The Impact of Entrepreneur-CEOs in Microfinance Institutions: A Global Survey

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Abstract

Microfinance is a global high-growth industry, in which entrepreneurship is prevalent and substantial. Based on the theoretical argument that microfinance entrepreneur-CEOs are "motivated agents" with a unique ability to hire and socialize mission-oriented staff, we hypothesize that these CEOs produce more sustainable microfinance institutions with better social performance and lower costs. This study utilizes data from 295 microfinance institutions in 73 developing countries, assessed between 1998 and 2010. Our empirical evidence suggests that entrepreneur-managed microfinance institutions feature higher social performance, greater financial sustainability, and lower costs.

Keywords: Microfinance, social entrepreneurship, motivated agents, founders, performance, non-profit organizations

INTRODUCTION

Microfinance is a global industry that has emerged over the last couple of decades, in which entrepreneurs play a prominent role. However, there is a lack of theoretical knowledge and empirical evidence of the impact of *entrepreneur* or *founder*[1] chief executive officers (CEOs) in microfinance institutions (MFIs). An entrepreneur-CEO is defined as a CEO who was the chief executive when the MFI was established. MFIs provide banking services such as loans and saving accounts to poor families and microenterprises operating in emerging markets, and commonly operate with a social mission. Prior to the advent of microfinance, these poor customers where commonly ignored by banks and left to be "served" by moneylenders.[2]

In this study, we argue that entrepreneur-CEOs in microfinance are different from typical for-profit entrepreneurs – and that their behavior can be interpreted through the theoretical lenses of mission-driven "motivated agents" (Besley & Ghatak, 2005). Such motivated agents are in less need of monetary incentives, due to the matching of the personal preferences of the CEO with the mission of the organization. Besley & Ghatak (2005) emphasize the beneficial matching of agents (CEOs) with principals (in our case donors, capital providers etc.). In applying this theory, we argue that when the CEO is an entrepreneur his/her personal preferences are most perfectly matched with the mission of the MFI. This argument rests on the observation that social entrepreneurs have a different intrinsic motivation from other entrepreneurs (e.g., Meyskens,

[1] We apply the terms founder and entrepreneur interchangeably.

[2] The term moneylenders refers to informal providers of credit that are commonly characterized by excessive lending rates (100% per year or more) and harsh collection methods.

Robb-Post, Stamp, Carsrud, & Reynolds, 2010), and that endogenously motivated entrepreneur-CEOs reduce the need for high-powered incentives or costly monitoring mechanisms (Randøy & Goel, 2003). A similar argument has also been forwarded in the overall entrepreneurship literature, that the entrepreneurial potential is supported when there is a strong "venture desirability" – reinforced by the entrepreneur's intrinsic rewards and supported by extrinsic "social norms." (Krueger & Brazeal, 1994).

As an illustration of how the mission-orientation of the entrepreneur translates into organizational practices, Battilana & Dorado (2010) show how the founding leadership of two microfinance entrepreneurs was instrumental in implementing mission-supporting hiring practices and socialization of staff. These organizations were simultaneously able to apply two different institutional "logics"; both profit-making (banking logic) *and* poverty-reducing (development logic), to build a "sustainable hybrid organization". A unique contribution of these microfinance entrepreneur-CEOs was that their leadership facilitated "a common organizational identity" (Battilana & Dorado, 2010: 1420), despite the inherent tension between the two institutional logics. These two institutional logics, typically referred to as microfinance's "double bottom line" (Armendáriz & Morduch, 2010), produce objectives that are commonly referred to as "servicing the poor" and achieving sufficient profits to be "financially sustainable" (Honig, 1998; Morduch, 1999). Therefore, this study is a fitting response to the call for research addressing the role of social enterprises all over the world (Battilana & Dorado, 2010), and we specifically address how entrepreneurial involvement can be beneficial.

The advent of the microfinance industry in the 1970s to 1980s was dominated by social entrepreneurs coming from a philanthropic development culture (Mersland & Strøm, 2012). A number of well-known entrepreneur-CEOs, such as Muhammad Yunus of Bangladesh (Grameen Bank), Ingrid Monroe from Kenya (Jami Bora Trust), and Pilar Ramirez from Bolivia (Banco

FIE), were among the pioneers. Using a novel global dataset of rated (by third-party rating agencies) MFIs from 73 countries, we show that entrepreneur-CEOs are still in charge in 39.1% of the identified MFIs.

We highlight the practical importance of this research given the newness of the industry and the possible strategic choice made by MFI boards to replace their entrepreneurial CEOs as both the MFIs and the industry as a whole mature. Mersland & Strøm (2010) report that during the last decade the microfinance industry has experienced a yearly growth rate of 44.2% (see also www.mixmarket.org). This phenomenal growth has become known to the general public through entrepreneur-CEOs such as Muhammad Yunus, who received the Nobel Peace Prize for his efforts.[3] Moreover, it is claimed that the executive labor market for MFI CEOs is thin (Mersland, 2009) and lack of managerial capacity is repeatedly mentioned as a major risk factor in the industry (CSFI, 2011). Thus, in order to issue adequate strategic guidelines for the industry, it is important to better understand what distinguishes entrepreneur-managed from non-entrepreneur-managed MFIs. More generally, this study may carry lessons for organizations making the transition from entrepreneur to non-entrepreneur management in emerging markets and it may also interest those studying the management of social enterprises.

This paper is divided into six sections. Following the introduction, which has reviewed the main motivations for this study, the second section discusses the applied theory and the third specifies our hypotheses. The methodology is discussed in the fourth section and the empirical results in the fifth. The conclusions—as well as implications for policy makers—are presented in the sixth section together with a discussion of the inherent limitations of this study, as well as

[3] Microfinance has increasingly attracted negative attention in the media, however. Reports of private individuals pocketing US$150 million from the Compartamos IPO in Mexico, microfinance clients in the Indian state of Andhra Pradesh committing suicide because they were unable to repay their loans, multi-borrowing and related over-indebtedness among many clients in several Andean American cities, and interest rates in some cases reaching 100%, are all evidence of an industry that is becoming more and more controversial in the public eye.

directions for future research.

THEORY

The microfinance institution is said to harbor two objectives, one social mission to provide poor people with financial services, and the other to be financially sustainable. This is often interpreted to mean that the social mission has the priority, while financial sustainability should be at a break-even level (Armendáriz & Morduch, 2010). We may define **social mission maximization** as an effort to maximize the organization's social mission, while ensuring that **financial sustainability** is at least positive in the long term. Financial sustainability should not be confused with profit maximization, as financial sustainability is merely focused on the MFI's ability to survive.[4] In this article, we argue that that the entrepreneur-CEO is better able to meet the MFI's dual objectives due to his stronger motivation.

The Besley & Ghatak (2005) theory of "motivated agents" is the main theoretical basis for this study. Besley & Ghatak assume that the organization is founded with a certain mission, and that the employees agree to that mission. This theory is not merely an extension of agency theory, but rather a different kind of theory of agency relationships, that rivals traditional agency theory. The motivated agent derives utility from pursuing the organization's operational goals, leading him/her to experience a "warm glow" feeling (Andreoni, 1990).[5] For the MFI, this means that the agent (the CEO) finds utility in providing poor people with access to affordable credit. Thus, the agent is not induced to work by monetary rewards alone. This theory offers a rival explanation to standard agency theory that builds on the assumption that individuals maximize wealth (Tirole,

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[4] This dual character of the MFI is not a new phenomenon, as this was pointed out in a study of the Jamaican microfinance industry (Honig, 1998), as well as in earlier studies of microfinance.

[5] The opening sentence in Adam Smith's *The Theory of Moral Sentiments*, originally published in 1759, reads: "How selfish soever man may be supposed, there are evidently some principles in his nature, which interest him in the fortune of others, and render their happiness necessary to him, though he derives nothing from it except the pleasure of seeing it."

2006). The motivated agent theory gives predictions that are highly relevant to the social mission of microfinance. In a similar way, existing entrepreneurship research provides further evidence on the unique ability of a founder to impact organizational thinking (Schein, 1983) and legitimacy (Lounsbury & Glynn, 2001).

The social mission in microfinance has two sides. One is quantitative: to reach as many poor people as possible. The other is qualitative: to reach out to the poorest segments of the population (Mersland & Strøm, 2010). In managerial terms, the uniqueness of a mission-oriented organization is that *"..it can generate a variety of different missions which improves productivity by matching managers and workers who have similar mission preferences"* (Besley & Ghatak, 2005: 617).

We argue that the entrepreneur-CEO is a good proxy for a motivated CEO in the Besley and Ghatak sense. The entrepreneur-CEO has been part of the MFI since its inception and, since the MFI is still in existence, shows an ability to balance the MFI's dual objectives. Starting an MFI and running it through its first formative years surely requires a strong motivation for the task, presumably stronger than that of a hired professional CEO. Besley and Ghatak note that, the better the match between organizational mission and employees' identification with such a mission, the better the organization is able to fulfill its mission. In the case of the entrepreneur-CEO, the match should be perfect, since he or she was part of the organization when it was started.

Agency theory would predict that a non-profit firm, or any organization with multiple goals, would have greater shirking activity than for-profit organizations, mainly due to the lack of incentive alignment (Alchian & Demsetz, 1972). On the other hand, the Besley and Ghatak moral hazard theory suggests that having mission-matched managers and workers removes this incentive problem because the employees share the same goals as the organization. Besley and

Ghatak underline that an implication is that a motivated agent is willing to work for a lower wage than a worker whose sole motivation is monetary because the former derives personal utility from the work itself. In the incentive compatibility constraint, the motivation parameter is a perfect substitute for the monetary. We see two further implications. First, the entrepreneur-CEO should be better able to recruit motivated employees to work for the MFI than a hired professional CEO. The entrepreneur-CEO can be an attraction to potential employees in his or her own right. Furthermore, the entrepreneur-CEO should be better able to spot and hire motivated employees than a hired professional. As such, the founder is better able to find matching employees to work in the organization. The entrepreneur-CEO is a better match-maker, so to speak. The second implication is that, as the MFI is filled with a majority of motivated agents, the agency conflicts at all levels in the organization are diminished compared to what they would be if the employees were not motivated. The employees simply do not need the extra incentive premium in order to work toward the MFI's goals, and the need for extensive monitoring falls away, thus reducing administrative costs.

Besley and Ghatak (2005) note that the productivity in a mission-driven organization is higher when a good matching of mission and employees is achieved. We take this one step further (or up), by pointing out that such matching is also important in the agency relationship between the principal (donors and/or other founding stakeholders) and the agent (the CEO). However, this has also been addressed in the extant entrepreneurship literature, as Miner *(1990: 221)* write*: "that effective organizational performance is a function of the fit between organizational systems and motivational patterns of key performers."* When the CEO is the entrepreneur, we theorize that this reframes the principal-agent relationship so that any mission "friction" or diversion is minimized.

From the management literature, Battilana and Dorado (2010) show a microfinance

entrepreneur can be critical in producing organizational members' sense of ownership and commitment to the mission of the organization (also documented by Fidler, 1998). This is a case where the entrepreneur-CEO "lives out" Besley and Ghatak's theoretical predictions. The authors report that the social motivation of the entrepreneur-CEO (as well as his/her unique competencies) was used to socialize the social mission among the staff, by means of recruitment, internal promotion and training (Battilana & Dorado, 2010). The aim of one such entrepreneur-CEO was to *"convert social workers into bankers and bankers into social workers"* (Battilana & Dorado, 2010: 1426). The socialization facilitated by the entrepreneur was an explicit, key part of enabling the organization to balance its dual and hybrid mission. Honig (1998) also provides examples of how embedded decision making can exist in MFIs, and based on this logic we theorize that entrepreneur-CEOs can facilitate embedded decisions that promote certain behavior (for example a social mission) within the MFI.

The motivated agent model (Besley & Ghatak, 2005) has parallels in several strands of literature. First, the social entrepreneurship literature (Austin, Stevenson, & Wei-Skillern, 2006; Hearn, 2011; Meyskens et al., 2010; Murphy & Coombes, 2009) finds that a social mission can have a significant motivating effect on top management. Second, the general entrepreneurship literature suggests that this is also true among for-profit entrepreneurs (e.g., Adams, Almeida, & Ferreira, 2009; Anderson & Reeb, 2003). Third, we also see a parallel with family business research, in that entrepreneurs identify strongly with the mission of the firm (James, 1999) and consider the firm as much more than mere employment. This identification with the firm and its mission leads to more performance-enhancing CEO behavior (e.g., Chami & Fullenkamp, 2002; De Paola & Scoppa, 2001). The motivated agent viewpoint is also consistent with past research on the psychological motivation of entrepreneurship, such as deriving personal satisfaction (e.g., Begley & Boyd, 1987; Collings & Moore, 1964; Krueger, Reilly & Carsrud, 2000; Minor, 1990).

By being able to break through the startup barrier, the entrepreneur-CEO has developed highly valuable MFI-specific human capital. This is related to the unique social capital that the entrepreneur develops in relation to his/her customers, and the fact that the CEO has the longest tenure in the organization. The management literature also suggests that the positive performance effect of an entrepreneur-CEO might be partly attributed to his/her *"higher practical, analytical, and creative intelligence and that, together with entrepreneurial self-efficacy, it enables and motivates successful entrepreneurial behavior"* (Baum & Bird, 2010: 379). Research on entrepreneur-CEOs in publicly traded firms (e.g., Fahlenbrach, 2009; Villalonga & Amit, 2006) concludes that such entrepreneurs have a different way of running businesses than hired CEOs, confirming the results in smaller companies (Langowitz & Allen, 2010). We suggest that this might also be the case in microfinance. However, we do not know of any empirical evidence to support such a claim. We are also aware of the fact that MFI-specific competencies might become redundant as the organization professionalizes, and the fact that founding CEOs typically have less "outside" banking experience and/or less formal education than hired CEOs. For the MFI, this implies that entrepreneur-CEOs might be less attractive when the work demands formal education and/or strong national or international networks. Such areas might include accessing international funding or communicating with public banking authorities.

However, the entrepreneur-CEO's social capital in relation to clients can also have a dark side, that is, favoritism shown to relatives, friends, and useful friends in "high places". The CEO then becomes an example of a self-dealing CEO (Djankov et al., 2008). This can take the form of offering certain people advantageous loans or favorable positions within the MFI. However, if the entrepreneur-CEO is mission-motivated, this should counteract the tendency to engage in favoritism. The motivated CEO will choose to give priority to the MFI's mission over personal gain, whether this gain materializes as higher personal remuneration or favors. If the

entrepreneur-CEO gives in to favoritism, costs will escalate, especially administrative costs and wages, and the outreach to poor customers may deteriorate. Thus, finding signs of higher client outreach and lower costs in entrepreneur-managed MFIs should indicate that the CEO does not engage in favoritism.

The unique competencies of the entrepreneur-CEO might be of a technical nature, or take the form of motivational skills or political skills, as captured by Hulme (2008: 4): *"The early success of the Grameen model was matched by Professor Yunus's personal energy and enthusiasm."* Given the relatively short history of the industry, the difficulty of hiring highly experienced CEOs has naturally been an impediment (and consequently produced favorable conditions for the entrepreneur-CEO). Another example of Yunus's role in Grameen's success is the way the bank was able to redefine itself after encountering significant problems in 2001 and 2002.[6] Undertaking such a significant change in overall strategy—and basically changing the business model—would probably be much more difficult without the presence of its entrepreneur. It is methodologically difficult to capture the existence of such unique competencies and capabilities, but we suggest that long tenure—which an entrepreneur possesses by definition—would be a crude reflection of their accumulation.

HYPOTHESES

We argue that the entrepreneur-CEO is better mission-matched than the non-entrepreneur-CEO, and to become a surviving (i.e. successful) microfinance entrepreneur, he/she must have

[6] An indication of this significant shift was the fact that Grameen moved its main product from group-based loans, originally perceived as part of the identity of Grameen Bank, to individual loans.

unique competencies and capabilities for fulfilling the MFI's objectives. The founder-CEO is, so to speak, a better guardian of the original mission the organization was built around than later, professionally hired CEOs. We trace the imprint of the entrepreneur-CEO upon the MFI's dual fulfillment of its social mission and better financial sustainability. Furthermore, from the theory it also follows that costs could be lower in an entrepreneur-managed MFI. We try to capture this effect by looking at the effect of entrepreneur-CEOs on cost elements in the MFI.

Social mission

Since the motivated entrepreneur-CEO takes a strong interest in providing access to finance for poor people, the social mission objective takes precedence over traditional financial returns (profit) – but not financial sustainability. From the literature on psychological motivation of entrepreneurship, we know that entrepreneurs have typically higher "need for achievement" than non-entrepreneurs, and that this is expected to lead to higher organizational performance (Begley & Boyd, 1987). We expect that the above intrinsic motivational effect is even stronger among social entrepreneur. Thus, we expect the entrepreneur-CEO to be more mission-oriented than the non-entrepreneur-CEO. By being the source, or partly so, of the MFI's original mission, we argue that the microfinance entrepreneur-CEO possesses a stronger intrinsic commitment to the mission than the non-entrepreneur-CEO. Being the entrepreneur, his/her words carry great authority, increasing the likelihood of his/her proposals being accepted. Thus, we suggest that:

H1) Entrepreneur-managed MFIs have higher social performance than non-entrepreneur-managed MFIs.

Financial sustainability

Past research on entrepreneur-managed for-profit firms suggests that such CEOs produce superior

financial performance (e.g., Adams et al., 2009; Fahlenbrach, 2009; Langowitz & Allen, 2010). Many of the same mechanisms could apply to MFIs. We argue that entrepreneur-CEOs have deeper insights into the prevailing business conditions than other CEOs, which potentially allows for higher financial (and social) performance. This is particularly relevant in the relatively new microfinance industry, as educational institutions that teach microfinance is still rather small and somewhat undeveloped. Yet another factor that also supports higher performance of entrepreneurs-managed MFIs (can be attributed to both social and financial performance), is the ability of the microfinance entrepreneur-CEO to create a shared organizational culture (Battilana & Dorado, 2010). This is also in line with the broader arguments from research on organizational culture (e.g., Lunsbury & Glynn, 2000: Shein, 1983).

However, we argue that mission-driven entrepreneur-CEOs do not commonly use this financial advantage to maximize the overall financial return, as expected from the motivated agent theory, but rather to achieve a satisfactory level (Simon, 1976). Thus, long-term survival of the institution and not firm value maximization is the financial objective; this is labeled financial sustainability in the microfinance industry.

H2) Entrepreneur-managed MFIs have higher financial sustainability than non-entrepreneur-managed MFIs.

Costs efficiency

Overall financial sustainability of the MFI reflects the managerial competence, agency costs *and* the competitive environment of the MFI (which to a large extent can be assumed to be exogenous). A lower cost base can ensure financial sustainability. The cost consequences of a motivated, entrepreneurial CEO are twofold. First, motivated agents at all levels of mission-driven organizations are willing to work for lower wages compared to employees of for-profit

organizations, since they derive utility from taking part in the MFI's mission. Second, lower administrative monitoring costs follow from the microfinance entrepreneur-CEO's ability to establish a "common organizational identity" (Besley & Ghatak, 2005: 1420), that is, his/her ability to prevent the formation of subgroups within the organization, whereby some subscribe to one objective, for example the social mission, whereas others prioritize profit. This implies lower agency conflicts, and therefore a lower need for monitoring. Moreover, we argue that a microfinance entrepreneur-CEO possesses a unique legitimacy for creating an organizational identity that supports efficiency, particularly in the demanding context of a dual or hybrid organizational goal (Battilana & Dorado, 2010). Thus we suggest that:

H3) Entrepreneur-managed MFIs have lower costs compared to non-entrepreneur-managed MFIs.

METHODOLOGY

Data

In the 1990s, after the initiative by the World Bank and others, the need for independent MFI information made room for several organizations to emerge, offering specialized rating assessments of MFIs. These rating assessments are much wider in scope than traditional credit ratings, as they aim to measure the MFI's ability to reach multiple sets of objectives (Reille et al., 2002). The data are hand collected from www.ratingfund2.org. All data are from the ratings

reports made by the five ratings agencies: MicroRate, Microfinanza, Planet Rating, Crisil, and M-Cril. These agencies have been selected because they provide the most comprehensive reports and are the largest players in the industry, and all five agencies are approved official ratings agencies by the Rating Fund of the Consultative Group to Assist the Poor (C-GAP) (www.ratingfund2.org). The fact that the ratings stem from a third party, independent from the MFI and the funds providers, is of particular importance.

The dataset only include MFIs for which information about the entrepreneurs and the CEO is included in the rating report. This reduced our original dataset of 386 MFIs to 295. However, we see no systematic differences, in terms of the statistics of the background variables, between the original and final samples. The five microfinance rating agencies differ in their emphasis and the extent of information provided. Thus, there are a different number of observations for each variable. The rating reports contain "soft" information such as data on the management of the MFI, and "hard facts" on, for example, the MFIs' funding and liquidity. Information on the entrepreneur-CEO, unavailable in existing secondary datasets in the microfinance industry, such as the MIX-Market,[7] can be obtained from these reports. The main purpose of the rating reports are to present independent information that stakeholders such as lenders, donors, owners or managers can use to make informed decisions (Beisland & Mersland, 2012). This wide emphasis makes the rating report information especially useful when assessing the impact of entrepreneurship among MFIs.

The rating reports are gathered from 1998 to 2010, and represent the basis of the constructed database. In addition to data from the rating year, we also have between one and eight additional firm-year observations per MFI, prior to the rating year. The MFIs are nearly all young

[7] http://www.mixmarket.org/

organizations. The bulk of the total of 1,474 observations is centered around an MFI age of 10 years, with a mean of 9.4 years and a median of 8.0. They were thus founded in the same period and can be expected to be influenced by the same idea: to provide financial services to poor people. This is an advantage compared to other recent studies of founders, such as Adams et al. (2009) and Fahlenbrach (2009), that use data from diverse industries and from different time periods. Our dataset comprises MFIs from 73 countries. However, since the business models are largely similar and fairly simple, the data sample is relatively homogenous, and meaningful inferences may be drawn. The dataset has a certain level of sample selection bias, since only *rated* MFIs are included. They represent MFIs with the *intention* to search out international funding and practice microfinance in a business-oriented manner. We do not consider such a bias to be a problem in this study focusing on entrepreneurship.

Variables

This study has three main groups of dependent variables, only one main explanatory variable (the existence of an entrepreneur-CEO), and some control variables. The dependent variables are divided into the MFI's social mission (hypothesis 1), its financial sustainability (hypothesis 2), and its cost efficiency (hypothesis 3).

Social mission variables. The social mission variables encompass portfolio growth, credit client growth, average loan size, and the extent of rural clients. Considering the claimed development effect of microfinance, growth in the portfolio and especially growth in the number of clients are important indicators for assessing an MFI's social performance (Schreiner, 2002). Though not a perfect indicator, average loan size is the most used proxy for a MFI's social performance among microfinance donors and investors, as well as being commonly applied in academic research (e.g., Cull et al., 2007). Smaller loans, which commercial banks would not consider attractive, are

also more appropriate for poor clients. However, given that there is a fixed cost involved in lending, smaller loans are more costly to banks. Thus, MFIs offering smaller loans are, in the literature, considered more social. Similarly, rural clients, who are normally poorer and face greater constraints on their use of financial services than urban clients, demand a more costly distribution capability on the part of the MFI. This makes average loan size and the outreach to rural clients possible indicators of the extent to which the MFI—and its CEO—is mission focused (Mersland & Strøm, 2010). The operationalization of the measures for social performance/mission is as follows:

Growth in loan portfolio (portgro)**.** We study this by creating a growth variable (Portfolio(t)/Portfolio(t-1)) that measures the yearly overall growth of all microfinance loans dispensed by the MFI.

Growth in client base (ccligro). The loan portfolio may grow if the number of credit clients increases, holding the average loan constant. We define the growth in the number of clients by Clients(t)/Clients(t-1). This variable should give a better picture of the MFI's social mission than the portfolio growth, since the portfolio can increase with the average loan size, holding the credit client base constant.

Average loan size (avgl). Average loan size is defined as the MFI's loan portfolio divided by the number of credit clients. We adjust the average loan for purchasing power parity (PPP) effects using conversion factors from the International Monetary Fund. Table 1 shows that the average nominal loan is US$679 in entrepreneur-CEO MFIs and US$622 in MFIs without entrepreneurs-CEOs.

Rural clients (rural) is measured as a binary variable set to one if the MFI mainly provides credit to rural clients and zero otherwise.

Financial sustainability variables: *Operational Self-Sufficiency 1* (OSS1). Armendáriz and Morduch (2010: 244) describe financial performance measures that mirror the MFI's ability to sustain its operations without subsidies. The first used here is OSS1, defined as interest and commissions earned on the loan portfolio divided by the sum of operational costs, default cost and funding costs. If this is larger than 100 in percentage terms, the MFI is deemed to be self-sufficient. Ahlin et al. (2011) use this measure.

Operational Self-Sufficiency 2 (OSS2). OSS2 is a modification of OSS1 in which we divide by operational costs only. The rationale for excluding default and funding costs is that MFIs may practice different default policies and some MFIs access the commercial loan market whereas others access subsidized loans. Thus, funding costs are biased due to different funding policies or different capital structures.

Return on assets (ROA), defined as the total operating income divided by the MFI's assets. This traditional measure is included to provide a comparison with other financial institutions. We should expect an entrepreneur-CEO to keep a closer eye on the OSS measures than the traditional for-profit measures (such as ROA or ROE) because this will give the CEO a better success indicator with regard to the achievement of the social mission *and* secure long-term survival in this particular industry.

Cost variables: We focus on three key dimensions of the MFI's costs derived from the Besley and Ghatak (2005) motivated agent theory: operational costs (mainly staffing costs), loan defaults and administrative costs. In addition we test for differences in funding costs between entrepreneur managed MFIs and other MFIs. Wage costs are a prominent part of the total operational costs, and the Besley and Ghatak model suggests that the wage level is lower in organizations with a social mission. On the other hand, an entrenched or self-serving

entrepreneur-CEO could be overly generous with the MFI's money, and thus drive up wage costs. This implies that the setting of the wage rate is an arena in which the two interpretations (entrepreneur-CEOs being good or bad) may be judged against each other. Besides operational costs, loan defaults are an important cost factor in the microfinance industry. In fact, modern microfinance was born as a response to high default rates on government loans targeting rural populations (Hulme & Mosley, 1996). The underlying factors explaining the effect of better entrepreneur-CEO performance in relation to operational costs (i.e., stronger incentives and better knowledge), should in our opinion also apply equally to loan defaults. We also argue that the CEOs (both entrepreneurs and non-entrepreneurs) of MFIs have a significant effect on average loan defaults, as they can formulate the default policies, establish employee incentives and motivate loan officers. Dealing with loan defaults could even be described as the "dirty laundry" of the microfinance industry. It is not seen as the most prestigious part of managing a MFI and this makes it even more appropriate as a test of the superior incentives and skills of entrepreneur-CEOs over hired CEOs. Last, administrative costs should be lower in mission-oriented organizations, since the managers and workers are mission matched and the MFI needs to have fewer monitoring procedures in place.

Operational costs (opxport). This is defined as the operational costs divided by the loan portfolio. The costs mainly cover wages and administrative costs. We expect the operational costs of the loan portfolio to be lower in entrepreneur-CEO MFIs.

Staff wages (wage) is defined as the total wage bill divided by the number of employees of the MFI. Following Besley and Ghatak, motivated agents at firms with a social mission are willing to work for less than the market wages because they identify with the organization's mission and find personal utility from working there.

Administrative costs (admcost) also come from the Besley and Ghatak model. Since

managers and workers are mission matched, a lower level of monitoring is necessary. The variable is measured as the natural logarithm of total administrative costs on the loan portfolio.

Loan defaults (par30). We use "Portfolio at Risk (30 days) – PaR30" as a risk proxy. The variable is defined as the outstanding balance of loans more than 30 days past due divided by the average outstanding gross loan portfolio. Since CEOs can to a large extent influence default policies and follow-ups of clients in distress, this is a relevant variable. However, MFIs may have different accounting policies for defaults (see our discussion of the need for OSS2 in addition to OSS1). We run (unreported) regressions where the MFI's write-off ratio replaces the PaR30 ratio to check this possibility, but find no substantive difference.

Cost of funds (cof) is an important cost item for an MFI. We define it as the natural logarithm of the interest paid on all borrowed funds, including deposits, divided by borrowed funds. A mission-driven MFI should have no particular advantages in obtaining funding at low cost. Thus, this variable provides a contrast to the operational, wage, and administrative costs.

The explanatory variable, control variables and instrument: *Entrepreneur* (ECEO). This is our main explanatory variable. It is a binary variable defined as 1 if the CEO is also the entrepreneur from the time the MFI was founded, and zero otherwise. Thus, this is not a case of family ownership stretching several generations, as in Anderson and Reeb (2003), but a case of CEOs taking part in the incorporation of the MFI enterprise.

Control variables. The global microfinance industry is populated with MFIs of various sizes, organizational backgrounds, regulations, countries of domicile and so on. The need for firm-specific and country control variables is obvious. We control for institutional conditions, including the ownership type, a country control, and a control for the rating agency (the various sources of our data), based on past research (e.g., Ahlin, Lin, & Maio, 2011; Cull, 2007;

Mersland & Strøm, 2009). There is a need to control for an entrepreneur-CEO's links (or lack of links) to ownership type (shareholder versus other types, as suggested by Kistruck & Beamish, 2010; Mersland, 2009), regulations (supervised by banking authorities or not), international initiators (Mersland, Randøy & Strøm, 2011), and competition (the degree of product market competition). It may be argued that the institutional variables are not truly independent of the entrepreneur-CEO, since the entrepreneur must have been present when the MFI decided upon ownership type and the other institutional variables. If this is the case, we should expect to find systematic biases in the associations between the presence of an entrepreneur-CEO and the institutional aspects. The country's development level is also among the background exogenous variables. Finally, regressions are run with controls for the five rating agencies that provided the information for our dataset (in line with Beisland & Mersland, 2012) and controls for the calendar year, expressed as binary variables.

Assets (assets). We use the logarithm of the PPP-adjusted total assets as a control variable to proxy for the MFI's size. Firm size is used as an explanatory variable in earlier entrepreneur studies, such as Fahlenbrach (2009) and Adams et al. (2009). Size is obviously related to several of our dependent variables. For instance, in the banking literature, scale advantages are reported to be high for especially small banks and for MFIs (Hartarska, Shen, & Mersland, 2013). It could be hypothesized that the size of assets and the presence of an entrepreneur-CEO would be correlated if the typical entrepreneur-CEO is successful and grows the MFI to a larger size than the MFIs with non-entrepreneurs acting as CEOs. However, the correlation between entrepreneur-CEO status and assets is in fact very low. Also, Table 1 shows no size difference between entrepreneur and non-entrepreneur-CEO MFIs. In unreported regressions we omit assets but the results remain largely the same.

Ownership types (shf). Microfinance is characterized by different ownership types,

ranging from shareholder-owned financial institutions, to MFIs operating as NGOs, cooperatives, and state banks. The majority (50.5%) of MFIs is NGO; shareholder-owned financial institutions constitute about 30%, and cooperatives about 15%. We define the ownership type variable in terms of whether or not the MFI is shareholder-owned, as suggested by Kistruck and Beamish (2010). Thus, the ownership type is 1 if the MFI is owned by shareholders, and zero otherwise. The variable can be important if it turns out that, say, shareholder-owned firms are more profit- and less social mission-oriented than MFIs of other ownership types as suggested by Mersland (2009). Mersland and Strøm (2008) were unable to find such differences running along ownership type lines but did not consider how ownership type may interfere with entrepreneur effects.

Regulation (regul). This is a binary variable equal to one if the MFI is regulated by a local bank authority, for instance, the central bank. Most of the MFIs in the sample are not regulated; in fact, only 27% are. Regulation entails a fixed cost that may lead to changes in the MFI's lending behavior. We should expect regulation to increase the average loan size, for instance, thus having a negative impact upon the MFI's social mission. At the same time, being regulated might open up other funding opportunities. Therefore, as MFIs are differentially regulated, the regressions should take account of the impact upon the results.

Internationally initiated (intinit). This variable is binary, having the value 1 if the MFI was initiated by an international organization and zero otherwise. An international initiator is likely to stress the social mission aspects even more strongly than a domestic initiator, because the social mission is its rationale for entering the arena in the first place. Furthermore, an international organization may turn over the CEO position to a local manager earlier than a domestic MFI. Thus, this control variable will constitute an omitted variables problem if a disproportionately high share of MFIs still has an entrepreneur-CEO.

Competition (compet). The raters provide in their reports information about the competition faced by the MFI. We use this information to build a competition variable normalized on a scale of 1 to 7, and use this as our measure of the competition facing the MFI. Again, if competition differs among entrepreneur and non-entrepreneur MFIs, an omitted variables problem would emerge if the variable were left out. Competition may impact upon the weight given to the social mission relative to financial performance. McIntosh & Wydick (2005) documented that greater competition leads to a gradual deterioration of loan repayments and a drop in savings, based on a study of MFIs in Uganda. The MFI may resort to curtailing subsidized loans to the young and the poor, since it may not expect to have long-term relationships with its customers. Accordingly, greater competition may lead to less focus on the social mission aspect of the business and more on financial performance.

Human Development Index (hdi). The UN Development Programme's HDI of life expectancy, literacy, education and standards of living for countries worldwide is our identifier of the MFI's country of domicile (Ray, 1998). The index is specified for every country and for every year in the sample. The HDI identifies a country effect in the MFI's business practices. For instance, we expect the average loan to rise with the country's index value.

Rating agency and year. We include the rating agency as a control in the regressions by forming binary variables for each of them, and including the first four as indicators. The agencies include the US-based *MicroRate,* the Italian-based *Microfinanza,* the French-based *Planet Rating* and the Indian-based *Crisil* and *M-Cril*. Even if an agency may argue that its methodology is different from others' (Mitra, Ranjan, & Negi, 2008), the core information used in this study consists of standard indicators that are calculated similarly across the industry. Nevertheless, Beisland and Mersland (2012) document some differences across rating agencies when it comes to their assessments of MFIs so we choose to control for rating agency in our regressions. We

also include the calendar year in the regressions as an extra safeguard.

Instrument. Fahlenbrach (2009) and Adams et al. (2009) take the entrepreneur-CEO status to be endogenous, since "…past success and the anticipation of future success and attractive investment opportunities can make it more likely for the founder-CEO to remain in office", according to Fahlenbrach (p. 443-444). The entrepreneur-CEO is by definition a survivor, and he/she survives because organizational objectives are obtained. The instrument we use for the entrepreneur-CEO is the conditional probability of being an entrepreneur-CEO, given a set of variables containing control variables and two time-related variables. A description of the method follows in the next section. The two time variables are the year of startup as an MFI ("Incorporation"), and the difference in years between MFI startup and the organization's establishment ("Year difference"). Sooner or later, the entrepreneur-CEO must depart, and the likelihood of departure depends upon the time that has elapsed since the startup of the MFI. Since microfinance was born in the development sector, some MFIs actually have a history that goes beyond their microfinance operations. For most of the MFIs included in our dataset there is no difference between the time of their startup as an MFI and the time of their startup as an organization, but some MFIs do have a longer history. This gives us an opportunity to use startup year as a variable for the instrument since it is likely that the MFI's CEO comes from this older organization, and the greater the time since then, the less likely it is he/she will remain as CEO. Using an instrument that reflects time is in line with Adams et al. (2009) and Fahlenbrach (2009).[8]

MFI age (mfiage) is the number of years the MFI has operated, providing microfinance resources to borrowing or saving clients. We could also have used the logarithm of the MFI's age

[8] For instance, Adams et al. use as one instrument the occurrence of the founder's death before 1992, and Fahlenbrach uses incorporation before 1940. Naturally, the probability that the entrepreneur-CEO is still at the helm falls with time.

to condition the instrument but it turns out that both choices produce very similar results. Both Fahlenbrach (2009) and Adams et al. (2009) include CEO tenure and firm age as explanatory variables alongside the entrepreneur-CEO (ECEO) indicator variable. Since the three variables are clearly interconnected, we choose to include year adjustments and an instrument for entrepreneur-CEO.

Methods

One major methodological challenge in this study is to address how a set of indicators for the social mission, financial sustainability, and costs in the MFI vary with the CEO's status as an entrepreneur or professionally hired, given a set of control variables. We may think of this as an experiment (Lee, 2005), as the sample is split into two subsamples such that the entrepreneur-CEO (ECEO) is the "treated" group and the professional CEO (NCEO) is the "untreated" group. We compare the two groups and we are interested in finding differences between them. In the data section, we documented that no control variable perfectly matches either the ECEO or the NCEO group, that is, performance differences between the two groups must be due to the presence of an entrepreneur-CEO.

We noted above that the entrepreneur-CEO is endogenous. If we can find a suitable instrument for the entrepreneur-CEO variable (ECEO), the endogeneity drops away, and we will know that the relationship is causal, that is, the presence of an entrepreneur-CEO determines the performance outcomes. To this end, we employ the Heckman (1979) dummy endogenous variable model in order to take the endogeneity of ECEO into account. Wooldridge (2010, chapter 21) suggests an instrumental variable (IV) regression procedure for dealing with this situation. Thus, we want to estimate

$$Y_i = \beta ECEO + \gamma Controls + Constant + u_i \qquad (1)$$

using instrument Z=P(ECEO|S,Controls) for ECEO.

The dependent variable Y_i represents social mission, financial sustainability, and the cost variables. The entrepreneur-CEO indicator ECEO is the endogenous variable, and the set of exogenous variables in Controls includes firm size, ownership type, regulation, an international entrepreneur, competition, the country control variable (HDI), and indicator variables for rating agency and calendar year. The instrument Z to the endogenous variable ECEO is a generated variable, to be determined.

Thus, following Wooldridge, the first task is to form the conditional probability P(ECEO|X,Controls). We use all variables in the control set except for firm size. The additional variables in S are Incorporation and Year difference. This means that we run the following logit regression:

$$P(ECEO) = a_1 Incorporation + a_2(Year\ difference) + B(Control\ variables) + v_i \qquad (2)$$

From this regression, we form the fitted probabilities Z for each observation. Wooldridge (2010: 939) says that the model for P(ECEO) is robust in the sense that it need not be correctly specified. The researcher desires an instrument that is highly correlated to the endogenous variable(s), but is not related to the dependent variable. This is achieved here, although this is merely an empirical question. The second step is to estimate (1) with the IV method using Z as an instrument for ECEO. Adams et al. (2009) follow this procedure, while Fahlenbrach (2009) employs the propensity score method, as explained at the end of this section.

The data are panel data (1998-2010). We employ the random effects instrumental variables model (Wooldridge, 2010) in regressions. In our case, the use of a fixed effects model

for estimating the relationships is not an option, since the presence of an entrepreneur-CEO is, for most MFIs, a fixed, binary variable throughout the observation period. Fixed, binary variables are removed in the fixed effects transformation. The unbalanced panel data in our sample is of a "large N, small T" type, that is we have 295 MFIs and a maximum of nine observations.

We test for the assumption for IV regressions that the correlation between the residuals u_i and the instruments and exogenous variables is zero: $E(u_i|I_i) = 0$, where $I_i = [X,Z]$ and X is the Controls from (1). We assume that the variables for firm size, ownership type, regulation, being internationally initiated, competition, and the HDI are exogenous. To test for this, we follow Wooldridge (2010: 352-353) in constructing an exclusion test. The procedure is as follows: First, the exogenous variables X are split into a part containing the firm size and institutional variables X_1 and a part containing the remaining exogenous variables (the rating agency and calendar year indicator variables X_2). Second, each of the exogenous variables in X_1 is taken as a dependent variable and run against the remaining exogenous variables and the Z instrument. Third, the residuals from each regression are calculated. We call these the "Residuals". Finally, all of the Residuals are added to the regression:

$$Y_i = \alpha ECEO + \mu X_1 + \theta X_2 + \pi Z + \rho Residuals + Constant + e_i$$

If the exogenous variables in X_{21} really are exogenous, then the coefficients in ρ will be zero. We test for this condition using a Wald test of exclusion. We call the test the Wooldridge test.

The Rosenbaum and Rubin (1983) matching model based on the propensity score is an alternative to the IV regressions. The propensity score is the probability that the MFI is an ECEO, conditional on available covariates. The score is then used to construct a set of matching pairs of MFIs, and performance differences can then be studied. Fahlenbrach (2009) follows the common

procedure of using the propensity score in regressions on firm performance. The trouble with the procedure is that it critically depends upon the model for P(CEO|Covariates). A wrong model will induce bias in estimation of performance differences. In particular, Heckman and Navarro-Lozano (2004) show that enlarging the set of control variables or instruments may even increase the bias in propensity score estimations. In conclusion, since the IV regression method appears to be the most robust, we follow this.

RESULTS

We study performance differences between two subgroups of MFIs, those with an entrepreneur-CEO and those with a hired CEO. Table 1 gives an overview of the variables used in the analysis as well as the correlations between them. The table has two parts. In Panel A, the statistics reported are for the entrepreneur-CEO MFIs, while Panel B presents the numbers for MFIs whose CEOs are not the entrepreneurs. The table shows remarkable differences in both averages and the pattern of correlations.

Insert Table 1 here

First of all, we note that 39.1% of the MFIs are led by an entrepreneur-CEO. Thus, comparisons of the two groups are facilitated by the good balance between them. We use a number of control variables to sort meaningfully between the two groups. Are these well-balanced as well? If the background variables show that the MFIs in the two groups are fairly equal, we will be more confident that differences in social mission and financial sustainability reflect the effects of the entrepreneur-CEO. The comparison between entrepreneur-managed and non-entrepreneur-managed MFIs reveals only one significant difference amongst the institutional

factors; this is in relation to the share of internationally initiated MFIs. Among non-entrepreneur-CEO MFIs the proportion is on average 48%, but for the entrepreneur-CEO MFIs it is only 26%. Thus, we conclude that the use of these variables as control variables is legitimate. Furthermore, looking at the MFI-specific variables, MFI age and HDI, the average entrepreneur-CEO MFI is about two years younger than its non-entrepreneur-CEO peers, but the country development levels are equal. This underlines the need to control for a time element in the regressions. Finally, we note that firm size, measured as assets, is about the same in both groups.

It may be argued that the institutional variables are not truly independent of the presence of an entrepreneur-CEO, since the entrepreneur must have been present when the MFI decided upon ownership type and other institutional variables (whether or not they were internationally initiated and regulated would have been partly decided by the organization). However, the data show no systematic bias between the two groups. Thus, the entrepreneur-CEO's presence at the time of founding has not brought about MFIs of a different kind. We conclude that our data are well suited to an analysis of performance differences between the two groups of CEOs.

Characteristics of the entrepreneur-managed MFIs

Table 1 is split into two panels, one for the MFIs managed by entrepreneur-CEOs (Panel A) and one for those managed by non-entrepreneur-CEOs (Panel B). We carry out simple bivariate analyses of the differences between the two. Table 1 reveals that the entrepreneur-managed MFIs have a higher social mission performance (outreach) and lower operational costs, in particular a lower wage rate, than the non-entrepreneur-managed MFIs. Financial sustainability (OSS2) is significantly better in entrepreneur-managed MFIs. The entrepreneur-managed MFI has higher portfolio and credit client growth rates, and reaches out to more rural clients than the

non-entrepreneur-managed MFIs. The two groups do not differ significantly in terms of the background variables, except in terms of whether they were internationally initiated, which is less likely among the MFIs run by entrepreneur-CEOs. The results are as expected according to the Besley and Ghatak (2005) model of motivated agents, and indicate that the entrepreneur-CEO is a better guarantor of the social mission maximization objective in microfinance than is the professionally hired CEO. These initial results are encouraging for the more comprehensive econometric analyses to come.

Instrument generation

The first step in the IV regression implementation of the Heckman (1978) dummy endogenous variable model is to generate an instrument for the endogenous variable ECEO. Thus, we run the logit regression for the likelihood of an entrepreneur-CEO (relationship (2)) and form the probabilities.

Insert Table 2 here

Table 2 shows regressions with Incorporation and Year difference as the time variables in column (1) and the MFI's age as the time variable in column (2). In both columns, the time variables turn out to be highly significant. We also note that the variable for an internationally initiated MFI is significant and about the same size in both regressions. Thus, using either Incorporation and Year difference or MFI age as the time variable(s) is likely to give a good instrument for ECEO. In fact, taking the instrument from regression (1) or (2) in Table 2 gives practically the same result. We proceed with a generated instrument from column (1), that is, using Incorporation and Year difference as the time variables. The instrument is then used in the IV regressions that follow.

The impact of entrepreneur-CEOs

We perform regressions on one variable at a time, using the proposed set of control variables and the instrument. First, we run regressions for the social mission effect of entrepreneur-CEO management (Hypothesis 1), specifically looking at the relations between entrepreneur-CEOs and four measures; portfolio growth, client growth, average loan size and a preference for rural clients. We then look at the relation between entrepreneur-CEOs and financial sustainability (Hypothesis 2) using ROA, OSS1 and OSS2 as measures. Furthermore, we explore the entrepreneur-CEO's relation to MFI costs (Hypothesis 3), by looking at operating expenses, staff wages (a subpart of the operating expenses) administrative costs, and loan defaults. In addition, we look at the cost of funds as a contrast to the operational cost variables as the entrepreneur-CEO is expected to have less influence in this cost item. An instrumental variable random effects model is employed.

***The MFI's social mission*.** Is the entrepreneur-managed MFI more capable of fulfilling its social mission than the non-entrepreneur-managed MFI (Hypothesis 1)? According to the existing microfinance literature, it is commonly assumed that the fulfillment of the social mission improves with increased outreach (to more clients), and when poorer customer segments become credit clients (e.g., Armendáriz & Morduch, 2010). The first aspect is a purely quantitative measure, which we approximate with portfolio growth and client growth. The second is qualitative; we gauge the extent to which loans are provided to poorer segments of the population by the MFI's average loan, supported by its targeting of rural clients.

Insert Table 3 here

From Table 3, we can see that entrepreneur-CEOs have a significant positive relation with portfolio growth and credit client growth, that is, the quantitative aspect of the MFI's social mission (Hypothesis 1). This implies that the entrepreneur-CEO is better able to build a large customer base than the non-entrepreneur. We argue that this is one of the strongest justifications for the high level of entrepreneur involvement in MFIs: that they consistently support long-term growth. This finding is in line with our expectations based on the Besley and Ghatak model that entrepreneur-CEOs are more mission-driven than other CEOs. Furthermore, we find that competition and the level of country development (HDI) inhibit portfolio growth. The first result is as expected; the more intense the competition, the less able the MFI is to grow. The second result is in contrast to Ahlin et al. (2011), who find that MFIs flourish more as the financial sector of the country deepens, which we find counter-intuitive. The difference in these results could be due to the fact that we are able to include better controls in our dataset (institutional variables), or to our IV methodology.

On the other hand, we cannot claim that the entrepreneur-managed MFIs are more oriented towards the qualitative aspect of the social mission than other MFIs. The sign for the average loan is as expected but has no significance. Meanwhile, we find that the entrepreneur-managed MFIs are no more inclined than the non-entrepreneur-managed ones to favor clients in rural areas. An interesting secondary result is that MFIs subject to regulation tend to offer larger loans on average to their microfinance customers. Thus, regulation induces a mission drift away from the poorest segments of clients.

The upshot of these findings is that the entrepreneur-managed MFIs fulfill their social mission by extending their loan portfolios and providing microcredit to more customers, as expected based on the Besley and Ghatak model of "motivated agents". However, the entrepreneur-managed MFIs do not target specific clients groups, such as the poorer segments of

the population or those in rural areas, more than other MFIs do. This also provides preliminary evidence that there is no mission drift concerning client segments in MFIs as they change leadership type from an entrepreneur-CEO to a professionally/externally hired one, confirming the past results of Mersland and Strøm (2010).

Overall financial sustainability. Can the entrepreneur-CEO create better financial sustainability than a non-entrepreneur? We use three overall financial sustainability measures—ROA, OSS1, and OSS2—the results for which are also presented in Table 3. From Table 1 we see that the average overall financial performance of MFIs is low and only OSS2 is significantly higher for the entrepreneur-managed MFIs than for the MFIs without such management. The entrepreneur-CEOs appear to be better able to deliver better financial results than the non-entrepreneur-CEOs. However, although the sign of ROA's coefficient is positive, there is no significant impact of having an entrepreneur-CEO on this traditional measure of financial return.

Altogether, the results indicate that the entrepreneur-CEO has a firm grip on the operational side of the business but is not able, or willing, to effectuate a purely higher financial return other than the one leading to higher financial sustainability. Our interpretation is that the entrepreneur-CEO leans more towards the MFI's social mission than other CEOs, while maintaining a low, but positive overall profitability. The outcome is that the MFI maximizes its social mission, subject to a break-even condition, and that the founder-CEO is better able to see this policy through[9]. Furthermore, turning to the various control factors, there are no significant results for the institutional variables—ownership type, being regulated, being internationally initiated and competition—which is also in line with previous research by Mersland and Strøm

[9] Maximization of social mission subject to a break-even condition is a modeling assumption that is often used in microfinance, as in Armendáriz and Morduch (2010).

(2009). At the same time, the assets variable is consistently and significantly positive, confirming the results in Hartarska et al. (2013) that MFIs can benefit from economy of scale.

Taken together, the social mission and financial sustainability results show that entrepreneur-managed MFIs follow a sustainable growth strategy to a greater extent than other MFIs. This is an indication that the social mission goals come first in entrepreneur-managed MFIs, and that the financial sustainability level is set at a satisfactory level rather than the maximum. Our findings fit well with the theoretical arguments, and case evidence, provided by Battilana & Dorado (2010), that the unique leadership skills of microfinance entrepreneur-CEOs can facilitate an efficient implementation of the dual or hybrid organizational logic, known in the microfinance industry as the "double bottom line".

Costs. The multivariate results in Table 4 significantly support our argument related to lower staff costs, derived from's motivated agents model (Hypothesis 3). Furthermore, the significant and negative impact of the entrepreneur-CEO on administrative costs is also in line with the Besley and Ghatak model's claim that, when managers and workers are mission matched, monitoring costs are lower. However, although the coefficient for operational cost is as predicted, it is not significant for model (1) in Table 4. The unconditional comparison in Table 1 shows that operational costs are significantly lower in the entrepreneur-managed MFIs. We are puzzled by this result. One explanation might be that entrepreneur-CEOs lack certain skills (e.g., related to having up-to-date IT systems) compared to non-entrepreneur CEOs.

Another possibility is that this is a problem of multicollinearity. We check further by interacting the entrepreneur-CEO with assets, see model (2) in Table 4. The regression shows that the coefficient of the entrepreneur-CEO indicator is significantly negative, that of assets is as before, and that of the interaction term is positive, with a much lower coefficient than either of

the individual variables. Furthermore, we see that the other coefficients remain at their levels from column (1). The interpretation is that the entrepreneur-CEO is instrumental in keeping the operational costs low. The specific cost items do not deviate qualitatively from the results in Table 4 when we interact the terms. We take the finding that entrepreneur-managed MFIs have significantly lower loan defaults (Hypothesis 3) as additional proof that these CEOs have a superior motivation and/or competences in relation to operating the core business of an MFI.

The assessment of "cost of funds" presents a theoretical contrast to the operational cost items. With reference to access to funds, the MFI needs to access an external market for financing expansion. The entrepreneur-CEO should have no particular advantage over professionally hired CEOs. This is also what the numbers in Table 4 tells us. A motivated agent, the entrepreneur-CEO, is no better at accessing funding on favorable terms than other CEOs. Furthermore, we note that the internationally initiated indicator is positively related to operational costs overall, to staff wages and to administrative costs in particular, but negatively related to loan defaults. This appears reasonable, as an international institution may "import" a culture of higher costs, while at the same time focusing strongly on the MFI's repayment record. This is also in line with findings in Mersland et al. (2011) and serves to corroborate the cost findings here.

Insert Table 4 here

CONCLUSIONS

This study shows that the entrepreneur-CEO is a common phenomenon in the microfinance industry, representing 39.1% of the MFIs in our global dataset. Our analysis indicates that these entrepreneur-managed MFIs are superior to other MFIs in terms of fulfilling a quantitative social mission (outreach to a larger number of credit clients and faster portfolio growth), produce stronger results with regards to financial self-sufficiency, have lower operational costs and incur smaller losses. This unique combination of efficiency *and* social mission is in line with the theoretical model of "motivated agents" (Besley & Ghatak, 2005). Our global empirical evidence suggests that entrepreneur-CEOs in the microfinance industry are able to balance dual organizational demands—financial sustainability *and* social mission—as previously shown in a case study by Battilana and Dorado (2010). Whereas previous research has shown that for-profit entrepreneurs have a powerful ability to produce efficient organizations (e.g., Fahlenbrach, 2009; Langowitz & Allen, 2010; Villalonga & Amit, 2006), this research highlights that microfinance entrepreneurs can use this higher efficiency to enhance social goals. We argue that entrepreneur-managed MFIs' unique combination of higher growth *and* lower costs is a by-product of the entrepreneur-CEO's mission-driven motivation. As previously seen in the case of not-for-profit entrepreneurial organizations (e.g., Meyskens et al., 2010), we also argue that the microfinance entrepreneurs could potentially possess unique experience and competencies, although this is not pursued empirically in this paper and needs to be addressed by future research. Furthermore, driven by the common social mission of most MFIs, we suggest that the entrepreneur-CEO is internally motivated to a greater extent than the hired CEO, and thus entrepreneur-managed MFIs suffer less from agency conflicts than other MFIs (i.e., lower agency costs related to employee contracts, funding relationships, and other stakeholder relations). Thus, this reduces the need for costly managerial incentives and alleviates (but does not eliminate) the need for other monitoring mechanisms, such as the oversight and scrutiny of a competent board. This could be addressed in

future research.

The policy implication for entrepreneur-managed MFIs is that those monitoring CEOs, typically boards, should appreciate the cost advantages gained from entrepreneur management. Our results suggest that it is mainly through lower wages that entrepreneur-managed MFIs achieve lower costs. The lack of managerial competencies and capacity has been addressed as a major risk in the microfinance industry (CSFI, 2011). The lower wages seen in entrepreneur-managed MFIs may also reflect a lower level of competence among their staff members, and this may also be the reason for the higher costs of funds (but not significantly so), in that they may be less able to connect with professional investors or donors. One could argue that entrepreneur-managed MFIs might be *too* cost-focused. Furthermore, the boards of MFIs should be aware that, when replacing entrepreneur-CEOs, they can expect an increase in wage costs as the entrepreneur's unique competence will need to be replaced with more formally skilled staff. Finally, from a corporate governance point of view, owners/trustees (or others who hire/fire MFIs' CEOs) should be aware that this represents a succession risk in the microfinance industry, as growth can be expected to fall after the entrepreneur-CEO retires.

There are several limitations to this study that can motivate future research. First, there is the challenge of possible confounding effects, particularly as we attempt to attribute individual characteristics (the entrepreneur status) to organizational outcomes (MFI performance and costs). This also implies that we like to see research that move further "upstream" in theorizing how entrepreneurs and non-entrepreneurs CEOs might differ in how they accomplish their social missions.[10] Future research could attempt to close these theoretical leaps with multi-level research. Second, the direction of causality could potentially be reversed as superior MFI

[10] This was specifically suggested by one of our reviewers.

performance may make it more likely that the entrepreneur-CEO will remain in charge. On the other hand, the opposite could also be true, as entrepreneur-managers of poorly performing MFIs may use their stronger local network ties and social role as entrepreneur to remain in power. Future studies might research MFIs that make the switch from being entrepreneur-managed to non-entrepreneur-managed, possibly using an event study approach. Third, we conduct research on a sample of the largest and most internationally oriented MFIs, and future research should attempt to draw cases from a wider set of MFIs. Fourth, a life-cycle model of the role of the entrepreneur and entrepreneurship in microfinance could be developed. Finally, we see a need for research addressing the issue of "motivated agents" in other kinds of social enterprises beyond microfinance.

In 1983 Schein wrote that *"an organizaton's culture begins life in the head of its founder – springing from the founder's ideas about truth, reality, and the way the world works"* (page 13). In line with this quote, and the theoretical arguments of microfinance entrepreneur-CEOs as "motivated agents" with stronger intrinsic motivation, we observe that entrepreneur-managed MFIs "work" more successfully than similar institutions without the presence of a founder.

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Table 1: Summary statistics of the variables in the study

PANEL A: MFIs with entrepreneur-CEOs. Frequency: 471; percentage: 39.12

Variable	Mean	Std	portgro	ccligro	avgl	rural	roa	oss1	oss2	opxport	wage
Portgro	**0.80**	1.46									
Ccligro	**0.58**	1.28	0.53								
Avgl	683	757	-0.12	-0.09							
Rural	**0.71**	0.45	0.02	-0.06	-0.05						
Roa	0.01	0.12	-0.10	-0.17	0.13	-0.05					
oss1	1.16	0.59	-0.13	-0.16	0.21	-0.10	0.55				
oss2	**1.58**	0.82	-0.06	-0.08	0.27	-0.09	0.49	0.83			
Opxport	**0.27**	0.32	-0.09	0.08	-0.21	0.01	-0.58	-0.33	-0.45		
Wage	**6119**	4686	-0.19	-0.12	0.35	0.01	0.15	0.10	0.04	0.11	
admcost	0.12	0.17	-0.06	-0.09	0.04	0.04	0.08	0.06	0.05	0.12	0.30
par30	**0.05**	0.08	-0.10	-0.10	0.05	-0.04	-0.17	-0.08	-0.03	-0.05	-0.15
Cof	-0.02	0.06	-0.09	-0.11	-0.08	-0.05	0.10	0.02	0.10	-0.08	0.12
Ceoten	**7.79**	5.20	-0.19	-0.18	-0.01	0.06	0.11	-0.01	0.09	-0.07	0.02
Assets	5.63	9.48	-0.12	-0.07	0.25	-0.02	0.14	0.07	0.24	-0.13	0.36
Mfiage	**7.77**	5.22	-0.19	-0.17	0.00	0.05	0.12	0.00	0.10	-0.08	0.02
Shf	0.35	0.48	0.01	0.08	0.12	0.12	-0.13	-0.13	-0.12	0.16	-0.02
Regul	0.27	0.44	0.05	0.10	0.12	0.12	-0.11	-0.03	-0.08	0.07	-0.13
Intinit	**0.26**	0.44	-0.08	-0.12	0.07	-0.04	0.04	0.04	-0.04	-0.02	-0.02
Compet	4.37	1.49	-0.02	0.01	-0.03	0.06	0.04	-0.09	-0.11	0.03	0.25
Hdi	0.63	0.13	-0.15	-0.09	0.35	-0.02	0.22	0.17	0.18	-0.04	0.55

	admcost	par30	cof	ceoten	assets	mfiage	shf	regul	intinit	compet
par30	-0.05									
Cof	0.05	0.02								
Ceoten	0.03	0.11	0.02							
Assets	0.45	-0.01	0.06	0.21						
Mfiage	0.03	0.10	0.01	1.00	0.21					
Shf	0.03	0.12	-0.11	-0.03	0.09	-0.04				
Regul	0.05	0.12	-0.19	-0.20	0.11	-0.21	0.51			
Intinit	0.09	-0.18	0.00	-0.15	0.08	-0.15	0.04	-0.05		
Compet	0.12	0.13	0.23	0.02	0.06	0.02	-0.14	-0.21	-0.12	
Hdi	0.18	-0.05	0.12	-0.02	0.15	-0.02	-0.14	-0.18	0.02	-0.06

A mean value in bold signifies that the difference between the entrepreneur-CEO and the non-entrepreneur-CEO is statistically significant at a 5% level on a mean comparison t-test. Assets are in million US$.

PANEL B: MFIs with non-entrepreneur-CEOs. Frequency: 733; percentage: 60.88

Variable	Mean	Std	portgro	ccligro	avgl	rural	roa	oss1	oss2	opxport	wage
Portgro	**0.42**	0.57									
Ccligro	**0.31**	0.48	0.62								
Avgl	616	796	0.04	0.03							
Rural	**0.65**	0.48	0.00	-0.03	-0.01						
Roa	0.01	0.13	0.09	0.04	0.10	-0.11					
oss1	1.12	0.71	0.06	0.01	0.12	-0.05	0.39				
oss2	**1.43**	1.00	0.04	0.03	0.22	-0.04	0.35	0.93			
Opxport	**0.32**	0.28	-0.10	-0.10	-0.29	0.01	-0.45	-0.29	-0.34		
Wage	**7199**	6923	-0.06	-0.05	0.19	0.00	0.09	-0.04	-0.03	0.28	
admcost	0.14	0.13	-0.06	-0.09	0.04	0.04	0.08	0.06	0.05	0.10	0.22
par30	**0.07**	0.09	-0.19	-0.08	0.16	-0.03	-0.31	-0.14	-0.06	0.02	-0.01
Cof	-0.01	0.08	-0.15	-0.08	0.10	-0.04	0.00	0.03	0.09	-0.10	0.07
Ceoten	**2.75**	2.76	-0.09	-0.06	0.11	-0.05	0.20	0.12	0.13	-0.09	0.27
Assets	5.36	7.21	-0.06	-0.08	0.19	0.04	0.16	0.21	0.27	-0.24	0.14
Mfiage	**10.20**	7.38	-0.22	-0.15	0.03	0.09	0.06	0.04	0.09	-0.18	0.02
Shf	0.34	0.47	0.03	0.05	0.02	0.04	0.00	0.01	0.02	-0.01	-0.10
Regul	0.27	0.44	-0.03	-0.08	0.07	0.04	0.05	0.01	0.03	-0.19	-0.11
Intinit	**0.48**	0.50	0.04	-0.06	-0.14	0.09	-0.03	-0.01	-0.08	0.19	0.07
Compet	4.42	1.55	-0.11	-0.11	0.11	0.02	0.03	0.09	0.14	-0.13	0.16
Hdi	0.61	0.13	0.00	0.04	0.26	-0.17	0.22	0.14	0.13	-0.11	0.29

	admcost	par30	cof	ceoten	assets	mfiage	shf	regul	intinit	compet
par30	-0.03									
Cof	0.03	0.12								
Ceoten	0.08	-0.18	0.09							
Assets	0.67	0.01	0.04	0.21						
Mfiage	0.20	0.22	0.13	0.17	0.41					
Shf	0.06	-0.10	0.01	-0.15	0.07	-0.18				
Regul	0.18	-0.07	0.02	0.01	0.21	0.04	0.51			
Intinit	-0.02	-0.20	-0.04	0.12	-0.08	-0.22	0.05	-0.05		
Compet	0.08	0.08	0.11	0.20	0.18	0.06	-0.04	0.03	-0.10	
Hdi	-0.03	-0.07	0.11	0.10	0.03	0.02	-0.13	-0.21	-0.03	0.08

A mean value in bold signifies that the difference between the entrepreneur-CEO and the non-entrepreneur-CEO is statistically significant at a 5% level on a mean comparison t-test.

Table 2: The probability of an MFI having an entrepreneur-CEO. Estimation with logit panel data regressions and two alternatives for the instruments

	Entrepr. CEO	
	(1)	(2)
Incorporation year	0.354***	
Year difference	0.237*	
MFI's age		-3.751***
Ownership type	1.020	-0.037
Regulation	-1.937*	-1.685
Int. initiated	-6.582***	-6.497***
Competition	-0.085	-0.003
HDI	2.217	2.703
Constant	-706.761***	10.165
Agency indicators	*Yes*	*Yes*
Year indicators	*Yes*	*Yes*
Wald chi2(22)	0.000	0.000
Observations	1130	1133
MFIs	287	288

Table 3: The entrepreneur-CEO, the MFI's social mission, and its financial sustainability

	Portfolio growth	Credit clients growth	Average loan	Rural clients	ROA	OSS1	OSS2
Entrepr. CEO	0.222**	0.251**	-0.030	0.015	0.011	0.071	0.091*
Assets	-0.057	-0.115***	0.257***	0.002	0.043***	0.104***	0.166***
Ownership type	0.136	0.317**	0.007	0.000	-0.017	0.030	0.047
Regulation	0.046	0.056	0.349***	0.004	0.019	-0.063	-0.089
Int. initiated	0.035	-0.190	-0.228**	0.018	0.009	-0.058	-0.153***
Competition	-0.066**	-0.024	-0.004	0.024***	0.007	0.010	0.018
HDI	-1.123*	0.428	4.785***	-0.555**	0.334***	0.912***	1.161***
Constant	0.630	1.077	-0.201	0.828***	-0.943***	-2.241***	-3.031***
Agency indicators	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year indicators	Yes	Yes	Yes	Yes	Yes	Yes	Yes
r^2	0.100	0.105	0.331	0.031	0.091	0.092	0.149
Wald chi2(19)	0.000	0.000	0.000	0.000	0.021	0.000	0.000
Wooldridge test	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Observations	744	718	1118	1098	1098	1075	1076
MFIs	260	257	286	280	282	284	285

Instruments: MFI startup year, the difference between the MFI startup year and the organization's year of establishment. Endogenous explanatory variables: CEO founder and Assets.The Wooldridge test reports the coefficient value, which is zero in all regressions, indicating that ownership type, regulation, being internationally initiated, competition level, and HDI are all exogenous variables.

Table 4: The effect of an entrepreneur-CEO on costs

	Operational costs (1)	(2)	Staff wages	Adm. costs	Loan defaults	Cost of funds
Entrepr. CEO	-0.013	-0.287*	-0.202***	-0.129*	-0.014*	-0.004
Assets	-0.053***	-0.061***	0.221***	-0.231***	-0.005**	0.007***
(Entrepr. CEO)*Assets		0.017*				
Ownership type	0.036**	0.035*	0.126*	0.142*	-0.008	0.002
Regulation	-0.034*	-0.030	-0.210***	-0.020	0.005	0.000
Int. initiated	0.049***	0.049***	0.113*	0.142*	-0.029***	-0.005
Competition	0.000	0.001	0.027	-0.027	0.001	0.007***
HDI	-0.177*	-0.189*	3.344***	-0.771	-0.069	0.083**
Constant	1.188***	1.320	3.893***	1.827***	0.174***	-0.132***
Agency indicators	Yes	Yes	Yes	Yes	Yes	Yes
Year indicators	Yes	Yes	Yes	Yes	Yes	Yes
r^2	0.216	0.216	0.421	0.191	0.077	0.097
Wald chi2(19)	0.000	0.000	0.000	0.000	0.000	0.021
Wooldridge test	0.000	0.000	0.000	0.000	0.000	0.000
Observations	1113	1113	1004	1049	1067	1077
MFIs	286	286	256	278	277	285

Instruments: MFI startup year, the difference between the MFI startup year and the organization's year of establishment.

The Wooldridge test reports the coefficient value, which is zero in all regressions, indicating that ownership type, regulation, being internationally initiated, competition, and HDI are all exogenous variables.