoute Tchuigoua and Kouao (2011) documented that larger and profitable MFIs would rather opt for equity financing whereas smaller MFIs will rather choose debt. Equally, Gaganis (2017) evidenced a reversed U-shaped impact of size on the performance; otherwise, to some extent, higher lending activity may negatively affect MFIs performance. In order to measure financial efficiency, we only identified the financial expenses to assets (FINEXP_ASSETS) ratio. This ratio provides information on the total interest expenses incurred in funding the assets.

$$Financial\ expense\ to\ assets\ ratio = \frac{Financial\ expenses}{Average\ assets}$$

Personnel productivity. On mirroring rotating savings and credit associations (ROSCAs), the personnel in informal financial schemes is reduced to as small team of volunteers who run the association. Once the business is structured alike a microfinance, the picture is quite close to standard banking rules. The personnel should be qualified and well remunerated. Personnel productivity is assessed by the borrowers per staff member ratio (BORROW_STAFF). This ratio assesses the overall productivity of financial institutions' employees in terms of serving borrowers.

$$Borrowers\ per\ staff\ member\ ratio = \frac{Total\ number\ of\ active\ borrowers}{Total\ personnel}$$

The Multinomial Logistic Regression

Our study consists in examining differences of performance across MFIs legal status. Otherwise, we enquire whether variances of performances can be statistically attributed to ownership types. In that respect, we called on the Multinomial Logistic Regression (MLR) since the dependent variable here is polytomous in line with available ownership forms in the database: Credit Union, Microbank, and NGO. We segmented Credit Union form into independent and affiliated structures. Again, independent variables are either continuous, and to some extend nominal (age).

The MLR model can be used to predict a response variable on the basis of continuous and/or categorical explanatory variables to determine the percent of variance in the response variable explained by the explanatory variables, to rank the relative importance of independents, to assess interaction effects, and to understand the impact of covariate control variables. The impact of predictor variables is usually explained in terms of odds ratios. Logistic regression applies maximum likelihood estimation after transforming the dependent into a logit variable (the natural log of the odds of the dependent occurring or not). Logistic regression calculates changes in the log odds of the dependent, not changes in the dependent itself as ordinary least square (OLS) regression does.

The analysis of differences of performance incurred by MFIs with respect to their legal status will induce the logistic regression. Not all available variables in MIX market were considered. In order to avoid multicollinearity, we selectively discarded those variables that are either strongly correlated or which observations were inconsistent. Consequently, we were left with:

• *Y* as the independent variable. The multinomial variable includes the ownership forms: independent Credit Union, affiliated Credit Union, Microbank, and NGO.

• main effect variables: CPB, OPEXP_ASSETS, FINEXP_ASSETS, and BORROW_STAFF;

• as institutional variables: Maturity (AGE);

• as macroeconomic variables, we considered the gross domestic product per capita (LN_GDP_PERCAPITA), the market saturation (domestic credit to the private sector by banks, DCPS_BANKS).

The generic model will therefore be:

$$Y = \alpha + \beta_1 CPB + \beta_2 OPEXP\_ASSETS + \beta_3 FINEXP\_ASSETS + \beta_4 BORROW\_STAFF + \beta_5 AGE + \beta_6 LN\_GDP\_PERCAPITA + \beta_7 DCPS\_BANKS$$

Sample Description

Our population consists of microfinance institutions in Cameroon which financial ratios were extracted for performance measurement purposes. We could not get an exhaustive information on all Cameroonian reported MFIs. Then, we collected information from the MIX Market database. MIX which is a global web-based microfinance platform referenced on the World Bank. This platform provides high-quality, standardized up-to-date information on MFIs operating all over the word. Reported microfinance institutions willingly decided to submit it but we selected four and five diamonds high quality reports provided. As Barth et al. (2013) evidenced it from banks information disclosure and transparency, the microfinance that reports there are most likely performant so that their information can be valuably used. Excluding other microfinances for the purpose of assessing the effect of the ownership form design is a point submitted by Christen, Lyman, and Rosenberg (2002). They advocated as for the regulation that the test should first be successfully run on best performing firms in such a way that other lagging firms will follow. As such, the supervisor aims not to improve poor performing firms, but to identify and discard those (Christen & Rosenberg, 2000). However, undermining low-performing and less transparent MFIs is self-reporting bias inductive because, not only more performing firms are selected but also larger firms and those having easy access to finance (Morgan, 2015).

However, as mentioned by Xu, Coperstake, and Peng (2016), this information does have limitations: Most of the data are self-reported and there is the problem of self-selection of MFIs into the sample. More, some information has been aggregated like networks which include a variety of individual entities which do not perform exactly the same. But the bias can still be assumed when we are aware of the uniform rule networks abide their affiliates and that make them converging towards the same standards. Again, aggregating information of networks, like MC² and CAMCCUL, prevented us from capturing individual information of each unit. This may lead us to the size bias however.

The dataset included 31 MFIs in Cameroon over the period 2001-2017. Whether proxied by the number of licensees or the loan portfolio, COBAC reports claim that Cameroon gather nearly 60% of the sub-regional market share. Overall, the sample MFIs encompassed 51.1% of the Cameroon gross loan portfolio. We were able to include in our analysis 170 observations which distribution breakdown is exhibited hereto.

Table 1

Distribution of Sampled MFIs as per Ownership Form

	Relative frequencies (in %)
Independent Credit Union	38.5
Affiliated Credit Union	23.8
Microbank	32.2
NGO	5.5
Total	100.0

Note. Source: MIX Market (2020).

Descriptive Statistics

In order to describe our variables, we run cross-tabulation in such a way that we could appreciate the global performance on the ratios but also on the difference between identified ownership forms.

On examining operating expenses to assets ratio, we found that, on average, affiliated Credit Unions undergo the top best performance. Besides, NGOs exhibit the best performance as far as the cost per borrower is concerned. For that matter, we can still notice that NGOs allocate the highest number of borrowers per

employee. Seemingly, there is no great difference of financial expenses between organisational patterns; if not, affiliated Credit Unions and NGOs record the lowest ratio of financial expenses relative to assets.

Table 2

Descriptive Statistics

Ownership forms	Operating expenses to assets ratio (%)	Cost per borrower	Borrowers per staff member	Financial expenses to assets ratio (%)
Independent Credit Union	14.94	149.90	89.52	3.48
Affiliated Credit Union	7.77	179.01	106.3	2.24
Microbank	14.97	335.13	73.50	3.14
NGO	13.48	37.84	197.54	2.17
Overall	13.14	217.96	95.00	3.00

Differential Costs With Respect to the Ownership Forms

Virtually, all variables investigated as main effects were entered at once, while institutional and macroeconomic variables were selectively passed in through the forward entry method. Finally, LN_GDP_PERCAPITA was definitely the most relevant control variable. Most significant main variables were virtually all variables specified. But by the means, the effects are not the same when the reference category changes. We begin with considering NGO as reference group, then Microbank. Consistent with Hansmann (1996), we first compare ownerless firms (NGOs) with fully owned firms (Microbanks and Credit Unions); afterwards, we balance risk indicators of pioneered member-based and so-claimed socially-minded firms (Cooperatives) against investors-owned firms and commercially oriented all the same (Microbanks). Finally, we shall compare affiliated and independent Cooperatives performance.

Preliminary results show a significant likelihood ratio of 117.134 and associated to a Nagelkerke coefficient of 0.695. Such results prospect good model fitting. Table 3 will be more instructive.

Table 3

Classification Table

Observed	Predicted				
	Independent Credit Union	Affiliated Credit Union	Microbank	NGO	Percent correct (%)
Independent Credit Union	26	2	7	1	72.20
Affiliated Credit Union	4	20	10	0	58.80
Microbank	5	11	27	0	62.80
NGO	1	0	0	3	75.00
Overall percentage (%)	30.80	28.20	37.60	3.40	65.00

In fact, our model was able to predict accurately 65% of initial information.

From Table 4, we could not highlight any statistical difference of performance that allows comparison between NGOs and other ownership forms. Thus, we believe NGOs cannot be discriminatively identified from other ownership forms. Although NGOs were initially identified with the best cost per borrower (CPB) ratio, our regression model does not entail any statistical difference even on this variable. Provided their marginal market share (less than 1% of the ownership forms reported and less than 0.4% of the loan market share), our spotlights will be directed towards the main leaders on the microfinance market: Microbanks and Credit Unions.

Table 4

Parameters Estimate with Reference to NGO Category

Ownership forms		β	Std. error	Wald	Sig.
	Intercept	40.247	63.613	0.400	0.527
	BORROW_STAFF	0.287	0.401	0.513	0.474
Independent Credit Union	OPEXP_ASSETS	-118.793	149.924	0.628	0.428
	CPB	0.001	0.001	0.710	0.400
	FINEXP_ASSETS	2,201	2,794.710	0.620	0.431
	LN_GDP_PERCAPITA	-14.838	18.009	0.679	0.410
	Intercept	2.639	63.952	0.002	0.967
	BORROW_STAFF	0.290	0.401	0.523	0.470
Affiliated Credit Union	OPEXP_ASSETS	-149.622	149.887	0.996	0.318
	CPB	0.001	0.001	0.730	0.393
	FINEXP_ASSETS	2,164	2,794.765	0.599	0.439
	LN_GDP_PERCAPITA	-8.987	18.022	0.249	0.618
	Intercept	-6.043	64.044	0.009	0.925
	BORROW_STAFF	0.288	0.401	0.517	0.472
Microbank	OPEXP_ASSETS	-130.836	149.920	0.762	0.383
	CPB	0.001	0.001	0.736	0.391
	FINEXP_ASSETS	2,239	2,794.688	0.642	0.423
	LN_GDP_PERCAPITA	-8.316	18.025	0.213	0.645

Notes. $^{***}p< 0.01;$ $^{**}p < 0.05;$ $^{*}p <0.1.$

Table 5

Parameters Estimate with Reference to Microbank Category

Ownership forms		β	Std. error	Wald	Sig.
	Intercept	46.290	10.943	17.894	0.000^{***}
	BORROW_STAFF	-0.001	0.003	0.138	0.711
Independent Credit Union	OPEXP_ASSETS	12.044	4.255	8.012	0.005^{***}
	CPB	0.000	0.000	6.252	0.012^{**}
	FINEXP_ASSETS	-37.241	21.981	2.870	0.090^{*}
	LN_GDP_PERCAPITA	-6.522	1.551	17.677	0.000^{***}
	Intercept	8.682	11.112	0.610	0.435
	BORROW_STAFF	0.002	0.002	0.583	0.445
Affiliated Credit Union	OPEXP_ASSETS	-18.785	5.675	10.956	0.001^{***}
	CPB	0.000	0.000	1.393	0.238
	FINEXP_ASSETS	-74.650	27.370	7.439	0.006^{***}
	LN_GDP_PERCAPITA	-0.670	1.554	0.186	0.666

Notes. $^{***}p< 0.01;$ $^{**}p < 0.05;$ $^{*}p < 0.1.$

Table 5 outlines that the main effect significant variables in our regression model were: operating expenses to assets (OPEXP_ASSETS), cost per borrower (CPB), and financial expenses to assets (FINEXP_ASSETS) ratios. The only control variable that entered in the regression was LN_GDP_PER CAPITA.

GDP per capita is found with a negative coefficient in all model specifications but insignificant in many instances. These results hint that any improvement of the wealth distribution among poor and intermediary income earners is likely to shape MFIs efficiency. Besides, as far as Borrowers per staff member (BORROW_STAFF) ratio is concerned, there is no significant difference between ownership forms.

Microfinance organisations nearly allocate staff in a similar manner. However, when, we refer to operating expenses, we did find a significant difference. Relative to assets, independent Cooperatives undergo higher expenses than Microbanks; whereas affiliated Credit Unions are worth better cost efficient that Microbanks. For that matter, Table 7 supports that independent member-based institutions undergo more operating costs than their pairs affiliated.

Table 6

Parameters Estimate with Reference to Affiliated Credit Union Category

Ownership forms		β	Std. error	Wald	Sig.
Independent Credit Union	Intercept	37.608	10.526	12.764	0.000***
	BORROW_STAFF	-0.003	0.003	0.878	0.349
	OPEXP_ASSETS	30.829	6.582	21.941	0.000***
	CPB	0.000	0.000	3.408	0.065*
	FINEXP_ASSETS	37.409	29.325	1.627	0.202
	LN_GDP_PERCAPITA	-5.852	1.525	14.722	0.000***

Notes. ***$p < 0.01$; ** $p < 0.05$; * $p < 0.1$.

Table 7

Comparative Performance of Assets Size and Operating Expenses

Ownership forms	Logarithm of assets	Operating expenses to assets (%)	Cost of credit ratio (%)
Independent Credit Union	19.98283536	14.94	30.45
Affiliated Credit Union	23.84953841	7.77	14.59
Microbank	22.09598261	14.97	28.52
NGO	20.32085329	13.48	20.41
Total	21.60986918	13.14	25.54

On examining cost of credit ratio, we found similar pattern with operating expenses to assets ratio. Therefore, we can conjecture that the best performance of networks does not stem from their scale economies, but intrinsically, affiliation to a network helps MFIs to control their operating costs. This cost efficiency is not reflected on their cost per borrower because we have not found great difference of cost per borrower in our sample. Instead, between Microbanks and independent Cooperatives, and between Credit Unions, the difference is significant, but the regression coefficient is nil. Hence, pursuant to Araújo da Costa (2017), we can postulate that, whatever their portfolio scale is, the ownership type does not allow any advantage in terms of portfolio efficiency. Then, were assets not involved—alike in ROSCAs—all MFIs would undergo similar cost in running loans. Mersland and Strøm (2008) found similar results and submitted that shareholdings are wrongly deemed to be the most efficient ownership form. By contrast, dissimilar results are found by Ahlin and Lin (2006), Tchakouté Tchuigoua (2010a), and Amadou Barry and Tacneng (2014).

As for financial expenses, we did find that Microbanks evidenced the highest cost of financing relative to invested assets. And similar to operating expenses, networks outperformed independent Credit Unions, though the difference is not significant. Our proposition still holds: Whether from operating or financing costs, networks are the most cost-efficient organisational form. Those networks low cost of financing may ascribe to the low remuneration on deposits as well as donated equity support. Moreover, the network brings together authorized establishments, driven by a common goal and which, willingly have decided to form an organization

with its own internal regulation. The network boundaries may include local but also national MFIs. The network created must be headed by an artificial body. Recent regulation in CEMAC Zone bound gathering microfinance institutions into networks. The regulators have laid down the rules for representation within these networks as well as control and management procedures. Networks apply for accreditation on behalf of their members, vet the management team and develop internal control and reporting mechanisms.

The headquarters of the network is an establishment with an artificial person with equity and has to perform the following tasks on behalf of its members:

• representing the network in the transaction with third parties (microfinance supervisors mainly);

• determining conditions for membership, exclusion or dismissal of microfinances affiliated;

• defining and setting up procedures likely to maintain cohesiveness and financial stability in the network;

• exerting discipline, sanctions and restructuration on affiliated members found guilty;

• defining and setting accounting standards in compliance with the accounting plan provided for the profession;

• providing consolidated financial statements in accordance to COBAC regulation;

• managing excess of resources generated by affiliated members. This function is performed by a financial organ created for this purpose. This financial organ created is regulated as any other credit establishments;

• preserving liquidity stability in the network;

• organizing the procedure for intervention to support members in bankruptcy so as to maintain the stability of the group;

• organizing the internal control system of the network as well as the compliance to applicable prudential norms.

Conclusion

In this paper, we investigated on the relative organisational performance of Cameroonian ownership forms. As such, we were geared towards the efficiency of MFIs in meeting people's needs. From MIX Market database, we extracted financial ratios related to personnel allocation, the portfolio efficiency, operating and financial expenses as well. The dataset included 31 MFIs in Cameroon over the period 2001-2017. Sampled MFIs encompassed 51.1% of Cameroon gross loan portfolio and we got in our analysis 170 observations. On processing data though a multinomial logistic regression, we found out that relative to assets, affiliated Credit Unions exhibited the lowest operating expenses than Microbanks, and then followed independent Cooperatives. As for financial expenses, we did find that Microbanks evidenced the highest cost of financing relative to invested assets. There was no significant difference of financing cost between Credit Unions. However, affiliated Credit Unions showed latent lower cost of financing than their pair independent. We have found cost per borrower ratios are insensitive to ownership form change; but the only significant coefficients were found between Microbanks and independent Cooperatives, and between Cooperatives. As far as borrowers per staff member ratio is concerned, there is no significant difference between ownership forms. Overall, we could not discriminate NGOs performance from Microbanks and Cooperatives efficiency.

In sum, affiliated Credit Unions were the most cost-effective organisational form. In fact, networks gather many small units that cooperatively mutualise their technology and their resources in order to coordinate their action for the benefit of affiliates. Historically, networks in Cameroon have a long-standing existence and though prevailing risks in the field, no bankruptcy has been reported till date. We have strong evidence that

small units can still prosper in microfinance but their action should be coordinate under an umbrella organisation. Henceforth, our results are supportive of COBAC regulation R-2017/01 that compelled First-Class MFEs that formerly operate independently to enroll a network. By the virtue of network partnership, best practices can be conveyed. As such, this result calls for further studies that will appraise the effects of ownership forms on performance but from a stance (financial or social performance) in Cameroon or in the whole CEMAC Zone. Furthermore, we could have improved our results if networks data were not aggregated. Individual information on networks could have provided better insights to understand the underlying microstructure of those organisations.

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