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MICROFINANCE INSTITUTIONS AS SOCIAL ENTREPRENEURS: WHEN DO THEY FULFILL A SOCIAL MISSION?

Mariarosa Scarlata University of Surrey, m.scarlata@surrey.ac.uk

Jonathan Kimmitt Newcastle University Business School

Dimo Dimov University of Bath School of Management

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THE G. DALE MEYER AWARD FOR THE MOST RELEVANT RESEARCH IN SOCIAL ENTREPRENEURSHIP

MICROFINANCE INSTITUTIONS AS SOCIAL ENTREPRENEURS: WHEN DO THEY FULFILL A SOCIAL MISSION?

Mariarosa Scarlata, University of Surrey, UK Jonathan Kimmitt, Newcastle University Business School, UK Dimo Dimov, University of Bath School of Management, UK

Abstract

This paper investigates social and economic objectives in social entrepreneurship. It analyzes the use of microcredit to entrepreneurs in the poorest regions of Sub Saharan Africa where individuals lack capabilities to escape from poverty. It highlights under which conditions social and economic goals can be aligned to improve individuals' capabilities. Our findings show that microfinance institutions are able to fulfil their social mission when they have a viable economic engine to cater to that mission. This depends on the existence of institutional settings that enable entrepreneurs receiving microcredit to build sustainable businesses.

INTRODUCTION

Promoting economic growth in the world's poorest countries remains one of the biggest challenges of the twenty first century. Despite widespread international strategies to promote economic growth, Easterly (2001) and McMullen (2011) report their ineffectiveness due to the institutional environment. Social enterprises have attracted increasing attention by practitioners and academics (Short, 2009). By adopting market based approaches to the solution of social problems (Austin, Stevenson, & Wei-Skillern, 2006), social enterpreneurship aims at bringing social change and social impact (Mair & Marti, 2009; Moss, Short, Payne, & Lumpkin, 2011; Zahra, Gedajlovic, Neubaum, & Shulman, 2009) by expanding individuals freedom of choice. Social enterprises have been presented as a model for systemic social change (Bornstein, 2004) as well as of political transformation and empowerment (Alvord, Brown, & Letts, 2004). Yet, to date it is still not clear whether social enterprises are indeed transforming (Mair, Marti & Ventresca, 2012; Mair & Marti, 2009) or are transformed by the environment they are embedded in (Scarlato, 2012), partly due to the qualitative nature of most of this research.

Social enterprises represent a context where social and entrepreneurial challenges create organizational tensions (Moss, Short, Payne et al., 2011). Micro-Finance Institutions (MFIs) are an important example of social enterprise that combine development and a banking logic (Battilana, 2010; Khavul, Chavez, & Bruton, 2013). On the development side, MFIs pursue the social objective of empowering poor invidivuals to pursue entrepreneurial activity towork their way out of poverty (Mair & Martí, 2006; Peredo & McLean, 2006). To accomplish their social objective, MFIs facilitate access to small amounts of credit for poor individuals who are constrained from accessing the traditional banking system due to a lack of collateral to secure such financing. MFIs convey a banking logic covering for operating expenses, loan losses as well as the expansion of their capital base ultimately funding future growth (Fernando, 2006). Through the provision of microcredit, poor entrepreneurs can improve their overall capabilities by building assets and economic resources whilst creating employment opportunities and services for local communities (Helms, 2006), ultimately altering and influencing the contexts they operate in (Mair & Marti, 2009).

Due to the MFIs' simultaneous pursuit of economic and social objectives of poverty eradication, prior research has questioned whether MFIs are providing credit to the poorest of the poor to improve their social conditions, thus accomplishing their social mission, or have to compromise with wealthier clients (Morduch, , 2000). In this paper, we use organizational identity (Albert, 1985) and institutional entrepreneurship theory (Dimaggio, 1988; Eisenstadt, 1980; Maguire, Hardy, & Lawrence, 2004) and seek to explain the conditions under which social enterprises can successfully accomplish social aims through the pursuit of economic objectives. We test hypotheses in the context of MFIs arguing that, as social enterprises, MFIs are able to fulfil their social mission of empowering individuals with the capabilities to escape from poverty when they have a viable economic engine to cater to that mission. Their ability to develop capabilities is strengthened when they can have an effect on the development of either economic or political institutions they are embedded in, which provide them a platform for the unfolding of entrepreneurial activity. We analyze microcredit in Sub Saharan Africa and test predictions using the World Bank's Enterprise Survey, the Economic Freedom of the World Report index (2011), the World Economic Forum Global Competitiveness Report (2008), operationalizing Sen's (1999) capabilities approach.

We aim at making several contribution both for theory and practice. First, we contribute to the emerging literature on social entrepereneurship by conducting a quantitative study highlighting the social effectiveness of social enterprises. It also shows under which conditions social enterprises further strengthen their social role by acting as institutional entrepreneurs in those environments with either a low development of markets or of judicial-political institutions. In such contexts, their social effect is even stronger. This provides an important and timely insight into understanding the role of businesses and their ability to operate in conditions of poverty (Bruton, 2010).

The paper is structured as follows. First, we conceptualize the conditions under which organizations pursuing dual objectives can accomplish social and economic organizational goals. We then formulate hypotheses in the context of MFIs and predict variations in the provision of credit as a function of the capabilities of entrepreneurs and the institutional setting within which borrowing ventures operate. We then discuss our methodological approach. Finally, we present our results and discuss their implications, concluding with suggestions on future research opportunities.

THEORETICAL DEVELOPMENT

Social entrepreneurship is a new field of enquiry (Short, 2009). Definitions of social entrepreneurship focus on the pursuit of economic and social objectives (Austin et al., 2006; Battilana, 2010; Mair & Marti, 2009). Austin et al. (2006) as well as Moss, Short, Payne et al. (2011) argue that, because of this, social enterprises exhibit dual organizational identities. Based on Albert and Whetten (1985), organizational identity represents what is central, distinctive, and enduring about an organization's character.

The dual identity of social enterprises makes them an exceptional case for research due to the conflict that there might exist between them (Foreman & Whetten, 2002). The *social* objective of social enterprises calls for the creation of social value to solve social problems. On the other hand, their organizational social identity co-exists with a more utilitaristic, *economic* identity. Social enterprises need to use business skills and market based approaches of revenue maximization and cost reduction to address social problems in a sustainable way (Battilana, 2010; Zahra et al., 2009).

MFIs have been presented as a peculiar typology of social enterprises in that they aim at solving social problems by helping poor people gain access to capital through which they can engage in entrepreneurial activity and move out of poverty. The social mission coexists with a more utilitaristic objective. MFIs pursue profit making strategies that facilitate and support the ongoing activity of capital provision to poor entrepreneurs whilst also trying to extend their services and drive outreach. By providing small amounts of credit (namely microcredit), savings, insurance and retirement plans, individuals are able to obtain capital that is used to finance the creation and the survival of new ventures (Campbell, 2010; Khavul, 2010).

The Social Mission of MFIs

Austin et al. (2006) argue that the purpose of social entrepreneurship is creating social value for the public good, contrasting with the primary pursuit of private gains in commercial entrepreneurship. Social entrepreneuship emerges where there is a compelling social problem to be addressed (Dees, 2003). Peredo and Chrisman (2006) further argue that social enterprises are most closely associated with communities with limited access to resources; they emerge as a response to the lack of facilities and services in those communities. Resource constraints push the social enterprise into finding innovative ways of using existing resources and acquiring new ones to be financial sustainable and generate social outcomes.

Elaborating on Sen's (2005) 'capabilities approach', Cornelius, Todres, Janjuha et al. (2008) argue that the social objective of a social enterprise could be analyzed with respect to the individual's freedoms, i.e., how and why individuals are able or constrained in their abilities to do or to be. Based on this, a person's freedom refer to their genuine opportunity to realize whatever it is that they are trying to achieve (Alkire, 2005) which determines 'what they do' (Anand et al., 2009). The capabilities approach considers individuals to have ideas about the type of lives they want to lead and they act in accordance with such aims (Sen, 1999). As such, social enterprises, such as MFIs, should focus their attention on expanding capabilities as the means to alleviating poverty. In this vein, the capabilities approach proposes that those with greater capabilities have greater scopes of opportunities and are therefore likely to achieve more than with fewer capabilities associated with limited possibilities. Typically, the latter is associated with the lives of the poorest.

The provision of adequate financial services is an instrumental freedom (Sen, 1999). This give the capability to adequately participate in economic exchange, reducingpoverty and inequalities (Beck, Demirgüç-Kunt, & Levine, 2007). Honohan (2007) shows that access to finance is the most pervasive issue facing both individuals and businesses in Sub-Saharan Africa, with 41.2% of small businesses revealing credit constraints. By focusing their activity on the most inadequately financed strata of society, financial services facilitate the process through which the conditions for economic growth can emerge (Levine, Loayza, & Beck, 2000).

Combining the preceding arguments, we posit that the social effectiveness of social enterprises, and thus MFIs, is evident in the use of their services by new ventures that experience greater restrictions to their capabilities. To the extent that MFIs do fulfil their social mission of alleviating poverty through improved capabilities, the expectation is that MFIs lend to ventures operating in geographical areas where capabilities are more constrained. By boosting the new venture's financial capabilities and enabling its pursuit of growth opportunities, microcredit can play a key role in building social value in areas where capabilities are more restricted. The following hypothesis is thus formulated:

Hypothesis 1: *MFIs are more likely to operate in environments characterized by higher constrained capabilities.*

The Economic Mission of Social Enterprises and their Institutional Role

The economic identity of social enterprises requires them to develop a business model through which addressing social needs becomes a sustainable activity. Social enterprises thus address elements such as revenue generation and maximization as well as cost reduction (Moss et al., 2011). The ethos of accomplishing a social purpose through commercial activity, ensures that social outcomes are integral to economic performance (Peredo & McLean, 2006) and, in turn, the long-term survival of the organization, potentially making its impact more enduring.

However, as explained by Austin et al. (2006), social entrepreneurship can be found in environments characterized by a paucity of resources which reflects heterogeneities in capabilities, which according to North (1987) are influenced by the institutional environment. Mair and Marti (2012; 2006; 2009) focus their research on understanding how social entrepreneurship acts to fill the institutional void that characterizes resource poor environments. Based on this, social entrepreneurs act as institutional entrepreneurs that build *economic* institutions, namely markets (North, 1987). The weakness of economic institutions is particularly relevant in emerging economies where transactions are typified by trust-based exchange (Fafchamps, 2001) which reduces incentives for action and constrains the capabilities of aspiring entrepreneurs.

The knock on effect of voids in economic institutions is that financial markets do not adequately support the economy. This reduces the perceived appropriability of entrepreneurial opportunities, hindering the ability of individuals to adequately participate in economic exchange (Sen, 1999). MFIs thus operate in environments where they can adopt a policy to comply with their economic identity, selecting areas in which they operate in such a way that they are able to meet the capital needs of the borrowing venture whilst generating economic returns. Resources accumulted in such a way are are then used to drive the MFIs definitive social mission (Morduch, 2000) of improving capabilities and institutional development. These arguments thus lead us to formulate the following hypothesis.

Hypothesis 2: *MFIs are more likely to operate in environments where economic institutions are less developed.*

In addition to economic institutions, North (1987) argues that *political-judicial* institutions provide the necessary structures of law which allow for the enforcement of property rights. Lapsed legal frameworks are a common feature in the developing world which is typified by over simplified and inefficient legal environments (Easterly, 2001b; Moyo, 2009; North, 1970). Furthermore, legal constraints erode profit making incentives for organizations and raise legitimacy concerns within the environment in which organizations operate (Hoffman, 1999) and reduce the willingness of intervening organizations to permeate developing economy markets (Webb et al., 2010).

The power of political institutions is also influenced by corruption which exacerbates individuals' capabilities (Gupta, Davoodi, & Alonso-Terme, 2002) and reduces the economic incentives for entrepreneurial action. Corruption reduces economic investment, distorts markets, hinders competition and creates inefficiencies by increasing the costs of doing business (Pak Hung, 2001).

In the context of MFIs, Massey (2011) finds that corruption may play a role in determining the MFI's size, but not its outreach. This suggests that MFIs are not refrained from operating in environments with less developed political-judicial institutions but create a new system that ties the

functioning of different insitutions together. Khavul, Chavez, and Bruton's (2013) development logic of MFIs further strengthens the argument for this view, highlighting that MFI's get stuck when the development logic becomes more institutionalised and they shift towards the adoption of a banking logic. Thus, the following hypothesis is formulated:

Hypothesis 3: *MFIs are more likely to operate in environments where political-judicial institutions are less developed.*

However, institutional entrepreneurs are faced with the paradox of 'embedded agency' (DiMaggio & Powell, 1991; Holm, 1995; Seo, 2002). Based on this, actors are influenced by the existing institutions that shape their cognitions, define their interests and produce their identities (Clemens & Cook, 1999; Friedland, 1991). This suggests that there must be a minimum institutional framework to work on for institutional entrepreneurs to shape it and change it. A lack of institutions leads to destructive chaos which creates an environment where entrepreneurship takes on similar forms (Baumol, 1990), and if that environment supports piratical behaviour, then such organizations will evolve (North, 1990). This indicates that, in order for MFIs to be socially effective in their institutional role, there must be some form of development in existing economic and/ or political-judicial institutions. In such a way, MFIs operate within varying institutional contexts, acting to build upon and change the economic and/or political-judicial institutional frameworks, complying with their institutional role. This leads to the formulation of the following hypothesis:

Hypothesis 4: *MFIs are more likely to operate in environments characterized by high constrained capabilities where economic institutions are more (less) developed and political-judicial institutions less (more) developed.*

Method

To test hypotheses, we used data from the World Bank Enterprise Survey. We focused on countries in Sub Saharan Africa. Twenty seven such countries were included in our analysis. The Enterprise Surveys collect firm level information on the business environment, how it is perceived by individual firms, how it changes over time, and the various constraints to firm performance and growth (World Bank, 2011). Firm level data is available from 2002; however, since data prior to 2006 were collected by different units within the World Bank and employed different survey questions for different countries, our analysis limits to data collected from 2006. In addition, the Enterprise Survey is addressed to operating businesses that employ a minimum of 5 employees; this eliminates most of the subsistence-driven and self-employment forms of entrepreneurship. By concentrating on ventures with 5 or more employees, we incorporate the microbusiness sector (1-10 employees) and the growing demand for finance from ventures where loans may have the most catalytic effect by building upon the pre-established managerial and business acumen of entrepreneurs (Karnani, 2007). For what concerns our conceptualization of entrepreneurship as new ventures, consistent with prior research in both developed and developing countries, we limited our analysis to those firms that were not part of larger firms and were less than 10 years old (BarNir, Gallaugher, & Auger, 2003; Benson, 2001). Based on these parameters, our sample size for analysis was 5255 out of the 16847 firms in the original Enterprise Survey dataset.

Measures

We measured our dependent variable, i.e., the supply of microcredit, by an indicator of whether a firm used microcredit to finance its working capital. The relevant question from the survey (K3) asked respondents to estimate, over the latest fiscal year, the proportion of their establishment's working capital that was financed from a range of sources: (a) internal funds / retained earnings, (b) borrowed from banks, (c) borrowed from non-financial institutions, (d) purchases on credit from suppliers and advances from customers, and (e) other (moneylenders, friends, relatives, etc.). We focused on the financing of working capital since this represents a recurrent decision for firms and readily applies to all respondents in the survey. In contrast, for more discretionary purchases such as fixed assets, since only a portion of the surveyed firm's purchases fixed assets in any given year, the financing of such purchases is relevant only to a small subset of the respondents.

The validity of our measure rests on a theoretical consideration of the relationship between the demand and supply of microcredit. The foundation of MFIs lies in the provision of financial services to those individuals and enterprises that are left out from the traditional financial industry to a lack of necessary collateral and guarantees, or income to pay for the service. The fact that ventures know beforehand they will not be able to obtain a loan from the traditional banking sector, they self-select out of the banking sector (Kon & Storey, 2003). MFIs exist because they know that some borrowers cannot access the traditional banking sector, leaving no other options for such disadvantaged entrepreneurs looking for capital but the use of microcredit. As a consequence, the amount of microcredit used by new ventures is not reflecting the amount of capital these ventures actually need but rather the amount of capital the MFIs is willing to grant. Therefore, the percentage of microcredit used by borrowing ventures is a good proxy for the extent to which microcredit is supplied by MFIs. In the sample, the percentage of microcredit used to finance working capital varied between zero and one hundred and was provided in the original World Bank dataset as an integer over that range. We converted that into a proportion measure. Since only 4% of the sample firms made use of microcredit, we created an indicator variable for our main analysis, based on whether a firm used microcredit. Nevertheless, we used the proportion in supplementary analysis.

One relevant consideration for the validity of our measure pertains to cases where the entrepreneurs may not actively look for microcredit funding. The pecking order hypothesis from the finance literature suggests that, if available, internal funds are typically the first option for financing a business (Myers & Majluf, 1984). Therefore, in our analyses, we seek to tease out this explanation of the variability in the proportion of microcredit used by modelling the availability of internal funds / retained earnings as an endogenous characteristic of the firm and controlling for the probability of self-seleciton into the category of firms with no sufficient internal funds, i.e. those who are likely to look for external options such as microcredit.

We measure capability constraints at the level of the individual firm following Sen's (1999, 2005) capability approach and focusing on the perceived constraints to the entrepreneurs' functioning., i.e., the pursuit of valuable activities and positive choices that the entrepreneur is able to make concerning the operation of his/her business. Our measure of capability constraints was thus as a composite of the degree to which the following were perceived as obstacles: telecommunication, electricity, transportation, access to land, inadequately educated labor force, crime theft and disorder, tax administration, customs and trade regulations, labor regulations, business licensing and permits, and practices of competitors in the informal sector. These factors are argued important for the entrepreneurial process in developing economies because they can affect the degree to which the potential value of opportunities is appropriable (Baker et al., 2005). But this is additionally important from the MFIs perspective in terms of how social enterprises can achieve impact within certain institutional arrangements (Bacq & Janssen, 2011; Sud, VanSandt, & Baugous, 2009). The data for these items came from the Enterprise Survey. For each of these issues, respondents indicated on 5 point scale (from "no obstacle" to "very severe obstacle") the degree to which it constituted an obstacle to the current operations of their establishment. The overall reliability (alpha) of the scale was 0.77. Posted at Digital Knowledge at Babson

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We measured *development of economic institutions* as a composite of several country-level factors, obtained from the World Economic Forum's Global Competitiveness Report (2008). We included the scores of four main pillars of the competitiveness index –goods market efficiency, financial market sophistication, market size, and business sophistication – as well as the score for the intensity of local competition. In deriving the scale we used the standardized value of each component. The reliability (alpha) of the scale was 0.94.

We measured development of political-judicial institutions as a composite of several countrylevel factors, obtained from several sources. First, we used data from the Economic Freedom of the World Report index (2011) on the legal environment and corruption for each country and survey year. In particular we used area 2 of the index, which covers legal structure and the security of property right. Its individual components include judicial independence, impartial courts, protection of property rights, military interference in rule of law and the political process, integrity of the legal system legal enforcement of contracts, and regulatory restrictions on the sale of real property. The index score varies from 1 (the weakest) to 10 (the strongest). We also used the index for item 5Cv of the Business Regulation section, which provides a score for extra payments and bribery. The score varies from 1 (the weakest) to 10 (the strongest), with higher value suggesting that corruption is less problematic. Second, we used the corruption perception index from Transparency International for each country and survey year. Finally, we used data from the World Economic Forum Global Competitiveness Report (2008) on the first pillar (Institutions) of the Competitiveness Index as well as, from the detailed profile of each country, on the degree to which corruption was perceived as a problematic factor for doing business in the country. In deriving the scale we used the standardized value of each component. The reliability (alpha) of the scale was 0.90.

We control for a number of variables in order to rule out alternative explanations for variations in the usage of microfinance. First, at the country level, we controlled for each country's Human Development Index (from the United Nations), to factor out the country's overall level of development. Second, at the level of the firm, we controlled for its status as sole proprietorship, highest educational attainment of the owners, number of employees (logged), annual sales (logged), and whether it was in a manufacturing sector.

Analysis

Given the binary nature of our dependent variable, we used a logit model in our main estimation and a robust option for calculating the standard error in order to deal with possible heteroskedasticity in the data. We also performed several supplementary analyses to establish the robustness of our results. First, in consideration of the excessive number of zeros in our data, we estimated a tobit model, for which we used the proportion of microcredit as the dependent variable. Second, we considered whether a firm financed its working capital entirely by internal funds / retained earnings. One might argue that the decision to rely entirely on internal funds may be driven by factors related to the external environment of the firm, thereby intersecting the realm of our theory. In order to ensure that such endogeneity in the funding decisions of the ventures in our sample did not bias our estimation, we estimated our model on the sub-sample of firms not entirely financed by internal funds. The correction was based on a probit estimation of whether a firm was entirely financed by internal finds, from which we derived the expected probabilities that a firm was not entirely financed by internal funds, to use as control variable in the estimation.

RESULTS

Table 1 provides the descriptive statistics and correlations for the variables used in the analyses. In Table 2 we provide the results of the logit estimation. In Model 1 we include only our control variables. In Model 2, we include the main effects for capability constraints, development of economic environment, and development of legal-judicial institutions. In Model 3, we include the individual interaction effects of economic environment and legal-judicial institutions with capability constraints. Finally, in Model 5 we include the joint interaction effect of economic environment and legal-judicial institutions with capability constraints.

In Model 2, the main effect for capability constraints was positive and significant ($\beta = .39$, p < .001). This suggests that the use of microcredit is more likely when ventures operate with constrained capabilities. This result is consistent with the social mission of MFIs and provides support for Hypothesis 1. The main effects of market environment and legal-judicial institutions were negative and significant in the model ($\beta = .47$, p < .001 and $\beta = .41$, p < .001, respectively), suggesting that firms are less likely to use microcredit in more developed environments, supporting the institutional role of MFIs and hypotheses 2 and 3. In Model 3, the individual interactions of market environment and legal-judicial institutions with capability constraints did not improve the fit of the model and were not significant.

In Model 4, the addition of the joint interaction effect of market environments and legaljudicial institutions significantly improved the fit of the model (Δ Chi-square = 11.2 (2df), p < .01). The three-way interaction effect was negative and significant (β = -1.299, p < .05). In order to understand the nature of the interaction we plotted the effect of capability constraints on the likelihood of using microcredit for four different development combinations of market environment and legal-judicial institutions: high-high, high-low, low-high, and high-high. The interaction plot is shown in Figure 1. The plot shows that the relationship between capabilities constrains and the use of microcredit is positive when market environment is more developed and the legal-judicial institutions less developed, and negative in the other two combinations, when they are both more or less developed. This provides support to Hypothesis 4.

Our robustness estimations of Model 4 from Table 2 are shown in Table 3. Model 1 presents the tobit estimation of the proportion of microcredit used by the firms. The three-way interaction effect of market environment, legal-judicial institutions, and capability constraints is negative and marginally significant ($\beta = -.32$, p < .10). This effect as well as the overall results is consistent with our main estimation. In Model 2, we present the logit estimation on the subset of ventures that were not financed by internal funds, while controlling for their endogenous self-selection into that category. Again, the three-way interaction effect is negative and marginally significant ($\beta = -1.129$, p < .10) and consistent with our main estimation. These findings corroborate the robustness of our results.

DISCUSSION

This paper analyzes how social and economic identities interact in social entreperneurship by analyzing the provision of microcredit by MFIs. Microcredit deals with the social issue of poverty alleviation by empowering individuals and organizations to access capital and make sufficient surplus to support the MFI's ongoing operations that facilitates the fulfillment of its social mission. As such, microcredit has emerged as an important tool in tackling the elusive social challenge of poverty reduction through increasing the capabilities of recipients of loans (Sen, 1999; Yunus,

1999). Within this framework, we highlight the conditions under which MFIs can be a socially effective resource for poor entrepreneurs. We thus focus the empirical analysis on countries in Posted at Digital Knowledge at Babson http://digitalknowledge.babson.edu/fer/vol33/iss18/1

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Sub Saharan Africa which reflect the highest levels of poverty (World Bank, 2011). Specifically, we examine the degree to which microcredit was utilized among new ventures as a function of their social identity, i.e., in the degree of capabilities in which the venture operates, and their economic one, i.e., the country's institutional environment, as represented by the level of corruption, strength of the legal system and development of economic institutions.

Our findings suggest the existence of a positive effect of the use of microcredit in environments characterized by lower development of firms' capabilities. Microcredit facilitates access to capital for those entrepreneurs that operate in regions with the most restricted capabilities such that entrepreneurs receiving it are able to create and appropriate economic returns. This is consistent with the MFIs' social mission of aiming at improving the conditions of poor people and is strongest when either economic or judicial-political institutions are less developed. This result further supports the view that MFIs act as a necessary institutional platform for individuals to realize their entrepreneurial capabilities through which they can improve their life conditions but only when there are the appropriate supporting institutional mechanisms.

These findings show that social enterprises fulfil their social mission by acting at two different levels: first at the individuals' level and second at the institutional level. First, social enterprises' services tend to be used more by those ventures that face higher capabilities constraints, which in the context of MFIs translated into accomplishing the social mission of helping entrepreneurs in gaining better access to finance. Second, social enterprises act as institutional entrepreneurs in that they are more active in those environments where they can influence the development of either economic or judicial-political institutions. This suggests that the pursuit of social goals, reflecting the social enterprise's social identity, can be effective only when there is a minimum viable economic engine to ensure the sustainability of the social venture. This is an important contribution towards our current understanding of why MFIs choose to operate in certain contexts. In unpacking the institutional conditions within which MFIs operate we can better understand the challenges associated with permeating the most challenging contexts.

Limitations, Future Research and Conclusions

Our work helps stimulate theoretical conversations at the intersection of social and institutional entrepreneurship, social impact and economic sustainability. We add to the existing conversations on the relationship between social entrepreneurship and social impact by studying the prominence of microcredit as a widepsread and highly regarded social solution to poverty, and combine it with the notion that the provision of microcredit is intertwined with the country's institutional environment. Mair and Marti (2009) previously asserted that MFIs, as social entrepreneurial organizations, act as institutional entrepreneurs in contexts of institutional voids left open by underdeveloped economic institutions which do not perform the role that is expected of them. Alternatively, our results suggest that social enterprises may have higher social impact when economic institutions ensure the allocation of economic rents and property rights but political institutions need to be shaped. Therefore, MFIs can help fill voids in those environments, but need the foundational institutional support in order to tackle social problems. On the contrary, MFIs may not be able to perform as institutional entrepreneurs when institutional frameworks are completely absent and require some level of initial institutional support to cater to their social and economic missions.

Aside from the contribution and further reflection that our results stimulate, there are limitations to our study that need to be considered in any further extrapolation from our results. First, the study was cross sectional in nature and, as such, cannot make a reliable inference on the direction of the interplay between the effectiveness of the provision of microcredit on capabilities or on the institutional development over time. The nature of our data enabled us to study only the use of microcredit as a function of capability constraints, but a promising and much needed extension of the work concerns the reverse relationship, i.e. how the use of microcredit helps in improving entrepreneurial capabilities. Second, while large scale data are difficult to collect on this topic, the availability of the Enterprise Survey has enabled us to throw a glimpse at the use of microcredit across a large group of African countries. At the same time, as is true for any secondary dataset, the data offer limited insight into the conditions and rationale under which microcredit was (or was not) obtained. This prevented us from deriving explicit evidence for the specific theoretical mechanism we outline for the interplay between microcredit, social effectiveness, and institutional activity. We hope that our insights can stimulate further research that would seek to elucidate this mechanism through more suitable research designs. As the challenge of assessing the effectiveness of the activity of social enteprises through the pursuit of economic objectives continues, this paper offers one perspective in understanding the relationship between institutional environment and the use of microcredit.

CONTACT: Mariarosa Scarlata; m.scarlata@surrey.ac.uk; Surrey Business School, University of Surrey, Guildford GU2 7XH.

References

- Albert, S., Whetten, D. A (Ed.). (1985). Organizational Identity. Greenwich, CT: JAI Press.
- Alkire, S. (2005). Why the Capability Approach? Journal of Human Development, 6(1), 115-135.
- Alvord, S. H., Brown, L. D., & Letts, C. W. (2004). Social Entrepreneurship and Societal Transformation: An Exploratory Study. *The Journal of Applied Behavioral Science*, 40(3), 260-282.
- Anand, P., Hunter, G., Carter, I., Dowding, K., Guala, F., & Van Hees, M. (2009). The Development of Capability Indicators. *Journal of Human Development and Capabilities*, *10*(1), 125-152.
- Anokhin, S., & Schulze, W. S. (2009). Entrepreneurship, innovation, and corruption. *Journal of Business Venturing*, 24(5), 465-476.
- Ansari, S., Munir, K., & Gregg, T. (2012). Impact at the 'Bottom of the Pyramid': The Role of Social Capital in Capability Development and Community Empowerment. *Journal of Management Studies*, 49(4), 813-842.
- Austin, J., Stevenson, H., & Wei-Skillern, J. (2006). Social and Commercial Entrepreneurship: Same, Different, or Both? *Entrepreneurship Theory and Practice*, *30*(1), 1-22.
- Bacq, S., & Janssen, F. (2011). The multiple faces of social entrepreneurship: A review of definitional issues based on geographical and thematic criteria. *Entrepreneurship & Regional Development*, 23(5-6), 373-403.
- Baker, T., Gedajlovic, E., & Lubatkin, M. (2005). A framework for comparing entrepreneurship processes across nations. *Journal of International Business Studies*, *36*(5), 492-504.
- BarNir, A., Gallaugher, J. M., & Auger, P. (2003). Business process digitization, strategy, and the impact of firm age and size: the case of the magazine publishing industry. *Journal of Business Venturing*, 18(6), 789-814.
- Battilana, J., Dorado, S. (2010). Building Sustainable Hybrid Organizations: The Case of Commercial Microfinance Organizations. *Academy of Management*, 53(6), 1419-1440.
- Baumol, W. (1990). Entrepreneurship: Productive, Unproductive and Destructive. *Journal of Political Economy*, 98(5), 893-921.
- Beck, T., Demirgüç-Kunt, A., & Levine, R. (2007). Finance, inequality and the poor. *Journal of Economic Growth*, 12(1), 27-49.

Beckert, J. (1999). Agency, Entrepreneurs, and Institutional Change. The Role of Strategic Choice and Institutionalized Practices in Organizations. *Organization Studies*, 20(5), 777-799. Posted at Digital Knowledge at Babson

http://digitalknowledge.babson.edu/fer/vol33/iss18/1

- Benson, H. (2001). Human capital and structural upheaval: A study of manufacturing firms in the west bank. Journal of Business Venturing, 16(6), 575-594.
- Berthelemy, J. C., & Varoudakis, A. (1996). Economic Growth, Convergence Clubs, and the Role of Financial Development. Oxford Economic Papers, 48(2), 300-328.
- Bornstein, D. (2004). How to change the world: Social entrepreneurs and the power of new ideas. Oxford: Oxford University Press.
- Bruton, G., Khavul, S, Chavez, H. (2010). Letters From the Editor: Business and the World's Poorest Billion - The Need for an Expanded Examination by Management Scholars. Academy of Management Perspectives, 24(3), 6-10.
- Campbell, G. (2010). Microfinancing the Developing World: how small loans empower local economies and catalyse neoliberalism's endgame. Third World Quarterly, 31(7), 1081-1090.
- Certo, ST, Miller, T. (2008). Social Entrepreneurship: Key Issues and Concepts. Business Horizons, 51(4), 257-271.
- Clemens, E. S., & Cook, J. M. (1999). Politics and Institutionalism: Explaining Durability and Change. Annual Review of Sociology, 25(1), 441.
- Coleman, B. E. (2006). Microfinance in Northeast Thailand: Who benefits and how much? World Development, 34(9), 1612-1638.
- Cornelius, N., Todres, M., Janjuha-Jivraj, S., Woods, A., & Wallace, J. (2008). Corporate Social Responsibility and the Social Enterprise. Journal of Business Ethics, 81(2), 355-370.
- Dacin, P. A., Dacin, M. T., & Matear, M. (2010). Social Entrepreneurship: Why We Don't Need a New Theory and How We Move Forward From Here. Academy of Management Perspectives, 24(3), 37-57.
- De Soto, H. (2001). The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else. London: Black Swan.
- Dees, G., J. Anderson, B, B. (2003). For Profit Social Ventures. International Journal of Entrepreneurship Education, 2 (Special Issue), 1-26.
- Di Domenico, M., Haugh, H., & Tracey, P. (2010). Social Bricolage: Theorizing Social Value Creation in Social Enterprises. Entrepreneurship Theory and Practice, 34(4), 681-703.
- Dimaggio, P., J (Ed.). (1988). Interest and Agency in Institutional Theory. Cambridge: MA Ballinger.
- DiMaggio, P., J. Powell, W, W (Ed.). (1991). Introduction. Chicago: University of Chicago Press.
- Dutton, J. E., Dukerich, J. M., & Harquail, C. V. (1994). Organizational Images and Member Identification. Administrative Science Quarterly, 39(2), 239-263.
- Easterly, W. (2001). The Elusive Quest for Growth: Economists' Adventures and Misadventures in the Tropics. Massachusetts: MIT Press.
- Economic Freedom of the World. (2011). Economic Freedom of the World Index. from http:// www.freetheworld.com/
- Eisenstadt, S, N. (1980). Cultural Orientations, Institutional Entrepreneurs, and Social Change: Comparative Analysis of Traditional Civilizations. American Journal of Sociology, 85(4), 840-869.
- Fafchamps, M. (2001). Networks, Communities and Markets in Sub-Saharan Africa: Implications for Firm Growth and Investment. Journal of African Economies, 10(2), 109-142.
- Fernando, N. (2006). Understanding and Dealing with High Interest Rates on Microcredit: A Note to Policy Makers in the Asia and Pacific Region Manila: Asian Development Bank.
- Foreman, P., & Whetten, D. A. (2002). Members' Identification with Multiple-Identity Organizations. Organization Science, 13(6), 618-635.
- Friedland, R., Alford, R, R (Ed.). (1991). Bringing society back in: symbols, practices, and institutional contradictions. Chicago: University of Chicago Press.

Gine, X., Karlan, D. (2010). Group versus Individual Liability: Long Term Evidence from Phillipine *Microcredit Lending Groups*. World Bank. Frontiers of Entrepreneurship Research 2013

- Gries, T., & Naudé, W. (2011). Entrepreneurship and human development: A capability approach. *Journal of Public Economics*, 95(3–4), 216-224.
- Gupta, S., Davoodi, H., & Alonso-Terme, R. (2002). Does corruption affect income inequality and poverty? *Economics of Governance*, *3*(1), 23-45.
- Heckman, J. J. (1979). Sample Selection Bias as a Specification Error. Econometrica, 47(1), 153-161.
- Helms, B. (2006). Access for All: Building Inclusive Financial Systems. Washington: World Bank.
- Hoffman, J., Andrew. (1999). Institutional Evolution and Change: Environmentalism and the U.S. Chemical Industry. *Academy of Management Journal*, 42(4), 351-371.
- Holm, P. (1995). The dynamics of institutionalisation: Transformation processes in Norwegian fisheries. *Administrative Science Quarterly*, 40(3), 398-422.
- Honohan, P. (2007). Making Finance Work for Africa. World Bank.
- Karnani, A. (2007). The Mirage of Marketing to the Bottom of the Pyramid: How the Private Sector Can Help Alleviate Poverty. *California Management Review*, 49(4), 90-111.
- Khanna, T., Palepu, K, Sinha, J. (2005). Strategies that fit emerging markets. *Harvard Business Review*, 83(6), 63-76.
- Khavul, S. (2010). Microfinance: Creating Opportunities for the Poor? Academy of Management *Perspectives*, 24(3), 58-72.
- Khavul, S., Chavez, H., & Bruton, G. D. (2013). When institutional change outruns the change agent: The contested terrain of entrepreneurial microfinance for those in poverty. *Journal of Business Venturing*, *28*(1), 30-50.
- Kon, Y., & Storey, D. J. (2003). A Theory of Discouraged Borrowers. Small Business Economics, 21(1), 37-49.
- Levine, R. (1998). The Legal Environment, Banks and Long-Run Economic Growth. *Journal of Money, Credit, and Banking, 30*(3), 596-613.
- Levine, R., Loayza, N., & Beck, T. (2000). Financial intermediation and growth: Causality and causes. *Journal of Monetary Economics*, 46(1), 31-77.
- Maguire, S., Hardy, C., & Lawrence, T. B. (2004). Institutional Entrepreneursip in Emerging Fields: HIV/AIDS Treatment Advocacy in Canada. *Academy of Management Journal*, 47(5), 657-679.
- Mair, J., Mart, I, I, & Ventresca, M. J. (2012). Building Inclusive Markets in Rural Bangladesh: How Intermediaries work Institutional Voids. *Academy of Management Journal*, 55(4), 819-850.
- Mair, J., & Martí, I. (2006). Social entrepreneurship research: A source of explanation, prediction, and delight. *Journal of World Business*, 41(1), 36-44.
- Mair, J., Marti, I. (2009). Entrepreneurship in and around institutional voids: A Case Study from Bangladesh. *Journal of Business Venturing*, 24, 419-435.
- Mair, J., Marti, I, Ganly, K. (2007). Social entrepreneurship: Seeing institutional voids as spaces of opportunity. *European Business Forum*, *31*, 34-39.
- Massey, C., E. (2011). Analyzing Microfinance Institutions Growth: Does Corruption Matter? (Doctoral Dissertation).
- Mcmillan, J., Woodruff, C. (2002). The Central Role of Entrepreneurs in Transition Economies. *Journal of economic Perspectives*, 16(3), 153-170.
- McMullen, J. S. (2011). Delineating the Domain of Development Entrepreneurship: A Market-Based Approach to Facilitating Inclusive Economic Growth. *Entrepreneurship Theory and Practice*, 35(1), 185-193.
- Miller, T. L., & Wesley Ii, C. L. (2010). Assessing Mission and Resources for Social Change: An Organizational Identity Perspective on Social Venture Capitalists' Decision Criteria. *Entrepreneurship Theory and Practice*, 34(4), 705-733.

Morduch, J. (2000). The Microfinance Schism. *World Development*, *28*(4), 617-629. Moss, T. W., Short, J. C., Payne, G. T., & Lumpkin, G. T. (2011). Dual Identities in Social Ventures: An Exploratory Study. Entrepreneurship Theory and Practice, 35(4), 805-830.

- Myers, S. C., & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*, *13*(2), 187-221.
- Nicholls, A. (2010). The Legitimacy of Social Entrepreneurship: Reflexive Isomorphism in a Pre-Paradigmatic Field. *Entrepreneurship Theory and Practice*, 34(4), 611-633.
- North, D. C. (1987). Institutions, Transactions Costs and Economic Growth. *Economic Inquiry*, 25(3), 419-428.
- North, D. C. (1990). *Institutions, Institutional Change and Economic Performance*. Cambridge: Cambridge University Press.
- North, D. C. (1970). An economic theory of the growth of the Western World. *Economic History Review*, 23(1-17).
- Pak Hung, M. (2001). Corruption and Economic Growth. *Journal of Comparative Economics*, 29(1), 66-79.
- Peredo, A. M., & Chrisman, J. J. (2006). Toward a Theory of Community-Based Enterprise. Academy of Management Review, 31(2), 309-328.
- Peredo, A. M., & McLean, M. (2006). Social entrepreneurship: A critical review of the concept. *Journal of World Business*, 41(1), 56-65.
- Sachs, J. (2005). The End of Poverty: Economic Possibilites of Our Time: Penguin Press.
- Scarlato, M. (2012). Social Enterprise and Development Policy: Evidence from Italy. *Journal of Social Entrepreneurship*, 3(1), 24-49.
- Scully, G. W. (1988). The Institutional Framework and Economic Development. *Journal of Political Economy*, *96*(3), 652-662.
- Seelos, C., Mair, J. (2007). Profitable Business Models and Market Creation in the Context of Deep Poverty: A Strategic View. *Academy of Management Perspectives*, *21*, 49-63.
- Sen, A. (1999). Development as Freedom. Oxford: Oxford University Press.
- Sen, A. (2005). Human Rights and Capabilities. Journal of Human Development, 6(2), 151-166.
- Seo, M.-G., Creed, D. (2002). Institutional contradictions, praxis and institutional change: A dialectic perspective'. Academy of Management Review, 27(2), 222-247.
- Sewell, W. H., Jr. (1992). A Theory of Structure: Duality, Agency, and Transformation. *American Journal of Sociology*, *98*(1), 1-29.
- Shleifer, A., Vishny, R, W,. (1997). A Survey of Corporate Governance. Journal of Flnance(2), 737-783.
- Short, J., C, Moss, T, W, Lumpkin, G, T. (2009). Research in Social Entrepreneurship: Past Contributions and Future Opportunities. *Strategic Entrepreneurship Journal*, *3*, 161-194.
- Suchman, C., M, Steward, J, D, Westfall, A, (Ed.). (2001). *The Legal Environment of Entrepreneurship*. Stanford, California: Stanford University Press.
- Sud, M., VanSandt, C., & Baugous, A. (2009). Social Entrepreneurship: The Role of Institutions. Journal of Business Ethics, 85(0), 201-216.
- Takyi-Asiedu, S. (1993). Some socio-cultural factors retarding entrepreneurial activity in sub-Saharan Africa. *Journal of Business Venturing*, 8(2), 91-98.
- Webb, J. W., Kistruck, G. M., Ireland, R. D., & Ketchen, J. D. J. (2010). The Entrepreneurship Process in Base of the Pyramid Markets: The Case of Multinational Enterprise/Nongovernment Organization Alliances. *Entrepreneurship Theory and Practice*, 34(3), 555-581.
- World Economic Forum. (2008). Global Competitiveness Report.
- Yunus, M. (1999). Banker to the Poor. London: Aurum.
- Zahra, S., A., Gedajlovic, E., Neubaum, D. O., & Shulman, J. M. (2009). A typology of social entrepreneurs: Motives, search processes and ethical challenges. *Journal of Business Venturing*, 24(5), 519-532.

Table 1: Descriptive Statistics and Correlations (N = 5,255)

| | | Mean | St.dev | 1 | 2 | 3 | 4 | 5 | 7 | 8 | 9 | 10 |
|----|-----------------------------|-------|--------|-------|-------|-------|-------|-------|-------|-------|------|------|
| 1 | Use of microcredit | 0.04 | 0.20 | 1.00 | | | | | | | | |
| 2 | Capability constraints | -0.13 | 0.52 | 0.06 | 1.00 | | | | | | | |
| 3 | Market environment | -0.11 | 0.88 | -0.05 | 0.07 | 1.00 | | | | | | |
| 4 | Legal-judicial institutions | 0.10 | 0.80 | -0.01 | -0.01 | -0.07 | 1.00 | | | | | |
| 6 | Human development index | 0.40 | 0.07 | 0.03 | 0.11 | 0.44 | 0.51 | 1.00 | | | | |
| 7 | Sole proprietorship | 0.73 | 0.45 | -0.06 | -0.07 | 0.17 | -0.21 | -0.12 | 1.00 | | | |
| 8 | Education of owner | 5.13 | 2.16 | 0.03 | 0.14 | 0.01 | 0.17 | 0.26 | -0.33 | 1.00 | | |
| 9 | Employees (log) | 2.10 | 0.98 | 0.04 | 0.10 | 0.01 | 0.18 | 0.06 | -0.30 | 0.32 | 1.00 | |
| 10 | Sales (log) | 16.52 | 2.37 | 0.04 | -0.04 | -0.21 | 0.06 | -0.07 | -0.27 | 0.27 | 0.45 | 1.00 |
| 11 | Manufacturing | 0.24 | 0.43 | 0.03 | 0.03 | -0.02 | -0.05 | 0.03 | -0.04 | -0.01 | 0.03 | 0.00 |

Table 2: Logit Estimation of the Whether Firms Use Microcredit

| | Model 1 Coef. Std. Err. | Model 2 Coef. Std. Err. | Model 3 Coef. Std. Err. | Model 4 Coef. Std. Err. |
|--|----------------------------|----------------------------|----------------------------|----------------------------|
| | | 0.200 (0.12) | 0.496 (0.14) | 0.517 (0.14) |
| Capability constraints | | 0.390 (0.12) *** | 0.486 (0.14) *** | 0.517 (0.14) *** |
| Market environment | | -0.470 (0.09) *** | -0.475 (0.09) *** | -0.375 (0.11) *** |
| Legal-judicial institutions | | -0.413 (0.10) *** | -0.405 (0.10) *** | 0.008 (0.18) |
| Market env. X Cap. constraints | | | 0.236 (0.15) | 0.083 (0.17) |
| Legal-jud. Inst. X Cap. constraints | | | -0.036 (0.09) | -0.578 (0.23) * |
| Market env. X Legal-jud. Inst. | | | | 0.786 (0.39) * |
| Market env. X Legal-jud. Inst. X Cap. const. | | | | -1.299 (0.63) * |
| Human development index | 2.145 (1.04) * | 6.603 (1.41) *** | 6.658 (1.42) *** | 6.147 (1.41) *** |
| Sole proprietorship | -0.453 (0.17) ** | -0.362 (0.18) * | -0.353 (0.18) * | -0.373 (0.18) * |
| Education of owner | -0.002 (0.04) | -0.025 (0.04) | -0.024 (0.04) | -0.008 (0.04) |
| Employees | 0.044 (0.07) | 0.113 (0.07) | 0.103 (0.07) | 0.127 (0.07) + |
| Sales (log) | 0.053 (0.04) | 0.020 (0.04) | 0.029 (0.04) | -0.005 (0.04) |
| Manufacturing | 0.254 (0.15) + | 0.184 (0.15) | 0.191 (0.15) | 0.205 (0.15) |
| Constant | -4.719 (0.75) *** | -6.074 (0.78) *** | -6.234 (0.77) *** | -5.607 (0.78) *** |
| Log-likelihood | -899.4 | -875.8 | -874.7 | -869.1 |
| Chi-square | 36.4 *** | 87.2 *** | 84.9 *** | 88.3 |
| ∆chi-square | | 47.0 *** | 2.3 | 11.2 ** |
| N | 5,255 | 5,255 | 5,255 | 5255 |

+ p < .10, * p < .05, ** p < .01, *** p < .001

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| | T | obit | Logit | | |
|--|-----------|-------------------|----------------------|-----------|--|
| | | on of microcredit | Selection correction | | |
| | Coef. S | Std. Err. | Coef. Std. Err. | | |
| | | | | | |
| Capability constraints | 0.143 | (0.04) *** | -0.335 | (0.34) | |
| Market environment | -0.108 | (0.03) *** | -1.411 | (0.39) ** | |
| Legal-judicial institutions | 0.001 | (0.05) | -0.812 | (0.33) * | |
| Market env. X Cap. constraints | 0.012 | (0.05) | 0.067 | (0.19) | |
| Legal-jud. Inst. X Cap. constraints | -0.127 | (0.07) + | -0.298 | (0.25) | |
| Market env. X Legal-jud. Inst. | 0.202 | (0.10) + | 0.937 | (0.37) * | |
| Market env. X Legal-jud. Inst. X Cap. const. | -0.318 | (0.18) + | -1.129 | (0.68) + | |
| Human development index | 1.705 | (0.39) *** | 11.745 | (2.46) ** | |
| Sole proprietorship | -0.107 | (0.05) * | -0.175 | (0.20) | |
| Education of owner | -0.002 | (0.01) | -0.051 | (0.04) | |
| Employees | 0.037 | (0.02) + | -0.842 | (0.35) * | |
| Sales (log) | -0.003 | (0.01) | 0.003 | (0.04) | |
| Manufacturing | 0.060 | (0.04) | 0.183 | (0.16) | |
| Self-selection correction for internal financing | | × / | 5.465 | (2.36) * | |
| Constant | -1.744 | (0.23) *** | -2.412 | (1.42) + | |
| LL | -801.2 | | -758.1 | | |
| F / Chi-square | 5.990 *** | | 120.7 *** | | |
| N | 5,255 | | 3,446 | | |

Table 3: Supplementary Estimations

+ p < .10, * p < .05, ** p < .01, *** p < .001

Figure 1: Interaction Effect of Market Environment, Legal-Judicial Institutions, and Capability Constraints on the Likelihood of Using Microcredit

