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IMPACT MEASUREMENT IN MICROFINANCE: IS THE MEASUREMENT OF THE SOCIAL RETURN ON INVESTMENT AN INNOVATION IN MICROFINANCE?[1]

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What indicators can be used to measure the impact[2] of microfinance? Microcredit and its umbrella term microfinance significantly increased their popularity over the last years. Though some negative issues especially with respect to overindebtedness and high interest rates are discussed as well, microfinance is seen as an effective and innovative measure for alleviating poverty. But what is the outcome of microfinance? Does it really alleviate poverty? Does it outplay other measures of development aid? Which impact is most important (Hermes, Lensink, 2007b)?

This paper describes concepts and studies that intend to measure the impact of microfinance. We will describe and exemplarily use methods of outreach measurement on the basis of mixmarket.org data. Outreach measurement is used in many studies on the impact of microfinance. In addition to this we will describe social cost-benefit analysis and we will introduce and discuss the social return on investment (SROI) concept as an alternative

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2. In this paper we use the term impact measurement to describe the measurement of the impact of microfinance on their clients, i.e. their borrowers. Impacts in these cases can be social or economically.

concept for measuring the impact of microfinance. The concepts will be applied to an imaginary microfinance institution, MicroImpact, to test whether and how they are applicable and what advantages and drawback of the concepts are. Let us start with a short description of microfinance and microcredit and its intended impacts. We will use the term microfinance for a group of products and services such as micro-loans, microcredit, or micro-savings. Microcredit is used as a synonym for micro-loans.

THE IMPACTS OF MICROFINANCE AND MICROCREDIT

Before the creation of Microfinance Institutions (MFI), bank loans were unavailable for poor people, and money lenders exploited many of the underbanked (da Silva, 2007) especially in developing countries. Today, microfinance facilitates financial inclusion and linkage (Ashta, 2009; Karmakar, 2008) and expands financing channels for vulnerable groups such as the members of the base of the pyramid. Hence microfinance can be called economic innovation that has the goal to fight poverty (Jonker, 2009).

In addition to pure financial support, microfinance spreads the idea of democracy and human rights, and aims to improve women's social status (Chaudhry, Nosheen, 2009; da Silva, 2007; Montgomery, Weiss, 2011). In terms of quality of life, MFIs care about the health and education of the borrowers' families as well. For instance, Montgomery and Weiss (2011) found a relation between being a microfinance borrower and better medical treatment, nutrition and education for the borrowers' families. DeLoach and Lamanna (2011) demonstrated positive effects on the health of children of microloan borrowers as well and explained this effect with social and financial capital, economic growth and the ability of smooth consumption. All these examples and analyses demonstrate that microfinance is able to create an impact that exceeds pure financial support.

Some studies state that the availability of financial capital for SMMEs is often a major success factor that should be measured through impact analysis. Therefore Hartarska and Nadolnyak (2008) analyzed whether the microfinance industry in a certain region improved the local credit markets and found positive results. In contrast, some studies suggest that capital is not the predominant problem for the poor and that knowledge, leadership, product prices, and risks are major hurdles for conducting a successful business. Additionally financing of SMMEs can cause a need of additional labor, which often is child labor. In this case microfinance does not support schooling but prevents children from attending school (Maldonado, González-Vega,

2008). Therefore, microfinance institutions should collaborate with economic development projects to educate their clients and to facilitate economic development (Song, Xue, Zhong, 2010).

TYPES OF MICROFINANCE INSTITUTIONS

To date we find two main types of microfinance institutions: those that follow the poverty alleviation approach and those following the financial systems approach. Traditional financial institutions focus on profit maximization. In contrast, microfinance enables financial institutions to think about human capabilities, their creativity, and the potential to serve society (Yunus, Weber, 2007). Therefore a large group of microfinance institutions, for instance 39% of the institutions listed on mixmarket.org, are NGOs (see also Gutiérrez-Nieto, Serrano-Cinca, Mar Molinero, 2007). Others are listed as banks or credit-unions. Enabling the poor to be professional, productive and profitable, and providing microloans to help people establish self-sustaining businesses seem to be in the focus of many MFIs.

Traditionally microfinance is seen as a poverty reduction tool, which grants loans to different segments of the poor (da Silva, 2007). But it should be used to alleviate social problems and provide the poor with financial assistance to help them improve their quality of life as well (Yunus, Weber, 2007). A number of institutions that focus on poverty alleviation are dependent on donor subsidies to manage the high costs of lending. The costs are caused because of the approach to provide small loans to as many borrowers as possible. Hence, often traditional microfinance institutions following the poverty alleviation approach are often dependent on donor monies. Therefore, until to date, investments in microfinance were mainly done because of philanthropically motives (J.P. Morgan, 2010). However, recently microfinance has been spotlighted as an investment that creates financial returns as well. Thus in-line with other base-of-the-pyramid business strategies (Karnani, 2007) conventional investors see microfinance as an investment opportunity as well. Following this approach some microfinance institutions like the Indian SKS Microfinance or the Mexican Compartamos are already listed on stock exchanges in order to attract investors. Those and similar institutions follow the financial systems approach (Hermes, Lensink, 2007a; Robinson, 2001). This approach is striving to serve as many poor people as possible as well. Additionally it emphasises the financial sustainability of microfinance that goes along with commercial viability and institutional growth in order to avoid donor reliance and to be attractive for investors that want to support the growth of microfinance.

OUTREACH MEASUREMENT

Because of the strong link to the conventional financial sector, some worry that the financial systems approach will depart from its social mission and only focus on financial returns. In contrast proponents of the financial systems approach argue that a large-scale and long-term outreach to the poor can only be guaranteed by financially sustainable institutions that have access to capital. Therefore, many outreach studies focus on the question whether the financial systems approach changes the outreach of microfinance. Usually they compare the number and the size of loans and the group of borrowers receiving the loans. If smaller loans are provided to borrowers at the base of the pyramid, a greater outreach is assumed.

Often the assumption is tested whether microfinance institutions that follow the financial systems approach tend to provide larger and fewer loans to decrease administrative costs. However, using this methodological approach, a number of scholars such as (Hishigsuren, 2007; Mersland, Strøm, 2010; Morduch, 1999; Yaron, 1992b) could not find differences in the outreach or social performance between microfinance institutions that follow the different approaches. Other studies found that those that follow the financial systems approach tend to grant less but higher loans to less poor borrowers in order to decrease costs (Cull, Demirgueç-Kunt, Morduch, 2007). However, Hermes and Lensink (2007b) generally criticize the validity of common outreach measures because they are often not comparable. A solution for this problem could be the use of multi-criteria measurements that include both financial and social criteria (Bartual Sanfeliu, Cervelló Royo, & Moya Clemente, in press). Criteria could be used such as the housing index, monthly household income per capita, caste, geographical and sectorial distribution of loans, or quality and scope of outreach (Aubert, de Janvry, Sadoulet, 2009).

SOCIAL COST-BENEFIT ANALYSIS

Originally social cost-benefit analysis is used to evaluate projects with regard to their social or profitability (Stewart, 1975). Often shadow prices are used to measure the value of social costs and benefit. While in general project management social cost-benefit analysis focuses on both social cost and benefit, in microfinance it is usually used to analyze the social benefit compared to the financial costs for creating the benefit. Microfinance, as well as other means to alleviate poverty, has to demonstrate its efficiency and a positive cost-benefit relation (Bhatt, Tang, 2001). The social cost-benefit approach

defines efficiency as the cost-benefit ratio of microfinance compared with other available poverty interventions such as publicly financed development aid (van de Walle, 1997). This analysis has to take the donor subsidies that many microfinance institutions receive into consideration. In addition to his administrative costs, the costs of capital or cost of defaults have to be taken into consideration on the cost side of the analysis. Benefits of microfinance could be increased income for borrowers, better educations, better health, empowerment and other social benefits. Using social cost-benefit analysis Gutiérrez-Nieto *et al.* (2007) found significant differences in the efficiency of microfinance institutions. They found that those declaring themselves as NGOs were more efficient than for-profit institutions because they saved costs through voluntary work.

A method to measure the cost-benefit of microfinance taking subsidies into account was developed by Yaron (1992a). He claims that a microfinance institution achieves self- sustainability when the return on equity equals or exceeds the opportunity costs of funds. Given that many microfinance institutions depend on donor subsidies an indicator for the cost benefit calculation according to Yaron could be the increase in the average interest rate that is required to eliminate the subsidies while keeping the return on equity equally.

In contrast to Yaron, Mordoch (2000) argues that as long as funding is available and as long as benefits of microfinance outweigh its costs, measuring benefits without taking subsidies into consideration is not an option. In his opinion subsidized programs eventually have a higher outreach than financially sustainable programs and thus cannot just be compared by cost-benefits analyses. However, a cost-benefit analysis conducted by Khandker (1998) compared different microfinance institutions and other poverty alleviation programmes in Bangladesh and found cost-benefit differences between both, microfinance and other development initiatives and different microfinance institutions. His results show the complexity of the measurement as, for example, some microfinance institutions offer training and education programs in addition to their loans while others do not. Therefore, similar benefits are created with different costs. Furthermore it seems that the ability to avoid loan defaults is one of the most important issues in order to deliver a good cost-benefit ratio (Burgess, Pande, 2005). Therefore Sadik (1978) stated that especially the "benefit" part of the cost-benefit analysis is relatively uncertain and is often regarded as much more certain than it is.

Duvendack, Palmer and Jones (2012) criticize such results because they do not consider the effect of unobservables, such as entrepreneurial skills, organisational abilities, or the willingness to take risks that could have a major influence on the success of SMMEs financed by microfinance. As van

der Walle (1997) proposes, social cost-benefit of microfinance should be compared with the benefit of other development aids. But how can the effect of development aids be measured and how can it be attributed to different means like microfinance or development programs? Therefore comparing social cost-benefit of microfinance with the goals of other development aids is often problematic. Certainly it is usable to analyze the efficiency of a microfinance institution or of specific products like microcredit. The open questions, though, is, whether the results of such analyses are comparable between different organizations. Clearly they are usable to analyze and to improve the efficiency inside a microfinance institution.

In the following we will use outreach measurement and social cost-benefit analysis for microfinance institutions that can be found on mixmarket.org in an exemplary way in order to find whether these methods can help finding differences between different types of microfinance institutions.

METHOD AND SAMPLE

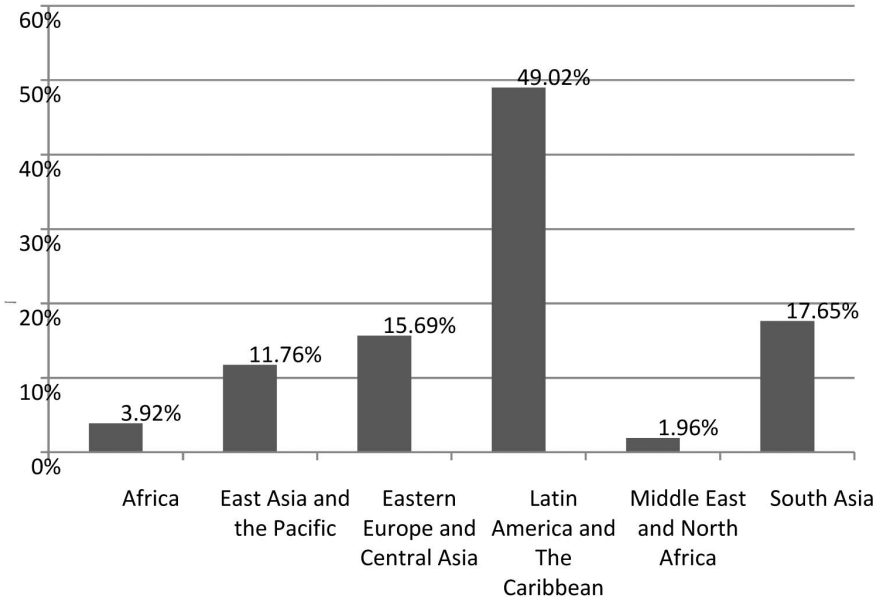
We used data from mixmarket.org, a global web-based microfinance information platform. Mixmarket.org contains data of about 2000 microfinance institutions globally (Microfinance Information Exchange, 2012). Microfinance institutions, networks, and service providers deliver data to mixmarket.org. Analysts validate the data and report errors back to the source. Using the validated data, the analysts create a standardized data set for every microfinance institution and integrate it into the database. A standardized evaluation algorithm analyzes the data again. In case of inconsistencies the analysts check the data and return it. After this step the data is integrated into mixmarket.org that is available for end users. Mixmarket.org contains financial and operational data as well as social performance data. In addition it provides data on funding structures and products of microfinance institutions. To analyze the mission of microfinance institutions we checked the 50 biggest institutions with respect to their gross loan portfolio in 2010. They comprise for 72% of the total gross loan sum of all listed microfinance institutions in 2010.

REGIONAL DISTRIBUTION OF THE SAMPLE

We analyzed all the missions that are presented by the microfinance institutions in the database and grouped them into categories. The categories were constructed using a grounded theory approach (Corbin, Strauss, 1990;

Glaser, 1967) starting with collecting the missions of the microfinance institutions and grouping them into categories. The biggest microfinance institution globally in 2010 was Postal Savings Bank of China that provided $ 14 billion in total loans. Following are Vietnam Bank for Social Policies (VBSP) in Vietnam and Bank Rakyat Indonesia (BRI) in Indonesia with total loans of $ 4.6 billion and $ 3.6 billion respectively. The average of total loans for the top 50 institutions was $ 996 million. The regional distribution of the top 50 microfinance institutions is presented in Figure 1. Nearly 50% of the microfinance institutions are located in Latin America and the Caribbean followed by South Asia, Eastern Europe and Central Asia.

Figure 1 – Regional distribution of microfinance institutions in the sample

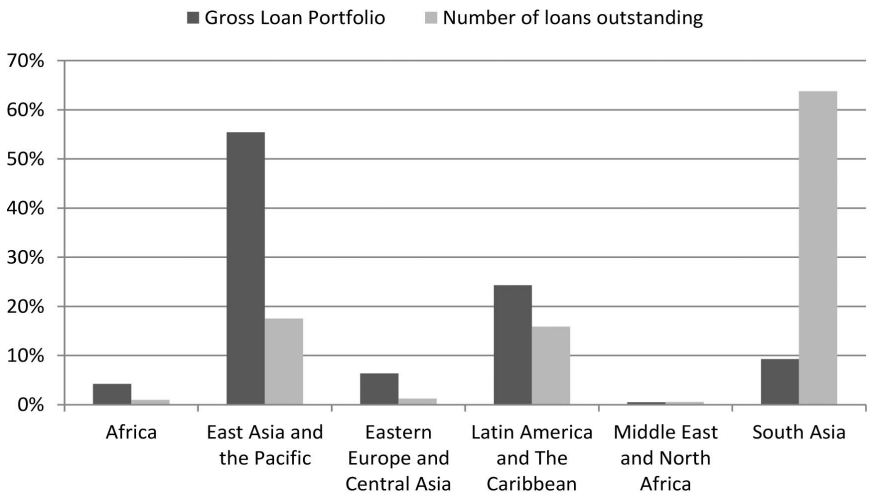


GROSS LOAN PORTFOLIO

With respect to the gross loan portfolio we see a different pattern than for the number of microfinance institutions. Because of the large Chinese microfinance institutions 55% of the gross loan portfolio is located in East Asia and the Pacific followed by 24.3% in Latin America and the Caribbean. 9.3% are located in South Asia, 6.6% in Eastern Europe and Central Asia, 4.2% in Africa and 0.5% in the Middle East and North Africa.

A comparison between regional gross loan portfolios and the number of loans outstanding is presented in Figure 2. It shows that in East Asia and the Pacific, Eastern Europe and Central Asia, Africa and Latin America and the Caribbean the percentage of the gross loan portfolio is higher than the number of loans outstanding while it is the opposite way in South Asia. This suggests that in South Asia more but smaller loans are granted compared to other regions. Following the literature described above microfinance institutions that provide smaller but more loans are more likely to follow the poverty alleviation approach connected with a non-profit status of the microfinance institutions. In order to test whether microfinance in South Asia is rather based on a non-profit concept than in other regions we used a Chi^2-test (Siegel, Castellan Jr., 1987). This test analyzes whether categories, such as for-profit and non-profit, are distributed randomly between groups, such as microfinance institutions in different regions. The test did not suggest significant differences between the regions with respect to their for-profit or non-profit status ($Chi^2 = 7.8$, $p = 0.17$). Hence there is no indication that smaller loans are connected with a non-profit status of microfinance institutions.

Figure 2 – Gross loan portfolios and number of outstanding loans in the sample

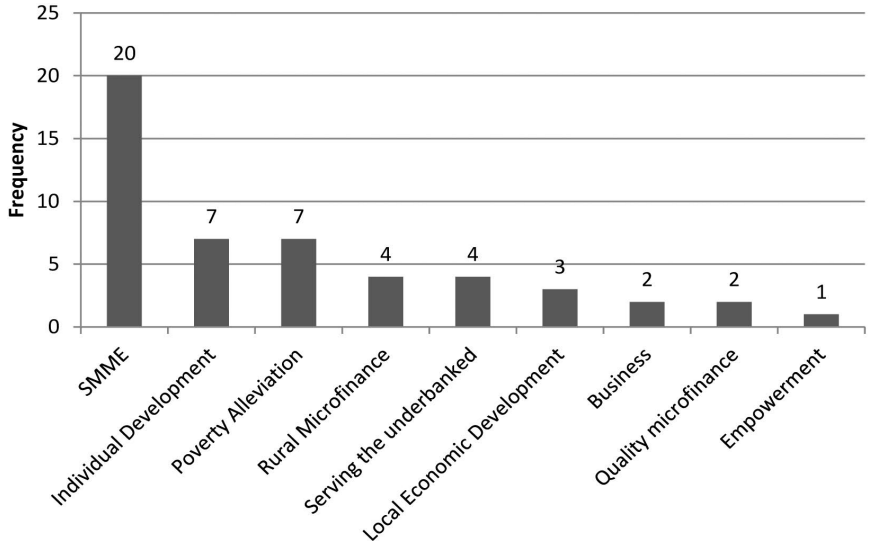


MISSIONS

As a next step we analyzed the missions of the biggest 50 microfinance institutions with respect to their gross loan portfolios. 40% state that their main mission is lending to micro-, small or medium enterprises. 14% mentioned

individual development and poverty alleviation as their main mission respectively. Rural microfinance and serving the underbanked followed with 8% as the main mission of the institutes. 6% strive to support local economic development. 4% see the microfinance business itself as their main mission or state that they offer quality microfinance. Empowerment is the main goal of 1% of the microfinance institutions. As described above, empowerment is connected with increasing capabilities for decision making, self-control, or influence (see for instance Montgomery, Weiss, 2011). The distribution of the different missions is presented in Figure 3.

Figure 3 – Missions of microfinance institutions



STATISTICAL TESTS BETWEEN GROUPS WITH DIFFERENT MISSIONS

As the results about the mission of the microfinance institutions suggest, they strive for much more than poverty alleviation that is usually seen as the goal that should be measured. A large part of the microfinance institutions, though, are more involved in financing micro, small and medium enterprises. The issue of empowerment is only mentioned once though it can be often found as a rationale for microfinance in the literature (Chaudhry, Nosheen, 2009; Maldonado, González-Vega, 2008; Montgomery, Weiss, 2011). Therefore we used the mission and the self-declared profit-status to analyze effects

on profitability measures, such as yield on the gross loan portfolio, costs per borrower, operational self-sufficiency, and profit margin. Furthermore we tested whether the mission and the profit-status have an influence on the percentage of female borrowers as another measure of outreach. The analysis is based on t-tests for the profit-status and analyses of variance (ANOVA) for the mission of the microfinance institutions.

The detailed results of the t-tests are presented in Table 1.

Table 1 – Results of the t-tests between for-profit and not-for-profit microfinance institutions

Indicator	df	t	sig.
Yield on gross loan portfolio	39	-0.79	0.43
Costs per borrower	41	-0.82	0.42
Operational self-sufficiency	30	-0.48	0.64
Profit margin	42	-0.94	0.35
Percentage of female borrowers	30	-0.20	0.84

With respect to the profit status there were no significant differences between for profit and non-for profit microfinance institutions neither for the profitability measures yield on the gross loan portfolio, costs per borrower, operational self-sufficiency, profit margin nor for the percentage of female borrowers. The same is valid for differences between microfinance institutions with different missions as presented in Figure 3. Again no significant differences could be found for profitability measures yield on the gross loan portfolio, costs per borrower, operational self-sufficiency, profit margin, and percentage of female borrowers respectively. For the detailed results of the ANOVAs see Table 2.

Table 2 – Results of the ANOVAs between microfinance institutions with different missions

Indicator	df	F	sig.
Yield on gross loan portfolio	41	0.94	0.50
Costs per borrower	42	-0.75	0.65
Operational self-sufficiency	44	1.16	0.35
Profit margin	44	1.45	0.20
Percentage of female borrowers	31	2.12	0.08

On the basis of our results we conclude that the measurement of the impact of microfinance is much more complex than just measuring the number of loans, the profitability or loans provided for specific groups of borrowers, such as women. But datasets like mixmarket.org do not provide the data that would be necessary to measure the real outcome of microfinance institutions. It seems that present concepts to measure the outreach of microfinance do not really provide useful results. Thus we conclude that new concepts and measures are needed to measure the outcome of microfinance instead of its outreach.

SOCIAL RETURN ON INVESTMENT AS A METHOD TO MEASURE THE IMPACT OF MICROFINANCE

Methods to measure the impact of finance are used in social finance and impact investing as well. As there is a connection between those and microfinance (Ashta, 2012) we will introduce social finance and impact investment and then demonstrate how Social Return on Investment (SROI) analysis that is often used in this field could be used to measure the impact of microfinance as well.

Impact measurement in social finance and impact investment

Social finance and impact finance measurement is just in a development phase as well. However, similar to microfinance, they strive to create a social return in addition to the financial return. It is defined "*as the application of tools, instruments and strategies where capital deliberately and intentionally seeks a blended value (economic, social and/or environmental) return*" (Harji, Hebb, 2010, p. 2). Social finance tries to achieve a positive impact through offering products and services, such as loans, investments, venture capital and of course microfinance. Hence, it is the umbrella term for financial products and services that strive to achieve a positive social, environmental or sustainability impact. Social banking, impact finance and microfinance can be subsumed under the term social finance. Connected with social finance is the concept of blended return. This concept does not imply a trade-off between social and financial returns but sees positive social, environmental and sustainability impacts compatible with financial returns (Emerson, 2003; A. Nicholls, 2009). Similar to microfinance the challenge is to measure the impact of social finance. One concept that tries to measure the impact and that is often used in social finance is SROI.

Social Return on Investment Analysis

SROI uses a set of practices and indicators in order to measure the impact of a business such as a social venture (Meyskens, Robb-Post, Stamp, Carsrud, Reynolds, 2010) or an activity, i.e. the impact of voluntary work (Pace, Basso, 2009). It measures both positive and negative impacts on the society and assumes that more than just economic value is created through a project or an investment (Gibson, Jones, Travers, Hunter, 2011). It strives to reduce inequality and environmental degradation and to improve wellbeing by incorporating and measuring social, environmental and economic costs and benefits (J. Nicholls, Lawlor, Neitzert, Goodspeed, 2009). The method tries to analyze the impact achieved by the dollar spent. The development of SROI indicators consists of collecting social performance data, prioritizing the data with respect to their importance, incorporating the data in decision-making processes, and reporting and valuing the amount of social values that are created or destroyed (Lingane, Olsen, 2004). Based on SROI decisions on channelling activities or capital can be made. However Ryan and Lyne (2008) found that comparing SROIs from different social enterprises or projects is rarely possible because of inconsistencies in the application of the method.

Furthermore, SROI can show the efficiency of social finance and can help investors making the right investment decision. It helps to plan, to manage and to assess business taking impacts into account. The concept consists of the construction of indicators, the definition of the content of these indicators, addressing risks and opportunities of SROI and providing an on-going evaluation. In detail SROI consists of ten guidelines (see for details Lingane & Olsen, 2004, p. 120) that could be applied on microfinance to measure its impacts (see Table 3).

Because SROI concentrates more on outcomes than on outputs it differs from many methods that are actually used to measure the impact of microfinance, especially outreach analyses. Rather than following money flows, the effects of these flows, for instance on sustainable development, are evaluated (Rotheroe, Richards, 2007). On the one hand this method would be able to measure the real impact of microfinance in a more accurate way as done so far. On the other hand evaluating outcomes is much more complex and time-consuming than using financial outreach indicators (Millar, Hall, 2012). Generally SROI analysis demands to assess baselines and to measure changes in these baselines. For instance, if the goal of a microfinance institution is to support borrowers to overcome poverty, income before the provision of a microloan and after having used the microloan for a business has to be assessed. Because this assessment has to be done in addition to the already

Table 3 – Ten SROI Guidelines (based on Lingane & Olsen, 2004)

Guideline	Description
Including positive and negative impacts	As we demonstrated above microfinance provides both positive and negative impacts. In addition to the provision of loans to conducts businesses in order to make one's living, microloans can cause overindebtedness, debt stress or foster non-sustainable businesses. Both impacts should be taken into account.
Considering all impacts	In addition to impacts on poverty alleviation internal impacts on the employees of microfinance institutions, impacts on other development organizations or on the environment should be considered. This includes a comprehensive stakeholder analysis.
Including only attributable impacts	In this step only impacts that can be clearly attributed to the microloan or another product or service of the microfinance institutions should be included.
Avoiding double counting and reflect full costs and benefits	This is an important issue especially with regard to financing SMMEs. As at the end the entrepreneur creates the financial outcome of the SMME methods should be developed to take the impact of the lender into account without double counting the outcomes.
Avoiding counting what had happened anyway	In some developing countries or areas there is a significant economic growth. Though capital is often a bottleneck in achieving business growth the impact of microfinance should be analyzed in comparison with the situation without microfinance. Especially the additional potential costs of microfinance in comparison to conventional finance have to be taken into account.
Analyzing cause effect relations	A logical system of cause and effect between microfinance and the mission of the microfinance institution should be set up.
Benchmarking	Most of the metrics is relative. They are only informative if they are compared to other time periods or to other means for achieving the same goal.
Addressing risk factors	In addition to reporting positive impacts, risk factors that could negatively impact the outcome of microfinance should be presented as well. Thus issues like over indebtedness of debt stress should be analyzed, tracked and be reported as well.
Analyzing key factors	A sensitivity analysis should be done to analyze the most important factors for the intended outcomes. For instance, though microfinance often strives for alleviating poverty by financing SMMEs, it is not clear whether SMMEs are really the best way to achieve the goal or whether, for instance, financing bigger enterprises would better support the goal achievement.
Continuous evaluation	The impact of microfinance should be evaluated on an ongoing basis. Usually when a loan is granted and after it is repaid there should be an evaluation of the effect of the loan. Furthermore long-term effects should be tracked through multiple evaluations as well.

relatively high administrative efforts, it adds costs that microfinance institutions eventually are not able to bear. However, using the method would add much more insight on the actual impact of microfinance.

COMPARISON OF THE THREE WAYS TO MEASURE THE IMPACTS OF MICROFINANCE

We discussed three concepts of measuring the impact of microfinance; outreach measurement, social cost-benefit analysis and SROI. Outreach measurement bases mainly on figures about the size and the number of loans. It assumes that smaller loans have a larger impact because they are provided to micro-entrepreneurs, mainly women in order to enable borrowers to make their living based on these loans. The advantage of this measure is the availability of data, the wide use in the literature, the comparability between different microfinance institutions, the use of financial and statistical figures and the comprehensibility. The disadvantage is that the relation between loan sizes and the number of loans and their impact is not always given, as Robinson (1996) or Khandker (1998) demonstrate.

Social cost-benefit analyses compare the impact of microfinance with other development aids on the basis of costs instead of products and services. They compare the financial costs between different institutions for creating a certain benefit. Again the problem is to specify and calculate the benefits because often different institutions do not strive for the same benefits. Therefore costs are not comparable as well in these cases. Furthermore, the intended benefits of development aid, like reducing poverty, are often very broadly defined. Therefore achieved benefits are hard to estimate.

A third alternative to the measurement of the outreach is the use of SROI. As described above, this method is mainly used for social enterprises and non-profit organizations but is applicable for microfinance as well. In contrast to the outreach measurement it measures the outcome in addition to the output. Disadvantages of SROI are the data availability, the costs of assessing outcomes over time and the low comparability between different microfinance institutions because of the use of individual indicators. However, the method specifically focuses on the needs of investors because it delivers data on both, financial and social returns. This information is much more important than information about costs that are delivered through social cost-benefit analyses. The advantages and the disadvantages of the three concepts are summarized in Table 4.

Table 4 – Advantages and disadvantages of outreach measurement, social cost-benefit analysis and SROI

	Outreach measurement	**SROI**	**Social cost-benefit analysis**
Advantages	• Data availability • Widely used • Easy to compare • Base on financial and statistical figure	• Measures outcome instead of output	• Data availability for costs • Compares costs with impact • Transparency about the influence of philanthropic capital
Disadvantages	• Relation between figures and impact unclear	• Data availability • Costs of defining and assessing the outcome • Comparability between different microfinance institutions	• Relation between costs and impact are unclear • Costs and impacts sometimes correlate • Microfinance institutions strive for different impacts • Impacts are defined very broadly

Exemplary use of different measures for the outreach of microfinance

In this section we will try and demonstrate the use of the three concepts of impact measurement in microfinance using an imaginary microfinance institution. Because there is no information on SROI and costs-benefits to be found on mixmarket.org or other databases, we constructed an imaginary microfinance institution based on real data that could exist like this.

Exemplary use of outreach analysis

An outreach analysis was done by the author of this paper on the basis of data that was taken from mixmarket.org and is described above. The data was selected in order to demonstrate the method in an exemplary way. We compared the data of the imaginary institution to the average of all institutions listed in mixmarket.org for the fiscal year 2010 using a mean-comparison test. For the detailed results of the tests see Table 5. The average gross loan portfolio of the institutions in 2010 was $ 65,147,503. The median was $ 4,872,046. With a gross loan portfolio of $ 1 million the imaginary microfinance institution had a significantly smaller gross loan portfolio and consequently a smaller outreach.

Another important outreach indicator is the loan size. Usually smaller loans stand for a higher outreach. The average loan size per borrower for the institutions listed in mixmarket.org was $ 1751 in 2010. The average loan

Table 5 – Outreach indicators for MicroImpact and mixmarket.org

Indicator	MicroImpact	Average mixmarket.org	df	t	sig.
Gross loan portfolio	$ 1 million	$ 65 million	1262	4.53	<0.0001
Loan size	$ 650	$ 1,751	1203	5.0	<0.0001
Loan Costs	$ 250	$ 252	1021	0.14	0.445

size in the exemplary institution is $ 650. Therefore it is significantly smaller than the average indicating a higher outreach.

Loan costs are usually related to outreach as well. The average loan cost per borrower for the mixmarket.org institutions was $ 252 in 2010. This corresponds to 14.4% of the loan sum. The costs per loan in the exemplary institution were $ 250 or 38.5% of the loan sum. However, we did not find a significant difference in the loan cost per borrower compared to the mixmarket.org data. It seems that MicroImpact grants smaller loans with higher costs per loan than the average institution in the mixmarket.org database. According to scholars following the concept of outreach measurement this institution should have a higher outreach than the average institution listed on the mixmarket.org platform.

Exemplary use of SROI

In order to measure the SROI we calculated the SROI ratio as the present value of social benefits divided by the present value of the investment, i.e. a loan. While data about the loans is available, criteria for the social returns have to be developed.

World Bank data shows that the average income in Honduras, where the institution is active, is $ 1870 per year (see http://data.worldbank.org/country/honduras). If we assume that micro loans are given to poorer people we take 25% of the average income as a baseline. This results in about $ 470 per year. Assuming that a loan has to be paid back during one year, a SROI indicator could be the increase of income created with one dollar of a loan. On the basis of an average loan sum of $ 650 the SROI can be calculated. However, one of the problems of this concept is to calculate the duration of the increased income. Therefore we assumed a duration of 10 years. The income surplus after this period would be $ 4,700 for a loan of $ 650. Consequently the total return on investment of this loan would be $ 7.25 for one dollar of loans granted.

A similar calculation can be done for educational issues. Instead of the increased income the number of children being able to attend school because

their parents received a loan can be calculated. This indicator differs from the one based on additional incomes because it does not compare two monetary units but the possibility to attend school. Assuming that the borrower is able to send two children to school because of the better income situation, the result is would two children school-educated per loan of $ 650 or three children attending school for $ 1000 of loans.

Exemplary use of social cost-benefit analysis

A similar calculation was done using the concept of cost-benefit analysis. We used the indicators for the benefits in order to make the results of the two methods comparable. They are income increase and children attending school. In contrast to the SROI method the costs were taken into account and compared to the benefits. All other indicators stayed the same.

In our case the costs for a loan are 38.5% per loan. Again, if we assume doubling the income through a loan of $ 650 and corresponding costs of $ 250, as we did in the SROI calculation a cost-benefit analysis would result in a factor of 18.85. With one dollar of costs 18.85 dollars of income increase would be created. The same calculation may be conducted for the educational impact. Two children attending school would cost $ 248 or one child attending school costs of $ 124. On this basis investors are able to compare MicroImpact with other institutions that follow the same approach.

Summary of the exemplary use of the three methods

The results demonstrate the financial efficiency of an institution. This is important for investors or institutions that want to create an impact with costs as low as possible. However, as MicroImpact creates $ 0.39 costs per one dollar of loans the costs are significantly higher than the average costs in the mixmarket.org database. On the average the costs for one dollar of loans are $ 0.14. Thus, from a cost perspective MicroImpact is providing microloans in a relatively inefficient way. However, as discussed above, it could be that the organization delivers additional outputs, like training and education, that maybe create social benefits but costs as well.

Table 6 summarizes the results of the exemplary analysis using the three measurement concepts outreach measurement, SROI and social cost-benefit analysis.

The exemplary use of the three methods demonstrates their advantages and disadvantages. While outreach measurement mainly operates on the basis of loan amounts, the number of loans and the characteristics of borrowers, SROI tries to use impact metrics. The results of the SROI analysis provide a

Table 6 – Results of the exemplary analysis using the three measurement concept outreach measurement, social cost-benefit analysis and SROI

Outreach measurement	SROI	Social cost-benefit analysis
• Cost per loan: $ 250 • Significantly smaller gross loan portfolio than the average institution in mixmarket.org • Significantly smaller loan size than the average institution in mixmarket.org • Average loans costs compared to mixmarket.org	• SROI of $21 for $ 1 cost • Income increase of $ 7.25 created with $1 loan • Three children attending school for $ 1,000 loan	• 38.5% loan costs • $ 18.85 income increase per $ 1 loan cost • Two children attending school for $ 250 loan costs

much more detailed insight into the achievements of a microfinance institution with respect to its mission and goals than outreach analysis. On the other hand outreach analysis delivers a comparative view on a microfinance institution that enables stakeholders to compare it with many others.

Social cost-benefit analysis mainly compares costs of loans instead of concentrating on financial returns. In contrast to SROI it assumes a certain benefit that should be achieved by the microfinance institution while SROI determines the benefit by analyzing the mission and the goals of the organization. Thus, social cost-benefit analysis delivers more general information that can be compared between different microfinance institutions. However, it assumes that all microfinance institutions follow more or less the same goals and use similar and comparable business practices.

SROI is a concept that emphasizes individual differences in the missions of microfinance institutions. The social return is often defined individually for the respective organization and therefore comparisons between different organizations are often not possible. In our analysis we tried to define the social return broadly as increased income or children attending school. These types of indicators could be used for comparative analyses as well. Hence, investors can use SROI in order to calculate social returns in addition to financial returns.

CONCLUSIONS

In this paper we presented the current state of impact measurement in microfinance. To date usually the outreach is measured by analyzing characteristics of borrowers the number of loans provided, loan sums per borrower and the use of the loans (Hulme, 2000). Many outreach studies use data from mixmarket.org that is publicly available (Hermes, Lensink, 2011; Hermes,

Lensink, Meesters, 2011; Hishigsuren, 2007). Furthermore some analyses compare microfinance institutions that follow the poverty alleviation approach versus those that follow the financial sustainability or financial systems approach (Hossain, 1998). These measures mainly base on the concept of outreach measurement.

Our analysis of the current missions of microfinance institutions suggests that they follow different approaches such as:

- Supporting SMMEs
- Fostering individual development
- Poverty alleviation
- Rural microfinance
- Serving the underbanked
- Local economic development
- Business approach
- Quality microfinance
- Empowerment

This result demonstrates that the microfinance sector is quite diverse and follows different missions and strategies. Therefore measuring the impact of the different approaches is important to be able to compare their effectiveness. Furthermore the results show that the differentiation between non-for profit and for-profit or between the poverty alleviation approach and the financial systems approach is not detailed enough to analyze microfinance institutions and their outcomes. Additionally, based on mixmarket.org data, we demonstrated that different microfinance missions did not cause a different outreach.

As we mentioned above, mainstream impact measurement mainly concentrates on measuring outputs, such as the amount of loans provided to microenterprises. In order to measure the real impact of microfinance, not only the output but also the outcome has to be measured (Jones, 2010; A. Nicholls, 2009). This implicates that an evaluation is needed to find out whether microfinance really manages to achieve its goals through the strategies, products and services used. Hence output measurement is the first step but outcome measurement has to follow. In addition to calculating the amount of loans provided to SMMEs, the effect of the SMMEs with respect to the goals of microfinance, i.e. poverty alleviation should be evaluated. In order to conduct this evaluation methods provided by the concept of Social Return on Investment or social cost-benefits calculation could be used in

addition to outreach measurement. These concepts go beyond pure financial analysis and analyse impacts from goal setting to an ongoing and long-term evaluation of the outcome.

Using an example of a microfinance organization we could demonstrate that both SROI and social cost-benefit analysis may contribute to measuring the impact of microfinance. They connect microfinance products and services or costs with specific impacts indicators and outcomes. However, the drawback of these methods is the measurement of the impacts. While measuring the increase of income is still manageable, indicators have to be developed to measure goals like increasing empowerment or providing education. Furthermore, after having developed these indicators additional basic data has to be assessed at the time the loan is granted, over the whole loan circle and probably after the loan is paid back as well in order to be able to calculate indicators. Many impacts or benefits appear or continue after a loan has been paid back. Therefore microfinance institutions have to track their goal achievements on a long-term basis. This may be done by following the principle of SROI that starts with considering all possible impacts of a social investment.

Future research will be needed to develop quantifiable impact indicators and methods to assess these indicators without creating high assessment costs. This research will help microfinance institutions to demonstrate their cost-efficiency and their potential to reduce poverty (Hermes & Lensink, 2007b).

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