

An Empirical Study of
Microfinance Social Performance

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Social Performance Definition

- What Social Performance is
 - Social performance is the ability of an MFI to translate its mission into practice or reality.
- What Social Performance is not
 - Social Performance is NOT social impact
 - Social performance goes beyond social impact, impact is just a part of performance. (Sinha, 2006)
 - Microfinance social impact is just about the observed change that can be attributed to the microfinance intervention however social performance involves the ability of the MFI to translate its mission into practice or reality

Existing Perspective

- Social Performance Indicators
 - Sinha et al. (2009)
 - The SEEP Network (2007)
 - Sinha (2006)
 - Zeller et al. (2003)
 - Copestake (2003)

Research Questions

■ Research Questions

- Does the age, profit status, loans per loan officer, regulatory status as well as assets of MFIs affect their ability to perform socially?
- Do these observed effects vary by geographical area?
- Do these observed effects vary by country income-levels?

Data Summary

- Number of MFIs = 878
- Number of countries = 96
- Number of years = 11 (2000 to 2010)

The Social Performance Index (SPI)

- 8 specific indicators of social performance are identified and used in a social performance index (SPI)
 - MFI Outreach
 - Average outstanding balance / GNI per capita
 - Cost per borrower
 - Number of offices
 - Operational self sufficiency (OSS)
 - Percent of women borrowers
 - Portfolio at risk after 90 days
 - Write-off ratio

The SPI (cont'd)

- Dummy variables are assigned to qualitative indicators
- Values of all quantitative indicators are rescaled to follow a normal distribution
- All newly generated values for each indicator are summed up.
 - $SPI = A + B + C + D + E + F + G + H$
where A...I are various values of indicators chosen

Panel Analysis

- Explanatory variables used are
 - MFI profit status
 - loans per loan officers
 - MFI assets
 - MFI age
 - MFI regulatory status

Panel Analysis (cont'd)

A panel regression model is given as;

$$y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \dots + \beta_N X_{jit} + \varepsilon_{it}$$

where i is the number of observations ranging from 1 to N , t is the time dimension of the panel, X_1 to X_j represent the various explanatory variables and ε is a disturbance term

Panel Analysis (cont'd)

We analyse this relationship by using the following regression model:

$$socperf_{it} = \beta_0 + \beta_1 age_{it} + \beta_2 pro_{it} + \beta_3 reg_{it} + \beta_4 loan_{it} + \beta_5 lnassets_{it} + e_{it}$$

where *socperf* represents all the dependent variable in this case the SPI, outreach, CB, ABPGNI, OSS and PARgo. *age*, *pro*, *reg*, *loan* and *assets* represent MFI age, profit status, regulatory status, loans per loan officer and assets respectively.

Overall Findings

Table 1: Tables of Results for all MFIs collectively regardless of Geographic Regions.

Models	1	2	3	4	5	6
	SPI	OUTREACH	CB	ABPGNI	OSS	PAR90
age	-0.0030** (0.0017)	0.0017*** (0.0005)	0.0002** (0.0001)	0.0029*** (0.0006)	-0.0001 (0.00006)	-0.0077*** (0.0010)
profit status	-0.0121 (0.0448)	-0.0128 (0.0124)	-0.0015 (0.0014)	-0.0147 (0.0132)	-0.00002 (0.0012)	0.0099 (0.0177)
regulatory status	-0.2768*** (0.0432)	-0.0354*** (0.0119)	0.0003 (0.0014)	-0.1301*** (0.0127)	0.0001 (0.0012)	0.0272 (0.0170)
loans/loan officer	0.0129*** (0.0021)	0.0047*** (0.0006)	0.0004*** (0.00009)	0.0039*** (0.0007)	0.0001 (0.0001)	0.0013 (0.0012)
lnassets	5.8765*** (0.6048)	7.4868*** (0.1794)	-0.3454*** (0.0251)	0.0758 (0.1941)	0.0968*** (0.0210)	0.0537 (0.3228)
constant	396.55*** (10.55)	-47.836*** (3.0813)	104.52*** (0.4175)	85.77*** (3.3239)	29.74*** (0.3490)	71.02*** (5.3319)
N	4098	4098	4098	4098	4098	4098
R squared	0.0891	0.5038	0.0282	0.1091	0.0161	0.0333

The Case of Africa

Table 2: Table of Results for MFIs in Africa

Models	1	2	3	4	5	6
	SPI	OUTREACH	CB	ABPGNI	OSS	PAR90
Age	0.0004 (0.0044)	0.0008 (0.0013)	-0.00004 (0.00006)	0.0029** (0.0016)	0.0002 (0.0002)	-0.0042 (0.0027)
profit status	-0.0334 (0.1001)	-0.0016 (0.0246)	0.0014 (0.0009)	0.0289 (0.0326)	-0.0046** (0.0021)	-0.0271 (0.0422)
regulatory status	-0.2509** (0.1172)	-0.0471 (0.0287)	0.0008 (0.0010)	-0.1109*** (0.0382)	-0.0002 (0.0024)	-0.0351 (0.0493)
loans/loan officer	0.0369*** (0.0067)	0.0166*** (0.0020)	0.0005*** (0.00009)	0.0134*** (0.0014)	0.0005** (0.0002)	0.0005 (0.0040)
lnassets	4.7181*** (1.7724)	8.1404*** (0.4973)	-0.1042*** (0.0194)	-1.9404*** (0.6079)	0.2395*** (0.0507)	0.6703 (0.9301)
constant	389.67*** (29.69)	-58.81*** (8.1243)	100.78*** (0.3116)	105.71*** (10.080)	27.12*** (0.8028)	60.51*** (14.983)
N	583	583	583	583	583	583
R squared	0.0543	0.5548	0.2047	0.1856	0.1538	0.0094

The Case of East Asia & The Pacific

Table 3: Table of Results for MFIs in East Asia and The Pacific

Models	1	2	3	4	5	6
	SPI	OUTREACH	CB	ABPGNI	OSS	PAR90
age	-0.0030 (0.0070)	-0.0011 (0.0017)	0.0005 (0.0004)	-0.0008** (0.0015)	0.0004** (0.0001)	-0.0036 (0.0037)
profit status	0.1692 (0.2024)	-0.0008 (0.0532)	-0.0074 (0.0062)	-0.0739 (0.0458)	0.0151*** (0.0052)	0.3019*** (0.0845)
regulatory status	-0.3512** (0.2030)	-0.0891** (0.0534)	0.0002 (0.0062)	-0.1810*** (0.0459)	0.0171*** (0.0052)	0.2031** (0.0843)
loans/loan officer	0.0104** (0.0060)	0.0015 (0.0015)	0.0009** (0.0004)	0.0014 (0.0013)	-0.0002 (0.0002)	0.0048 (0.0033)
lnassets	5.9184*** (1.6924)	6.7675*** (0.4176)	-0.6456*** (0.0926)	-0.1401 (0.3609)	0.1370*** (0.0451)	2.0297** (0.8909)
constant	397.54*** (34.75)	-29.72*** (8.8245)	109.17*** (1.6130)	104.32*** (7.6100)	27.18*** (0.9110)	9.9490 (16.7610)
N	541	541	541	541	541	541
R squared	0.1429	0.5043	0.0775	0.1819	0.1354	0.0094

The Case of Eastern Europe & Central Asia

Table 4: Table of results for MFIs in Eastern Europe and Central Asia

Models	1	2	3	4	5	6
	SPI	OUTREACH	CB	ABPGNI	OSS	PAR90
age	-0.0061** (0.0030)	0.0010 (0.0009)	-0.0003** (0.0001)	0.0035** (0.0015)	-0.0004*** (0.0001)	-0.0076*** (0.0020)
profit status	0.1033 (0.0630)	-0.0361** (0.0173)	-0.0014 (0.0058)	0.0774*** (0.0274)	0.0012 (0.0026)	0.0167 (0.0277)
regulatory status	-0.0104 (0.0804)	-0.0114 (0.0222)	0.0042 (0.0074)	-0.0857** (0.0351)	-0.0064* (0.0034)	0.1252*** (0.0361)
loans/loan officer	0.0963*** (0.0119)	0.0271*** (0.0036)	0.0020*** (0.0005)	0.0299*** (0.0059)	0.0012** (0.0006)	0.0318** (0.0075)
lnassets	-0.5463 (1.1970)	6.3922*** (0.3501)	-0.1973*** (0.0579)	-1.2660** (0.5685)	-0.0562 (0.0548)	-1.3831** (0.6605)
constant	441.12*** (19.606)	-43.21*** (5.6805)	100.89*** (1.1467)	88.61*** (9.1920)	33.07*** (0.8854)	86.52*** (10.5344)
N	732	732	732	732	732	732
R squared	0.1994	0.6048	0.0858	0.1922	0.0421	0.0838

The Case of Latin America & The Caribbean

Table 5: Table of results for MFIs in Latin America and the Caribbean

Models	1	2	3	4	5	6
	SPI	OUTREACH	CB	ABPGNI	OSS	PAR90
age	-0.0003 (0.0030)	0.0021** (0.0009)	-0.0001** (0.00004)	0.0029*** (0.0010)	0.00003 (0.0001)	-0.0066*** (0.0018)
profit status	-0.2110*** (0.0657)	-0.0485*** (0.0183)	0.0017 (0.0011)	-0.0519*** (0.0198)	0.0011 (0.0020)	-0.0671** (0.0271)
regulatory status	-0.3315*** (0.0688)	-0.0008 (0.0193)	0.0021* (0.0011)	-0.1376*** (0.0208)	0.0031 (0.0021)	-0.0538* (0.0292)
loans/loan officer	0.0195*** (0.0056)	0.0074*** (0.0017)	0.0004*** (0.0001)	0.0092*** (0.0018)	0.0004** (0.0002)	0.0065** (0.0034)
lnassets	6.7935*** (1.0571)	7.9190*** (0.3178)	-0.1495*** (0.0146)	0.6011* (0.3385)	-0.0039 (0.0360)	0.0339 (0.5662)
constant	384.68*** (17.0875)	-58.66*** (5.0785)	101.33*** (0.2423)	79.73*** (5.4207)	30.95*** (0.5721)	74.91*** (8.8461)
N	1476	1476	1476	1476	1476	1476
R squared	0.0818	0.6456	0.1074	0.0769	0.0261	0.0501

The Case of Middle East and North Africa

Table 6: Table of results for MFIs in Middle East and North Africa

Models	1	2	3	4	5	6
	SPI	OUTREACH	CB	ABPGNI	OSS	PAR90
Age	0.0057 (0.0062)	0.0035* (0.0021)	0.00002 (0.00005)	0.0030*** (0.0010)	0.0001 (0.0004)	-0.0034 (0.0039)
profit status	0.0598 (0.4934)	0.1468 (0.1513)	-0.0015 (0.0044)	-0.1152 (0.1179)	0.0042 (0.0190)	-0.2197 (0.2121)
regulatory status	-0.1868 (0.1737)	-0.0505 (0.0534)	-0.0032** (0.0015)	-0.0723* (0.0411)	-0.0076 (0.0068)	-0.0488 (0.0759)
loans/loan officer	0.1861*** (0.0251)	0.0424*** (0.0086)	0.0008*** (0.0002)	0.0150*** (0.0041)	0.0071*** (0.0014)	0.0706*** (0.0155)
Lnassets	-2.3883 (2.6826)	8.2177*** (0.9057)	-0.0238 (0.0225)	-1.4587*** (0.4569)	0.0456 (0.1388)	-2.3452 (1.5362)
Constant	482.18*** (64.6392)	-84.19*** (20.6035)	99.99*** (0.5716)	119.66*** (13.9025)	29.25*** (2.8430)	120.93*** (31.5720)
N	212	212	212	212	212	212
R squared	0.3424	0.6143	0.1629	0.1408	0.1615	0.2262

The Case of South Asia

Table 7: Table of results for MFIs in South Asia

Models	1	2	3	4	5	6
	SP	OUTREACH	CB	ABPGNI	OSS	PAR90
Age	0.0055 (0.0059)	0.0038** (0.0018)	0.0002*** (0.00003)	0.0047*** (0.0013)	0.0005*** (0.0002)	-0.0045 (0.0034)
profit status	-0.1078 (0.1374)	-0.0125 (0.0343)	0.0002 (0.0005)	-0.0192 (0.0301)	-0.0028 (0.0031)	-0.0002 (0.0619)
regulatory status	-0.0981 (0.1302)	-0.0396 (0.0323)	-0.0001 (0.0005)	-0.0181 (0.0285)	-0.0002 (0.0029)	0.0730 (0.0582)
loans/loan officer	0.0006 (0.0027)	0.0004 (0.0008)	0.00001 (0.00001)	0.0008 (0.0006)	0.00001 (0.00009)	-0.0013 (0.0016)
Inassets	10.4678*** (1.4262)	7.2750*** (0.4480)	0.0222*** (0.0086)	0.4594 (0.3278)	0.2594*** (0.0495)	-0.1022 (0.8497)
constant	360.32*** (28.4747)	-30.69*** (8.4611)	99.35*** (0.1568)	79.10*** (6.4602)	26.53*** (0.9069)	72.53*** (15.8967)
N	554	554	554	554	554	554
R squared	0.1374	0.4689	0.1665	0.0372	0.1733	0.0265

The Case of MFIs in Low-Income Countries

Table 8: Table of results for MFIs in Low Income Countries

Models	1	2	3	4	5	6
	SPI	OUTREACH	CB	ABPGNI	OSS	PAR90
age	-0.0010 (0.0031)	0.0024*** (0.0009)	-0.00004 (0.00004)	0.0046*** (0.0010)	0.0001 (0.0001)	-0.0062*** (0.0018)
profit status	-0.1564** (0.0793)	-0.0167 (0.0200)	0.0024*** (0.0008)	-0.0361 (0.0235)	-0.0037** (0.0017)	-0.0584** (0.0295)
regulatory status	-0.3125*** (0.0792)	-0.0483** (0.0199)	-0.0007 (0.0008)	-0.1200*** (0.0234)	-0.0004 (0.0017)	0.0034 (0.0293)
loans/loan officer	0.0098*** (0.0027)	0.0040*** (0.0008)	0.0001*** (0.00003)	0.0036*** (0.0009)	0.00009 (0.00009)	-0.0008 (0.0015)
lnassets	6.6956*** (0.9821)	7.5814*** (0.2905)	-0.0287** (0.0120)	-0.1138 (0.3246)	0.1311*** (0.0314)	-0.4611 (0.5290)
constant	400.82*** (18.1493)	-43.18*** (5.1640)	99.89*** (0.2133)	84.59*** (5.8358)	29.10*** (0.5340)	84.00*** (9.0501)
N	1527	1527	1527	1527	1527	1527
R squared	0.0820	0.4858	0.0590	0.0777	0.0705	0.0285

The Case of MFIs in Low-Middle Income Countries

Table 9: Table of results for MFIs in Low-Middle Income Countries

Models	1	2	3	4	5	6
	SPI	OUTREACH	CB	ABPGNI	OSS	PAR90
age	-0.0042*	0.0012*	0.0004***	0.0024***	-0.0002*	-0.0088***
	(0.0023)	(0.0007)	(0.0001)	(0.0007)	(0.00009)	(0.0013)
profit status	0.1753***	-0.0135	-0.0058**	0.0222	0.0023	0.1004***
	(0.0564)	(0.0161)	(0.0028)	(0.0159)	(0.0018)	(0.0240)
regulatory status	-0.2498***	-0.0583***	0.0027	-0.1059***	0.0021	0.0657***
	(0.0536)	(0.0153)	(0.0027)	(0.0151)	(0.0018)	(0.0228)
loans/loan officer	0.0176***	0.0050***	0.0008***	0.0056***	0.00008	0.0051**
	(0.0034)	(0.0010)	(0.0002)	(0.0011)	(0.0001)	(0.0021)
lnassets	5.5769***	7.5420***	-0.6603***	-0.1572	0.0373	0.5724
	(0.8046)	(0.2354)	(0.0455)	(0.2539)	(0.0294)	(0.4306)
constant	381.94***	-50.45***	109.25***	87.37***	30.71***	54.78***
	(13.7110)	(3.9908)	(0.7567)	(4.2329)	(0.4909)	(7.0446)
N	2289	2289	2289	2289	2289	2289
R squared	0.1075	0.5554	0.0355	0.1476	0.0066	0.0617

The Case of MFIs in Upper-Middle Income Countries

Table 10: Table of results for MFIs in Upper-Middle Income Countries

Models	1	2	3	4	5	6
	SPI	OUTREACH	CB	ABPGNI	OSS	PAR90
age	0.0026 (0.0056)	0.0023 (0.0019)	-0.0002*** (0.0001)	0.0014 (0.0009)	0.0001 (0.0003)	-0.0032 (0.0038)
profit status	-0.4848*** (0.1331)	-0.0499 (0.0366)	-0.0004 (0.0032)	-0.1009*** (0.0305)	0.0004 (0.0042)	-0.2086*** (0.0581)
regulatory status	0.0182 (0.1535)	0.0013 (0.0416)	0.0017 (0.0037)	-0.0272 (0.0357)	-0.0064 (0.0047)	0.0291 (0.0648)
loans/loan officer	0.0264** (0.0120)	0.0069* (0.0041)	0.0011*** (0.0003)	0.0049** (0.0021)	0.0010* (0.0005)	0.0117 (0.0078)
lnassets	0.5458 (2.2596)	7.3272*** (0.7217)	-0.0828 (0.0533)	-0.7208* (0.4047)	0.3263*** (0.0896)	-2.6766** (1.2853)
constant	488.49*** (36.2362)	-50.88*** (11.4117)	99.95*** (0.8575)	107.67*** (6.6893)	25.80*** (1.4078)	120.66*** (20.1238)
N	282	282	282	282	282	282
R squared	0.1867	0.5475	0.1274	0.1517	0.1710	0.1526

2SLS Estimates

GMM Estimates (Overall and Region Cluster Results)

	1	2	3	4	5	6	7
	OVERALL	AFR	EAP	EECA	LAC	MENA	SA
spiL1	0.8935*** (0.0148)	0.8417*** (0.0452)	0.9103*** (0.0469)	0.6921*** (0.0454)	0.8325*** (0.0267)	0.7232*** (0.0821)	0.7703*** (0.0440)
Age	0.0008 (0.0014)	0.0044 (0.0043)	-0.0030 (0.0051)	0.0012 (0.0027)	0.0004 (0.0026)	-0.0049 (0.0056)	0.0016 (0.0038)
profit status	0.0041 (0.0137)	-0.0458 (0.0401)	0.0934** (0.0462)	0.0497* (0.0269)	-0.0636*** (0.0228)	0.0482 (0.1487)	-0.0356 (0.0364)
loans/loan officer	0.0054*** (0.0018)	0.0186*** (0.0067)	0.0008 (0.0052)	0.0673*** (0.0100)	0.0235*** (0.0048)	0.1189*** (0.0278)	-0.0023 (0.0024)
Lnassets	1.6797*** (0.3513)	1.9683* (1.0880)	1.4168 (1.3019)	0.4728 (0.7324)	1.0342* (0.5406)	-0.5952 (1.6638)	3.8031*** (1.0807)
Constant	15.9832* (8.4615)	23.7224 (27.2007)	14.4795 (24.2401)	110.65*** (24.4654)	55.849*** (15.7436)	115.02*** (42.4861)	57.841*** (22.2319)
N	4095	583	538	729	1474	209	554

2SLS Estimates (Cont'd)

	1	2	3
	Low	Low-Middle	Upper-Middle
spiL1	0.8858*** (0.0236)	0.8749*** (0.0211)	0.8566*** (0.0685)
Age	0.0029 (0.0025)	0.0020 (0.0019)	-0.0124** (0.0054)
profit status	-0.0535** (0.0232)	0.0637*** (0.0186)	-0.1348** (0.0555)
loans/loan officer	0.0032 (0.0024)	0.0105*** (0.0029)	0.0223** (0.0099)
Lnassets	2.9722*** (0.6362)	0.9680** (0.4460)	1.5505 (1.2781)
Constant	-0.3108 (13.9271)	30.703*** (11.5152)	52.5408 (36.8609)
N	1525	2286	281

2SLS Estimates Diagnostic Tests

	Sargan Test		Basmann test		Wu-Hausman F test		Durbin-Wu-Hausman test		Pagan-Hall	
	Stat	PV	Stat	PV	Stat	PV	Stat	PV	Stat	PV
OVERALL	13.39	0.0095	13.40	0.0095	136.68	0.000	132.48	0.000	125.95	0.000
AFR	13.74	0.0082	13.83	0.0079	18.96	0.00002	18.58	0.00002	72.40	0.0395
EAP	5.67	0.2255	5.62	0.2294	39.36	0.000	37.12	0.000	59.91	0.2395
EECA	8.51	0.0747	8.49	0.0752	6.70	0.0098	6.70	0.0096	74.20	0.0288
LAC	13.04	0.0111	13.06	0.0110	39.89	0.000	39.02	0.000	77.70	0.0152
MENA	2.03	0.7305	1.95	0.7449	1.48	0.2256	1.52	0.2180	40.33	0.8340
SA	13.84	0.0078	13.94	0.0075	0.11	0.74130	0.11	0.73961	101.56	0.0001
Low Income	13.88	0.0077	13.92	0.0076	26.83	0.000	26.48	0.000	95.85	0.0003
Low-Middle Income	8.73	0.0682	8.73	0.0683	93.02	0.000	89.65	0.000	101.77	0.0001
Upper-Middle Income	2.19	0.7002	2.13	0.7115	9.49	0.00228	9.40	0.00217	42.15	0.8577

Conclusions

- Overall, older MFIs as well as regulated ones tend to perform less socially as compared to younger and non-regulated MFIs.
- Furthermore, MFIs with more assets and higher ratios for loans per loan officer have the tendency of performing more socially.
- MFIs in various regions exhibit similar trends with regards to Social Performance except in the case of Eastern Europe and Central Asia .
- MFIs in low income countries also exhibit similar trends like MFIs in upper middle income countries.

Thank you!