PERFORMANCE OF MICROFINANCE: THE ROLE OF SUBSIDIES[1]

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Abstract

Microfinance institutions (MFIs) strive for financial sustainability, but also for the empowerment of the poor. The social nature of MFIs is mainly financed by subsidies. This paper measures the sustainability of microfinance, employing Yaron's Subsidy Dependence Index (SDI) which measures the social cost of subsidized MFIs. Generating the data set directly from the audit reports of the 204 MFIs with 23 million borrowers in 54 Countries, the results show that microfinance sector is highly subsidized. Moreover, once subsidies are accounted for, MFIs financial performance declines substantially. Further, the paper also highlights the factors which contribute to and decrease the sustainability of microfinance.

Keywords: Microfinance institutions, Subsidies, Sustainability

JEL Codes: G21, H2, D02

1. INTRODUCTION

Microfinance promises poverty reduction without subsidization. After four decades into the business this promise is yet to be fulfilled and the role of subsidies still persists despite recent surge for commercialization of mi-

crofinance[3]. The social welfare concept associated with Microfinance Institutions (MFIs) along with the shift towards commercialization, warrants that their performance on the basis of traditional financial ratios without unearthing their degree of subsidy dependence provides only a partial and often meaningless or misleading picture of the social cost of maintaining the MFIs (Yaron, 2004). Traditionally the performance of MFIs has been measured using either the welfarist or the institutionalist approach. The former put emphasis on assessing the impact on the welfare of the poor while later argues for the assessment in terms of the institution's success in achieving self-sustainability and breadth of outreach (Morduch, 2000). Basically, the institutionalist approach employs two measurements of success: outreach and sustainability. There is neither an agreed upon nor a widespread definition of a well-performing MFI. The performance criteria and indicators used vary significantly from one author to another or from one organization to another, since they depend on the methodological approach, which, in turn, depends on the determination to give priority to the supply side or to the demand side of the financial intermediation. This essay adopts an approach based on both performance criteria introduced by Yaron (1992b, et. al 1997) and those proposed by CGAP (2003). These authors suggest two key criteria to evaluate the performance of MFIs: outreach and sustainability. Sustainability requires MFIs to have a positive return on equity (net of any subsidy received) while covering all transaction costs (loan losses, financial costs, administrative costs, etc.), and consequently to function without subsidies. The level of sustainability is measured through financial indicators such as the Subsidy Dependency Index (SDI), suggested by Yaron (1992a, 1997) or other more common measures such as the return on equity (ROE) or the return on assets (ROA). However the figures on the MFIs Profit and loss statements are questionable as most of the subsidy does not make it into the balance sheets of respective MFIs. Even if it does, the MFIs tend to under estimate the subsidy figures to make their accounts look more acceptable. Contrarily to the welfarist approach, subsidies adjustments are necessary under this approach, and they have to be reduced to a minimum level when an MFI is looking for sustainability (Rhyne, 1994). Notwithstanding these shortcomings, this paper calculates the sustainability of MFIs using the Yaron's Subsidy Dependence Index (SDI) which measures the social cost of subsidized MFIs. The measurement of the social cost of Development financial Institu-

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[3] See for example, Armendáriz de Aghion and Jonathan Morduch (2004, 2005); Morduch (1999a); Morduch (1999b); Goodman (2005); Cull et al. (2007) and Zeller et al. (2002).

tions matters because funds earmarked for development are scarce. Subsidies for DFIs are not problematic unless they could improve social welfare more somewhere else (Schreiner and Yaron, 1999 & 2001). This quality financial information has been generated directly from the audit reports[4] of the 204 MFIs with 23 million borrowers in 54 Countries worldwide for years 2005 and 2006. This constitutes a significant part of the microfinance outreach worldwide.

For the proponents of the Win-Win proposition i.e. microfinance reduces poverty and in the course of that becomes subsidy free or sustainable, the overall evidence is not a good as on the sustainability front. Based on our SDI calculations for the year 2005, 153 MFIs out of 204 are subsidy dependent while for year 2006 it is 122 out of 179 MFIs. Further summary statics reveal that MFIs located in Africa and South Asia are more subsidy dependent on average than the rest of the regions, while Latin American (LA) MFIs are far less subsidized. MFIs with status of "Bank" and "NGO" are more subsidy dependent on average than others. Notwithstanding the lending methodology, MFIs with group (solidarity) lending methodology are more subsidy dependent while MFIs which lend to individuals are, on average, relatively less subsidy dependent. While MFIs providing other services eg education and health etc. in addition to finacial serivices are on average more subsidy dependent. The study also shows the inability of conventional financial ratios i.e. ROA and ROE to take into account the true social cost to society of the subsidization in microfinance sector.

The paper is organized as follows. In the next section, a description of data and theoretical framework of calculating SDI is presented followed by the overall description of the subsidy dependence of microfinance sector. Then a comparison between conventional nominal and subsidy-adjusted financial ratios is presented. A conclusion is given at the end.

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[4] The audit reports have been taken from the Mix Market Website (hhp://www.mixmarket.org). The MIX MARKET is a global, web-based microfinance information platform. It provides information to sector actors and the public at large on Microfinance Institutions (MFIs) worldwide, public and private funds that invest in microfinance, MFI networks, raters/external evaluators, advisory firms, and governmental and regulatory agencies.

2. DATA AND THEORETICAL FRAMEWORK

2.1 Description of the Data

Table *1* gives an overview of variables used in the study along with summary statistics. It is summed up two categories i.e. variables used in calculating SDI and variables depicting financial ratios. The definitions of the variables are also given as described by the Mix Market website[5] and CGAP, 2003. Through this information exchange platform individual MFI can provide financial and outreach data and the Mix Market ranks these data for quality using a 5-star system, where 5 is the most complete data available, while 1 is the least complete data available (usually the number of borrowers and some other outreach indicators but little financial information). After carefully reviewing the Audit Reports of more than 300 5-star MFIs taken from the Mix Market website, 204 MFIs in 54 countries have been chosen based on the clarity of their respective Audit Reports in general, and subsidy figures in particular. The most important variable to extract from the audit reports for subsidy calculations is the public debt/concessional borrowing. Therefore MFIs have been selected in large part on the quality and clarity of public debt figures in their respective audit reports. All the MFIs adhere to the International Accounting Standards (IAS) in compilation of their respective audit reports. The subsidy figures for the 25 MFIs for the year 2006 are missing due to the unavailability of the data. Therefore, the sample in Table 2.1 consists of 383 observations (204 for the year 2005 plus 179 for the year 2006). The summary statistics reveal some important information. The average interest rate paid by the MFIs to acquire loanable funds is 7.4%. Whereas, the average yield obtained on average annual loan portfolio is 30.3%. Further, the average value of 0.214 for SDI suggests that overall the average yield obtained on lending to the borrowers has to be increased by 21.4% to make the microfinance sector subsidy-free. The average value of SAROE is negative (though the median is positive) in contrast to the positive SAROA value. This is due to the fact that for those MFIs with negative true profits, the values for the average equity tend to be low because some grants (which ought to be a part of equities) appear on the income statement (rather than in equities). This makes the overall average of SAROE negative.

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[5] http://www.mixmarket.org/en/glossary.

Table 1: Variable Description and Summary Statistics

Variable used in subsidy calculations	Obs.	Definition	unit	Mean	Median	Min	Max
Average annual assets (A)	383	Average of current year (t) and previous year (t-1) assets. It includes all asset accounts net of all contra-asset accounts, such as the loan-loss allowance and accumulated depreciation.	$	37000	12000	323	521000
Average annual equity (E)	383	Average of current (t) and previous year (t-1) equity. Total assets less total liabilities.	$	8229	3900	-1400[6]	180000
Subsidised equity	383	Average equity (E) × Opportunity cost of capital (m).	$	1249	531	-140	27600
Average public debt (A)	383	Average annual outstanding concessionary-borrowed funds.	$	10600	3300	0	100000
Interest cost on debt	383	Actual interest rate (c) × Average public debt (A).	$	779	267	0	8629
Actual interest rate (c)	383	Interest cost paid on concessionary borrowed funds/ Average public debt (A).	%	7.4	7.2	0	32.1
Opportunity cost of capital (m)	383	Market lending rate[7]. Lending rate is the bank rate that usually meets the short and medium term financing needs of the private sector. This rate is normally differentiated according to the creditworthiness of borrowers and objectives of financing.	%	15.0	12.9	7.0	67.7
Discount on debt	383	$A \times (m-c)$.	$	709	155	-1044	13900
Revenue grants	383	Cash gifts except for the accounting choice to record them as revenues rather than as direct injection to equity.	$	526	1.144	0	79800

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[6] Negative equity value for the MFI Kando Jagima of Mali.
[7] Market lending interest rate has been taken from the International Financial Statistics, IMF for the years 2005 and 2006.

Variable used in subsidy calculations	Obs.	Definition	unit	Mean	Median	Min	Max
K	383	Sum of revenue grants and discount on expenses[8].	$	526	1.144	0	79800
Accounting profit	383	Total revenue less total expenses, operating and non-operating, Including all donations and taxes, if any.	$	526	1.144	0	79800
Tax	383	Includes all taxes paid on net income or other measure of profits as defined by local tax authorities. This item may also include any revenue tax.	$	282	0.403	-158	7078
Profit net of tax (P)	383	Accounting Profit – Taxes.	$	1510	461	-5899	41300
Subsidy (S)	383	$[E \times m + A (m - c) + K - P]$	$	967	220	-18100	76900
Average loan portfolio (LP)	383	Average annual outstanding loan portfolio.	$	89100	8411	48	24100000
Revenues from Lending ($LP*i$)	383	Revenue from interest earned on the annual gross loan portfolio only.	$	27700	2401	0	8040000
Yield on lending (i)	383	Revenues from lending ($LP*i$) / Average loan portfolio.	%	30.3	26.7	0.02	128.1
Subsidy dependence index (SDI)	383	Subsidy(S)/ Revenue from lending ($LP*i$).		0.214	0.122	-1.914	4.568[9]
Financial Ratios							
Change in yield[10]	383	$SDI \times$ (actual yield from lending).	%	6.9	2.8	-76.6	171.5
Nominal subsidy free yield	383	Change in yield + actual yield on lending.	%	37.2	30.8	-39.6	253.3

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[8] For the sake of simplicity, the discount on expenses is assumed to be zero.
[9] The maximum value of SDI is 4.568 for MFI "PADME" of Benin.
[10] The actual yield after accounted for the SDI.

Inflation[11]	383	Indices shown for consumer prices are the most frequently used indicators of inflation and reflect changes in the cost of acquiring a fixed basket of goods and services by the average consumer.	%	6.65	6.24	0.64	24.03
Real subsidy free yield	383	(Nominal subsidy free yield - inflation)/(1+inflation).	%	30.9	25.1	-33.7	229.6
True profit	383	Accounting profit - Profit grants	$	282	112	-50300	38500
Return on assets (ROA)	383	(Net operating income less Taxes) / Period average assets.	%	5.23	4.4	-68.5	61.6
Subsidy adjusted ROA (SAROA)	383	True profit / Period average assets.	%	0.64	1.20	-95.1	52.1
Return on equity (ROE)	383	(Net operating income, less taxes) / Period average equity.	%	14.56	16.94	-1723	853.5
Subsidy adjusted ROE (SAROE)	383	True profit / Period average equity.	%	-3.32[12]	5.87	-1763.9	1468.3
Operational self sufficiency (OSS)	383	Financial revenue (Total) / (Financial expense + Loan loss provision expense + Operating expense).	%	123.4	120.7	3.57	254.9

Source: Author´s own calculation based on the Audit Reports of MFIs taken from Mix Market website. All the values in USD are in '000s'. Exchange rates are also taken from Mix Market website. Some definitions are taken from CGAP (2003).

The Dummy variables along with their categories used in this study have been presented in Table 2. The categories are based on the Mix Market classification. Further, Table *3* highlights the definitions of their respective categories.

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[11] Taken from the World bank's World Development Indicators (WDI), 2005 & 2006.
[12] A negative average value of SAROE in contrast to the positive average SAROA is because of the presence of negative equity values for the 6 MFIs in the sample. Whereas all the MFIs in the sample have positive values for assets. A negative equity for an MFI indicates its inability to attract sufficient funding to grow at anything near an optimal rate and resultantly the accumulated deficits leads to negative equity (technical bankruptcy). Therefore once accounted for the subsidies the SAROE becomes –0.033% from the positive 0.145% ROE.

Table 2: Categorical Variables

Variables	Description
Region	Geographic region in which the MFI operates classified into 6 regions: Africa (*A*); East Asia and the Pacific (*EA&P*); Eastern Europe and Central Asia (*EE&CA*); Middle East and North Africa (*MENA*); Latin America and the Caribbean (*LAC*); South Asia (*SA*).
Lending Methodology	Lending methodology is classified into 4 categories: Individual (*I*); Individual & Solidarity/Group (*IS*); Group/Solidarity (*S*); Village banking (*V*).
Status	Classified into 5 categories: Nongovernmental organizations (*NGO*); Bank (*B*); Non-banking financial intermediaries (*NBFI*); Rural Bank (*RB*); Cooperatives (*Coop.*).
Other services	Whether MFI provides other services i.e. health, education etc in addition to providing financial services or not.
Saving	Whether saving (voluntary or Compulsory) is a feature of MFI or not.
Regulated	Whether MFI is regulated by some authority like central bank etc. or not.

* Data for all the categorical variables have been taken directly from the Mix market Website.

Table 3: Definitions of Categorical variables

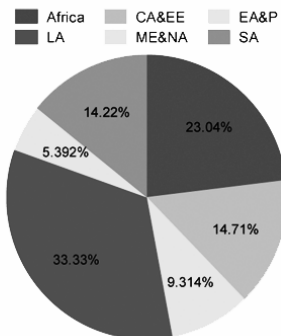| **Lending Methodology**	
Individual (*I*)	MFIs which give loans to individual borrowers.
Solidarity or Group (*S*)	MFIs which give loans to group of borrowers collectively.
Individual & Group both (*IS*)	MFIs which give loans to both individual borrowers and Group of borrowers.
Village Banking (*V*)	Village Banking methodology, developed by FINCA International, provides loan to informal self-help support group of 20-30 members, predominantly female heads-of-household.
Status of an MFI	
Non Governmental Organisation (*NGO*)	An organization registered as a non profit for tax purposes or some other legal charter. Its financial services are usually more restricted, and do not usually include deposit taking. These institutions are typically not regulated by a banking supervisory agency.
Bank (*B*)	A licensed financial intermediary regulated by a state banking supervisory agency. It may provide any of a number of financial services, including: deposit taking, lending, payment services, and money transfers.

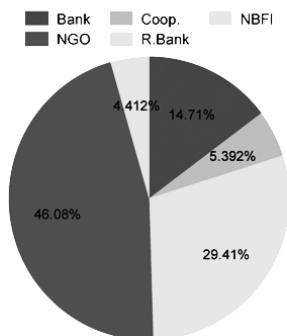| Non-Banking Financial Intermediaries (*NBFI*)	An institution that provides similar services to those of a Bank, but is licensed under a separate category. The separate license may be due to lower capital requirements, to limitations on financial service offerings, or to supervision under a different state agency. In some countries this corresponds to a special category created for microfinance institutions.
Rural Bank (*RB*)	Banking institution that targets clients who live and work in non-urban areas and who are generally involved in agricultural-related activities.
Cooperative (*Coop.*)	A non profit, member-based financial intermediary. It may offer a range of financial services, including lending and deposit taking, for the benefit of its members. While not regulated by a state banking supervisory agency, it may come under the supervision of regional or national cooperative council.
Regulated (*R*)	Regulations on MFI can be in the form of entry restriction and /or some prudential supervision by some authority. Mostly regulated MFIs are allowed to collect deposits and increase their loanable funds (Campion and White, 1999). In most countries, typical banking regulations do not cover microfinance activities. Currently, MFIs can operate as regulated or non-regulated or, in some countries, can choose between being regulated and being unregulated. Overall, MFIs can be subject to either mandatory entry regulation, prudential regulation, or some sort of entry regulation and consequent monitoring (tiered regulation) (Hartarska and Nadolnyak, 2007).
Saving	MFIs which collect savings (deposits). The data does not distinguish between compulsory savings and voluntary savings.
Other Services	MFIs which provide other services in addition to loans i.e. related to training, enterprise development, health, education, environment, agriculture etc.

Source: Mix Market Website.

Figure *1* depicts graphical display of the nature of the data used in this study. NGOs (46%) dominate the microfinance sector followed by the NBFIs (29%). MFIs with "Bank" status constitute only 16.29% of total sample. Almost half of the MFIs (48%) offer both group and individual lending services followed by MFIs which lend exclusively to the individuals (32%). Geographically one-third of MFIs are located in Latin America (33%) and almost one-fourth in Africa (23%). South Asian MFIs constitute only about 14% of the total MFIs in the sample. Majority of the MFIs in the sample are regulated (57%) and provide deposits/savings services (55%) to the clients. About 40% of the MFIs in the sample provide other services to the clients in addition to providing financial services. A complete list of the names of the 204 microfinance institutions in the sample is given at the end in *Appendix A*.
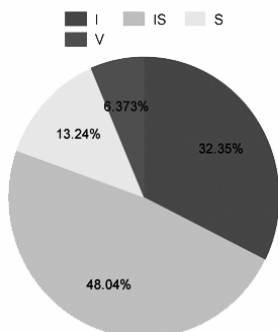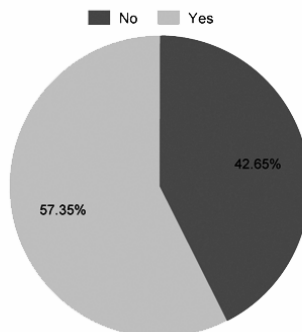
Fig. 1: Descriptive analysis of Data

REGION

Africa CA&EE EA&P
LA ME&NA SA

23.04%
14.71%
9.314%
33.33%
5.392%
14.22%

STATUS

Bank Coop. NBFI
NGO R.Bank

4.412%
14.71%
5.392%
29.41%
46.08%

LENDING METHODOLOGY

I IS S
V

6.373%
32.35%
48.04%
13.24%

REGULATED

No Yes

42.65%
57.35%

OTHER SERVICES

No Yes

40.2%
59.8%

SAVINGS

No Yes

44.61%
55.39%
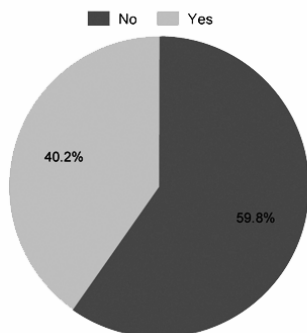
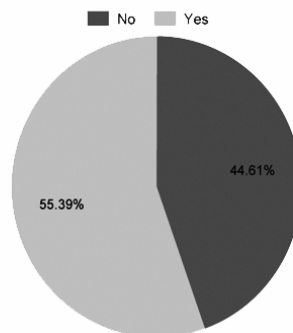*Source*: Information taken from the mix market website based on the sample of 204 MFIs.
* Individual (I); Individual & Solidarity (IS); Solidarity (S); Village Banking (V).

2.2 *The SDI Formula*

This paper calculates subsidies using Yaron's Subsidy Dependence Index[13] (SDI) (Yaron, 1992a and 1992b) which measures the social cost of subsidized MFIs. The SDI is a summary measure of sustainability. It is the ratio of subsidy received by a MFI to revenue from loans to the target group; it indicates whether a MFI could compensate society for the opportunity cost of public funds used in a short time frame and still show a profit.

The Formula for SDI is:

$$SDI = \frac{Subsdies}{revenues\ from\ lending} = \frac{[E \times m + A(m-c) + K - P}{(LP \times i)}$$

Where:

E = average annual equity;

m = Market Interest rate/Interest rate the MFI is assumed to pay for borrowed funds if access to concessional borrowed funds were eliminated.

A = Average annual outstanding concessionary-borrowed funds / Average public debt

c = interest rate paid on concessionary borrowed funds / Public debt

P = Reported annual profit / accounting profits

K = Other Subsidies i.e. Revenue Grant (RG) + Discount on Expenses (DX)

LP = Average annual outstanding loan portfolio of the MFI

i = lending interest rate / yield on lending

The SDI has a lower bound of –100 percent but no upper bound (Benjamin 1994). An SDI of zero means that an MFI has achieved full self-sustainability. An SDI of 100 percent indicates that a doubling of the prevailing average on-lending interest rate would be required to eliminate subsidies. A negative SDI indicates that an RFI has achieved full self-sustainability and that its annual profits exceeded the total annual value of any subsidies received by the MFI. Such an MFI could lower its average on-lending interest rate, eliminate all subsidies and remain self-sustainable.

In the above SDI formula, worth mentioning is what constitute subsidies and the choice of opportunity cost of MFIs concessional borrowings or the choice of Market interest rate.

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[13] To examine SDI calculations in past studies see for example Hulme and Mosley(1996); Schreiner (1997); Schreiner and Yaron (1999 and 2001); Jehangir (2005); Sharma (204); Congo (2002).

2.3 What Constitute Subsidies?[14]

These are subsidized/public funds from government or donors and come in six forms, as shown in Table 4 below. Three are equity grants that increase net worth but do not directly change the accounting profit reported in the year received. The other three are *profit grants* that do directly increase the accounting profit reported in the year received since they inflate revenues and/or deflate expenses. This increases retained earnings at year-end, and thus increases net worth. Compared with the case of no grant, all six forms of subsidized funds increase net worth one-for-one. All six forms have the same social opportunity cost. As in Yaron (1992b), dividends and taxes on profits are ignored for simplicity.

Table 4: Type of Subsidized Funds

TYPE	Notation	Type of grant
1. Direct Grant	DG	Equity Grant *(EG)*
2. Paid-up-capital	PC	
3. Revenue Grant	RG	
4. Discount on Public Debt	A.(m-c)	Profit Grant *(PG)*
5. Discount on Expenses	DX	
6. True Profit	TP	Equity Grant *(EG)*

Source: Schreiner and Yaron (1999)

2.3.1 Equity grants

The first two forms of subsidized funds are equity grants *EG*. These cash gifts increase net worth but do not change accounting profit directly. Equity grants are the sum of direct grants *DG* and paid-in capital *PC*:

$$\text{Equity grants} = \text{Direct grants} + \text{Paid in capital,}$$
$$EG = DG + PC$$

Direct grants *DG* are cash gifts. Direct grants increase net worth, but they do not pass through the income statement, and hence they do not inflate accounting profit. Direct grants include both gifts in cash and gifts in kind such as computers or trucks that are recorded in the accounts.

Paid-in capital *PC* comes from sales of shares to donors or government.

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[14] This section is primarily based on Schreiner and Yaron (1999).

Such a sale is like a direct grant since public funds pay for the shares. Furthermore, most public entities do not act like private owners. We assume that all paid-in capital comes from public sources.

2.3.2 Profit grants

Profit grants *PG* are the third through fifth forms of subsidized funds (see Table 4). Like all equity grants, all forms of profit grants increase net worth since they inflate accounting profit or reduce accounting loss and wind up in net worth through retained earnings at the end of the year. Profit grants distort accounting profit *P* and thus ROE since they depend on the arbitrary choices made in practice by administrators and accountants. Donors can and often do use profit grants to nudge accounting profit higher. In contrast, the SDI recognizes the economic fact that a dollar treated as a profit grant has the same effect on the business performance of a MFI as a dollar treated as an equity grant.

Profit grants are the sum of revenue grants *RG*, discounts on public debt *A. (m-c)*, and discounts on expenses *DX*:

Profit grants = Rev. grants + Discount public debt + Discount on expenses
$$PG = RG + A(m\text{-}c) + DX.$$

Revenue grants *RG* are cash gifts. They are just like equity grants except for the accounting choice to record them as revenue rather than as direct injections to equity. Revenue grants increase net worth, but only after they pass through the income statement and increase reported accounting profit. This is misleading since revenue grants are not the product of business operations.

Discounts on public debt *A×(m-c)* and discounts on expenses *DX* are the fourth and fifth forms of subsidized funds. They are non-cash gifts, expenses paid on behalf of the development finance institutions (DFIs) by someone else. Discounts increase the cash held by the DFI since they decrease the cash spent by the DFI.

The discount on public debt *A×(m-c)* is the opportunity cost of public debt less what the DFI paid, where *A* is average public debt, *c* is the rate paid by the DFI, and *m* is the opportunity cost of public debt for society:

Discount public debt = Average public debt (Opp. Cost of public debt - Rate paid)
$$= A×(m\text{-}c)$$

Discounts on public debt are subsidized funds that inflate profit and boost net worth since they cut expenses. Public debt is like private debt

linked to a grant of $A \times (m\text{-}c)$ (Inter-American Development Bank, 1994). Unlike the discount on public debt $A \times (m\text{-}c)$, public debt (A) itself does not increase net worth directly.

Discounts on expenses DX are costs absorbed by government or donors that the DFI does not record as expenses. Classic examples are technical assistance, free deposit insurance, coverage of organization costs or feasibility studies, debt guarantees, consultant services, classes for loan officers, and travel for employees. This paper assumes DX to be zero in all cases as MFIs do not categorically disclose it in their audit reports.

2.3.3 *True profit*

True profit TP, a non-cash equity grant, is the sixth form of subsidized funds (see Table 4). It is accounting profit (P) less profit grants:

$$\text{True profit} = \text{Accounting profit - Profit grants,}$$
$$TP = P - [RG + A\,(m\text{-}c) + DX]$$

All else being constant, true profit is the change in retained earnings that would be obtained in the absence of profit grants. Positive true profits are a benefit since society could withdraw them for use elsewhere. Negative true profits (true losses) are social costs.

2.4 Choice of Economic Opportunity cost of MFI Concessional funds (m)

There is always a controversy about the best possible alternative for the use of MFIs concessional funds. Most researchers[15] in this context have followed the rate what Yaron (1992a, 1992b, 1994, and *et. al* 1997) has prescribed from investor's point of view, where Finance Institution replaces public debt with deposits. He described it as the rate of interest on deposits[16] i.e. interest rate for treasury bills or, certificates of deposit with maturities of six months to one year. Or equivalently, the rate paid for time deposits by state-owned DFIs plus a mark-up for the expected cost of administration and reserve require-

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[15] Khandker, Khalily, and Khan, (1995) as Rate on three year Deposit (Bangladesh); Hashemi and Schuler (1997) as Transaction costs (3%) + Bangladesh Bank deposit rate (IMF); Morduch, (1999b) as Bangladesh Bank deposit rate(IMF) + 3% transaction costs; Sacay, Randhawa, and Agabin, 1996 as deposit rate; Yaron, Benjamin and Piprek (1997) as market deposit rate + administrative cost related to deposits and adjusted for cost of reserve requirements; Schreiner and Yaron (1999) as Deposit rate paid by MFI + 3% transaction costs.

[16] Benchmark market rate for local currency obligations is the average deposit rate (line 60l) from the International Monetary Fund, International Financial Statistics.

ments, commonly assumed to be about two to three percentage points but adjustable to the specific case. But scepticism abounds as only few MFIs take deposits. Even deposit taking MFIs replace some soft debt with market debt.

A point worth mentioning is that all the studies follow Yaron's (1992a&b) approach which assumes both the opportunity cost of Public debt and equity be the same. However Benjamin (1994) adds a premium for risk to the local prime rate for the opportunity cost of debt on the premise that MFIs equity are more riskier than the debt and they draw private funds from their own markets (Von Pischke, 1991; Mehra and Prescott, 1985; Modigliani and Miller, 1958). Schreiner (1999, 2003) also based his calculations of market interest rate[17] *(m)* on the same lines. Where the risk premium is:

Premium for risk = *premium for age + premium for profitability*
Where *Premium for age is:*
$$= (2/100/n)$$
Where *n = Number of years of operation of an MFI*
And, *Premium of profitability is*:

| If | *ROE* < 0 | then add 0.03 |
| | 0 < *ROE* < Prime rate | then add 0.02 |

While, the price of market equity is:
Price of Market Equity $(r) = m (1.1 + 0.1 L)$
Where Leverage (L) = average liabilities / average equity
Also the price of market equity is greater that the price of public debt i.e. $r > m$, as equity is more riskier than debt

Besides that some other studies[18] opted for the rate of inflation as a proxy for the opportunity cost of public fund. But, as suggested by Schreiner (1997), this would mean a real opportunity cost of zero, and that is too low. Another proxy used in the literature for the opportunity cost of public debt is "10%[19] in real terms" from poor or donors point of view. Most governments and donors such as the World Bank have used a rule of thumb of 10 or 12 percent per year in real terms. Nevertheless, no one knows about the true opportunity cost to the poor. It could be higher or lower, but 10 percent seems like a good rule of thumb. If this rate is too high, then it unjustly values people now and in the near future more than people in the distant future. In practice, the

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[17] 17% (Local prime rate + risk adjustment). Took lending rate (IFS) as local prime rate.
[18] (Rosenberg, Christen, and Helms, 1997; Holtmann and Mommartz, 1996; Christen *et al.*, 1995; SEEP, 1995; IADB, 1994).
[19] (Belli, 1996; Katz and Welch, 1993; Gittinger, 1982).

point is moot. MFOs now compete for public funds against all other projects funded by the budget earmarked to help the poor. To compare these projects, donors must use the same opportunity cost for all of them. This opportunity cost should be just high enough so the projects that pass a benefit-cost test exhaust all the funds earmarked to help the poor. The burden of proof for some other opportunity cost rests on the analyst (Gittinger, 1982).

The debate seems to be going on endlessly. According to Schreiner and Yaron (1999), the choice should meet four criteria. First, the number should be meaningful, that is, credibly close to the true opportunity cost. Second, all public-sector analyses should use the same opportunity cost because all public projects compete for public funds, and because comparisons across projects require the use of a uniform opportunity cost. Third, higher rates are preferred to lower rates, all else constant. This protects society from those who would use low rates to give a false sense of rigor to support their pet projects. Fourth, the rate chosen must be credible.

Based on the above discussion, this study uses the cost of private debt (local prime rate i.e. lending rate[20]) as an opportunity cost for MFIs concessional borrowings in calculating subsidy dependence index (SDI) on the premise that private debt replaces public debt. For few countries where reliable estimates of Lending rate are not available, 10% rate is used as a proxy.

For comparative analysis purpose, in addition to using market lending rate (*m*), this paper also calculates SDI using Benjamin (1994) formula by adding the risk premium to the lending rate as described above. The calculated SDI values using Benjamin formula have been presented at the end in *Appendix B*[21].

3. MICROFINANCE HORIZON

3.1 Subsidy Dependence Index (SDI)

Table *5* depicts the calculated SDI values for years 2005 & 2006 using the lending rate as the market interest rate. A detailed set of calculations for each MFI are available on request. SDI values for 25 MFIs for the year 2006 are missing due to the unavailability of their Audit Reports for year 2006. Out of the total 204 MFIs in year 2005, 153 MFIs are subsidy dependent while for year 2006, it is 122 out of total 179 MFIs. All the values taken from the respective MFI's

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[20] Taken from the International Financial Statistics (IFS) 2005 & 2006.
[21] The detailed calculations of SDI according to Benjamin (1994) formula for all MFIs are available upon request.

Table 5: Subsidy Dependence Index (SDI)

MFIs	2005	2006	MFIs	2005	2006
AFRICA			SEAP	-0.180	-0.305
CDS	0.161	0.109	SEF-ZAF	0.300	0.161
ACSI	-0.250	-0.388	ACEP	0.421	-
ADCSI	0.179	0.704	CMS	0.361	0.313
BG	0.809	0.026	PAMECAS	0.052	-0.103
DECSI	-0.074	-0.108	FINCA-TAN	0.065	-
OMO	0.484	-0.003	PRIDE	0.017	0.074
WISDOM	0.491	-0.061	CBANK	0.009	-0.074
NOVOBANCO	2.774	0.347	CML	0.024	0.189
ALIDE	1.169	0.588	FAULU	0.211	0.436
FECECAM	0.054	1.382	FINCA-UGA	0.047	0.125
PADME	0.287	4.565[22]	MEDNET	0.179	3.008
VF	0.205	0.254	UML	0.759	-
RCPB	-0.051	-0.094	CETZAM	2.342	0.830
ACEP-CAM	1.246	-	FINCA-ZAM	0.519	0.034
KSF	0.196	-	C. ASIA & E. EUROPE		
OI-SASL	0.189	-0.092	BESA	0.2403	0.010
PCRED GHA	-0.068	-0.028	PCRED-ALB	0.052	0.006
SAT	-0.013	0.053	Opportunity	0.285	0.059
EBS	-0.238	-0.320	ACBA	0.283	0.271
KADET	0.582	0.849	HORIZON	0.124	0.076
KREP	0.188	0.038	INECO	-0.028	0.068
KWFT	0.134	0.160	CRED-AGRO	0.687	0.000
MDSL	0.151	-1.914	ACCESS	0.461	0.404
SMEP	0.232	0.309	NORMICRO	0.183	0.290
FINCA-MAL	0.313	-	VIATOR	-0.121	0.082
KAN.JAGIMA	-0.380	-	EKI	0.146	-0.173
SORO-Y	0.952	1.506	MIKROFIN	-0.045	-0.354
FCC	1.46	0.180	PARTNER	0.091	-0.125
NOV.BANCO	0.377	-0.104	SUNRISE	0.021	-0.176
SOCREMO	0.350	0.193	C-FUND	0.216	0.309
TCHUMA	0.255	0.217	CONSTANTA	0.548	0.369
LAPO	0.012	-0.072	CREDO	0.728	0.426

[22] A high SDI value here signifies large negative profit due to the sharp decline in revenues from the lending operations.

MFIs	2005	2006	MFIs	2005	2006
LAZIKA	0.850	0.346	BNACO-L-A	0.311	0.124
KMF	-0.098	-0.097	CRECER	0.039	-0.028
AIYL-BANK	0.937	0.886	ECO-FUTURO	0.118	0.013
BTFF	1.164	0.554	FADES	0.547	0.249
FMCC	0.508	-0.004	FIE	0.218	0.099
CRED. MONGOL	0.457	0.407	FONCRESOL	0.359	-
KHAN-BANK	0.052	-0.063	FUNBODEM	0.416	0.172
FORUS	0.095	0.332	PRODEM	0.157	0.012
AGROINVEST	0.258	0.125	PROMUJAR	0.407	0.241
BANK ESKHATA	0.0075	0.272	CMM-BOG	0.122	0.096
FMFB-TAJ	1.509	0.815	FINAMERICA	0.121	0.170
IMON	0.824	0.301	FMM-BUCA	-0.174	-0.183
MICROINVEST	0.237	0.261	FMM-POP	-0.135	0.047
E. ASIA & PACIFIC			WMM-MED	0.212	0.023
ACLEDA	0.099	0.066	WWB-CA	0.020	0.075
AMRET	0.132	0.070	CREDIMUJER	0.623	0.292
SATHAPNA	0.194	0.383	FUNDECOCA	0.826	-
HKL	0.242	0.086	ADEMI	0.170	-
PRASAC	0.347	0.301	BANCO-SOL	0.003	0.156
MBK-VENTU	0.384	0.211	COAC-JARDIN	0.122	0.118
ASHI	0.331	0.082	COAC-S-JOSE	0.045	0.147
BCB	-0.272	-0.196	COAC-SAC	0.137	0.140
BANGKO-KA	-0.113	-0.157	D-MIRO	-0.075	-0.278
CBMO	-0.227	-0.253	FINCA-ECU	-0.611	-0.275
DIGOS	-0.010	-0.099	FODEMI	-0.055	-0.091
GREEN	-0.003	-	FUNDACION-ES	-0.315	-0.423
IST-VALLEY	0.1982	-0.234	PROCRED-ECU	0.055	-0.001
NWFT	0.0767	-0.013	AMC-DE-RL	0.164	0.401
SOLANO	-0.241	-0.269	FUNDACION	0.242	0.469
TSPI	-0.050	-0.070	FAFIDESS	-0.117	-
SPBD	0.503	0.371	FUNDACION-M	0.794	-
CEP	-0.070	-0.117	FUNDEA	0.219	-
TYM	-0.110	-0.010	GENESIS-EM	0.131	0.155
AGROCAPITAL	0.615	0.265	ACME	0.188	0.261
LATIN AMERICA			FINCA-HON	0.194	0.124
BANCOSOL	0.114	0.000	HDH	0.240	0.890

MFIs	2005	2006	MFIs	2005	2006
WORLD-REL	0.122	0.098	AL-AMANA	-0.008	0.012
ACODEP	-0.113	-0.154	AL-KARAMA	-0.110	0.011
FAMA	-0.218	-	FONDEP	-0.022	-0.330
FDL	-0.176	-0.051	INMAA	-0.004	-0.090
BANEX	0.006	-0.037	ZAKOURA	-0.037	0.061
FJN	-0.149	-	ENDA	-0.044	-0.320
FUNDENUSE	-0.482	-	SOUTH ASIA		
PROCRED-NIC	0.031	0.116	ARMP	0.653	0.182
PRODESA	-0.282	-0.311	BRAC-AFG	1.200	0.646
FIELCO	0.049	0.091	FMFB-AFG	1.034	0.077
INTERFISA	0.128	0.002	ASA	-0.286	-0.226
BANTRA	0.053	0.158	BRAC-BAN	1.035	0.859
CAJA-NOR	0.030	0.087	B-TANGAIL	-0.136	-0.023
CARITAS	0.646	0.438	DESHA	0.045	-
CMAC-ARQ	-0.084	-0.073	IDF	-0.071	-0.059
CMAC-CUS	-0.082	-	RDRS	1.195	1.287
CMAC-MAY	0.078	0.070	SHAKTI	0.179	-0.008
CMAC-TAC	0.056	0.138	TMSS	0.753	0.591
CMAC-TRU	0.033	0.018	BANDHAN	0.095	-0.215
EDPY.-C-T	0.196	0.370	BASIX	0.119	0.088
EDPY.-COF.	0.256	0.631	CASHPOOR	0.746	0.386
EDPY.EDYF	0.230	0.436	ESAF	0.243	-0.083
FINCA-PER	0.269	0.380	GK	0.130	-0.059
FONDESURCO	0.264	0.519	IASC	0.088	-
IDESI-LL	0.022	-	KBSLAB	0.462	0.478
MIBANCO	-0.089	0.034	MAHASEMAN	-0.100	-
MOVIM.-M-R	0.114	0.222	SHARE-MF	-0.116	0.158
PROMUJER	0.256	0.167	SNFL	0.639	0.531
MCHL	0.490	-	CBB	0.296	-0.029
BANGENTE	0.664	0.351	NIRDHAN	0.250	0.265
ME & NA			NSSC	0.105	-
AL-TADAMUN	0.975	-0.720	PGBB	0.533	-
DBACD	0.242	0.025	VYCCU	-0.182	-
LEAD	1.330	-0.470	ASASAH	0.211	1.015
Tamweelcom	-0.062	-0.040	FMBL	2.125	0.514
MFW	-0.125	0.010	KASHF	0.036	0.045

Audit reports have been converted into the USD using exchange rates provided by The Mix Market website. The interpretation of SDI values is straight forward. Take the value of year 2005 of 1st MFI "CDS" in Table 5 for example. The positive value of 0.161 means that CDS is subsidy dependent as it distorts public wealth. It has to raise the average yield obtained on average annual loan portfolio by 16.1% in order to become subsidy free. CDS is actually charging 19.3% interest rate on loans to borrowers. This suggests that CDS, in order to be subsidy free should charge 22.41% interest rate to borrowers on loans. On the other hand the 2nd MFI "ACSI" in 1st column has a negative value of –0.250 for year 2005 which shows that it is subsidy-free and thus creating public wealth. This suggests that it can reduce the average yield obtained on average annual loan portfolio by 25% and still remains subsidy-free. MFI "ACSI" actually charges 8.6% interest rate on loans to the borrowers. A 25% reduction in average yield suggests that it can reduce interest rate to 6.45% and still remain subsidy-free[23].

Yaron et al. (1997) pin down four factors critical in eliminating subsidy dependence as adequate on-lending rates, high rates of loan collection, savings mobilization, and control of administrative costs. Calculating SDI for two consecutive years enables us to track down the movement and causes of subsidization of each MFI.

Table 6: Subsidy-free MFIs in 2006 (subsidy-dependents in 2005)

MFIs	Contributing factors
OMO	Profits increased by almost 4 times. Revenues from lending almost doubled.
WISDOM	Profits increased by more than 6 times. Revenues from lending more than doubled.
OI-SASL	Profits increased by almost 29 times.
MDSL	Profits increased by almost 18 times. Interest cost to loanable funds significantly decreased.
NOVO BANCO	Profits were negative in 2005. In year 2006 it has positive profits. Market lending rate decreased.
LAPO	No revenue grants for year 2006. In 2005, it was 467677 USD as operating grant. Market lending rate also decreased.

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[23] For ACSI, the factors leading to charging low interest rate and still remain subsidy free are huge profits mainly because of: income from investments; donations as revenue grants and tax exemption. Further the market interest rate is also low for Ethipia which leads to lower average public debt.

PAMECAS	Profits increased by more than double. Interest income increased too.
Centenary Bank	No concessional loans. Increased profits due to investment income by taking deposits and interest income.
EKI	Profits increased by 3 times last year. Market lending rate decreased in year 2006.
PARTNER	Profits increased by 3 times last year. Market lending rate decreased in year 2006.
SUNRISE	Profits doubled last year. Market lending rate decreased, making borrowing cheap.
FMCC	Profits more than tripled due to increase in investment income.
KHAN BANK	Profits more than doubled. Interest income from loans and investment both increased. Market lending rate decreased for year 2006.
1st VALLEY	Interest paid for borrowing was greater than market rate for 2006. Profit increased due to increased interest income and investment. Revenue grants also eliminated.
NWFT	Interest paid for borrowing was greater than market rate for 2006. Revenue grants eliminated.
CRECER	Market lending rate fell significantly in 2006 to 11% from 17% in 2005.
AL TADAMUN	Revenue grants decreased significantly. While interest income from lending increased.
LEAD	Revenue grants decreased. Interest income from loans increased sharply.
SHAKTI	Profits increased. Discount on borrowing also decreased in 2006.
BANDHAN	Profits in 2006 increased sharply.
ESAF	Revenue grants decreased. While revenue from lending increased significantly.
GK	Revenue grants decreased. While revenue from lending increased significantly.
CBB	Profit tripled.

Source: Author´s own calculation based on the Audit Reports of respective MFIs

Table 6 lists those MFIs which have enhanced their financial sustainability and become subsidy free in year 2006, but were previously subsidy dependent in year 2005. The contributing factors to this increase in financial sustainability are also listed for respective MFIs with the most important one as the increase in the overall profits. This increase in profits is mainly attributed to an increase in the revenues from lending and investments, a decrease in the market lending rate thus making borrowing cheaper and to do away with grants.

Similarly Table 7 lists those MFIs which have become worse in terms of financial sustainability by becoming subsidy dependent in year 2006, but were previously subsidy-free in year 2005. The contributing factors relevant to this decline in the financial sustainability (or become subsidy dependent) are also listed for the respective MFIs. The main contributing factors to this decline in sustainability are decrease in the profits due to an increase in the administrative costs and also increase in the cost of loanable funds (borrowing).

Table 7: Subsidy-dependent MFIs in 2006 (subsidy-free in 2005)

MFIs	Contributing factors
SAT	Profits decreased to half in 2006.
INECO	Borrowing more than doubled which doubled the discount on borrowings. Increases in revenues from lending and investment did not offset that.
VIATOR	Discount on borrowing more than doubled due to decrease in actual cost of borrowing. Profit also decreased.
FMM POP	Profits decreased.
MIBANCO	Market lending rate increased by 30%.
MFW	Profit fell sharply due to increase in costs (Administrative and interest).
AL AMANA	Borrowing increased almost 4 times.
AL KARAMA	Revenue grants increased 4 times.
ZAKOURA	Actual cost of borrowing decreased.
SHARE MF	Profits decreased by almost 6 times the previous year mainly due to decrease in interest income from loans.

Source: Author´s own calculation based on the Audit Reports of respective MFIs

Table *8* shows a comparison of MFIs by calculating SDI using the Benjamin (1994) formula, taking into account the risk premium in the market lending rate as described in the previous section with SDI values by taking market lending rate as a proxy for opportunity cost to society. Out of 204 MFIs in year 2005, now 179 MFIs become subsidy dependent as compared to the 153 MFIs (only market lending rate i.e. no risk premium) while for year 2006, it is 155 out of total 178 MFIs compared to 122 MFIs (no risk premium). This shows that using Benjamin (1994) formula by adding risk premium to the market interest rate, the number of subsidy free MFIs reduce to 25 from 51 and to 24 from 55 for years 2005 and 2006 respectively.

Table 8: Opportunity cost of public debt comparison (No. of MFIs)

	Year 2005		Year 2006	
	SDI (Lending rate)	SDI (Benjamin, 1994)	SDI (Lending rate)	SDI (Benjamin, 1994)
	No risk premium	with risk premium	No risk premium	with risk premium
Subsidy Dependent	153	179	122	155
Subsidy Free	51	25	57	24
Total	204	204	179	179

Source: Author´s own calculation based on the Audit Reports of MFIs and Microfinance Information eXange Inc.

The correlation matrix in Table *9* shows the strength of the relationship among the variables used to calculate SDI in this study. It is interesting to look at the relationship between some variables. SDI has significant positive relationship with accounting profit, public debt and nominal and real subsidy-free yield. On the other hand, it has a significant negative relationship with nominal and subsidy-adjusted ROA, real subsidy-free yield and true profits.

3.2 Composition of SDI

Figure *2* depicts the SDI composition using the lending rate as a proxy for market interest rate.

MFIs located in Africa and South Asia are more subsidy dependent on average than those of other regions. Latin American (LA) MFIs, which constitute one-third of the sample, are far less subsidized. MFIs with status of Banks and NGOs are more subsidy dependent on average than the others. Rural Banks[24] are the exception, as they are on average subsidy free. Notwithstanding the lending methodology, MFIs with solidarity (group) lending methodology are more subsidy dependent, while, MFIs which lend to individuals are on average relatively less subsidy dependent. This is because lending to relatively poor clients via group lending features requires higher transaction costs, which demands more subsidized credit. Lending to relatively well off individual clients requires less subsidised credit. Moreover, MFIs providing other services (eg education and health etc.) in addition to finacial serivices are on average more subsidy dependent. It is also evident that regulated MFIs are more subsidy denpendent on average than unregulated ones. Those MFIs with savings features are, on average, slightly more subsidy dependent.

[24] All the rural banks exist in Philippines and comprised of only 4% of the whole sample.

Table 9: Correlations

	Asset	Equity	Debt Int	Debt Dis.	Debt	Grant	Profit	Subsidy	Loan	Revnue	SDI yield	Change	NSFY	R-SFY Profit	True	ROA	SAROA	ROE	SAROE
Asset	1.00																		
Equity	0.798*	1.00																	
Debt	0.738*	0.535*	1.00																
Debt Int.	-0.076	-0.031	-0.011	1.00															
DebtDisc.	0.661*	0.436*	0.765*	-0.094	1.00														
Grant	0.476*	0.628*	0.298*	0.015	0.193*	1.00													
Profit	0.750*	0.727*	0.531*	-0.022	0.504*	0.461*	1.00												
Subsidy	0.537*	0.662*	0.383*	-0.002	0.378*	0.897*	0.292*	1.00											
Loan	0.015	0.020	0.006	-0.010	0.013	0.008	0.012	0.015	1.00										
Revenue	0.008	0.016	-0.000	-0.009	0.011	0.007	0.010	0.014	0.999*	1.00									
SDI	0.044	0.057	0.155*	-0.084	0.099	0.070	-0.054	0.138*	-0.013	-0.018	1.00								
chayield	-0.080	-0.024	-0.095	-0.120*	-0.020	0.095	-0.129*	0.156*	-0.022	-0.021	0.455*	1.00							
nomsfy	-0.139*	-0.075	-0.174*	0.085	-0.059	0.063	-0.120*	0.099	-0.012	-0.008	0.272*	0.849*	1.00						
realsfy	-0.123*	-0.071	-0.161*	0.066	-0.035	0.055	-0.108*	0.095	-0.000	0.003	0.257*	0.808*	0.974*	1.00					
trueprof	-0.186*	-0.255*	-0.169*	-0.003	-0.164*	-0.789*	0.097	-0.885*	-0.005	-0.005	-0.146*	-0.198*	-0.144*	-0.136*	1.00				
ROA	-0.077	0.001	-0.062	0.049	-0.045	0.025	0.132*	-0.086	0.001	0.002	-0.269*	-0.476*	-0.290*	-0.306*	0.110*	1.00			
SAROA	0.007	0.025	-0.014	0.157*	-0.072	-0.100*	0.135*	-0.185*	0.005	0.005	-0.412*	-0.823*	-0.654*	-0.653*	0.248*	0.694*	1.00		
ROE	0.001	0.013	0.026	0.000	0.021	0.003	0.074	-0.031	-0.001	-0.001	0.055	0.166*	0.115*	0.108*	0.051	-0.217*	-0.232*	1.00	
SAROE	0.014	0.029	0.021	0.040	-0.005	-0.000	0.076	-0.037	0.002	0.002	0.022	0.107*	0.061	0.056	0.065	-0.197*	-0.136*	0.892*	1.00

Source: Author's own calculation based on the Audit Reports of MFIs and Microfinance Information eXange Inc.

* Refers to significant at 5% level of confidence.

Fig. 2: Compositions of Subsidy Dependence Index (SDI)
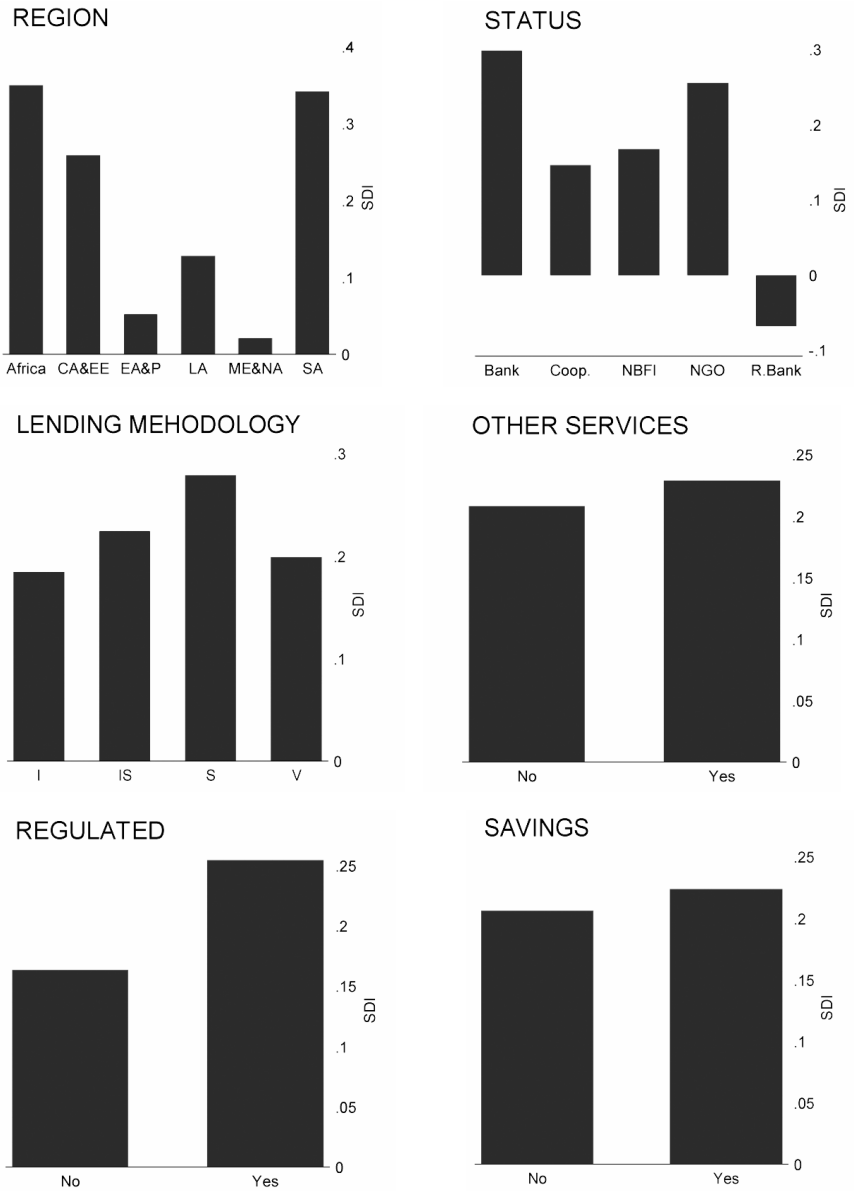
Source: Based on authors own calculation from the data taken from audit reports of 204 MFIs.

4. WITH AND WITHOUT SUBSIDY COMPARISONS

The financial performance of an MFI as depicted by its inflated financial ratios looks very rosy in the presence of subsidies. Therefore, a counterfactual question: "What would have been MFIs performance had there been no subsidies?" is worthy of investigation. This essay attempts to answer that question notwithstanding a comparison between the traditional benchmark measures of financial performance of nominal values of the Return on Equity (ROE) and Assets (ROA) with their subsidy-adjusted values.

4.1 Return on Equity[25] (ROE) Vs Subsidy adjusted Return on Equity (SAROE)

ROE is the single most common accounting measure of the financial performance of a private firm from the point of view of investors. It signals the rate of return earned on the invested equity and allows investors and donors to determine how their investment in a particular MFI compares against alternative investments. The ratio assumes importance as increasing numbers of MFIs seek private funds. A subsidy adjusted ROE would compare not accounting profit but rather true profit with average Equity. Hence a negative SDI implies an SAROE higher than the social opportunity cost m and vice versa.

Fig. *3* depicts a comparison between the average Return on Equity (ROE) figures and after adjusting for the subsidy (SAROE). The average values of Subsidy adjusted ROE are well below their nominal values for all the categories. African MFIs have negative ROE value on average, which becomes worse when adjusted for subsidy. South Asian MFIs suffer the most as the difference between the nominal and subsidy adjusted ROE is highest for them, while the decrease in the performance of Latin American MFIs seems less relative to the MFIs in other region. Notwithstanding the status of MFIs, Cooperatives are the worst performers having both negative nominal and subsidy adjusted values. However, NGOs seem to suffer most relatively to the others on average, as their performance decline sharply once accounted for subsidies. NBFIs too have negative ROE once adjusted for the subsidies. Further the decrease in financial performance is particularly resounding for MFIs which are solidarity and village lending methodologies, other service providers, not regulated and for those with no saving features.

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[25] Albeit it is not a good measure of the financial performance of subsidized MFIs since it depends on the form accountants and donors give to subsidized funds (Schreiner and Yaron, 1999).

Fig. 3: Return on Equity (ROE) & Subsidy Adjusted Return on Equity (SAROE)
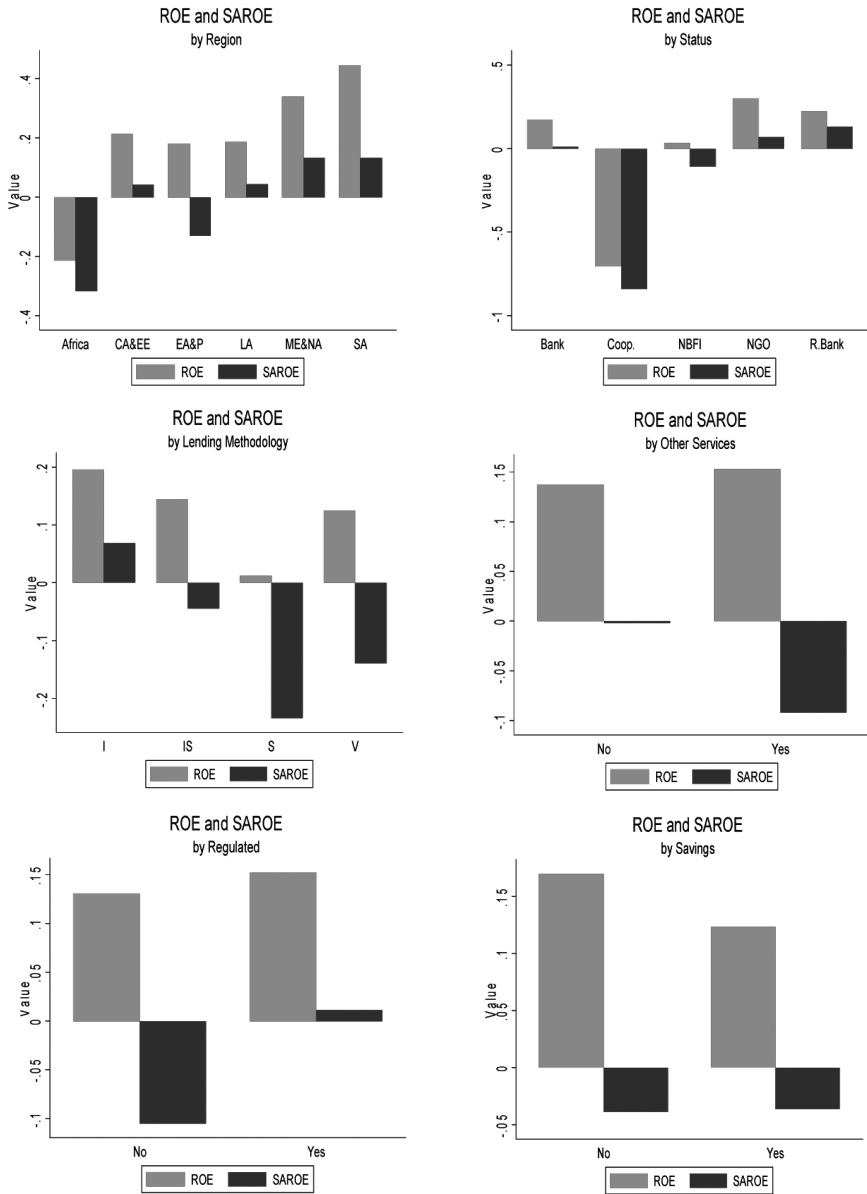
Source: Based on authors own calculation from the data taken from audit reports of 204 MFIs.

Fig. 4: Return on Asset (ROA) & Subsidy Adjusted Return on Asset (SAROA)
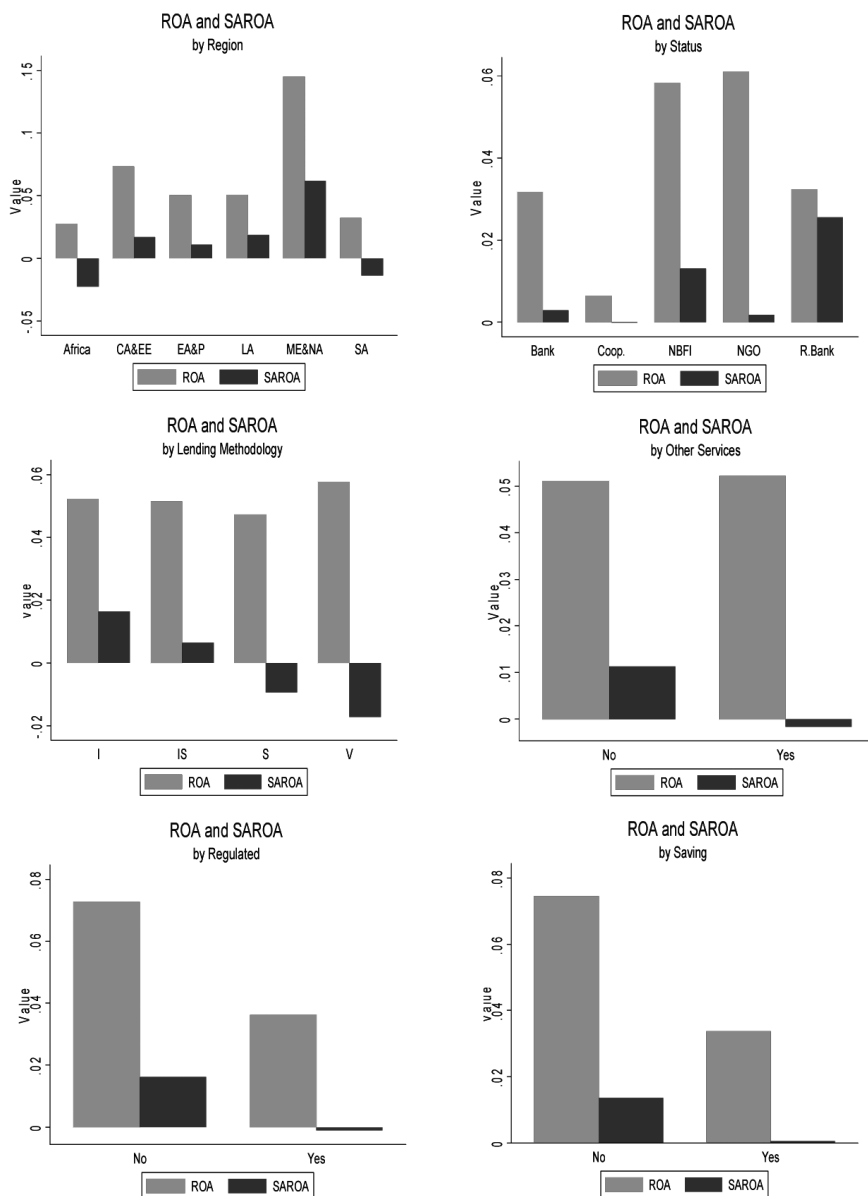
Source: Based on authors own calculation from the data taken from audit reports of 204 MFIs.

4.2 Return on Asset (ROA) Vs Subsidy adjusted Return on Asset (SAROA)

The return on assets (ROA) depicts how well an MFI has used its asset base to generate income. It measures the return on funds (total assets, which includes both liabilities and equity) that are owned by the MFI. While SAROA takes into account only true profits like SAROE. Fig. *4* shows that when average nominal value of ROA is adjusted for subsidies, the subsidy adjusted ROA value decreases substantially for all the categories. This raises some noteworthy points. For African and South Asian MFIs on average, the returns turn from positive to negative once subsidies are adjusted for. In fact these are the two most impoverished regions, with the highest number of poverty stricken people. They therefore get more subsidized funds than any other region, which are mainly directed towards the social uplift of the poor. Therefore, their financial performance declines substantially without subsidies. On the other hand, the decline in the performance for MFIs in Latin American region is less significant compared to others due to the fact that most of them are deposit-taking, commercially oriented institutions. MFIshaving NGOs status have the largest drop in the performance, followed by MFIs with NBFI and bank status. NGOs are non-profit institutions heavily rely on subsidized funds to carry out their social mission. Evidently their financial performance decline once subsidies are stripped off. Notwithstanding the lending methodology, MFIs with Solidarity and Village banking Methodology have the highest drop in performance and their average returns turn positive to negative. Whereas, MFIs which lend to the individual borrowers, seem relatively less affected because their borrowers consists of mainly less poor clients. Moreover MFIs providing other services, those which are not regulated and those without saving features also have large substantial drop in their performance compared to their respective counterparts.

4.3 Actual yield (AY) Vs Subsidy Free Yield (SFY)

Fig. *5* shows the difference between the average Actual Yield *(AY)* and the average Nominal Subsidy-free Yield *(NSFY)*. Actual Yield is what the nominal yield or the interest rate on lending is, while Subsidy free yield is what yield or interest rate ought to be if all the subsidies are stripped away. In line with the previous analysis of returns, for all the categories, the average value of the subsidy-free yield is more than the actual yield, thus showing overall subsidy dependence of MFIs. Notwithstanding the regions, MFIs located in SA and Africa have to increase the interest rates on lending more than MFIs in other regions to account for subsidies. Further, MFIs which are NGOs and those with village banking methodology have to raise interest rates on aver-

Fig. 5: Actual Yield (AY) Vs Nominal Subsidy-free Yield (NSFY)
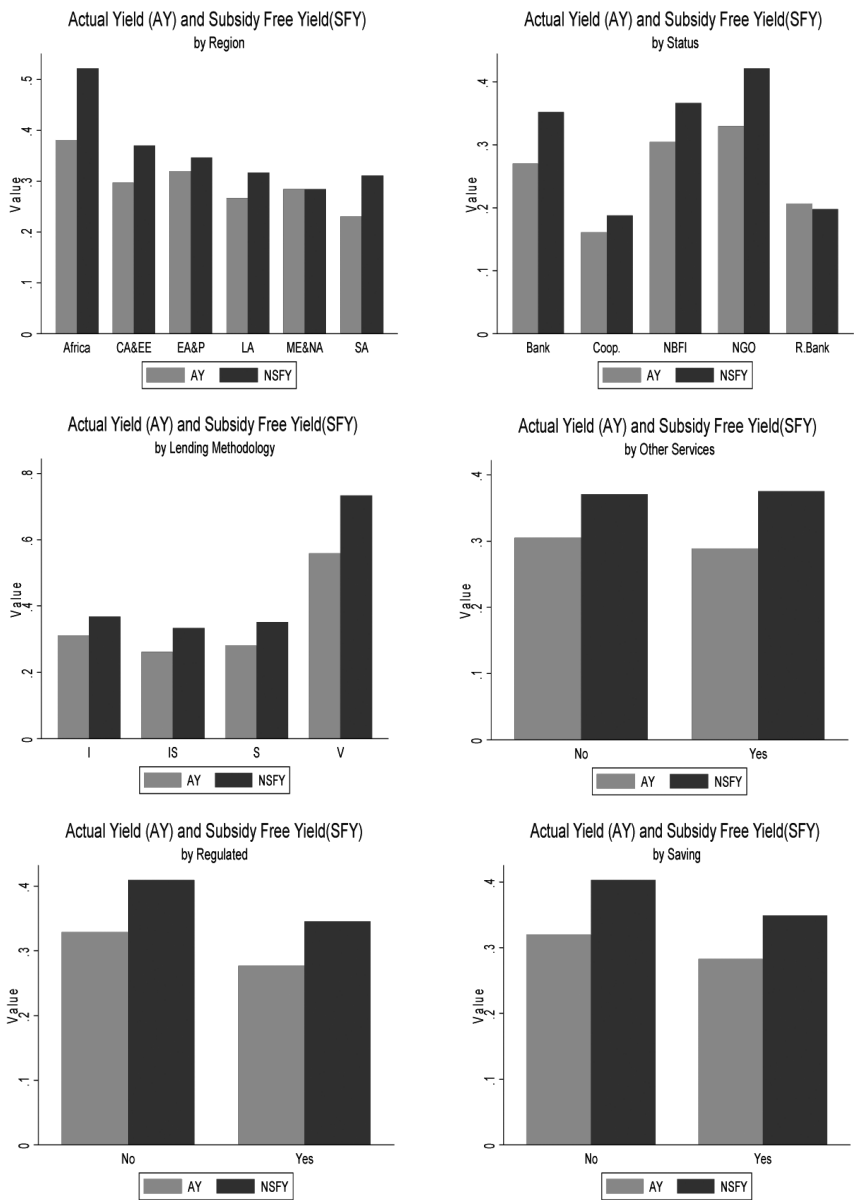
age more than the others in the absence of subsidies. Moreover, MFIs providing other services have to raise interest rates more than those MFIs which provide no other services in the absence of subsidies. Interestingly, MFIs which collect deposits and savings need not increase interest rates as much as those MFIs with no savings feature once subsidies are stripped off because of the extra income they generate by taking deposits.

5. CONCLUSIONS

The aim of this essay is to understand the role of subsidies in the sustainability of the microfinance sector. Towards this aim, Yaron's Subsidy Dependence Index (SDI) has been calculated which measures the social cost of the subsidization of microfinance sector to the society. This quality financial information has been obtained directly from the audit reports of the 204 MFIs with 23 million borrowers in 54 Countries worldwide for the years 2005 and 2006. This constitutes a significant part of the microfinance outreach worldwide. Nevertheless, the study has its limitations. The debate over the true social discount rate is far from settled, and rests more on the researcher's discretion. As shown in this paper, using another discount rate can significantly change the results of the subsidy dependence index. Moreover, judging MFIs' performance from a purely financial aspect would not do it justice; an analysis of social impact should be included in the overall performance. However, in the context of presenting a broader picture of the financial sustainability of Microfinance Sector, this cross-country study is revealing in many aspects.

On the whole, the analysis suggests that Microfinance sector is highly subsidized. Using market lending rate as a discount rate in SDI calculations, out of the 204 MFIs in year 2005, 153 MFIs are subsidy dependent while for year 2006, the figure is 122 out of a total of 179 MFIs. This study also shows the SDI´s sensitivity to changes in the discount rate: where the overall subsidization increases further once a risk premium has been added to the market lending rate in SDI calculations. Based on the subsidy calculations, this essay also highlights the factors which are instrumental in causing substantial change (positive and negative) in the subsidy dependence index. Results depict that MFIs located in Africa and South Asia are more subsidy dependent on average than other regions, while Latin American (LA) MFIs are less subsidized. MFIs with status of "Banks" and "NGOs" are more subsidy dependent on average than the others. The analysis further reveals that MFIs with solidarity (group) lending methodology are more subsidy dependent while MFIs which lend to individuals are on average relatively less subsidy dependent. More-

over MFIs providing other services (e.g. education and health etc.) in addition to financial services are on average more subsidy dependent. Our results are in line with the on-the-ground reality. Majority of MFIs in South Asia and Africa follow group lending methodology, and lend to the poor in general and to women in particular. Consequently they require more subsidized funds than their counterparts in Latin America, who predominantly lend to less poor individuals. By ccomparing the averages of the nominal financial ratios of return on assets (ROA) and return on equity (ROE) with their subsidy-adjusted ratios, this paper also highlights the inadequacy of the conventional financial ratios in measuring the financial performance of microfinance institutions by not taking into account the subsidies. And the results show that when adjusted for subsidies, the financial performance of MFIs decline substantially.

What are the policy implications of these findings and are there any wider lessons to be learned for the stakeholders in microfinance? We suggest four. First, for governments and donors, a measurement of social cost of subsidization will help them take informed policy decisions in making the best use of public funds earmarked for the poor. Second, for microfinance practitioners in general, and the practitioners for sample MFIs in this study in particular, the essay not only puts a price tag on their institution in terms of its cost to society, but also pins down the important factors which contribute towards financial sustainability by reducing subsidy dependence. Third, for social investors, it serves as a guide in evaluating their investment in projects which increase the public wealth of the society at large. And finally for microfinance clients, it provides some awareness of the importance of transparent prices in microfinance, particularly for those clients to whom MFIs charge exorbitant interest rates.

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APPENDIX A

MICROFINANCE INSTITUTIONS

PAKISTAN
KASHF - *Kashf Foundation*
FMFB - *First Microfinance Bank Ltd. Pakistan*
ASASAH - *Asasah*

NEPAL
NSSC - *Neighbourhood Society Service Centre*
VYCCU - *VYCCU Saving & Credit Cooperative Society Ltd.*
NIRDHAN - *Nirdhan Utthan Bank Ltd.*
PGBB - *Western Region Grameen Bikas Bank*
CBB - *Chhimek Bikas Bank Ltd.*

INDIA
BANDHAN - *Bandhan (Society and NBFC)*
BASIX - *Bhartiya Samruddhi Finance Limited*
SHARE - *SHARE Microfin Ltd.*
MAHASEMAN - *Mahasemam-SMILE*
CASHPOR - *Cashpor Microcredit*
IASC - *Indian Association for Savings and Credit*
KBSLAB - *Krishna Bhima Samruddhi Local Area Bank Limited*
ESAF - *Evangelical Social Action Forum*
SNF - *Sarvodaya Nano Finance Limited*
GK- *Grameen Koota*

BANGLADESH
BURO - *BURO Bangladesh*
DESHA - *DESHA*
ASA - *ASA*
BRAC - *Bangladesh Rural Advancement Committee*
RDRS - *RDRS Bangladesh*
Shakti - *Shakti Foundation for Disadvantaged Women*
TMSS - *Thengamara Mohila Sabuj Sangha*
IDF - *Integrated Development Foundation*

AFGHANISTAN
FMFB - *The First MicroFinanceBank – Afghanistan*
BRAC - *BRAC Afghanistan*
ARMP - *Afghanistan Rural Microcredit Programme*

AFRICA
KENYA
K-REPK - *Rep Bank*

EBS - *Equity Bank*
KADET - *Kenya Agency to Development of Enterprise and Technology*
KWFT - *Kenya Women Finance Trust*
MDSL - *Microenterprise Development Services Ltd*
SMEP - *Small and Micro Enterprise Project*

BURKINA FASO
RCPB - *Réseau des caisses populaires du Burkina*

SENEGAL
PAMECAS - *Programme d'Appui aux Mutuelles d'Épargne et de Crédit au Sénégal*
ACEP - *Alliance de Credit et d'Epargne pour la Production*
CMS

MALI
SORO Y - *Soro Yiriwaso*
KANDO JAGIM - *Kondo Jigima*

CAMEROON
ACEP - *Agence de Crédit pour l'Entreprise Privée Cameroun*
CDS - *Crédit du Sahel*

GHANA
FONCRESOL - *foncresol*
FUNBODEM - *Fundación Boliviana para el Desarrollo de la Mujer*
BancoSol - *BancoSol*
Eco Futuro - *Eco Futuro Fondo Financiero Privado*

HONDOROUS
HdH OPDF - *Fundación Microfinanciera Hermandad de Honduras OPDF*
World Relief - *World Relief Honduras*
FINCA - *FINCA Honduras*

TIRINIDAD & TOBBAGO
MCHL - *Microfin Caribbean Holdings Limited*

VENEZEULA
BANGENTE *Banco De La Gente Emprendedora*

PERU
CMAC Tacna - *Caja Municipal de Ahorro y Crédito de Tacna*
MIBANCO - *MiBanco*
BANTRA - *Banco del Trabajo*
CMAC Maynas - *Caja Municipal de Ahorro y Crédito de Maynas*
EDPYME Confianza - *EDPYME Confianza*
IDESI La Libertad - *Instituto de Desarrollo del Sector Informal para La Libertad*
FONDESURCO - *Fondo de Desarrollo Regional*
EDPYME EDYFICAR - *EDPYME Edyficar S.A.*
Caritas - *Caritas del Perú*
CMAC Cusco - *Caja Municipal de Ahorro Crédito de Cusco*
ProMujer - *Pro Mujer in Peru*
CMAC Arequipa - *Caja Municipal de Ahorro y Crédito de Arequipa*
FINCA - *FINCA Peru*
CMAC Trujillo - *Caja Municipal de Ahorro y Crédito de Trujillo*
CRAC Caja Nor - *Caja Nor Perú*
CMAC Tacna - *Caja Municipal de Ahorro y Crédito de Tacna*
Movimiento M R - *Movimiento Manuela Ramos*

ECUADOR
BANCOSOL -
COAC Sac Aiet - *Cooperativa de Ahorro y Crédito Sac Aiet*
D-miro - *D-miro*
FODEMI - *Fondo de Desarrollo Microempresarial*
ProCredit - *Banco ProCredit Ecuador*
ECLOF - *Ecumenical Church Loan Fund - Ecuador*
COAC San José - *Cooperativa de Ahorro y Crédito - San José*
Fundación Espoir - *Fundación Espoir*
FINCA - *FINCA ECU*
COAC Jardín Azuayo - *Cooperativa de Ahorro y Crédito Jardín Azuayo*

COSTA RICA
CREDIMUJER - *CREDIMUJER*
FUNDECOCA - *Fundación Unión y Desarrollo de Comunidades Campesinas*

COLOMBIA
FMM Popayán - *Fundación Mundo Mujer Popayán*

Finamerica - *Financiera América*
WWB - Medellín - *Women's World Banking – Medellín*
WWB-CALI -
CMM Bogotá - *Corporación Mundial de la Mujer*
CREDIT MONGOL - *Credit Mongol*

TAJIKSTAN
FMFB - *The First MicroFinanceBank - Tajikistan*
BANK ESHKTA - *Bank Eskhata*
FMM Bucaramanga - *Fundación Mundial de la Mujer Bucaramanga*
MICROINVEST - *Microloan Fund MicroInvest*
AGROINVEST - *OJSC Agroinvestbank*

RUSSIA
FORUS - *FORUS Bank*

KYRGYSTAN
AIYL BANK - *Aiyl Bank*
FMCC - *FINCA MicroCredit Company*
BTFF - *Bai Tushum*

ARMENIA
INECO - *INECO Bank*
ACBA - *ACBA-CREDIT AGRICOLE BANK CJSC*
HORIZON - *'Nor Horizon' UCO LLC*

AZERBAIJAN
CRED AGRO - *CredAgro Non-Banking Credit Institution*
ACCESS - *Access bank*
NORMICO - *Norwegian Microcredit LLC*
VIATOR - *Viator Microcredit Azerbaijan LLC*

BOSNIA & HEZGOVENIA
MIKROFIN - *MIKROFIN Banja Luka*
PARTNER - *Partner*
SUNRISE - *Microcredit Organization Sunrise*
EKI - *EKI*

KAZAKHSTAN
KMF - *"KazMicroFinance" LLC (formerly KLF)*

GEORGIA
CREDO - *VF Credo Foundation*
LAZKA Capital - *formerly SBDF*

CRYSTAL FUND - *JSC MFO Crystal formerly Crystal Fund*
CONSTANTA - *Constanta Bank*

MIDDLE EAST & EAST AFRICA
EGYPT
DBACD - *Dakahlya Businessmen's Association for Community Development*
LEAD - *Lead Foundation*
AL TADAMUN - *Al Tadamun*

JORDAN
TAMWEELCOM - *formerly JMCC*
MFW - *Microfund for Women*

MORROCO
AL AMANA - *Association Al Amana for the Promotion of Micro-Enterprises Morocco*
FONDEP - *FONDEP Micro-Crédit*
ZAKOURA - *Fondation Zakoura*
INMMA - *Institution Marocaine d'Appui a la Micro-entreprise*
AL KARAMA - *Association Al Karama de Micro Credit*

TUNISIA
ENDA - *enda inter-arabe*
PROCREDIT - *ProCredit SLC Ghana*
Fundación CAMPO - *Fundación CAMPO*
AMC de R.L. - *Sociedad Cooperativa de Ahorro y Crédito R.L.*
KSF - *Kraban Support Foundation*
OISL - *Opportunity International Savings and Loans Limited*
SAT - *Sinapi Aba Trust*

BENIN
ALIDE - *Association de Lutte pour la promotion des Initiatives de Développement*
VF - *Vital Finance*
PADME - *Association pour la Promotion et l'Appui au Développement de Micro Entreprises*
FACECAM - *Fédération des caisses d'épargne et de crédit agricole mutuel*

ANGOLA
NovoBanco - *NovoBanco Angola*

ETHIOPIA
DECSI - *Dedebit Credit and Savings Institution*
ADCSI - *Addis Credit & Savings Institution*
ACSI - *Amhara Credit and Savings Institution*
WISDOM - *Wisdom*
OMO - *Omo Microfinance Institution*
BG - *Buusaa Gonofaa*

TANZANIA
PRIDE - *PRIDE Tanzania*
FINCA - *FINCA Tanzania*

UGANDA
CML - *Commercial Microfinance Limited*
FAULA - *Faulu Uganda*
MED-*Net - Micro Enterprise Development Network*
FINCA - *Finca Uganda*
UML - *Uganda Microfinance Limited*
CENTENARY - *Centenary Rural Development Bank Ltd.*

MALAWI
FINCA - *FINCA Malawi*

MOZAMBIQUE
SOCREMO - *Banco de Microfinanças de Moçambique*
FCC - *Fundo de Credito Comunitario*
Tchuma - *Tchuma Cooperativa de Crédito e Poupança*
NovoBanco - *NovoBanco Mozambique*

NIGERIA
LAPO - *Lift Above Poverty Organisation*
SEAP - *Self-Reliance Economic Advancement Programme*

SOUTH AFRICA
SEF-ZAF - *Small Enterprise Foundation South Africa*

ZAMBIA
CETZAM - *CETZAM Opportunity*
FINCA - *FINCA Zambia*

LATIN AMERICA
BOLIVIA
ProMujer - *Pro Mujer in Bolivia*
CRECER - *Crédito con Educación Rural*
PRODEM - *Fondo Financiero Privado PRODEM*

FIE - *Financiero Privado paral Fomentoa Iniciativas Economicas*
ProCredit - *Banco Los Andes ProCredit*
FADES - *Fundación para Alternativas de Desarrollo*
AgroCapital - *Fundación AgroCapital*
Colombia - *Bogotá*

EL SALVADOR
saeca
FIELCO - *Financiera El Comercio*

HAITI
ACME - *Association Pour la Cooperation avec la Micro Enterprise*

DOMINICAN REPUBLIC
Banco ADEMI - *Banco ADEMI*

NICRAGUA
FUNDENUSE- *Fundación para el Desarrollo de Nueva Segovia*
PRODESA - *Fundacion Para La Promocion y el Desarrollo*
FAMA - *Financiera FAMA*
ACODEP - *Asociación de Consultores para el Desarrollo de la Pequeña. Mediana y Microempresa*
FJN - *Fundación José Nieborowski*
FDL - *Fondo de Desarrollo Local*
ProCredit - *Banco ProCredit Nicaragua*
BANEX (Ex FINDESA) - *Banco del Éxito. ex FINDESA*

PARAGUAY
Interfisa - *grupo internacional de finanzas interfisa financiera*
IMON - *LLC Microlending organization"IMON NTERNATIONAL"*

GAUTEMALA
FAFIDESS - *Fundación de Asesoría Financiera a Instituciones de Desarrollo y Servicio Social*
FUNDEA - *Fundación para el Desarrollo Empresarial y Agrícola*
Génesis Empresarial - *Fundación Génesis Empresarial*

Fundación MICROS - *Fundación para el Desarrollo de la Microempresa*

EAST ASIA & PACIFIC
COMBODIA
PRASAC - *PRASAC MFI Ltd.*
AMRET - *AMRET Co., Ltd.*
SATHAPANA - *SATHAPANA LIMITED*
HKL - *Hattha Kaksekar Ltd.*
ACLED - *AACLEDA Bank Plc.*

SAMAO
SPBD - *South Pacific Business Development*

PHILIPINES
GREEN - *Rural Green Bank of Caraga, Inc.*
BCB - *Bukidnon Cooperative Bank*
ASHI - *Ahon Sa Hirap, Inc.*
TSPI - *TSPI Development Corporation*
NWFT - *Negros Women for Tomorrow Foundation, Inc.*
Ist VALLEY - *1st Valley Bank*
CBMO - *Cooperative Bank of Misamis Oriental, Inc.*
DIGOS - *Rural Bank of Digos, Inc.*
SOLANO - *Rural Bank of Solano, Inc.*
BANK KA - *Bangko Kabayan (Ibaan Rural Bank, Inc.)*

VIETNAM
TYM - *TYM FUND*
CEP - *Capital Aid Fund for Employment of the Poor*

INDONESIA
MBK VENTU - *PT Mitra Bisnis Keluarga Ventura*

CENTRAL ASIA & EASTERN EUROPE
ALBANIA
BESA - *BESA Fund*
PROCREDIT - *ProCredit Bank Albania*
PHSM - *Opportunity Albania(formerly PSHM)*

MONGOLIA
KHAN BANK - *Khan Bank (Agricultural Bank of Mongolia LLP)*

APPENDIX B
SDI Calculations (Benjamin Formula)

MFI	SDI 2005	SDI 2006	MFI	SDI 2005	SDI 2006
ASIA			KWFT	0.241	0.250
KASHF	0.184	0.114	MDSL	0.150	-1.857
FMBL	2.985	0.844	SMEP	0.412	0.467
ASASAH	0.226	1.037	RCPB	0.100	0.038
NSSC	0.254	-	Pamecas	0.194	0.038
VYCCU	-0.104	-	ACEP	0.594	-
NIRDHAN	0.339	0.313	CMS	0.560	0.520
PGBB	0.775	-	Soro Y	1.176	2.029
CBB	0.443	0.086	K. Jagima	-0.403	0.179
BANDHAN	0.183	-0.146	ACEP	1.658	-
BASIX	0.298	0.221	CDS	0.441	0.430
SHARE MF	-0.037	0.392	ProCredit	-0.024	0.017
Mahaseman	-0.003	-	KSF	0.347	-
Cashpoor	1.045	0.396	Opportunity	0.318	-0.019
IASC	0.338	-	Sat	0.051	0.134
KBSLAB	0.683	0.704	Alide	1.24	0.666
ESAF	0.306	-0.013	VF	0.405	0.427
SNFL	1.037	0.930	PADME	0.481	5.834
GK	0.200	-0.007	FECECAM	0.185	1.443
B TANGAIL	-0.044	0.072	NovoBanco	3.344	1.387
DESHA	0.121	-	DECSI	-0.101	0.003
ASA	-0.190	0.538	ADCSI	0.596	1.267
BRAC	1.225	0.999	ACSI	-0238	-0.329
RDRS	1.580	1.623	WISDOM	0.773	0.097
SHAKTI	0.372	0.092	OMO	0.565	0.119
TMSS	0.900	0.681	BG	1.072	0.194
IDF	0.019	0.038	PRIDE	0.078	0.154
FMFB	1.335	0.189	FINCA	0.122	-
BRAC	1.274	0.804	CML	0.121	0.370
ARMP	0.873	0.250	FAULU	0.322	0.622
AFRICA			MEDNET	0.317	2.988
K-REP	0.372	0.193	FINCA	0.111	0.190
EBS	-0.015	-0.153	UML	1.039	-
Kadet	0.653	0.915	Centenary	0.211	0.112

	SDI				SDI	
MFI	2005	2006	MFI	2005	2006	
FINCA	0.388	-	Fondesurco	0.673	0.698	
SOCREMO	0.323	0.300	EDPY.Edyf	0.667	0.559	
FCC	1.555	0.296	Caritas	1.054	0.505	
TCHUMA	0.275	0.334	CMAC Cus	0.112	-	
N BANCO	0.428	-0.033	CMAC Tac	0.312	0.293	
LAPO	0.068	0.017	Caja Nor	0.236	0.228	
SEAP	-0.124	-0.215	FINCA	0.399	0.490	
SEF-ZAF	0.368	0.214	Movim. M R	0.192	0.298	
CETZAM	2.526	1.064	Promujer	0.498	0.273	
FINCA	0.568	0.148	CMAC Arq	0.047	0.043	
LATIN AMERICA			CMAC Tru	0.278	0.150	
ProMujar	0.564	0.382	Interfisa	0.295	0.128	
CRECER	0.114	0.055	FIELCO	0.106	0.152	
PRODEM	0.284	0.115	FUNDENUSE	-0.407	-	
FIE	0.358	0.217	Prodesa	-0.148	-0.212	
Bnaco L A	0.501	0.210	FAMA	0.088	-	
FADES	0.754	0.324	ACODEP	-0.074	-0.111	
Agrocapital	0.841	0.461	FJN	0.028	-	
Foncresol	0.596	-	FINDESA	0.068	0.009	
FunBodem	0.613	0.288	FDL	0.012	0.059	
BANCOSOL	0.260	0.118	ProCredit	0.112	0.246	
Eco Futuro	0.250	0.103	Fafidess	-0.008	-	
Fundacion C	0.467	0.725	Fundea	0.384	-	
AMC de RL	0.280	0.221	Genesis Em	0.267	0.294	
ACME	0.302	0.386	Fundacion M	1.176	-	
HDH	0.413	1.151	Banco Sol	0.167	0.406	
World Rel	0.243	0.215	COAC SAC	0.273	0.289	
Finca	0.284	0.216	PROcredit	0.251	0.083	
MCHL	0.720	-	Coac S Jose	0.189	0.321	
BanGente	0.965	0.591	Fundacion E	-0.205	-0.316	
Edpy. C Tac	0.644	0.532	D-Miro	0.117	-0.063	
MiBanco	0.092	0.143	COAC Jardin	0.264	0.274	
Bantra	0.219	0.269	FODEMI	0.116	0.075	
CMAC May	0.303	0.181	Finca	-0.544	-0.081	
Edpy. Cofian	0.767	0.848	Fundecoca	1.137	-	
IDESI LL	0.271	-	CrediMujer	0.813	0.408	

	SDI				SDI	
MFI	2005	2006	MFI	2005	2006
FMM Pop	-0.013	0.173	MicroInvest	0.383	0.420
Finamerica	0.254	0.312	Agroinvest	0.470	0.337
CMM Bog	0.252	0.229	IMON	1.308	0.378
FMM Buca	-0.149	-0.160	FORUS	0.237	0.519
WWB Ca	0.144	0.203	AIYL Bank	1.270	1.210
WMM Med	0.385	0.150	FMCC	0.256	0.044
ADEMI	0.273	-	BTFF	1.591	0.778
E.ASIA & PACIFIC			INECO	0.175	0.271
PRASAC	2.636	1.879	ACBA	0.548	0.504
AMRET	1.066	0.789	HORIZON	0.189	0.146
SATHA	0.954	1.194	C AGRO	0.916	0.000
HKL	1.479	0.860	ACCESS	0.683	0.621
ACLEDA	1.165	1.113	NORMICR	0.302	0.434
SPBD	-3.255	-2.785	Viator	-0.028	0.172
GREEN	0.611	-	MIKROFIN	0.105	-0.284
BCB	0.359	0.343	PARTNER	0.226	-0.071
ASHI	2.565	1.971	SUNRISE	0.117	-0.137
TSPI	0.784	0.664	EKI	0.221	-0.124
NWFT	0.706	0.562	KMF	-0.054	-0.046
Ist Valley	1.937	0.447	CREDO	0.881	0.597
CBMO	1.280	1.288	LAZIKA	1.038	0.503
DIGOS	0.844	0.681	C FUND	0.312	0.447
SOLANO	1.474	1.926	Constanta	0.685	0.581
Bangko Ka	1.523	1.254	M. EAST & N. AFRICA		
TYM	2.671	2.927	DBACD	0.492	0.175
CEP	2.247	2.180	LEAD	1.497	-0.341
MBK Ventu	0.644	0.373	Al Tadamun	2.044	0.411
C. ASIA & E. EUROPE			Tamwelcom	0.033	0.052
BESA	0.363	0.108	MFW	-0.093	0.082
ProCredit	0.245	0.215	AL AMANA	0.091	0.097
PSHM	0.504	0.144	Fondep	0.078	-0.295
Khan Bank	0.202	0.038	Zakoura	0.046	0.171
CredMongol	0.639	0.569	Inmaa	0.029	-0.056
FMFB	2.129	1.186	Al Karama	-0.043	0.087
Bank Eskhata	0.247	0.555	Enda	0.096	-0.23

Source: Author own calculations based on the Balance sheets of 204 MFIs for year 2005 & 2006

Résumé

Les institutions de microfinance (IMF) luttent pour la viabilité financière mais égale-
ment l'émancipation des pauvres. Cet aspect social des IMF est financé principale-
ment par les subventions. Cette étude évalue la viabilité de la microfinance en em-
ployant l'indice de dépendance aux subventions (SDI - Subsidy Dependence Index)
proposé par Yaron, qui permet de mesurer le coût social des IMF subventionnées.
Grâce à une base de données provenant de rapports d'audit de 204 IMF servant 23
millions d'emprunteurs dans 54 pays, les résultats montrent que le secteur de la mi-
crofinance est hautement subventionné. De plus, une fois ces subventions déduites,
on observe un déclin considérable des performances financières des IMF. Enfin, ce
papier met également en exergue les facteurs qui contribuent et nuisent à la viabilité
du secteur.