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## **A Comprehensive Review of Microfinance Impacts, Sustainability and Outreach**

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### **Authors' contributions**

*This work was carried out in collaboration between all authors. Author MWR reviewed literature, analyzed and wrote the draft report. Author JL supervised the whole research work. Author ASMGH provided overall guidance. Author TS given sincere comments on draft report. Author MWR submitted the manuscript for publication. All authors read and approved the final manuscript.*

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### **ABSTRACT**

This study reviews peer reviewed journal articles on microfinance impacts, sustainability, and outreach over the period 1997 to 2011. The review suggests mixed results on the impacts of microfinance worldwide, and fails to discover a concrete relationship between outreach and sustainability. However, the review confirms microfinance institutions extend financial and non-financial services to the bottom of the pyramid ignored by traditional financial institutions and considered un-bankable. The paper contributes to extant microfinance literature and guides inexperienced microfinance practitioners toward further academic research and publishing their work in relevant journals.

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## 1. INTRODUCTION

Microcredit is not a new concept; moneylenders, credit cooperatives, and credit unions have been practicing it since the 19<sup>th</sup> century. However, the modern concept of microfinance emerged in the 1970s with the efforts of Professor Mohammad Yunus, who established Grameen Bank, a special kind of bank for the poor. According to the modern concept, microfinance is the provision of microcredit, savings, insurance, remittance, health, education, skill training and social awareness; it is financial and non-financial services for the poor, traditionally not served by conventional financial institutions. These services enhance the inherent potential of the poor for entrepreneurship, income generation, self-reliance, employment creation, increased wealth and, ultimately, reducing poverty [1]. Accordingly, the microfinance field evolved into an industry [2], serving 150 million borrowers with US\$65 billion in loans and holding US\$27 billion in deposits from 92 million clients [3]. As recognitions of success, the United Nations declared International Year of Microcredit 2005, and Grameen Bank and Mohammad Yunus were awarded the Nobel Peace Prize jointly in 2006. The achievement places a significant responsibility on microfinance institutions (MFIs), charged with serving the poor better. However, the critical questions are: (1) can MFIs serve the poor continuously by achieving sustainability?, (2) is there a trade-off between sustainability and outreach? and (3) what impacts do microfinance programs have on sustainable livelihood of the poor?

Microfinance is comparatively a new discipline for academic research, receiving a good reputation as a unique and effective developmental approach. Extant studies suggest MFIs extend financial services to the unbanked and underserved population. However, a strong debate among policy-makers, academicians and microfinance practitioners exists regarding the welfare impact of microfinance programs and sustainability issues [4]. These are the most challenging questions put to MFIs since the modern concept of microfinance surfaced in the 1970s. A number of studies have been conducted in various regions as well as globally to discover the answer. Some report positive impacts of microfinance programs [5,6,7,8,9,10] while others find no or negative impacts [11,12,13]. Some studies find complementary

relationships between outreach and sustainability [14,15] while others find inverse relationships [16,17]. The present paper focuses on articles that were part of a rigorous, peer-review process. Though the present paper values those studies are commissioned, conducted and published by government agencies, international agencies, and non-government organizations (NGOs) but they are not cited or used in this paper.

The present study reviews research papers published in peer-reviewed journal from 1997 to 2011. The paper consists of two main sections. The first reviews the most relevant articles related to microfinance impacts, sustainability and outreach. The second includes descriptive statistics of the peer-reviewed papers identified in the first section. It is expected that an extensive review of articles and descriptive statistics provide answers to the questions discussed above, and act as a guide for future research.

## 2. METHODS

The study adopts a desktop research approach. The sample consisted of peer-reviewed journal articles published from 1997 to 2011 (past fifteen years). Peer-reviewed articles were collected using various search engines (Google scholar, science directory, and specific journal websites). Microfinance impact, sustainability and outreach were used as keywords while searching for the articles. These searches produced over 350 articles of which 302 articles were sorted by a skimming process based on relevance to microfinance sustainability, outreach and impact. Descriptive statistics were calculated to categorize and sub-categorize the articles based on their primary focus, regional coverage, year of publication and journal category. Eighty peer-reviewed articles are cited in this review since only those are considered relevant to this study's purpose. A similar approach of Brau and Woller [18] applies in reviewing paper.

## 3. IMPACTS OF MICROFINANCE

There is consensus that MFIs extend financial services to the poor normally ignored by traditional financial intermediaries. Access to finance is important for the poor to raise productivity, create wealth, generate income, encourage entrepreneurship, empower women, improve health and access to education, and reduce poverty. Hence, academia gives special

priority to determining the impacts of microfinance programs on sustainability and outreach. For example, 48% (145 articles of total searched articles 302) of the articles were identified as impact studies (Fig. 2). However, an extensive debate exists among academicians on using methodologies to determine microfinance impacts. It is difficult to assess the impact of microcredit accurately given current methodological advancements. To determine the impact of microcredit accurately, it is necessary to compare a client's situation with a counterfactual situation where microfinance is unavailable, which cannot be examined readily. Several studies measure the impacts of microfinance by comparing recipients of microfinance with a control group that has no access to microfinance [19]. [20] compares experienced borrowers who had begun receiving loans to those who had self-selected into programs but had not yet borrowed. The approach is criticized due to ignorance of dropout bias [21]. According to [22], an optimal impact assessment mechanism should be a mix of different methods for a fit between assessment objectives, program context, human resources and timing. [23] argue that existing impact assessment approaches are narrow, and should be examined from cultural, economic, social and political dimensions at individual, enterprise and household levels. Difference-in-Difference (DID), propensity score matching and Retrospective Analysis of Fundamental Events Contiguous to Treatment (RAFECT) are recent methodological advancements for impact studies. Considering methodological constraints and issues, this section answers the following questions by reviewing previous study: (1) can microfinance reduce poverty?, (2) can microfinance increase individual and household income?, (3) can microfinance empower women? and (4) can microfinance increase access to health and education?

Microfinance is effective in providing low-cost financial services to poor individuals and families [24]. MFIs reduce financing constraints of micro-businesses [25], and access to finance helps reduce poverty substantially [6,10]. Several studies in many developing countries suggest a positive relationship between microfinance and poverty reduction. Among them, [7] study, conducted in rural Bangladesh, is most influential. Using panel data from both program and non-program villages (eliminating dropout bias), they suggest a positive impact on women's product consumption, school enrollment, and poverty

reduction [7,8]. Using the same data sets and applying propensity score matching technique, [26] argues access to microfinance has a positive impact on expenditures, supplies of labor, and school enrollments. Applying propensity score matching combined with DID in Indonesia, [27] conclude that microcredit contributes to the reduction of inter-generational poverty through schooling investment, but may not have immediate impacts on poverty alleviation. [10] conducted an empirical study in Bangladesh among Grameen Bank borrower (with credit) and non-borrower (without credit) subjects, concluding that microcredit programs help rural women reduce their poverty more effectively. 'With credit' women have a much lower percentage of poverty in terms of its incidence (80%), intensity (28%) and severity (12%) in comparison with 'without credit' respondents (99%, 59% and 37%, respectively). An empirical study conducted by [9] in Bangladesh suggests a moderate reduction of poverty for the microfinance clients as measured by a variety of socio-economic indicators, though such opportunities have not reached many of the poorest in the village. The study suggests incorporation of other services such as skills training, technological support, education and health-related strategies to make microfinance a more effective means of poverty reduction. [28] analyzes two MFIs in Ghana and South Africa using the case method, and concludes that MFIs contribute to improving client quality of life. [29] surveyed 1,798 Bangladeshi households, finding a large positive effect of participation and non-credit aspects of microfinance programs on self-employment profit. However, there is a concern that microfinance reduces poverty for groups of poor people who have achieved a certain economic level without debt [30,31]. Microfinance does not reach the poorest of the poor, and the poorest are excluded deliberately from microfinance programs [11,12, 32]. Applying DID method in China, [33] conclude that microcredit programs improve household welfare by raising household income and product consumption, but this does not necessarily mean microcredit reduces poverty in China since microcredit beneficiaries are non-poor households. Similarly, [13] reveal that wealthier households receive more benefits compare to poor households in rural Philippines. Thus, MFI leaders and government policy-makers must exercise caution and restraint when applying the microfinance approach universally as a means of alleviating poverty [34].

Microfinance increases individual and household income; it allows holistic development by increasing the income of the household [35]. Empirical studies in Peru [36,37] report positive impacts of microfinance programs on household income, but the amount of income drops—though, still positive—when considering dropout bias. Similarly in Zambia, profit estimates by DID method is positive but significantly lower than that of dropout bias [38]. In Bolivia, [39] finds that assets and income increase proportionally with initial poverty levels; though, MFI services may increase vulnerability if borrowers over-leverage. Applying a similar approach to [37,40] reports the impacts of microcredit on ordinary members are statistically insignificant and sometimes negative; those on committee members are mostly positive with various outcomes including income, savings, productive expenses and labor time in Thailand.

One of the key objectives of MFI is to empower women through microfinance intervention. Access to credit has a number of benefits for women such as access to independent income, control over savings and credit and the ability to bring productive assets to household income [41, 42,43]. Credit programs allow women a greater role in household decision-making, access to financial and economic resources, access to social networks, greater bargaining power with husbands, and freedom of mobility [43]. Access to finance contributes to improvement of the social and economic situation of women [19]. Using a unique dataset consisting of nearly 280,000 microfinance borrowers in India, [44] conclude that access to microfinance empowers women. However, critics argue that women are often forced to hand over the loan to men, who subsequently use the loan for their own purposes [45]. This may lead to an additional burden for women if held responsible for repayment [46]. MFIs help women raise their status in society, but there is no direct evidence that they raise women's decision-making power in the household [47].

Microcredit alone cannot bring significant changes of poor livelihood and a credit plus-plus approach is needed. Hence, MFIs provide supplementary services (health, education, insurance, remittance, etc.) to their clients. Welfarists emphasize supplementary services to improve the effectiveness of microfinance programs [48,49,50,9]. Several empirical studies suggest positive impacts of microfinance on health, education and housing improvement.

Among them, Nanda [41] finds a positive impact of women's participation in credit programs on demand for formal healthcare in rural Bangladesh. Using data from 329 households in the operating areas of Grameen Bank, [51] examine the impact of micro-health insurance placement on health awareness, healthcare utilization and health statuses of microcredit members in rural Bangladesh. Results were significant for health awareness and healthcare utilization, but not health status; these findings are potentially important for the expansion and replication of micro health insurance. [43] estimate three health outcomes separately for boys and girls plus credit program participation for men and women; they find that women's credit has a large impact on two of three measures for the health of both boys and girls. In India, women who are borrowers make more use of health insurance than non-borrowing women who obtained insurance through their husbands [44]. Women are more enthusiastic about educating their children; since microfinance mostly goes to women, there is a strong influence on educating children [52]. Women use a substantial part of their income for health and education of their children [7]. In Zambia, microcredit enables HIV/AIDS-affected client households to smooth income flows through diversification of their income sources, and invest in the education of boys aged six to sixteen [53]. In Bolivia, [54] find mixed results, positive impacts on schooling gaps but negative effects on increased child-labor demand.

The impact of microfinance is not limited to poverty reduction, income generation, women empowerment, and increased access to health and education. Women's involvement in MFIs exert a curbing effect on desire for additional children [47], which contributes positively to a declining fertility rate in developing countries. [55] examine microfinance and home improvement among 1,672 households in Guatemala, India and Ghana; they find the probability of major housing improvement increases from 3.8% to 7% in the years subsequent to an initial microfinance loan. [56] analyze 147 MFIs and find that microfinance participation increases environmental awareness and common pool resource stewardship. In Sri Lanka, [57] find that loans obtained from an MFI after a catastrophic event (e.g., Tsunami) have a positive effect on changes in real income and weekly work hours, and the impact on performance variables is stronger for damaged versus non-damaged borrowers.

Despite extensive criticisms of the impacts of microfinance, the review above suggests that microfinance impacts poverty reduction, increases individual and household incomes, empowers women, increases access to education for children, increases access to health, influences housing improvement, decreases fertility, and provides support during natural disasters.

#### **4. MFI SUSTAINABILITY AND EFFICIENCY**

Sustainability may be defined as earnings from microfinance services that cover operational and funding costs and take care of bad loans while allowing further expansion of services [58]. It may be further delineated as Operational Self-Sufficiency (OSS) and Financial Self-Sufficiency (FSS), where OSS refers to the ability of an institution to generate enough revenue to cover operating costs, and FSS refers to an institution's dependency (or lack of it) on subsidies for successful operations [5]. Most MFIs started operations with subsidy or external funds with a mission of serving poor clients. Hence, there are different arguments for measuring MFI sustainability and efficiency. Some adopt the Subsidy Dependence Index (SDI) for measuring self-sustainability [50,59,60] while others are against it due to unavailability of required data [61]. Measuring sustainability requires detailed information about an MFI [14]. The basic question is how an MFI can attain sustainability.

According to the institutional view, MFIs cover costs with revenues; this self-sufficiency leads to long-term sustainability [18]. Welfarists argue MFIs acquire funds as gifts (subsidy) from donors as socially responsible funds at an initial stage and then move to long-term sustainability over time; they cite Grameen Bank as an example of sustainability even when reaching very poor people in Bangladesh [49,59]. [62] clarifies that MFIs achieve sustainability through expansion of loan programs, diversification of loan portfolios, increasing cost efficiency and loan productivity, training clients and employees, institutional development, and increasing interest rates to cover transaction costs for optimum loan production.

Regardless of the approach, financial sustainability is a major concern for MFIs. According to rough estimates, only 1 to 2 per cent of all MFIs in the world (150 organizations) are financially sustainable. Some 8 per cent are close to being profitable. A third group of

organizations (20%) consist of mostly NGOs, which are not yet financially sustainable but may become sustainable in the near future. The remaining 70% consist of smaller, start-up organizations still far from being financially sustainable, depending heavily on subsidies [19]. Another estimation using a benchmark data set of 704 MFIs reveals that 41% are not financially self-sustainable, relying on donor support to stay solvent [63]. Using an original database of rating agencies, [64] find a positive impact of subsidies on MFI efficiency, though over-subsidization is counterproductive. They report that subsidies MFIs are better position on raising higher productivity than not subsidized MFIs. Conversely, [65] finds a negative impact of subsidies on the financial sustainability of Self-Help Group (SHG) operations in the northwest region of India.

Donors, policy-makers and other financiers of microfinance recently made a shift from subsidizing microfinance institutions to a focus on financial sustainable and efficient institutions. The focus changed since many MFIs secured financial sustainability even while acquiring commercial funding. Technological advancements, efficient management practices and improving quality of service facilitated their success [66]. Relatively higher repayment rates of MFIs fostered sustainability [67]. Focusing on financial sustainability raised concerns about microfinance outreach [19], unequal distribution of microfinance institutions and unhealthy market competition. Extreme focus on MFI commercialization is one of the key reasons for the Andhra Pradesh (India) crisis in 2011. There is an inverse relationship between social performance and MFI financial performance. There is need for a cautionary approach to MFI commercialization without hampering the social mission.

#### **5. OUTREACH**

Microfinance outreach refers to the ability of MFIs to provide financial and non-financial access to large numbers of borrowers denied access previously [68]. From a financial viewpoint, economies of scale define outreach. Academicians propose several methods for measuring outreach. [69] proposes seven measures to determine MFI outreach: (1) value of outstanding loan portfolio and average value of loans extended; (2) amount of savings and average value of savings accounts; (3) variety of financial services offered; (4) number of

branches and village posts/units; (5) percentage of total rural population served; (6) annual growth of MFI assets in recent years and in real terms and (7) women's participation. Over the years, [69] measures were broadened, refined or categorized. For example, [30] mention six aspects for measuring outreach: depth, worth to users, cost to users, breadth, length and scope. Outreach can be determined based on number of clients served, particularly the poor and women who were ignored by traditional financial institutions [14].

The fundamental question is whether microfinance reaches the largest number of very poor people while maintaining sustainability. There are two primary arguments. First, microfinance targets all poor clients, but it often fails to reach those living in extreme poverty in practice [70,31]. Second, microfinance reaches the poorest people, at least to a certain level [6,71,72,73]. Fig. 1 shows the distribution of outreach in various financial intermediaries [73]. The number of people and their annual per capita expenditures are taken from VISA International and World Bank. Commercial banks traditionally reach only the top of the pyramid. Credit unions, especially those focusing on communities rather than organizations, reach further down the pyramid through cooperative principles and lower cost structures; though even they do not generally reach below the international poverty line. Surprisingly, microfinance innovations make it commercially feasible to reach further down; financially sustainable microfinance operations reach the near and upper poor (Fig. 1), but what about the bottom of the poor, those living on a dollar per day or less? Incredibly, Bangladesh MFIs (i.e., GB, BRAC and ASA) reach the very poor, particularly women, through special credit programs [74]. [14] proposes reengineering Bangladesh MFI products and policies based on careful market research and pilot testing, focusing on quality of service rather than outreach quantity. [75] argues that to achieve deep outreach and, thus, microfinance's vision of global poverty alleviation among the very poor, a second microfinance revolution is necessary to overturn the existing paradigm dominating current thinking and practice.

Women are the best on utilizing small amounts of money and good repays. Realizing these issues, most MFIs focus on women, offering meaningful transformation to their lives by making small loans available to them for income-generating

activities. Accordingly, MFIs discovered doing business with poor people—particularly women—is not only profitable, it is less risky. MFIs usually work in rural and slum areas, implying commitment to serving financially excluded segments of the population.

## 6. SUSTAINABILITY AND OUTREACH

There is disagreement on the relationship between MFI sustainability and outreach. Both for-profit and non-profit MFIs face challenges to balance sustainability and outreach. Profit-oriented MFIs face the question of whether they can develop innovations that reach poorer households without compromising profits. Non-profit MFIs face the question of whether their social and economic impact is large enough to justify and ensure continued support [76]. Some argue that outreach and financial sustainability are complementary; as the number of clients increases, MFIs enjoy economies of scale and, hence, reduce costs that help them achieve financial sustainability [14]. [77] analyzes 39 transformed MFIs and finds that their financial positions improved without affecting their mission. [78] examines financial performance and outreach in a large comparative study based on a dataset of 124 microfinance institutions in 49 countries. Results suggest MFIs that primarily provide individual loans perform better in terms of profitability, but proportions of poor and female borrowers in the loan portfolio are lower than for institutions that primarily provide group loans. [15] finds some institutions perform financially better in terms of outreach without being affected by domestic GDP growth. [79] conducted a study in Central and Eastern Europe and the Newly Independent States, incorporating governance with MFI sustainability and outreach. Findings suggest trade-offs between MFI outreach and sustainability depending on stakeholder representation on the board, providing strong support for independent boards with limited employee participation. Using random effects panel data estimations, [63] study finds no difference between non-profit organizations and shareholder firms in financial performance and outreach; they find outreach is lower in the case of lending to individuals than with group lending.

There appears to be an inverse relationship between MFI outreach and financial sustainability. The argument is higher outreach means higher transaction costs to gather information about client creditworthiness, making MFIs financially unsustainable. [17] argues there is a trade-off

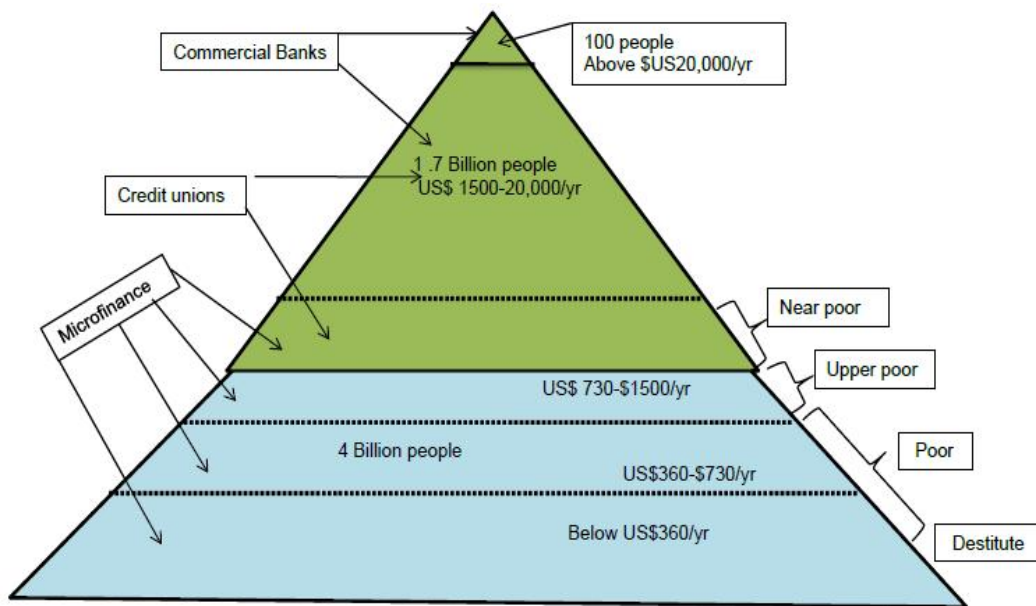
between serving the poorest segments and being financially solvent since transaction costs associated with smaller loans are high in comparison to larger loans. [16] argues reaching the poorest of the poor is more costly than reaching other segments even when there are no fixed lending costs; leverage is much harder to achieve for MFIs that target the low-end of the market. Similarly, [62] argues the high transaction costs of providing financial services to the doorsteps of borrowers and limited size of operations (limited to a number of clients) make the process of ensuring sustainability difficult. However, sustainability is achievable through efficient management and product diversification [80]. It is difficult to generalize on the trade-off between outreach and sustainability given the review above; any trade-off depends on context. More importantly, it depends on how an MFI uses existing resources to balance social mission and financial sustainability.

### 7. DISTRIBUTION OF PEER- REVIEWED JOURNAL ARTICLES

In this section, descriptive statistics of selected articles are provided based on key foci, regional coverage, year of publication and journals in which microfinance-related articles are given priority. Fig. 2 shows the distribution of articles based on key focus area. All selected papers were sorted within three foci: impact,

sustainability and outreach; some articles were found interrelated with more than one topic. A significant portion of the studies focused on impact of microfinance (48%), sustainability (35%) and outreach (17%). So, academicians pay more attention to impacts of microfinance since it has been a debated topic since the emergence of the microfinance concept.

Table 1 shows the distribution of peer-reviewed articles based on regional coverage and foci. The world was categorized into six regions similar to MIX market regional categorizations. A global category was added for studies that cover more than one region. Microfinance programs are more effective in developing countries. Hence, higher concentrations of microfinance institutions and academic research focus on South Asia, followed by Africa, East Asia and Pacific regions. For example, 33.11% of the studies were conducted in South Asian countries. One reason may be the success of microfinance programs and the pioneering adopters of the modern concept of microfinance in this region. About 16% of the articles focus on Africa, and about 9% on East Asia and the Pacific region (Table 1). Higher concentrations of academic research were revealed in this region since most of the countries fall under developing countries. About 29 per cent of the articles focus on more than one region. A number of methodological and review articles were sorted into this category,



**Fig. 1. Outreach of financial intermediaries in pyramid**  
 Source: Adopted from C.K Prahalad, 2010

which helps increase the percentages of contributions in this category. Latin America and Caribbean, Middle East and North America, and Eastern Asia and Central Europe were represented by 5.3%, 4.64% and 3.31%, respectively (Table 1). The categorization was adopted from MIX market. These regions are less developed with regard to microfinance activities. Encouragingly, when it comes to key foci of the articles based on region, impact studies dominated in all categories except global and Latin America/Caribbean categories in which sustainability issues are given more focus (Table 1).

The present study examines the distribution of peer-reviewed journal articles published in the last 15 years. Fig. 3 shows the distribution of articles during this period, showing the number of published articles increased from 1997 to 2003, then decreased to 2006 and again increased gradually in subsequent years. Thirty-four articles were published in 2003, and a similar number (31) was published in years 2002 and 2011. Estimating 2011 articles, only articles published before August 31, 2011 were considered since articles were collected/downloaded at that time. It is difficult to find a clear reason why some years included more academic publications than others did. Some reasons may include country policies,

research interests, and motivations of donors and financial intermediaries.

Since the discipline is new for academic research, few journals focus on microfinance-related articles. It is interesting to note that the 302 articles selected for this study were published in 112 journals. Most of the journals published few microfinance-related articles, considered an integral part of finance and economic development; in some cases, special issues on microfinance exist. These journals' aims and scopes are not appropriate for microfinance research. One-hundred forty-six of the papers (48%) were published in six journals seeking to publish microfinance-related papers. Among them, World Development alone published 40 articles (13.25%) related to microfinance impact, sustainability and outreach. As a topic-focused journal, the Journal of Microfinance published 34 articles (11.26%). IDS bulletin, Journal of International Development, Small Enterprise Development and Journal of Development Economics published 23, 22, 15 and 12 articles related to microfinance impact, sustainability and outreach from 1997 to 2011 (Table 2). Early microfinance practitioners may benefit from these statistics while publishing their work. Table 2 lists the journals that published more than 10 articles on the topic in the last 15 years.

**Table 1. Distribution of articles by regional coverage and key foci**

Region	Impact		Sustainability		Outreach		Totals	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
South Asia	58	58	21	21	21	21	100	33.11
Global (more than one region)	29	33.33	45	51.72	13	14.94	87	28.81
Africa	24	50	15	31.25	9	18.75	48	15.89
East Asia and Pacific	14	51.85	8	29.63	5	18.52	27	8.94
Latin America and Caribbean	6	37.5	8	50	2	12.5	16	5.30
Middle East and North America	8	57.14	5	37.71	1	7.14	14	4.64
Eastern Asia and Central Europe	6	60	4	40	0	0	10	3.31
Totals	145	48.01	106	35.09	51	16.88	302	100

**Table 2. Distribution of peer-reviewed articles by journal**

Journals	Frequencies	Percentages	Ranks
World development	40	13.25	1
Journal of microfinance	34	11.26	2
IDS bulletin	23	7.62	3
Journal of international development	22	7.28	4
Small enterprise development	15	4.97	5
Journal of development economics	12	3.97	6
Sub-total	146	48.34	-
Other journals	156	51.66	-
Total	302	100.00	-



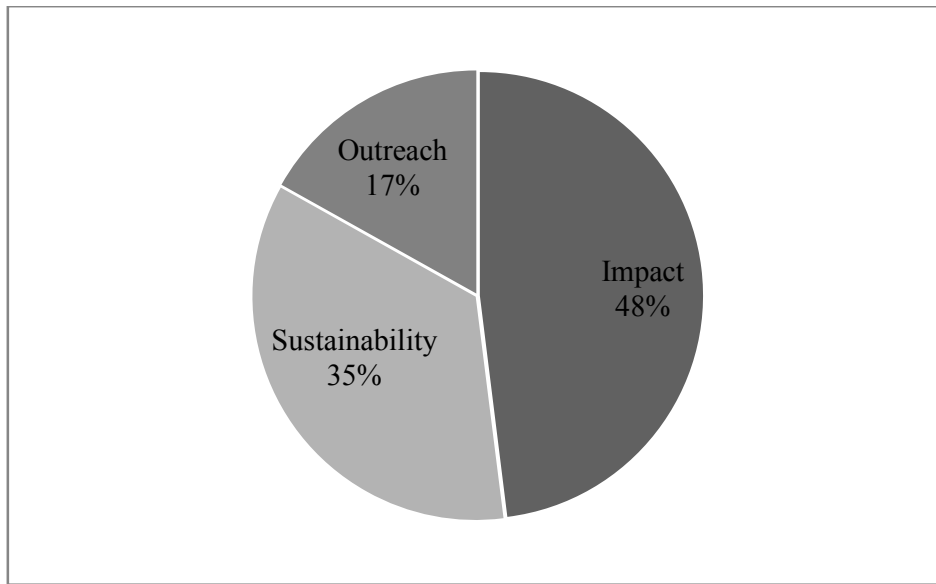


Fig. 2. Distribution of peer-reviewed articles by category

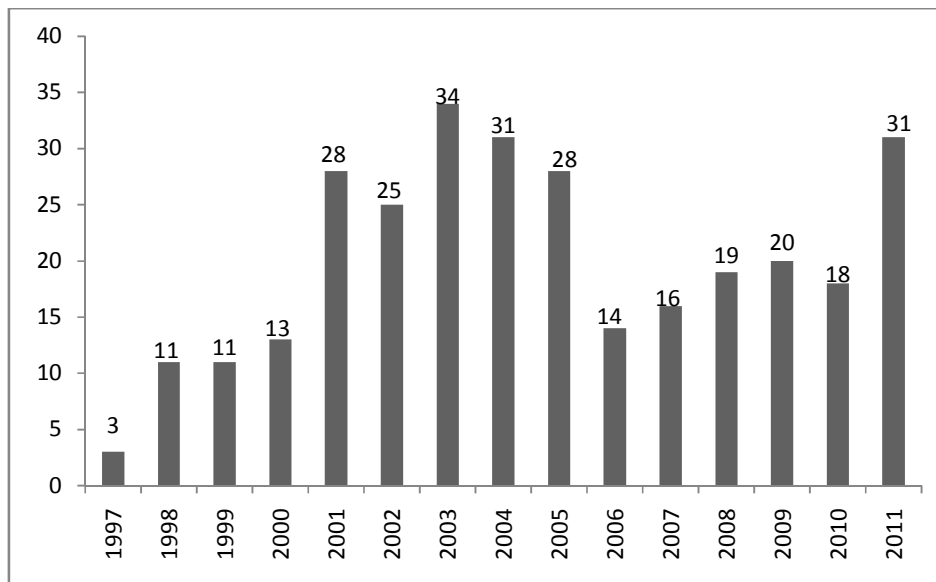


Fig. 3. Distribution of peer-reviewed articles by year of publication

## 8. CONCLUSION

Although microfinance is a new discipline for academic research, much research exists examining aspects of microfinance impact, sustainability and outreach. This paper examines how previous literature evaluates the impacts, sustainability and outreach of microfinance activities in many developing countries. It is difficult to make concrete conclusions since extant literature documents mixed results. Many

feasibility and impact studies report positive impacts of microfinance with respect to poverty alleviation, women empowerment, increased individual and household income, access to health education, and sanitation; others do not find direct links. Despite success of few large and efficient MFIs in achieving sustainability with maintaining their mission of serving an unbanked population, a large number of MFIs face challenges in attaining institutional sustainability. There is also disagreement on the trade-off

between MFI sustainability and outreach; several studies report complementary relationships between sustainability and outreach, other suggest inverse relationships. However, there is consensus that MFIs extend financial and non-financial services to people normally ignored by traditional financial institutions. To avoid generalization of microfinance as a means of sustainable livelihood of the poor, rigorous research on the impacts of microfinance is needed. The same is true for the question of trade-off between sustainability and outreach. Positive outcomes of various case studies in different countries suggest hope for future microfinance research. This review guides early microfinance practitioners in finding further academic research paths, and publishing their work in relevant journals.

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### COMPETING INTERESTS

Authors have declared that no competing interests exist.

### REFERENCES

1. Rahman MW, Jianchao Luo. Comparison of microfinance models in China and Bangladesh: The implications for institutional sustainability. *World Applied Sciences Journal*. 2011;14(2):245-255.
2. Hamada M. Financial services to the poor: An introduction to the special issue on microfinance. *The Developing Economics*. 2010;48 (1):1-14.
3. MIX. MIX Market, Financial Data and Social Performance, Microfinance Information Exchange. Available:<http://www.mixmarket.org/> (accessed on 20 September 2011)
4. Rahman MW, Jianchao Luo, Minjuan, Z. Welfare Impacts of NGO type Microfinance Service Providers in China: An empirical study in Shaanxi China. *Journal of International Development*; 2014. DOI: 10.1002/jid.3020. (in press).
5. Morduch J. The role of subsidies in microfinance: Evidence from Grameen bank. *Journal of Development Economics*. 1999;60:229-248.
6. Dunford C. Building better lives sustainable integration of microfinance and education in child survival, reproductive health, and HIV/AIDS prevention for the poorest entrepreneurs. *Journal of Microfinance*. 2006;3(2):1-25.
7. Pitt MM, Khandker S. The Impact of Group-based Credit Programs on Poor Households in Bangladesh: Does the Gender of Participants Matter?" *Journal of Political Economy*.1998;106(2):958-996.
8. Khandaker SR. Microfinance and poverty: Evidence using panel data from Bangladesh. *The World Bank Economic Review*. 2005;19(2):263–286.
9. Nawaz S. Microfinance and poverty reduction: Evidence from a village study in Bangladesh. *Journal of Asian and African Studies*. 2010;45(December):670-683.
10. Ahmed F, C Siwar, NAH Idris, Begum RA. Impact of microcredit on poverty alleviation among rural women: A case study of *Panchagarh* District in Bangladesh. *African Journal of Business Management*. 2011; 5(16):7111-7119.
11. Simanowitz A. Targeting the poor: A comparison between visual and participatory methods. *Small Enterprise Development*. 2011;11(1):29–39.
12. Weiss J, Montgomery H. Great expectations: Microfinance and poverty reduction in Asia and Latin America. *Oxford Development Studies*. 2005;33(3-4): 391-416.
13. Kondo T, Orbeta A, Dingcong C, Infantado C. Impact of microfinance on rural households in the Philippines. *IDS Bulletin*. 2008;39 (1):51–70.
14. Meyer RL. The demand for flexible microfinance products: Lessons from Bangladesh. *Journal of International Development*. 2002;14 (3):351-368.
15. Woolley J. Microfinance performance and domestic GDP growth: Testing the resiliency of microfinance institutions to economic change. *Stamford Journal of Microfinance*. 2008;1(2008):1-17.
16. Conning J. Outreach, sustainability and leverage in monitored and peer-monitored lending. *Journal of Development Economics*. 1999;60(1999):51–77.
17. Paxton J, Granham D, Thraen C.

- Modeling group-loan repayment behaviour new insight from Burkina Faso. *Economic Development and Cultural Change*. 2000; 48(3):639-655.
18. Brau JC, Woller GM. Microfinance institutions: A comprehensive review of the existing literature and an outline for future financial research. *Journal of Entrepreneurial Finance and Business Ventures*. 2004;9 (1):1-26.
  19. Harmes N, Lensik R. Microfinance: Its impact, outreach and sustainability. *World Development*. 2011;39 (6):875-881.
  20. Coleman BE. Microfinance in Northeast Thailand: Who benefits and how much? *World Development*. 2006;34(9):1612–1638.
  21. Karlan D. Microfinance impact assessments: The perils of using new members as a control group. *Journal of Microfinance*. 2001;3(2):75–85.
  22. Hulme D. Impact assessment methodologies for microfinance theory, experience and better practice. *World Development*. 2000;28(1):79–98.
  23. Zohir S, Matin I. Wider impacts of microfinance institutions: Issues and concepts. *Journal of International Development*. 2004;16: 301-330.
  24. Miller J, Martinez R. Championship League: An Overview of 80 Leading Latin American Providers of Microfinance. *MicroBanking Bulletin*. 2006;12:15-21
  25. Hartarska V, Nadolnyak D. Does rating help microfinance institutions raise funds? Cross-country evidence. *International Review of Economics and Finance*. 2008; 17:558-571.
  26. Chemin M. The benefits and costs of microfinance: Evidence from Bangladesh. *Journal of Development Studies*. 2008; 44(4):463–484.
  27. Takahashi K, Kigashikata T, Tsukada K. The short term poverty impact of small-scale collateral-free microcredit in Indonesia: a matching estimator approach. *The Developing Economics*. 2010;48 (1):128-155.
  28. Afrane S. Impact assessment of microfinance interventions in Ghana and South Africa: A synthesis of major impacts and lessons. *Journal of Microfinance*. 2002;4(1):37-58.
  29. McKernan SM. The impact of microcredit programs on self-employment profits: Do noncredit program aspects matter? *The Review of Economics and Statistics*. 2002; 84(1):93–11.
  30. Navajas S, Schreiner M, Meyer RL, Gonzalez-Vega C, Rodriguez-Mega J. Microfinance and the poorest of the poor: Theory and evidence from Bolivia. *World Development*. 2000;28(2):333-346.
  31. Haque MS, Yamao M. Can microcredit alleviate rural poverty? A case study of Bangladesh. *International Journal of Human and Social Sciences*. 2009;4 (13):929-937.
  32. Sharma M, Zeller M. Placement and outreach of group-based credit organizations: The cases of ASA, BRAC, and PROSHIKA in Bangladesh. *World Development*. 1999;27 (12):2123–36.
  33. Li X, C Gan, Hu B. The Welfare impact of microcredit on rural households in China. *The Journal of Socio-Economics*. 2011;40 (2011):404-411.
  34. Westover J. The record of microfinance: The effectiveness / ineffectiveness of microfinance programs as a means of alleviating poverty. *Electronic Journal of Sociology*. 2008;12(1):1-8.
  35. Dobra A. Microfinance: Champion in poverty alleviation and failure in female empowerment, *Internationale Politik und Gesellschaft Online*. 2011;3.(2011):134-144.
  36. Alexander-Tedeschi, G, Dean K. Cross sectional impact analysis: Bias from Dropouts. *Perspectives on Global Development and Technology*. 2010;9: 270-291.
  37. Alexander-Tedeschi G. Overcoming selection bias in microcredit impact assessments: A case study in Peru. *Journal of Development Studies*. 2008; 44(4):504–18.
  38. Copestake JG, Bhalotra S, Johnson S. Assessing the impact of microcredit on poverty: A Zambian case study. *Journal of Development Studies*. 2001;37(4).
  39. Mosley P. Microfinance and poverty in Bolivia. *Journal of Development Studies*. 2001;37(4):101–132.
  40. Coleman B. The impact of group lending in Northeast Thailand. *Journal of Development Economics*.1999;60:105-141.
  41. Nanda P. Women participation in rural credit programs in Bangladesh and their demand for formal health care: Is there a positive impact? *Health Economics*.1999;8: 415–428.
  42. Datta D. Microcredit in rural Bangladesh-Is it reaching the poorest? *Journal of*

- Microfinance. 2004;6(1):55-81.
43. Pitt MM, Khandker SR, Cartwright J. Empowering women with microfinance: evidence from Bangladesh, *Economic Development and Cultural Change*. 2006; 54(4):791-831.
  44. Rai A, Ravi S. Do Spouses make claims? Female empowerment and microfinance, *World Development*. 2011;39(6):913–921.
  45. Rahman A. Micro-credit initiatives for equitable and sustainable development: Who pays? *World Development*. 1999; 27(1):67– 82.
  46. Goetz AM, Gupta RS. Who takes the credit? Gender, power, and control over loan use in rural credit programs in Bangladesh. *World Development*. 1996;24(1):45–63.
  47. Goni MA, Saito O. Fertility decline and women’s status-the role of nongovernment organizations (NGOs) in Bangladesh: A micro data analysis. *International NGO Journal*. 2010;5(1):21-33.
  48. Bhatt N, Tang SN. Delivering microfinance in developing countries: Controversies and policy perspectives. *Policy Studies Journal*. 2001;29 (2):319-333.
  49. Woller G. From market failure to marketing failure: Market orientation as the key to deep outreach in microfinance. *Journal of International Development*. 2002;14(3): 305–324.
  50. Woller G, Woodworth WP. Microcredit as a grass-roots policy for international development. *Policy Studies Journal*. 2001; 29:267-283.
  51. Hamid SA, Roberts J, Mosley P. Evaluating the health effects of micro health insurance placement: Evidence from Bangladesh. *World Development*. 2011;39 (3):399-411.
  52. Behrman JR, Rosenzweig MR. Does increasing women’s schooling raise the schooling of the next generation. *American Economic Review*. 2002; 92(1):323-334.
  53. Barnes C. Microcredit and households coping with HIV/AIDS- A case study from Zimbabwe. *Journal of Microfinance*. 2005; 7(1):56-77.
  54. Maldonado JH, Gonzalez- Vega C. Impact of microfinance on schooling: Evidence from poor rural households in Bolivia. *World Development*. 2008;36(11):2440-2455.
  55. Mcintosh G, Villaran H, Wydick B. Microfinance and home improvement: using retrospective panel data to measure program effects on fundamental events, *World Development*. 2011;39(6):922-937. DOI: 10.1016/j.worlddev.2011.03.001.
  56. Anderson CL, Locker L, Nugent R. Microcredit, social capital and common pool resources. *World Development*. 2002; 30(1):95-105.
  57. Becchetti L, Castriota S. Does microfinance work as a recovery tool after disasters? Evidence from the 2004 Tsunami, *World Development*. 2011;39(6): 898-912.
  58. Rahman MW, Luo J. Sustainability of NGO type MFIs in Shaanxi Province, China - compared with Grameen Bank model, *African Journal of Bus Manage*. 2012; 6(15):5319-5327. DOI:10.5897/AJBM11.1458.
  59. Woodworth WP. Third World Economic Empowerment in the new Millennium: Microenterprise, micro entrepreneurship, and Microfinance. *Advanced Management Journal*. 2000;65(4):19-28.
  60. Kiiza B, Omeke M, Mugisha J. Microfinance self-sustainability and outreach in Uganda: A case of Teso Rural Development Trust Limited. *Eastern Africa Journal of Rural Development*. 2004;20(1): 34-44.
  61. Chaves RA, Claudio Gonzalez-Vega. The Design of successful rural financial intermediaries: Evidence from Indonesia. *World Development*. 1996;24 (1):65-78.
  62. Khalily BMA. Qualitative approach to impact analysis of microfinance programmes in Bangladesh - What have we Learned? *Journal of International Development*. 2006;16:331-353.
  63. Mersland R, Strom RO. Microfinance Mission Drift? *World Development*. 2010; 38(1):28-36.
  64. Hudon M, Traca D. On the efficiency effects of subsidies in microfinance: An empirical inquiry. *World Development*. 2011;39(6):966–973.
  65. Pati AP. Subsidized microfinancing and financial sustainability of SHGs. *The Indian Journal of Commerce*. 2008;61(4):137-150.
  66. Mokor JM. The transition from microfinancing into formal banking among the microfinance institutions in Kenya. *African Journal of Business & Management*. 2010;1:55-69.
  67. Kono H, Takahashi K. Microfinance revolution: Its facets innovations, and challenges. *The Developing Economics*. 2010;48 (1):15-73.
  68. Rahman MW, Luo J. The Development

- Perspective of Finance and Microfinance Industry in China: How far is MFIs regulations? *International Journal of Economics and Finance*. 2011;3 (1):160-170.
69. Yaron J. Assessing development finance institutions: A public interest analysis, Discussion Paper No. 174, Washington, DC. World Bank; 1992.
70. Rahman A, Razzaque A. On reaching the hard core poor: some evidence on social exclusion in NGI programs. *The Bangladesh Development Studies*. 2000; 36(1):1-36.
71. Halder SR. Poverty outreach and BRAC's microfinance interventions: Program impact and sustainability. *IDS Bulletin*. 2003;34(4):44-53.
72. Fletschner D. Rural women's access to credit: Market imperfections and intra-household dynamics. *World Development*. 2009;37(3):818-631.
73. Prahalad CK. *The fortune at the bottom of the pyramid- eradicating poverty through profits, fifth anniversary addition*. Wharton School Publishing; 2010.
74. Rahman, MW, Luo J, Ahmed S, Xiaolin W. The synthesis of Grameen Bank, BRAC and ASA Microfinance approaches in Bangladesh. *World Applied Sciences*. 2012;20(7):1055-1062. DOI:10.5829/idosi.wasj.2012.20.07.1558.
75. Woller G, Dunford C, Woodworth WP. Where to microfinance? *International Journal of Economic Development*. 1999; 1(1).
76. Cull R, Demirgüç-Kunt A, Morduch J. Microfinance and the market. *Journal of Economic Perspectives*. 2009;23(1):167-192.
77. Fernando NA. Microfinance outreach to the poorest: A Realistic Objective? *ADB. Finance for the Poor*. 2004;5(1):1-5.
78. Cull R, Demirgüç-Kunt A, Morduch J. Financial performance and outreach: A global analysis of lending microbanks. *The Economic Journal*. 2007;117(1):107-133.
79. Hartarska V, Nadolnyak D. An impact analysis of microfinance in Bosnia and Herzegovina. *World Development*. 2008; 36(12):2605-2619.
80. Pitt MM, Khandker SR, Chowdhury OH, Millimet DL. Credit programs for the poor and the health status of children in rural Bangladesh. *International Economic Review*. 2003;44(1):87-106.

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