

Cultural Effects on the Performance of Non-Profit and For-Profit Microfinance Institutions

Patrick M. Stanton, William R. McCumber

Abstract—Using a large dataset of more than 2,400 individual microfinance institutions (MFIs) from 120 countries from 1999 to 2016, this study finds that nearly half of the international MFIs operate as for-profit institutions. Formal institutions (business regulatory environment, property rights, social protection, and a developed financial sector) impact the likelihood of MFIs being for-profit across countries. Cultural differences across countries (power distance, individualism, masculinity, and indulgence) seem to be a factor in the legal status of the MFI (non-profit or for-profit). MFIs in countries with stronger formal institutions, a greater degree of power distance, and a higher degree of collectivism experience better financial and social performance.

Keywords—Hofstede cultural dimensions, international finance, microfinance institutions, non-profit.

I. INTRODUCTION

MICROFINANCE has evolved and changed since the early years in the 1980s when Dr. Muhammad Yunus founded the Grameen Bank in Bangladesh and set out to provide loans to the poor who often do not have access to capital. One of the major changes in microfinance being the growth in for-profit institutions that not only provide access to finance to the poor and near-poor but do so to distribute profits to shareholders. Other changes in the industry of MFIs include rapid growth in the number of active MFIs, a broader range of financial services offered, an increase in business volume, and changes in the types of MFIs [1]. The growth of for-profit MFIs and commercial banks breaking into this sector began debates about whether it is possible to effectively blend nonprofit ideals (namely social outreach and performance) and for-profit orientations and practices; i.e. financial performance and sustainability [2].

One side argues that the primary goal of the MFI is to reach the poorest sections of the population and the second goal is financial sustainability [3]. Yunus argues that MFIs that seek to maximize profits will do so at the cost of the poor and will trade off social performance for financial performance [4]. Claims are also made that MFIs experience “mission drift” as they cater to customers who are better off than their original customers [5], [6].

The other side argues that the non-profit sector of MFIs perhaps has purer motives, but is less efficient, smaller, and

unable to reach the demand for credit among the world’s poor. As a result, we have seen for-profit MFIs, some of which are even publicly traded companies (i.e. Elektra, SKS Microfinance, Compartamos Banco), continue to grow in number and size. Vikram Akula, the founder of SKS Microfinance in India (renamed Bharat Financial Inclusion), claimed to grow 3 times as fast as Grameen Bank and argues that there is a place for both non-profit and for-profit MFIs and more than one approach is needed to reach the 3 billion people in poverty lacking access to finance [7].

The goal of this paper is to explore the evolution of the international microfinance industry and study the differences in for-profit and non-profit institutions. The main research questions are: (i) which types of firms are more successful financially and socially; (ii) what are the determinants of this success; (iii) do formal institutions and cultural dimensions of a country impact the performance of MFIs?

The remainder of this paper proceeds as follows: Section II discusses the data collection and summary statistics; Section III covers the methodology and analysis; Section IV covers the main results and findings, and Section V concludes this paper and provides areas of future research.

II. DATA

Data were collected from the MIX Market (Microfinance Information Exchange) database to analyze MFIs between 1999 and 2016. MIX collects financial, operational, and social performance data from MFIs around the world and participation in the MIX database is voluntary. The sample is limited to those institutions which are classified as either non-profit or for-profit; this includes 2,477 institutions (17,616 institution-years) and represents MFIs from 120 countries and 6 geographic regions (the United States is not included).

TABLE I
MFIS BY REGION

Region	MFI's	Percent
Africa	636	25.68
East Asia and the Pacific	301	12.15
Eastern Europe and Central Asia	470	18.97
Latin America and The Caribbean	586	23.66
The Middle East and North Africa	69	2.79
South Asia	415	16.75
Total	2,477	100

Table I shows the number of MFIs by geographic region and we see that Africa, Latin America and the Caribbean make up nearly half of the total MFIs. Eastern Europe and Central Asia consist of about 19% of the sample while South Asia is

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about 17%. East Asia and the Pacific are home to about 12% of MFIs in the sample and the Middle East and North Africa contain less than 3% of total MFIs.

Table II presents the top 15 countries with the most MFIs; total MFIs in panel A, non-profits in panel B, and for-profits in panel C. In panel A, we see that the top 5 nations (India, Russia, Mexico, the Philippines, and Bangladesh) make up nearly a quarter of the MFIs in the total sample with 24.91%; and India has the largest proportion of individual MFIs overall with 212 making up about 9% of the sample. It is also notable that the top 15 nations in Panel A include nearly half of the total MFIs in the sample from 120 different nations. Panels B and C divide the sample into subsamples based on profit status and show that India is also the leader in non-profit and for-profit MFIs making up 7.62% and 9.7% respectively, and India is also rather evenly distributed between non-profit and for-profit MFIs with 104 and 108 respectively. This even distribution is not the case for the other top countries as Russia has 4 times as many non-profits (93 to 23 for-profit) and Mexico's MFIs are almost entirely for-profit (101 to 11 non-profit). One of Mexico's most famous MFIs is Compartamos

which began in 1990 as a non-profit organization supported by aid from international donors and aimed to alleviate poverty by providing microcredit to small businesses. Today Compartamos is one of the largest MFIs in Central and South America and through its growth and strong profits (criticized by some as due to exceedingly high-interest rates) the firm issued an IPO in the spring of 2007 and is traded as Genera on the Mexico Stock Exchange (market cap about \$1.67 billion) [8].

On the other end of the spectrum, Bangladesh only has 2 for-profit MFIs out of the 79 total, perhaps not surprising since this is the birthplace of Grameen Bank which was started by Dr. Muhammad Yunus (awarded the Nobel Peace Prize and considered the father of microfinance). Yunus is adamantly against for-profit firms participating in this business, even stating, "You could build a microfinance program, either as a profit-maximizing company or as a social business company. It's up to you to choose." [4] Ecuador also seems to be skewed toward the non-profit with 65 of its 71 MFIs claiming non-profit status. Nigeria and Ghana, on the other hand, are mainly for-profit MFIs with 94% and 72% respectively.

TABLE II
COUNTRY AND PROFIT STATUS

Panel A: All MFIs			Panel B: Non-Profit			Panel C: For-Profit		
Country	Frequency	Percent	Country	Frequency	Percent	Country	Frequency	Percent
India	212	8.56	India	104	7.62	India	108	9.7
Russia	116	4.68	Russia	93	6.82	Mexico	101	9.07
Mexico	112	4.52	Bangladesh	77	5.65	Nigeria	74	6.65
Philippines	98	3.96	Ecuador	65	4.77	Philippines	54	4.85
Bangladesh	79	3.19	Peru	45	3.3	Ghana	51	4.58
Nigeria	79	3.19	Philippines	44	3.23	Indonesia	45	4.04
Peru	73	2.95	China	38	2.79	Kazakhstan	39	3.5
Ecuador	71	2.87	Brazil	37	2.71	Tajikistan	31	2.79
Ghana	71	2.87	Benin	33	2.42	Peru	28	2.52
Indonesia	66	2.66	Colombia	30	2.2	Azerbaijan	26	2.34
China	48	1.94	Togo	30	2.2	Laos	23	2.07
Tajikistan	48	1.94	Pakistan	26	1.91	Russia	23	2.07
Brazil	46	1.86	Senegal	26	1.91	Kenya	22	1.98
Colombia	45	1.82	Guatemala	25	1.83	Uzbekistan	21	1.89
Nepal	44	1.78	Nicaragua	25	1.83	Nepal	20	1.8

TABLE III
COUNTRY AND PROFIT STATUS

Legal status	Non-profit	For-profit	Total
Bank	6	228	234
Credit Union	469	45	514
NBFI	121	662	783
NGO	725	14	739
Other	20	15	35
Rural Bank	17	131	148
Bank	6	228	234

It is important to note that a non-profit MFI may be financially profitable. The difference between a for-profit and a non-profit firm lies in the ownership of the company and how profits are distributed. A for-profit firm may choose to distribute a portion of the profits back to shareholders or to invest back into the company. A non-profit firm will not have

outside shareholders or investors expecting a return on their investment therefore a strong focus on profitability may not exist as one would expect within a for-profit institution. The earnings of a non-profit would then be reinvested back into the corporation to pursue the firm's social mission. The goal of a for-profit institution should be to maximize shareholder value, whether that is private investors or owners of the stock (if the firm is a public company).

Table IV subdivides the sample of non-profit and for-profit MFIs into 6 different legal statuses; i.e. Banks; Credit Unions/Cooperatives; Non-Banking Financial Institution (NBFI); Non-Governmental Organization (NGO); Other; and Rural Banks. Not surprisingly banks and rural banks are mainly for-profit institutions, and these make up about 15% of the sample. Credit Unions/Cooperatives and NGOs are largely non-profit and comprise about half of the sample while NBFI

are typically for-profit and represent about 32% of the sample.

Data were also collected from the World Bank's Country Policy and Institutional Assessment (CPIA) which includes annual data for 95 countries from 2005-2017. This database is an index of ratings from 1-6 (1 = low, 6 = high) for different sectors of the country's economy. These variables include: building human resources; business regulatory environment; equity of public resource use; financial sector; property rights and rule-based governance; social protection and labor market; and transparency, accountability, and corruption in the public sector.

To study the cultural effects on microfinance, data were also collected from Hofstede's cultural dimensions; which include 6 different indices (power distance, individualism, masculinity, uncertainty avoidance, long term vs short term orientation, and indulgence vs restraint) with scores ranging from 0-100 (low to high) for 109 different countries. MIX data were merged with World Bank CPIA data and Hofstede's cultural dimensions matched by country and year.

III. ANALYSIS

To investigate the country characteristics that are attractive for for-profit MFI's we collected data on measures of formal institutions at the country level from the World Bank. The first set of formal institutions that we use is the CPIA from the World Bank which includes annual data for 95 economies from 2005-2017. These data include ratings of 1-6 (1 = low, 6 = high) for the following sectors of the country's economic sector: building human resources (*human_resources*); business regulatory environment (*business_regulatory*); equity of public resource use (*public_resource*); financial sector (*financial_sector*); property rights and rule-based governance (*property_rights*); social protection and labor market (*social_protection*); and transparency, accountability, and corruption in the public sector (*transparency_accountability*). This index attempts to measure the framework and development of the government, legal system, protection, and regulations within a country's economy and we use these to proxy for formal institutions.

TABLE IV
FORMAL INSTITUTIONS AND DETERMINANTS OF FOR-PROFIT MFIS

	1	2	3	4	5	6	7
	for-profit	for-profit	for-profit	for-profit	for-profit	for-profit	for-profit
debt/equity	-0.000147 (-0.64)	-0.000121 (-0.60)	-0.000138 (-0.64)	-0.000125 (-0.65)	-0.000125 (-0.61)	-0.00013 (-0.61)	-0.000122 (-0.60)
assets	4.69e-10*** (3.31)	5.40e-10*** (3.66)	5.13e-10*** (3.47)	5.31e-10*** (3.70)	5.24e-10*** (3.59)	4.83e-10*** (3.43)	5.19e-10*** (3.60)
% female borrowers	-1.189*** (-10.62)	-0.949*** (-8.98)	-1.077*** (-10.03)	-1.069*** (-9.93)	-1.040*** (-9.49)	-0.986*** (-9.28)	-0.983*** (-9.13)
human resources	0.449*** (6.646)						
regulatory environment		0.265*** (4.55)					
public resource			0.468*** (7.29)				
financial sector				0.335*** (5.86)			
property rights					0.163** (2.66)		
social protection						0.231** (3.13)	
transparency							0.0508 (0.92)
constant	-1.275*** (-4.95)	-0.730** (-3.09)	-1.404*** (-5.61)	-0.837*** (-3.93)	-0.235 (-1.16)	-0.541* (-2.00)	0.0708 (-0.38)
Year Fixed-Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	5035	5035	5035	5035	5035	4965	5035
pseudo R-squared	0.025	0.022	0.027	0.024	0.02	0.02	0.019
t-statistics in parentheses							
*p < 0.05, **p < 0.01, ***p < 0.001							

Table IV shows the logit regression estimates with the dependent variable as an indicator variable equal to 1 if the MFI is a for-profit institution and the independent variables are the CPIA measures of formal institutions, control variables, and year fixed effects for all models. The results suggest that in models 1-6 each of the formal institution measures is positive and significant in the likelihood of the

MFI being a for-profit institution. The only measure that is not significant is transparency and accountability rating. Overall these results suggest that more developed countries in terms of formal institutions tend to have more for-profit MFIs.

Along with formal institutions, informal cultural characteristics within countries such as power distance, masculinity, and individualism may play a role in for-profit

MFIs being more concentrated in certain countries. To study this, we include Hofstede's six dimensions of national cultural (power distance, individualism, masculinity, uncertainty avoidance, long term orientation, and indulgence vs. restraint) in the logit regression in Table V. The power distance index expresses the degree to which societies accept that power is distributed unequally and in cultures with a high degree of power distance we would expect a hierarchical order of status and place. Individualism can be defined as a focus on self and the immediate family, compared with the other end of the spectrum, collectivism, in which the self-image would be more connected to a group or relatives. A culture with a high degree of masculinity would be more focused on achievement and success with a high degree of competition. Uncertainty avoidance refers to the attitude toward the future and unknown; high degrees of uncertainty avoidance uphold strict belief and behavior while societies with lower degrees will have a more comfortable approach to change and the future. Cultures with high levels of long term orientation will

encourage education and other efforts to prepare for the future while lower scores would indicate a preference for traditions and norms and hesitant to change. Indulgent societies are after gratification of natural human drives of enjoying life and pursuing fun, while restraint focuses on regulation and strict social norms. These results suggest that countries with higher scores in power distance, individualism, masculinity, and indulgence tend to have more for-profit MFIs while countries with lower uncertainty avoidance and long term orientation tend to have more for-profit MFIs. This makes intuitive sense as we would expect more competition and inequality to favor for-profit business structures as well as a stronger focus on the individual compared to the group. This has helped to shed light on the determinants of for-profit MFIs in terms of formal institutions (CPIA measures from the World Bank) and the informal cultural dimensions (Hofstede's cross-cultural dimensions). The next section attempts to investigate the effect of formal institutions and cultural dimensions on financial and social performance.

TABLE V
HOFSTEDE'S CROSS-CULTURAL DIMENSIONS AND FOR-PROFIT MFIS

	1	2	3	4	5	6
	for-profit	for-profit	for-profit	for-profit	for-profit	for-profit
debt/equity	-0.000801 (-0.46)	-0.000352 (-.95)	-0.0000993 (-0.51)	-0.000106 (-0.54)	-0.0000934 (-0.50)	-0.0000815 (-0.45)
assets	4.16e-10*** (3.61)	4.88e-10*** (4.08)	4.43e-10*** (4.04)	3.91e-10*** (3.31)	1.78e-10 (1.76)	1.68e-10*** (1.66)
% female borrowers	-0.424*** (-4.05)	-1.155*** (-10.09)	-0.627*** (-5.87)	-0.496*** (-4.43)	-1.069*** (-11.66)	-1.117*** (-11.94)
power distance	0.0174*** (7.28)					
individualism		0.0471*** (21.24)				
masculinity			0.0505*** (17.40)			
uncertainty avoidance				-0.00820*** (-5.29)		
long term orientation					-0.00543*** (-3.65)	
indulgence vs restraint						0.0170*** (16.87)
constant	-1.471*** (-3.73)	-0.946* (-2.52)	-2.828*** (-7.12)	-2.828*** (-7.12)	0.700* (-2.25)	-0.174 (-0.55)
Year Fixed-Effects	Yes	Yes	Yes	Yes	Yes	Yes
N	5834	5834	5834	5834	6399	6431
pseudo R-squared	0.021	0.08	0.058	0.018	0.033	0.063
t-statistics in parentheses						
	*p < 0.05, **p < 0.01, ***p < 0.001					

Financial performance, measured as return on assets (roa), is the dependent variable in Table VI and is regressed against a dummy variable equal to 1 if the MFI is a for-profit institution, control variables (debt to equity, assets, and percentage of female borrowers) and Hofstede's cultural dimensions. All models include year fixed effects and robust standard errors.

The estimates from Table VI suggest that for-profit MFIs are not more profitable but rather a culture with a greater

power distance and a more collectivist focus is related to greater MFI financial performance. Power distance is positive and statistically significant indicating that countries with a greater hierarchical structure and inequality tend to be more advantageous to for-profit MFIs. Individualism and uncertainty avoidance are both negative and significant indicating that less individualistic cultures tend to have more profitable MFI's. This finding supports the widely used practice of group lending throughout the microfinance

literature, in which the institution makes group loans and the group agrees to cross-guarantee each other's loans. For example, many MFIs employ a model that utilizes group loans to a group of five or more people and after the borrower gains reputation capital and creditworthiness through multiple successful group loan cycles and demonstrating growth in

their business, entrepreneurs can qualify for larger, individual business loans. This provides one explanation of the mechanism through which institutions in collectivist cultures can utilize strong group dynamics to ensure loan repayment by the group.

TABLE VI
HOFSTEDE'S CULTURAL DETERMINANTS ON FINANCIAL PERFORMANCE

	1	2	3	4	5	6
	roa	roa	roa	roa	roa	roa
for-profit	-0.0048 (-1.32)	0.0041 (1.08)	-0.00336 (-0.89)	-0.00284 (-0.78)	0.00229 (-0.59)	0.00187 (-0.47)
debt/equity	-0.00000130 (-0.22)	-0.00000360 (-0.06)	-0.00000136 (-0.23)	-0.00000162 (-0.27)	-0.00000986 (-0.15)	-0.00000787 (-0.12)
assets	1.10e-11 (1.87)	8.63e-12 (1.46)	1.03e-11 (1.74)	9.36e-12 (1.58)	1.14e-11 (1.73)	1.16e-11 (1.75)
% female borrowers	-0.00699 (-1.03)	0.0202** (2.85)	0.0041 (0.60)	-0.00147 (-0.20)	0.00166 (0.25)	0.000199 (0.03)
power distance	0.00116*** (7.83)					
individualism		-0.000752*** (-5.54)				
masculinity			0.000220 (1.30)			
uncertainty avoidance				-0.000230* (-2.30)		
long term orientation					0.0000740 (0.66)	
indulgence vs restraint						0.0000125 (0.17)
constant	-0.0741** (-3.73)	0.00797 (-2.52)	-0.00969 (-7.12)	0.0213 (-7.12)	-0.00623 (0.26)	-0.00357 (-0.15)
Year Fixed-Effects	Yes	Yes	Yes	Yes	Yes	Yes
N	5254	5254	5254	5254	5634	5653
R-squared	0.018	0.012	0.006	0.007	0.014	0.016
t-statistics in parentheses						
*p < 0.05, **p < 0.01, ***p < 0.001						

Table VII tests the existence and strength of formal institutions within a country and the effect on MFI financial performance by regressing the individual MFIs' return on assets (profitability) on the World Bank CPIA measures of formal institutions as well as control variables and the for-profit indicator variable. Building human resources, business regulatory environment, public resource use, and social protection and labor market are all positive and significant suggesting that countries with more developed institutions in these areas tend to have more profitable MFIs. Surprisingly the strength of the financial sector is negative and not statistically significant and property rights are also not significant in determining MFI profitability.

The next test explores the social performance of MFI's in terms of cultural dimensions and formal institutions within the country. The average loan size is a common proxy for social performance throughout the microfinance literature. MFI's that make smaller loans are considered to have better social

performance, as smaller loans are reaching the most under-banked and those with the greatest need for financing (for robustness We also tested the percentage of female borrowers and the number of active borrowers and the results were consistent).

Table VIII presents the results of regressing loan size (average loan size scaled by Gross National Income per capita) on the for-profit indicator variable, control variables, and Hofstede's cultural dimensions. The estimates suggest that for-profit MFIs tend to have lower social performance (i.e. larger loans) as larger MFIs in terms of total assets. Countries with a higher degree of power distance, individualism, masculinity, and indulgence tend to have MFIs with better social performance. Higher uncertainty avoidance and long term orientation tend to have MFIs with lower levels of social performance using the loan size proxy.

TABLE VII
FORMAL INSTITUTIONS AND FINANCIAL PERFORMANCE

	1	2	3	4	5	6	7
	roa	roa	roa	roa	roa	roa	roa
debt/equity	-0.00000153 (-0.30)	-0.000000951 (-0.18)	-0.00000155 (-0.30)	-0.000000942 (-0.18)	-0.00000104 (-0.20)	-0.00000132 (-0.26)	-0.00000701 (-0.14)
assets	5.34e-12*** (0.95)	8.27e-12*** (1.46)	6.61e-12*** (1.17)	8.10e-12*** (1.43)	7.91e-12*** (1.40)	6.06e-12*** (1.08)	8.45e-12*** (1.49)
% female borrowers	-0.00526 (-0.86)	0.0115* (1.97)	0.00475 (0.81)	0.0111 (1.86)	0.00884 (1.46)	0.00858 (1.46)	0.0137* (2.29)
human resources	0.349*** (8.85)						
regulatory environment		0.0101** (3.05)					
public resource			0.0272*** (7.47)				
financial sector				-0.0000912 (-0.03)			
property rights					0.00497 (1.40)		
social protection						0.0444*** (10.55)	
transparency							-0.00739* (-2.28)
constant	-0.110*** (-7.39)	-0.0298* (-2.18)	-0.0871*** (-6.08)	0.00594 (-0.48)	-0.00765 (-0.64)	-0.142*** (-9.07)	0.0252* (2.25)
Year Fixed-Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	4556	4556	4556	4556	4556	4492	4556
R-squared	0.025	0.022	0.027	0.024	0.02	0.02	0.019
t-statistics in parentheses							
*p < 0.05, **p < 0.01, ***p < 0.001							

TABLE VIII
CULTURAL DIMENSIONS AND SOCIAL PERFORMANCE

	1	2	3	4	5	6
	loan size	loan size	loan size	loan size	loan size	loan size
for-profit	0.0582*** (3.50)	0.0988*** (5.86)	0.0947*** (5.67)	0.0592*** (3.60)	0.284*** (10.59)	0.314*** (11.64)
debt/equity	-0.00000863 (-0.30)	0.00000358 (0.12)	-0.00000783 (-0.27)	-0.00000323 (-0.11)	-0.00000181 (-0.34)	-0.00000168 (-0.32)
assets	1.18e-10*** (4.77)	9.98e-11*** (4.05)	1.07e-10*** (4.35)	1.18e-10*** (4.79)	1.31e-10** (3.05)	1.33e-10** (3.14)
power distance	-0.00242*** (-3.64)					
individualism		-0.00686*** (-11.67)				
masculinity			-0.00939*** (-12.53)			
uncertainty avoidance				-0.00403*** (9.95)		
long term orientation					0.00478*** (6.22)	
indulgence vs restraint						-0.00410*** (-7.90)
constant	1.142*** (10.37)	1.116*** (11.24)	1.467*** (13.84)	0.685*** (6.66)	0.575*** (3.76)	0.909*** (6.00)
Year Fixed-Effects	Yes	Yes	Yes	Yes	Yes	Yes
N	6868	6868	6868	6868	7642	7665
R-squared	0.018	0.035	0.038	0.03	0.031	0.034
t-statistics in parentheses						
*p < 0.05, **p < 0.01, ***p < 0.001						

Table IX presents the results for the formal institutions' effect on MFI social performance and we see that all 7 measures of formal institutions within a country tend to have MFIs with better social performance in terms of loan size. From this table, we also see that firms with more female borrowers tend to also issue smaller loans, perhaps by

construction because both of these measures are commonly used as social performance proxies. These results also suggest that for-profit MFIs and larger MFIs also tend to issue larger loans and thus have lower social performance according to this measure.

TABLE IX
SOCIAL PERFORMANCE AND FORMAL INSTITUTIONS

	1	2	3	4	5	6	7
	loan size	loan size	loan size	loan size	loan size	loan size	loan size
debt/equity	0.00000477 (0.06)	0.00000248 (0.03)	0.00000621 (0.08)	0.00000167 (0.21)	0.00000777 (0.10)	0.00000579 (0.07)	0.000001 (0.13)
assets	2.90e-12** (3.25)	2.68e-10** (3.03)	2.90e-10** (3.26)	2.61e-10** (2.95)	2.87e-10** (3.23)	2.91e-10** (3.28)	2.86e-10** (3.22)
% female borrowers	-1.640*** (-17.99)	-1.741*** (-20.08)	-1.667*** (-18.97)	-1.603*** (-18.30)	-1.590*** (-17.70)	-1.679*** (-19.21)	-1.632*** (-18.44)
for-profit	0.270*** (5.37)	0.281*** (5.62)	0.280*** (5.56)	0.292*** (5.84)	0.267*** (5.33)	0.270*** (5.35)	0.259*** (5.18)
human resources	-0.180** (-3.09)						
regulatory environment		-0.380*** (-7.69)					
public resource			-0.247*** (-4.57)				
financial sector				-0.422*** (-8.71)			
property rights					-0.308*** (-5.89)		
social protection						-0.425*** (-6.75)	
transparency							-0.258*** (-5.43)
constant	2.496*** (11.48)	3.230*** (16.13)	2.741*** (13.06)	3.204*** (17.73)	2.734*** (15.70)	3.275*** (14.15)	2.588*** (15.95)
Year Fixed-Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	5020	5020	5020	5020	5020	4950	5020
R-squared	0.091	0.1	0.093	0.103	0.095	0.096	0.094
t-statistics in parentheses							

*p < 0.05, **p < 0.01, ***p < 0.001

IV. CONCLUSION

This paper seeks to more broadly explore the differences between non-profit and for-profit MFIs, specifically the determinants in social and financial performance and the role of formal institutions within a country and informal cultural institutions. Using a large dataset of more than 2,400 individual MFIs from 120 countries we find support for the growth of for-profit institutions as nearly half of the MFIs in the sample from 1999-2017 operate as a for-profit. Africa, Latin America, the Caribbean have the largest number of MFIs with a combined 1,222 unique institutions. By country, India has the most MFIs in the sample, both total MFIs and for-profit/non-profit. MFIs in Bangladesh are primarily non-profit (97.5%) while those in Mexico are mainly for-profit (90%). In terms of legal status banks and NBFIs tend to be for-profit and Credit Unions and NGOs are typically non-profit.

For-profit MFIs tend to have more administrative expenses, lower social performance (depth), pay higher salaries, are

more profitable, and have more staff turnover when using t-tests for a difference in means between non-profit and for-profit MFIs. For-profit MFIs also appear to charge higher interest rates than non-profit. Non-profit MFIs appear to be busier, have larger boards and more females on the board, and a greater percentage of female borrowers.

The determinants of for-profit MFIs saturating a country as opposed to non-profit MFIs can be better understood by examining the formal institutions and cultural dimensions within each country. Formal institutions and development are collected from Country Profit and Institutional Assessment (CPIA) index from the World Bank and are included in the analysis of (i) determinants of for-profit MFIs, (ii) MFI financial performance, and (iii) MFI social performance. The findings suggest formal institutions such as; business regulatory environment, property rights, social protection, and a developed financial sector, have a positive effect on the likelihood of for-profit MFIs within a country. Financial

performance is also associated with countries with higher measures of human resources, business regulatory environment, public resource use, and social protection. MFI social performance (smaller loan size) is associated with more development in all 7 variables of CPIA formal institution metrics.

Using Hofstede's cultural dimensions to proxy for informal institutions and cultural characteristics within each country we find that cultures with greater degrees of power distance, individualism, masculinity, and indulgence tend to have more for-profit MFIs. Greater power distance and more collectivist societies appear to have better financial performance in the MFIs consistent with the group lending models employed by many for-profit and non-profit institutions alike. The social performance also appears to improve within cultures with a greater degree of power distance, individualism, masculinity, and indulgence; while a negative relation in social performance is shown for larger, for-profit MFIs and cultures with higher uncertainty avoidance and long term orientation.

The future avenues for research in this field could explore the economic impacts of the growth in MFIs (both for-profit and non-profit) within individual cities and communities.

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