



A New Index of the Business Environment for Microfinance

ROBERT CULL^a, SERGIO NAVAJAS^b, IPPEI NISHIDA^a and RENATE ZEILER^{c,*}

^a *World Bank Development Research Group, USA*

^b *Multilateral Investment Fund (MIF), Inter-American Development Bank Group, USA*

^c *International Finance Corporation (IFC), USA*

Summary. — This paper describes a new index of the quality of the business environment for microfinance institutions (the Global Microscope on the Microfinance Business Environment). Regressions are used to validate the index by linking it and its sub-components to microfinance outcomes. The main findings are that the components of the index related to the supporting institutional framework are strongly linked to measures of microfinance penetration (such as microfinance borrowers as a share of total population). Components related to the framework for regulation and supervision are more strongly linked to outcomes at the MFI level, including loan portfolio quality, financial self-sufficiency, average loan size, and the share of lending to women. Many, but not all, of these relationships are robust to using instrumental variables estimation in which a country's general stringency with respect to financial regulation is used as an instrument for the index and its components.

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1. INTRODUCTION

Recent years have witnessed a concerted effort to measure the quality of the environment for business and investment, and assess its implications for economic growth. Perhaps the most well-known example, the World Bank's Ease of Doing Business index focuses on the complexity of business regulations and the strength of property rights protections. This index is a composite of information on the ease of performing specific business activities including starting a business, dealing with construction permits, registering property, getting credit, protecting investors, paying taxes, trading across borders, enforcing contracts, and resolving insolvency (*Doing Business, 2012*).

This and similar indexes have been shown to be strongly associated with economic outcomes. *Djankov, La Porta, Lopez-De-Silanes, and Shleifer (2002)* find that burdensome regulations governing business entry are associated with higher levels of corruption and a larger unofficial economy. *Ciccone and Papaioannou (2007)* confirm that longer periods to register a new business are significantly negatively associated with business entry. Similarly, using a large database of European firms, *Klapper, Laeven, and Rajan (2006)* find that more streamlined business entry regulations contribute to more rapid creation of new firms, and effects are most pronounced in industries that naturally have a high rate of entry.

Moreover, regulatory and procedural reforms have improved the quality of the business environment as measured by these indexes. For example, since 2003, 17 countries (including Belgium, Ireland, Mauritius, and Norway) have introduced electronic registration, which has shortened the average reported time to start a business from 40 days to 14. In addition, because it substantially reduces contact between entrepreneurs and government officials, online registration improves transparency and reduces opportunities for corrupt behavior such as demands for bribes. Ultimately, the quality of the business environment impacts economic growth. Using measures of business regulations in 135 countries from 1993 to 2002, *Djankov, McLiesh, and Ramalho (2006)* show that an improvement in the business environment from the worst

quartile of their sample to the best is associated with an increase in annual growth of 2.3 percentage points.

In principle, aspects of the business environment are also likely to affect microfinance and its clients (who are largely in the informal sector), though not necessarily in the same ways that it has been shown to affect firms in the formal economy. By 2011, the microfinance industry was serving over 200 million clients worldwide and had \$73 billion in loans outstanding.¹ As the industry has grown and flourished, so too has academic interest in it, though studies have tended to focus on the mechanics of micro-lending (e.g., group liability lending) and the impact of micro-banking services on clients and their households. Less attention has been paid to the macro impacts of microfinance on developing economies or the environments (macroeconomic, institutional, regulatory, and financial) in which microfinance institutions ("MFIs") are most likely to flourish, though there are recent exceptions. For example, *Imai, Gaiha, Thapa, and Annim (2012)* show that countries with larger microfinance sectors (as measured by gross loan portfolios) tend to have lower levels of poverty, even after accounting for the potential endogeneity of the size of microfinance loan portfolios. Other recent papers examine how institutional quality affects the outreach and performance of microfinance institutions (*Barry & Tacneng, 2014*) and the gender orientation of their lending (*Boehe & Cruz, 2013*). In addition, *Wagner and Winkler (2013)* explore how microfinance outcomes were affected by the global financial crisis.

In this paper, we therefore describe and attempt to validate a relatively new tool, the 2011 Global Microscope on the Microfinance Business Environment (hereafter, "the

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Microscope”), that summarizes the quality of the business environment as it pertains specifically to the microfinance industry.² The purpose of this paper is, therefore, to use regressions to examine how the regulatory and business climates shape the growth and development of the microfinance sector in a country. In particular, our analysis is a test of whether MFIs in countries that score highly on the index of the quality of the microfinance business environment perform better than others in terms of financial sustainability, overall penetration, and outreach to underserved market segments.³

The 2011 Microscope summarizes information from surveys that were conducted by the Economist Intelligence Unit (EIU) of microfinance experts in each country based on consultations with MFIs, networks, regulators, consultants, and investors. EIU deliberately interviews a diverse group of stakeholders in order to include recent developments and policy changes in each country, and conducts an online survey to incorporate an expanded set of views. According to EIU:

The index provides a means of distinguishing those countries with support for a greater availability of financing options for the poor, from those with considerable work to do. The index also fills an important data gap by quantifying the state of the regulatory and operating environment of microfinance. Lastly, the index is intended to spur dialogue about sound policy and practice that will encourage positive reform in the microfinance industry

[EIU, 2013, p. 9]

The index is comprised of two broad categories. The first, *Regulatory Framework and Practices*, has five sub-components: regulation and supervision of microfinance portfolios; formation of regulated and supervised microcredit institutions; formation and operations of non-regulated microcredit institutions; regulatory and supervisory capacity for microfinance; and the regulatory framework for deposit taking.⁴ In the regressions that use MFI-level outcomes as the dependent variables, we use the overall score for *Regulatory Framework and Practices* and scores from three of its sub-components (regulatory and supervisory capacity for microfinance, the regulatory framework for deposit taking, and conditions for the formation/operation of non-regulated microfinance institutions) as explanatory variables. The construction of each of those variables and the underlying survey questions are presented in detail in [Table 9](#).

The second broad category, the *Supporting Institutional Framework for Microfinance*, also summarizes expert survey responses in five areas: microfinance institutions’ accounting transparency; microfinance client protection as it relates to transparency in pricing; client protection as it relates to resolution of disputes between microfinance borrowers and lenders; the effectiveness and reliability of credit bureaus for microfinance; and the quality of policies and practices for financial transactions through agents. We use the overall score for the *Supporting Institutional Framework for Microfinance* and the score for the sub-component for microfinance client protection as it relates to transparency in pricing as explanatory variables in country-level regressions that explain microfinance borrowers as a share of the population. Note that we have fewer degrees of freedom in the country-level regressions and thus include fewer Microscope components as explanatory variables.⁵ The construction of each of these variables and the corresponding underlying survey questions are also presented in [Table 9](#).

Finally, we use the overall Microscope score, which ranges from 0 to 100 and is a summation of the sub-components under the broad categories described above, as explanatory variables in both the country-level microfinance penetration

regressions and the regressions that explain MFI-level outcomes. The overall index also makes adjustments for political shocks and tensions that could affect microfinance operations and for general political stability. [Table 9](#) also provides the EIU description of how the overall score is constructed.

To provide additional context for the revised Microscope, the 2011 report provided information from the Microfinance Information Exchange (the MIX) on the average financial performance, overall penetration measures, proxies for outreach to the poor, deposit levels, and measures of efficiency for microfinance institutions in each country. That report also marked the beginning of an analytical effort to empirically validate the revised index by linking it (and its sub-components) to the microfinance outcomes reported by the MIX and other sources.⁶ In the analysis that follows, we control for a number of factors that could also affect microfinance penetration measures (and other MIX outcomes) including macroeconomic variables such as GDP growth and inflation and non-performance characteristics of microfinance institutions in each country such as their age, legal status (non-profit, for profit), organizational type (bank, non-bank formal financial institution, NGO), and preferred lending methodology (individual liability, group liability, or village banking).⁷

In this paper we undertake multiple empirical analyses to (a) test whether the links between the Microscope and MFI outcomes are robust to controlling simultaneously for other relevant variables, (b) better identify which components of the index best explain variation in which outcomes, and (c) examine where microfinance fits into the broader formal financial sector across developing countries, and how the interplay between microfinance institutions and formal providers of financial services is related to the Microscope and its components.

In addition, the direction of causation is sometimes difficult to infer from simple correlations. For example, it could well be that supervisory capacity improves as a result of widespread microfinance penetration rather than the reverse. Similarly, [Imai et al. \(2012\)](#) relies on an instrumental variables approach because reverse causality from poverty levels to the size of microfinance loan portfolios is plausible if, for example, development organizations and governments provide more funds to MFIs located in poorer countries. We therefore provide instrumental variables regressions to address the potential endogeneity of the Microscope. As instruments we rely on measures of the strictness of commercial banking regulation and supervision in a country reasoning that those variables reveal a general approach to financial regulation that could be tied to underlying exogenous factors such as culture, ethnic fractionalization, religion, and geography. Importantly, because the microfinance sector is quite small relative to the formal banking sector in almost every country, it is plausible to argue that a country’s approach to banking sector regulation and supervision is much more likely to influence microfinance regulation and supervision than the reverse. In essence, we use the broader financial regulatory variables to identify an exogenous component of the microfinance business environment (as reflected in the Microscope) and we link it to microfinance penetration, financial performance, and outreach.

Microfinance institutions occupy unique places within the financial sectors of developing countries, niches that vary by country. The interplay between the microfinance and banking sectors is therefore likely to shape both the business environment for microfinance and resulting outcomes in terms of their financial performance and outreach to underserved market segments, and thus we account for the development of the formal financial sector in the analyses that follow.⁸ We also hypothesize and test whether responses to the competitive

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