



Systematic review of quantitative evidence on the impact of microfinance on the poor in South Asia

Professor Arun Kumar Gopaldaswamy (Department Management Studies, IIT Madras, India)
Dr M. Suresh Babu (Department of Humanities and Social Sciences, IIT Madras, India)
Professor Umakant Dash (Department of Humanities and Social Sciences, IIT Madras, India)

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Abbreviations

2SLS	Two-stage least squares
AAS	Association for Asian Studies
BASAS	British Association for South Asian Studies
CGAP	Consultative Group to Assist the Poor
DFID	Department for International Development, UK
DID	Differences-in-differences
IDRC	International Development Research Centre
IMF	International Monetary Fund
IV	Instrumental variable
LIML	Limited information maximum likelihood
LMICs	Lower- and middle-income countries
MDG	Millennium Development Goal
MF	Microfinance
MFI	Microfinance institution
NABARD	National Bank for Agriculture and Rural Development
NGO	Non-governmental organisation
PSM	Propensity score matching
RCT	Randomised controlled trial
SAALG	South Asia Archive and Library Group
SEWA	Self Employed Women's Association
SIDBI	Small Industries Development Bank of India
SMEs	Small and medium enterprises
SR	Systematic review
USAID	United States Agency for International Development
WoE	Weight of evidence

1. Background

Microfinance (MF) is commonly known as the magic wand to improve the social and economic status of a community by empowering women, enhancing financial inclusion and literacy, and encouraging savings (Harcourt 2012). Despite the apparent success and popularity of microfinance there has been mixed evidence on its effects on the social and economic wellbeing of the poor (Duvendack et al. 2011, Stewart et al. 2010, 2012).

In this review, an attempt is being made to synthesise the existing literature related to the impact of microfinance on the wellbeing of the poor in the South Asian context. This assumes relevance for two important reasons: (a) South Asia presents a heterogeneous set of countries which went into large-scale microfinance programmes early on; (b) it also provides an ideal setting as a group of countries ranging from very-low-income to lower-middle-income countries. Further, systematic reviews attempting to synthesise conflicting evidence from different regions are conspicuously absent in the South Asian context.

The subsequent sections deal with the rationale and objectives of the review, the conceptual definitions of microfinance used and the outcomes on which the review focuses. In addition, we discuss the methods used for identifying the studies, the criteria for including the studies in the review and the method adopted for synthesis of the studies.

1.1 Rationale for review

With the growth of microfinance as a tool for ‘including the excluded’ and as an industry by itself, it has attracted the attention of policy makers, donors and private investors. This has demanded the generation of clear evidence on the outcomes, which are currently very ambiguous (Armendáriz de Aghion and Morduch 2010). Attempts to examine the impacts of microfinance (Gaile and Foster 1996, Goldberg 2005, Odell 2010, Orso 2011) have shown that the methodology, tools and techniques used for assessing the impact suffer from several drawbacks. The popular method of using anecdotes and other inspiring stories showed that microfinance could make a real difference in the lives of those served. However, rigorous quantitative evidence is scarce and inconclusive (Armendáriz de Aghion and Morduch 2010). As the definition and practice of microfinance has changed to a ‘financial inclusion’ approach, there has been increased reliance on commercial operations, leading to reductions in subsidies and agency financial support (Mahajan and Nagasri 1999, Tiwari and Fahad 2004, Fernando 2006). The financial systems approach supports the argument that microfinance institutions should aim for sustainable financial services to low-income people, which may undermine the potential for poverty reduction and social empowerment. According to Cull et al. (2009), the argument that microfinance institutions should seek profits has an appealing “win-win” resonance, admitting little trade-off between social and commercial objectives (Imai et al. 2010).

However, some recent studies have shown its significant effect on poverty using household survey data. Using panel data at both participant and household levels in Bangladesh, Khandker (2005) confirms that microfinance programmes have a sustained impact in reducing poverty among the participants, especially females and a positive spillover effect at village level, thus contributing to national economic growth. Other studies have shown that microfinance institutions (MFIs) have not reached the poorest of the poor in Asian countries (Weiss and Montgomery, 2005) or in Bolivia (Mosley, 2001). Thus the relationship between microfinance and poverty is still in question. Even though there is some unanimity on the interconnections and pathways through which microfinance could potentially alleviate poverty, the multiplicity of indicators used to assess these pathways

has resulted in conflicting evidence, in particular, showing a relatively small impact on poverty at the macro level. Recent attempts to synthesis the available literature on the impact of microfinance shows that “almost all impact evaluations of microfinance suffer from weak methodologies and inadequate data, thus the reliability of impact estimates are adversely affected” (Duvendack et al. 2011).

This is further complicated by the wide product proliferation in the microfinance industry, namely, microcredit, microsavings, micro-leasing and microinsurance in recent years, which has necessitated a continuous synthesis of the outcomes. Two prominent systematic reviews (SRs) - one on microcredit worldwide (Duvendack et al.(2011) and the other (Stewart et al. 2010) covering Sub-Saharan Africa - have formed a large corpus of synthesised evidence. Though Duvendack et al. (2011) focused on microfinance interventions in addition to microcredit, the studies on microsavings, which forms a part of microfinance, have been excluded (Stewart et al. 2012). A recent review by Brody et al. (2013) focuses on the impact of women’s economic self-help groups on their individual empowerment in low- and middle-income countries (LMICs), while Kennedy et al. (2013) focus on income-generation interventions, including microfinance and vocational skills training for HIV prevention. More recently, Vessel et al. (2012) have studied the effect of microcredit on women’s control of household finances in developing countries. There exists a paucity of reviews that explicitly examine the role of microfinance in poverty reduction in the South Asian context. The specific focus on the South Asian region, which houses a large number of microfinance interventions and has also been a pioneer in developing different models, ranging from Grameen Bank to group lending, is relevant for a comprehensive understanding of the impact of microfinance.

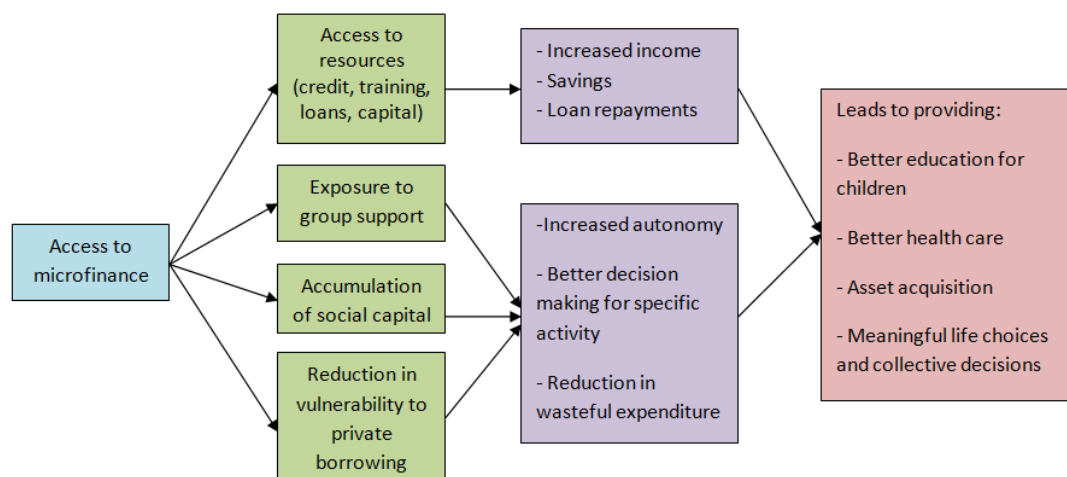
In this review, the impact on poverty reduction will be analysed using the dimensions of access, coverage, activities generated and outcomes, as the literature indicates a strong link between these variables and poverty reduction. The evidence base on the topic is comparatively high for some specific countries (for example, the majority of studies synthesised by Duvendack et al. (2011) were based in Bangladesh, with few of them in India and Pakistan and none in other South Asian countries). However the evidence base and literature on South Asia has been growing recently (Shetty 2012).

1.2 Definitional and conceptual issues

In line with the systematic review methodology, we establish clear and precise definitions of the interventions/institutional mechanisms to be studied and the impacts to be assessed. This is all the more important as the concept and practice of microfinance have changed significantly over the years in South and East Asia. The concepts and practice mechanisms vary significantly and are influenced by financial literacy, financial service providers, population density, attitudes to debt, group cohesion and enterprise development, to name a few.

The causal links between access to microfinance and outcomes have been elucidated in Brody et al. (2013). In their framework, they ‘hypothesize that women’s participation in economic and livelihoods SHGs [self-help groups] will enable women to gain access to resources in the form of credit, training, loans or capital’ (Brody et al. 2013: 6). However given the significant inter-country variations in South Asia we will be considering two important impacts in terms of reduction in vulnerability to informal money lenders and access to better education, thereby increasing human capital formation for the immediate next generation. Thus our conceptual framework, extending on Brody et al. (2013), will include the impact of vulnerability and access to better education due to microfinance.

Figure 1: Access to microfinance and its leading benefits



1.2.1 Definition of microfinance

Microfinance is the provision of access to high-quality and affordable financial services to low-income households with an intended objective of financing income-producing activities, building assets, stabilising consumption and protecting against risks, and thereby fighting against poverty (Brau and Woller 2004:3, Duvendack et al. 2011, Robinson 2001, Yunus 1999)¹. It principally encompasses microcredit, microsavings, micro-insurance and money transfers for the poor. The microfinance literature currently provides definitions of microfinance institutions (MFIs) as self-help groups that offer women a collective finance, enterprise and/or livelihoods component (Brody et al. 2013), or institutions that offer microcredit, micro-leasing and microsavings (Stewart et al. 2012). Microcredit, which is part of microfinance, refers to small loans given to usually unsalaried borrowers with little or no collateral or to members of cooperatives who otherwise cannot get access to credit (Hossain 2002).² It should be noted that the terms ‘microcredit’ and ‘microfinance’ tend to be used interchangeably to indicate the range of financial services offered specifically to low-income households and microenterprises (Brau and Woller 2004).³

Microsavings refers to financial products that enable the poor to save small, variable amounts of money, frequently offering different terms of access and generating differing returns. Micro-insurance helps low-income people to manage risks, such as death, disability, hospitalisation or crop failure, in exchange for regular payments called ‘premiums’, proportionate to the likelihood of the risk occurring and the probable costs (Ledgerwood and Gibson 2013). According to the USAID definition, a microenterprise consists of a poor owner-operator (typically a small shopkeeper, craftsman or vendor) with few workers. We will follow the definition of microfinance by Brody et al. (2013), and we will be focusing on microfinance interventions including self-help groups that offer a collective finance, enterprise and/or livelihoods component. Collective finance and enterprise can include savings and loans, group credit, collective income generation and micro-insurance. Initiatives for improving financial inclusion, such as vocational training

¹ See also www.cgap.org

² <http://www.microfinancegateway.org/what-is-microfinance>; www.cgap.org

³ See also www.cgap.org

and other technical assistance, though crucial in improving the impact of microfinance services, are not included as microfinance in this review.

1.2.2 Spectrum of microfinance products

Poor and vulnerable households require and use an array of financial support mechanisms for a variety of purposes, from acquiring productive assets to more pressing needs of consumption or to take care of unanticipated emergencies (such as sickness, loss of employment, death of a bread winner, nutrition, floods) (Afrane 2002, Hatch 2011, Hossain and Knight 2008, Khandker 2001, Matin et al. 1999). Hence the requirements for financial support are affected by age, gender, life-cycle events, structure of the family, livelihoods, geography and income levels (Ledgerwood and Gibson 2013).

However, the poor's access to the formal financial system is limited, and the services available do not acknowledge their diverse requirements (Matin et al. 1999,). Even though informal financial mechanisms entail high costs and cause inconvenience and embarrassment, the poor often prefer them because of their easy access, flexibility and other customised product features. Of late access to microfinance institutions, which include NGOs, specialised commercial institutions and member-based community groups (self-help groups) has increased, and they are providing financial services on a sustainable basis. Microfinance is not limited to borrowing, but also includes other financial services, such as savings, insurance and transfer facilities. Savings facilities are a particularly important issue for MFIs because the microfinance target group usually involves more deposit business than lending.

1.2.3 Outcome variables of impact

To study the impact of microfinance on the poor, we need to decide the accepted outcome variables to be considered for the review. Since poverty reduction is one of the main objectives of microfinance, changes in the income levels of individuals and households are often used as a measure of impact (Johnson and Rogaly 1997, quoted in Makina and Malobola 2004; Zaman 2001). Sometimes the extent to which female micro-entrepreneurs have been empowered is also seen as an outcome indicator (Husain et al. 2014, Mayoux 1999, Rahman 1998).

Outcome indicators also include increased food consumption, improvement in nutrition status, better health and education outcomes, better employment opportunities, a strong social network, reduction in vulnerability to shocks, reduced inequality, empowerment indicators and strengthened local economic and social development. As seen in the literature, some of the impact would be felt at the micro level (e.g. individual and/or household level), while others would be felt at the meso and macro levels (e.g. community, district and national levels). This review will include meso, macro and micro level impacts driven by microfinance.

1.3 Policy and practice background

Improving the access of low-income producers to basic financial services is viewed as part of developing economies' efforts to promote economic growth and reduce poverty. In general the approach is market-driven, in which financial sustainability becomes paramount. In many cases, the market approach is possible because of the use by MFIs of group lending and other techniques to offset borrowers' lack of collateral. The broad strategy in emerging countries to develop microfinance in rural small and medium enterprises (SMEs) includes implementation of a number of key measures in the overall legal and regulatory framework, including building up institutional capacity and the introduction of financial systems infrastructure.

In South Asia, the incidence of poverty or social exclusion is higher than in East Asia, although the difference between some specific countries may be relatively small.⁴ Within South Asia, a greater degree of poverty can be observed in Afghanistan, Pakistan and Nepal. Notable improvements in poverty reduction have been recorded in India, Sri Lanka and Bangladesh; however, these economies are still vulnerable to poverty or social exclusion.

Given that there is a valid rationale for the existence of microfinance institutions in South Asia, they operate in diverse market environments, resulting in a variety of models. These models can be categorised either according to the 'legal' classification - MFI with/without banking license - or with regard to the nature of the MFI. The diversity of these business models forms the basis for the varied product portfolios, designed to fit into a heterogeneous market environment, with a wide range of financial intermediaries applying different microfinance models and going through varied stages of development.

Studies have reiterated the diversity and heterogeneity of the microfinance sector in South Asia, as evidenced through the actual implementation of various schemes and models (World Bank 2007). County heterogeneity suggests that MFI measures need to be flexible to fulfil the markets' needs. In addition, intervention measures for target groups need to be sufficiently broad in order to provide efficient support. Thus the product range also has to be sufficiently wide in order to meet the target groups' needs.

1.4 Research background

There are number of studies examining the impact of microfinance on different LMICs. Islam et al. (2015) examine how the availability of microfinance influences households' borrowing from informal sources in village economies, using a unique household-level panel data set spanning more than two decades (1987-2008), from rural Bangladesh. The study concludes that households' access to microfinance reduces the incidence of borrowing from informal sources, but not the amount of borrowing. Moreover, less-poor households benefit more in terms of reducing their reliance on informal borrowing and the benefit accrues over time. Further it is found that having access to microfinance increases women's informal borrowing for small consumption usage, without facilitating access to new business opportunities. Khandker et al. (2014) use the same survey data to examine the dynamics of microcredit programmes in Bangladesh. A dynamic panel model is used to assess whether: (a) credit effects are declining over time; (b) market saturation and village diseconomies are taking place; and (c) multiple programme membership, arising as a consequence of microcredit expansion, is harming or benefiting the borrowers. The results confirm that microcredit programmes have continued to benefit the poor by raising household welfare. The beneficial effects have also remained higher for female than male borrowers. Multiple programme membership is also growing with competition from microfinance institutions, but this has helped raise assets and net worth more than it has contributed to indebtedness.

In the Indian context, Banerjee et al. (2012) studied the randomised evaluation of a group lending microcredit programme and found that small business investment and profits of pre-existing businesses increased, but consumption did not significantly increase. The study did not document any significant changes in health, education, or women's empowerment, while after two years, when the control areas had gained access to microcredit, households in the treatment area had borrowed for longer and in larger amounts. Imai et al. (2010) assessed the impact of microfinance on poverty reduction in India using cross-sectional data on 5,260 client (from 20 different MFIs) and non-client

⁴ There is much heterogeneity subregionally under the \$2 per day poverty line. In terms of head count ratio (HCR), East Asia performed better than the rest of the region with a 30% reduction, while South Asia reduced the HCR by less than 4% (Wan and Sebastian 2011).

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households. Impact was assessed on an index-based poverty ranking indicator that contained information on landholdings, income, assets, housing and sanitation. They found that microfinance had significantly positive impacts on poverty reduction. Duvendack (2010) re-examined the microfinance impact evaluation of SEWA Bank in India. The USAID panel and a new cross-section data set were analysed using propensity score matching (PSM) and panel data techniques to address selection bias. Sensitivity analysis of the matching results was used to explore their reliability. Various sub-group comparisons between borrowers, savers and controls were also conducted to shed some light on the impact of savings versus credit. The research concluded that doubts remained about the quality of the impact estimates re-examined using advanced econometric techniques.

Gobbi (2005) have presented the findings of two small surveys of women who, as microfinance clients, were engaged in microenterprise activities in Nepal and Pakistan. In an analysis of the impact of microfinance and microenterprise development on the economic and social empowerment of these women entrepreneurs, the study reported that MFI initiatives for the provision of financial services, the policy framework and legal reforms were key elements for greater economic and social empowerment of women. The study concludes that microfinance and microenterprise development may serve as a catalyst for social change, and in turn improve the political and social status of women. Setboonsarang and Parpiev (2008) explored the contribution of microfinance to the Millennium Development Goals (MDG) in Pakistan using data from a survey of clients of a microfinance bank (Khushhali Bank) in 2005. The study found that despite the Bank's strict poverty-targeting programme used in client selection, selectivity bias indeed still existed in the sampled households. Using propensity score-matching methods (PSM) to address the selectivity bias, this study found that the lending programme contributed significantly to income-generation activities such as agricultural production and, in particular, animal raising (MDG 1). However, the impacts on other MDGs - education, health, female empowerment and so forth - were of limited significance. Noreen et al. (2011) examined the role played by microfinance in poverty alleviation using a sample of 384 customers of four microfinance institutions in Pakistan collected through multi-stage cluster sampling. The study reported a positive and significant effect of microfinance programmes on children's education and household expenditure and no significant impact of microfinance on housing conditions, consumption of food items or ownership of household assets.

In the context of Sri Lanka, Shaw (2004) documented that the microenterprise earnings of microfinance clients in South Eastern Sri Lanka were linked to their initial incomes. Poorer clients were found to face geographic, financial and socio-cultural barriers to entry into the most promising microenterprise occupations, leading them to select low-value activities with poor growth prospects. Further, it was reported that in semi-urban areas, poverty impacts could be strengthened by supplementing loans with non-financial interventions encouraging poor clients to select higher-value occupations whereas in rural areas, where microenterprises faced severe market and infrastructure constraints, microenterprise development was unlikely to facilitate exit from poverty. Tilakaratne and Wickramasinghe (2007) examined the outreach of microfinance and its impact on poverty and the welfare of households. The study documented that although MFIs had reached the poor and the poorest groups, a significant proportion of their clientele was from the non-poor groups. The study also reported that there was a need for MFIs to provide credit plus services to their clients and also for rural infrastructure facilities to be developed that would encourage private and NGO sectors to get involved in microfinance provision. Recognition of the heterogeneity of microfinance clients and the design of appropriate, need-based microfinance instruments were also highlighted in this study.

As well as studies on different LMIC contexts, there is a comprehensive review of the impact of microfinance on poverty by Duvendack et al. (2011). In this study they have emphasised the need to reinvestigate the existing microfinance impact evaluations due to the inconclusive nature of their results. They found no study showing any strong impact of

microfinance on poverty alleviation and women empowerment with robust evidence. Systematic reviews on microfinance have considered six major characteristics for inclusion criteria: participant attributes, microfinance intervention and the type of MFI, comparison groups, outcomes, methodologies and publication status (Duvendack et al. 2011). Though in some studies, the initial focus was on the intervention (e.g. provision of microcredit), studies also analysed the measurement of outcomes (e.g. income, expenditure, assets, health and education, empowerment and so on) and contextual factors that were likely to affect differences in outcomes in different contexts, including other microfinance services. Few studies considered different categories of persons (impact heterogeneity) and the potential existence, as well as the likely significance of factors which might provide evidence of a causal relationship with microfinance. Research design was classified into five broad categories - randomised controlled trials (RCTs), pipeline designs, with/without comparisons, natural experiments and general-purpose surveys. Duvendack et al. observed that there were very few RCTs (studies by Banerjee and Duflo, 2009, and Banerjee et al., 2010, in the Indian context and a study by Karlan and Zinman, 2010, in the Philippines).

There was no robust evidence of positive impacts of microfinance on women's status or girl's enrolments in school. Further, some of the studies which claimed to have found positive impacts on females were based on weak research designs and problematic analyses (Goetz and Sen Gupta 1996, Hashemi et al. 1996, Schuler and Hashemi 1994). There was no statistically convincing evidence to either support or contradict the main claims for the beneficence of microfinance, partly due to weak research designs (Duvendack et al. 2011).

1.5 Purpose of the systematic review

The purpose is to assess the impact of microfinance on the wellbeing of poor people living in South Asia. The impact will be measured in terms of wellbeing, better access to healthcare, wealth creation, women's empowerment and the creation of social capital. The systematic review will focus on poor and excluded or marginalised populations within their own societies. The scope is limited to characterising the quantitative studies and synthesising their evidence.

1.6 Review questions

There are several implications for the review question arising from these considerations. The main review question is:

What is the impact of microfinance on the wellbeing of the poor and what are the conditions for making microfinance work for the poor in South Asia?

in this study, microfinance encompasses micro credit and micro savings.

Further, on the advice of DFID and the support group from the EPPI-Centre, we suggest the inclusion of the following sub-questions, for which the rationale will be provided during the scoping exercise. We do not think that women's empowerment can be measured quantitatively, so we will use proxy indicators such as measurable reduction in wasteful expenditures at the household level and creation of specific household enterprises by women.

1. Which types of interventions or their components could affect the wellbeing of the poor on particular outcomes, for example, income, consumption, savings, investment, profits, accumulation of productive or non-productive assets, health, education and women's empowerment?
2. What are the direct and indirect, positive and negative, intended and unintended effects on the participants and non-participants?

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3. How are the effects distributed across target segments (e.g. rural, urban and other hard to reach marginal groups, different poverty segments, women, entrepreneurs, farmers) and outcome variables (e.g. SME development, empowerment)?
4. Do they affect individuals, households, small businesses and communities differently?
5. What are the critical success factors or enabling conditions at the meso, macro and micro levels for achieving greater positive benefits? These might be, for example, legal form (for profit/not for profit), delivery model (individual versus group), single-product versus multiple financial services), non-financial services (financial literacy, skill training, etc.), presence of resource agencies (capacity building, on-lending funds), supportive regulation.
6. Does the context (geographical, political and socio-economic) matter and under what circumstances do these interventions succeed or fail?

2. Methods used in the review

2.1 User involvement in the review

During the study search phase, we will contact leading researchers project advisers and experts working on this area (Malcom Harper - Cranfield School; M.S. Sriram - Indian Institute of Management, Bangalore, India; S.L. Shetty - Economic and Political Weekly; Center for Financial Inclusion; Penn Microfinance Network) to inform them about the systematic review that we are undertaking and also to ask them to suggest studies that could be included for the review. The draft report will also be reviewed by the advisory committee to the project.

2.1.1 User engagement

Since the main target group of the review is policy makers, we will engage with them at various levels. First, we will work closely with the DFID and the EPPI-Centre support group, who initiated the research questions, by sharing progress reports and having telephone discussions on the study parameters. We will use the expertise of the advisory group members to scope and target the review and will also schedule periodic discussions with them. This will ensure that the review clearly addresses the question in a way that will have a strong relevance to the policy makers.

2.2 Identifying and describing studies

2.2.1 Identification of potential studies: search strategy

A sample search strategy for databases can be found in Appendix 2.1. This will be tested and modified for each specific databases. Titles and abstracts will be imported into EPPI-Reviewer 4, which will be used to keep track of and code studies found during the review.

2.2.2 Defining relevant studies: inclusion and exclusion criteria for mapping

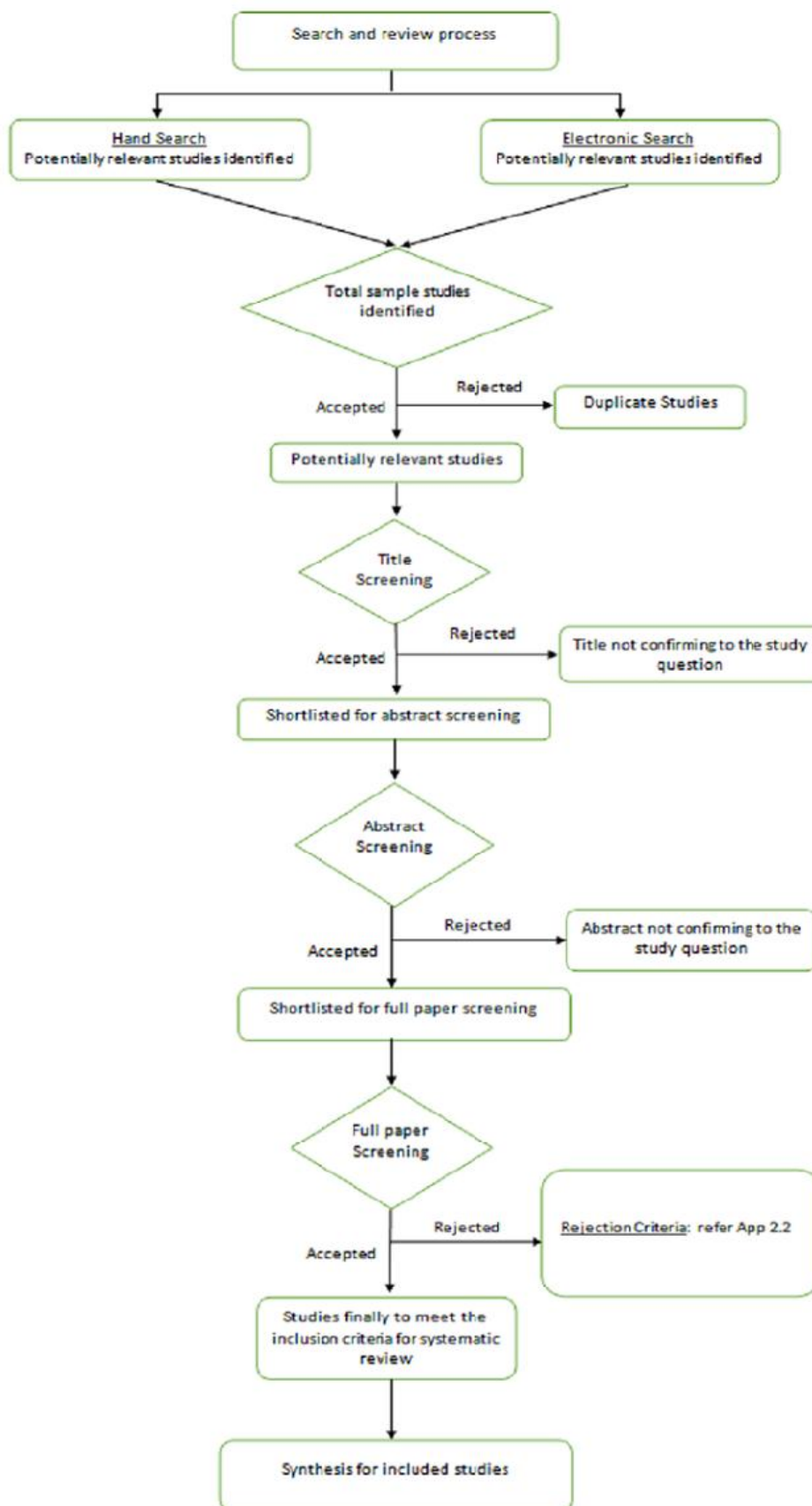
At the mapping stage, using the search strategy, an initial, broad bibliography will be collated. To ensure that only studies focusing on the review question are included for mapping, a set of inclusion criteria has been developed (see Appendix 2.2).

2.2.3 Screening studies: applying inclusion criteria

Inclusion and exclusion criteria for mapping in respect of country context, intervention and publication date will be applied on identified studies successively to: (i) titles and abstracts and (ii) full reports. Full reports will be obtained for those studies that appear to meet the initial criteria or those that have insufficient information, and will be screening once more. Further inclusion/exclusion criteria with respect to methodologies, outcomes and type of intervention (developed in consultation with DFID and the EPPI-Centre support group, and based on the findings from the systematic map) will be applied to the full reports (see Section 2.3).

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Figure 2: Flowchart: review process



2.2.4 Characterising included studies

At the mapping stage, a quick characterisation will be carried out based on the type of intervention, region, population, target study design and outcomes. The PICO components, which are commonly used to formulate research questions, define much of the eligibility criteria for the initial characterisation of the studies. This stands for Population (Participants), Intervention (or Exposure), Comparator and Outcomes. Thoughtfully and unambiguously specifying the parameters for each of these attributes allows for research questions to be created that will provide data relevant to the review question. Apart from PICO, additional criteria include study design, minimum number of subjects per study, background of the participants, baseline status, minimum intervention period, minimum information for characterising the intervention, outcome measures of interest and statistical/econometric analysis. The draft coding chart is provided in Appendix 2.3.

2.2.5 Identifying and describing studies: quality assurance process

Each record found in the searches will be assessed independently by the two lead reviewers (Arun Kumar and Umakant Dash) using the inclusion criteria stated in Appendix 2.2, as will reports or websites with potentially relevant text and data.

The coding of the included studies in the systematic map will be carried out by Suresh Babu and then validated by Arun Kumar and Umakant Dash to create a final study dataset.

Disagreement between the lead reviewers will be referred to a third reviewer (Thillai Rajan) or the adviser (V R Muraleedharan), who will make the final decision.

2.3 In-depth review

2.3.1 Moving from broad characterisation (mapping) to in-depth review

The studies in the in-depth review have to be checked for methodological soundness (by assessing their validity in terms of research design and methods used) and appropriately grouped. The validity assessment of studies will be conducted based on the delivery and adequacy of the microfinance intervention, the reliability and validity of the outcome measures and other factors affecting the heterogeneity of outcomes.

2.3.2 Assessing the quality of studies

The quality of individual studies will be assessed in accordance with DFID's How to note (Department for International Development 2014). A 'checklist for study quality' will be completed for each study included in the review and based on this the study will be classified as high, medium or low quality according to the EPPI-Centre Weight of Evidence (WoE):

1. Trustworthiness of results:

Criteria for judging validity used in this review are adapted from the Cochrane Handbook (Higgins and Green 2011). The Cochrane Collaboration suggests that the key components of bias (and therefore in assessment of validity) in any study are:

- A. Selection bias: Arises due to systematic differences between the baseline characteristics of the two groups, i.e., those who are selected for study and those who are not. It occurs when the study sample does not represent the target population for whom the intervention was intended.
- B. Performance bias: A systematic difference between the care or support provided to the two groups.
- C. Attrition bias: The systematic differences between the two arms in withdrawals from the study. It arises because of inadequacies in accounting for losses of participants due to dropouts, leading to missing data.

- D. Detection bias: The systematic differences between groups in how outcomes are determined.
- E. Reporting bias: Systematic differences between reported and unreported findings.

2. Appropriateness of the use of the study design to address the review question:

Though the validity criteria form the basis for assessing the quality of the studies, a composite scoring method (Duvendack et al. 2011) based on a research design score (RDS) and an analytical method score (AMS) will be used. Further, a composite score (CS) will be computed by aggregating both the scores and a cut-off value will be proposed to classify studies as 'high', 'medium' or 'low' quality. Studies that are rated 'low quality' will not be included in the review. These tools will be applied since they enable an assessment of quality of individual studies that 'acknowledges the diversity of methodological approaches of multiple academic disciplines' by focusing on 'principles of credible research enquiry relevant to all research studies' (Department for International Development 2014: 11). This allows for a common framework to be used across the team and across different methodological approaches. Based on a template that will be developed for the review of individual studies relevant data will be extracted in a consistent way across all the studies reviewed. This will enable the recording of substantial amounts of data as well as methodological information.

Though RCTs are considered to be the best for impact evaluations (Duflo et al. 2007), they suffer from constraints such as double-blinding, and experimental and spillover effects that are not controlled for. Pipeline studies (studies that use pipeline design and do not have random allocation of samples) suffer from attrition bias and programme placement bias. These threats to validity cannot be fully compensated for by elaborate analytic methods. Hence, panel data studies, with/without studies, before/after studies, natural experiment-based and observation-based research designs are also included.

With respect to analysis methods, though instrumental variable (IV), propensity score matching (PSM), two-stage least squares (2SLS), limited information maximum likelihood (LIML) and difference in difference (DID) are considered to be very sophisticated, they have limitations in respect of weak instruments and unbalanced covariates. These methods require sensitivity analysis to establish robustness in the estimates. Multivariate methods do not control for endogenous variables and simple tabulation methods are the least preferred due to absence of controls for endogenous as well as exogenous variables. Hence, studies using weak research designs but sophisticated analytical methods or vice versa will be considered for systematic review based on scoring of research design and the econometric method used and subsequent ranking.

- 3. Appropriateness of the focus for answering the review question (topic relevance, including relevant answers and legal and ethical propriety)
- 4. Overall weight of evidence (a summary of the above).

Validity assessment will focus on checking the delivery and adequacy of the intervention (e.g. provision of microcredit), reliability of the outcome measures (e.g. income, expenditure, assets, and so on), contextual factors affecting the heterogeneity of outcomes (including other MF services). The potential risk of bias for each included study will be summarized in tabular format.

2.3.3 Synthesis of evidence

As the possibility exists that the studies will be characterised by substantial heterogeneity in terms of the type of data, methodologies used, outcomes analyses, etc., we propose that using a single synthesis method (synthesis based on any one single

criterion) would not adequately capture and explain the evidences in these studies. We will therefore use mixed-methods approaches to synthesise the results.

First, wherever possible we will use statistical techniques such as standardised mean differences, odds ratios (Borenstein et al, 2008) and meta-regression analysis (Stanley and Jarrell, 1989) to synthesise the evidence from quantitative studies. In the case of meta-regression analysis, we will also use the funnel asymmetry test and the meta significant test to check the robustness of the findings. Appropriate variables will be used in the meta-regression analysis to capture the differences in study characteristics to account for heterogeneity.

Second, a narrative approach will be used to synthesise the evidence, since it is better suited for reviews that aim to describe the existing body of literature. In addition, this approach is useful in synthesising evidence of different types such as qualitative, quantitative, economic, etc. (Lucas et al. 2007). Textual narrative also makes the context of the study clearer and is more likely to make the heterogeneity between studies transparent (Barnett-Page and Thomas, 2009). This narrative approach will be used only for mixed-method studies in the present review.

All studies selected for inclusion in the review will be coded, and this will then be used to prepare the narrative synthesis. The coding of the studies would facilitate a common understanding among all the members of the learning that can be gleaned from them for inclusion in the textual narrative. The findings from such multiple methods of synthesis will complement each other. Statistical analysis, on the other hand, will involve a more rigorous synthesis of evidence for some of the studies using quantitative tools and techniques. Textual narration will help us to understand the causality in greater detail between interventions and outcomes, while helping to deal with heterogeneity.

2.3.3.1 Selection of studies for synthesis

As discussed in the literature, evaluation of the impacts of microfinance is complex because of the difficulties of establishing causal relations in the presence of the challenges posed by the factors listed earlier. These are particularly challenging because of the impossibility of blinding in social experiments and due to selection and placement biases.

In this stage of the review, we will carefully screen shortlisted publications to select those which will be analysed in depth. We are confident that despite having rigorous inclusion criteria, there will be a substantial number of papers that will meet the selection criteria. We plan to include papers based on observational data since they represent the bulk of the microfinance literature to date. In selecting the studies qualifying for this stage, our logic is to score for research design, robustness of data analysis and conclusiveness of the results, attaching weight to the quality of research design, the methods of statistical analysis and the robustness of the results. These scores will then be weighted and aggregated, and a cut-off value specified to include studies judged to warrant further investigation. Scoring, weighting and aggregation will be performed using Excel and the spreadsheet will be annexed to the final report.

2.3.3.2 Selection of outcome data for synthesis

Outcome data will be classified into economic and social outcomes. Economic outcome indicators will include: business profits and revenues, sales, income per capita, consumption/expenditure, assets, employment, savings, debts and poverty indices.

As argued by Armendáriz de Aghion and Morduch (2010), microfinance affects households beyond economic outcomes. We classify these as social and empowerment outcomes; these are more clearly outcomes of intrinsic as well as instrumental value, while economic outcomes are better seen as instrumental (to achieving social and empowerment) outcomes (Sen 1999). Social outcome indicators include: children's school enrolment,

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school attendance, nutritional status, vulnerability to shocks, social capital, contraceptive use. It is often argued that microfinance empowers women (Armendáriz de Aghion and Morduch 2010), which we classify as a political outcome indicator.

Many studies will have multiple impact estimates on the same dataset using different sub-samples, estimation designs and methods. In many studies, estimates of impacts might be made at several stages in the putative pathways between access and wellbeing impacts. Further, studies focus on the initial steps - borrowing, business investments, activities and outputs - which are means to welfare improvement, before moving, if at all, to impacts such as profits, household incomes and expenditure. Some of the impacts may at least be partly ends in themselves as well as means to further ends, or to health, nutrition and other indicators including subjective assessments of wellbeing or empowerment. These studies will be classified under multiple outcome studies.

Data extracted and tabulated will include as study characteristics, target group, exposure, comparison group and study relevance, validity criteria and outcome data; this last includes sample sizes, data processing and analysis methods, the values of impact variables and parametric descriptive statistics of continuous data.

2.3.3.3 Process used to combine/synthesise data

As far as possible, we will check the data to determine suitability for further evaluation by meta-analysis and/or meta-regression techniques to highlight outcome and contextual variability and to appraise their usefulness for subsequent work. In some key cases, unit-level data may be accessed to assess data and data processing reliability but not to undertake replication (or re-analysis) of the study, because of resource constraints. Narrative synthesis will be structured by the interconnections between microfinance/microcredit and wellbeing that are identified, and will be stratified by methodology. In addition, if raw data are available, they will be extracted and made available for subsequent replication exercises, which, however, will not be performed in this study.

2.3.3.4 Criteria for identifying important review results

Petticrew and Roberts (2006), in their study *Systematic Reviews in the Social Sciences*, point to the importance of critical assessment of the quality of methodologies used in papers, and also draw attention to the way that an excessive emphasis on methodological rigour raises the risks of type 2 errors - rejecting on methodological grounds evidence that the intervention works. But, as is well known, reducing the likelihood of type 2 errors raises that of type 1 (accepting evidence that the intervention works, when in fact it does not). We try to steer a balanced course between the type 2 and type 1 errors. Our approach will be to see the review results arising out of studies that have a sophisticated and robust range of research designs and analytical methods, to assess both the short- and longer-term impacts of microfinance. We will especially identify the results of studies which are well-designed, experimental and observational in nature and that are in multi-disciplinary, mixed-methods research, especially drawing on an ethnographically (giving due emphasis to the local context and culture) rich understanding of the country context.

3. Timeline

Activity	Start date	End date
Draft protocol submission	January 15, 2015	
Submission of final protocol	January 25, 2015	
Peer review of protocol (3 weeks)	January 25, 2015	March 15, 2015
Protocol published	June 30, 2015	
Study search and collection	February 15, 2015	May 10, 2015
Assessment of study relevance	March 30, 2015	June 15, 2015
Extraction of data	April 15, 2015	June 15, 2015
Synthesis of the study	June 15, 2015	August 30, 2015
Preparation of draft report	July 15, 2015	August 30, 2015
Draft report submission	August 30, 2015	

4. Dissemination plan

The review team will engage in two-stage dissemination. In the first stage, the dissemination will be aimed at policy makers by circulating the report and soliciting their responses. Subsequently they would be invited to participate in focus-group workshops, where the findings of the reports will be discussed from the policy makers' perspectives. We will also look at publishing salient findings of this review in the popular press, newspaper op-eds and journals that are targeted at the policy makers.

The second level of dissemination will be to the research fraternity. We will seek to publish the review in a reputed international journal to which the research community will have wide access. The findings of this research will also be presented in some of the leading conferences and workshops in the area, firstly as a mode of knowledge dissemination and secondly to get expert opinions. To enhance the accessibility of the study, the research paper will be posted on leading research websites like SSRN. Hard copies of the final report will be sent to the experts, policy makers and leading libraries.

The report will also be shared with implementing NGOs who are engaged at the grassroots level. The review team will conduct a workshop for relevant personnel to disseminate the findings and enhance their performance. This will help them to channel their funding better and assist them in achieving higher social returns. The report and the findings will be widely shared with donors, credit providers and intervention agencies.

The findings of the study will be shared with the organisers of leading conferences in microfinance in the world. Efforts will be made to participate in the Annual Penn Microfinance Conference, the West Africa Microfinance Conference and the conference organised by the Microfinance Council of the Philippines. In addition the reviewers will also share the findings with their existing collaborators in the University of London, the Yunus Center - Asian Institute of Technology, Thailand and the University of Wurzburg, Germany. This may be in the form of seminars, policy briefs or a review paper.

Policy makers in developing countries will benefit from the findings of this synthesis. Transparency is assuming an important feature in political and policy decisions. For example, the recent Right to Information Act enacted in India is considered to be a path-breaking initiative to enhance transparency in the government and public sector. The results of this review will clearly highlight the benefits that can be realised from a transparent system. The lead reviewers will circulate the policy brief widely to policy makers at various levels.

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Appendices

Appendix 1: Authorship of this report

Authors

Professor Arun Kumar Gopaldaswamy, Department Management Studies, IIT Madras, India

Dr M. Suresh Babu, Department of Humanities and Social Sciences, IIT Madras, India

Professor Umakant Dash, Department of Humanities and Social Sciences, IIT Madras, India

Advisory group

Malcolm Harper, Emeritus Professor, Cranfield School of Management, UK

Dr N. Jeyaseelan, CEO, Hand in Hand, India

Ms Ragini Chaudhary, DFID India

Ms Shahnila Azher, DFID Bangladesh

Professor M.S. Sriram, Indian Institute of Management, Bangalore, India

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Contact details

Department of Management Studies,
Indian Institute of Technology Madras,
Chennai -600036 INDIA

garun@iitm.ac.in

Phone:+91 9884014405; +91 44 22574563 Fax:+91 442257 4552

Conflicts of interest

None of the authors have any financial interests in this review topic, nor have been involved in the development of relevant interventions, primary research, or prior published reviews on the topic.

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Appendix 2.1: Search strategy

Sources

1. Electronic search of bibliographic databases such as Web of Science, IDEAS Economics and Finance Research, ECONLIT, JSTOR, Social Assistance in Developing Countries Database, Sociological Abstracts, Australian Education Index, ERIC, PubMed, Global Health, POPLINE, 3ie impact evaluations, SCOPUS, ABI/Inform, Social Sciences Full Text, SOCINDEX, Humanities Full Text (H.W. Wilson), Health Business Elite and Finance Source.
2. Systematic review databases such as the Campbell Collaboration Library of systematic reviews and the Cochrane Library
3. Existing systematic reviews, including Duvendack et al. (2011) and Stewart et al. (2012) to ensure that all the studies included in the earlier systematic reviews in a similar domain are included in this review.
4. Key websites:
 - PhD thesis abstracts (<http://www.sasnet.lu.se/sasnet/sasnet-nordic-dissertations>;
http://www.library.illinois.edu/asx/southasiancollection/sa_dissertations)
 - NGO/Funder websites: <http://www.hihindia.org/>; <http://www.dhan.org/>;
<http://www.ifmrlead.org/cmfi/>; <http://icfn.in/FFC/janodaya-trust/>
 - CGAP, <http://www.cgap.org/>
 - Microfinance Gateway, <http://www.microfinancegateway.org/>
 - DFID
 - World Bank
 - Asian Development Bank
 - National Bank for Agriculture and Rural Development (NABARD)
<https://www.nabard.org/english/home.aspx>
 - Small Industries Development Bank of India (SIDBI), <http://www.sidbi.in/>
 - Association for Asian Studies (AAS)
 - British Association for South Asian Studies (BASAS)
 - South Asia Archive and Library Group (SAALG)
 - WHO Index Medicus for South-East Asia Region (IMSEAR)
 - Asian Journals Online
 - Nepal Journals Online
 - Bangladesh Journals Online
 - Vietnam Journals Online
 - Philippines Journal Online
 - Sri Lanka Journals Online
 - Indonesia Journals Online
 - Indian Citation Index
 - South East Asia Index

In addition we will search policy pointers such as:

- UNESDOC, <http://www.unesco.org/new/en/unesco/resources/online-materials/publications/unesdoc-database/>
- UNESCO Social and Human Science Publications, <http://www.unesco.org/new/en/social-and-human-sciences/resources/online-materials/publications/unesdoc-shs/>
- IFAD, <http://www.ifad.org/>
- Labordoc, <http://labordoc.ilo.org/>
- IMF eLibrary, <http://elibrary-data.imf.org/DataExplorer.aspx>
- South Asian Network for Development and Environmental Economics, <http://www.sandeeonline.org/>
- IDRC digital library, <http://idl-bnc.idrc.ca/dspace/>
- USAID, <http://www.usaid.gov/>

The search engines that will be used are Google and Google Scholar.

We also intend to include hand searching of key journals; for those available in print form only, we will undertake hand searching by reading the contents page of each journal issue. We will search for relevant PhD theses published online, and those available in print form in reputed universities and research institutes in India will be hand searched.

Search terms

#1 Topic=(LMIC as listed in the 2012 Cochrane filter, <http://epocoslo.cochrane.org/lmic-filters>)

- A. (Africa or Asia or Caribbean or "West Indies" or "South America" or "Latin America" or "Central America"):ti,ab,kw
- B. (Afghanistan or Albania or Algeria or Angola or Antigua or Barbuda or Argentina or Armenia or Armenian or Aruba or Azerbaijan or Bahrain or Bangladesh or Barbados or Benin or Byelarus or Byelorussian or Belarus or Belorussian or Belorussia or Belize or Bhutan or Bolivia or Bosnia or Herzegovina or Hercegovina or Botswana or Brasil or Brazil or Bulgaria or "Burkina Faso" or "Burkina Fasso" or "Upper Volta" or Burundi or Urundi or Cambodia or "Khmer Republic" or Kampuchea or Cameroon or Cameroons or Cameron or Camerons or "Cape Verde" or "Central African Republic" or Chad or Chile or China or Colombia or Comoros or "Comoro Islands" or Comores or Mayotte or Congo or Zaire or "Costa Rica" or "Cote d'Ivoire" or "Ivory Coast" or Croatia or Cuba or Cyprus or Czechoslovakia or "Czech Republic" or Slovakia or "Slovak Republic"):ti,ab,kw
- C. (Djibouti or "French Somaliland" or Dominica or "Dominican Republic" or "East Timor" or "East Timur" or "Timor Leste" or Ecuador or Egypt or "United Arab Republic" or "El Salvador" or Eritrea or Estonia or Ethiopia or Fiji or Gabon or "Gabonese Republic" or Gambia or Gaza or Georgia or Georgian or Ghana or "Gold Coast" or Greece or Grenada or Guatemala or Guinea or Guam or Guiana or Guyana or Haiti or Honduras or Hungary or India or Maldives or Indonesia or Iran or Iraq or "Isle of Man" or Jamaica or Jordan or Kazakhstan or Kazakh or Kenya or Kiribati or Korea or Kosovo or Kyrgyzstan or Kirghizia or "Kyrgyz Republic" or Kirghiz or Kirgizstan or "Lao PDR" or Laos or Latvia or Lebanon or Lesotho or Basutoland or Liberia or Libya or Lithuania):ti,ab,kw
- D. (Macedonia or Madagascar or "Malagasy Republic" or Malaysia or Malaya or Malay or Sabah or Sarawak or Malawi or Nyasaland or Mali or Malta or "Marshall Islands" or Mauritania or Mauritius or "Agalega Islands" or Mexico or Micronesia or "Middle East"

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or Moldova or Moldovia or Moldovian or Mongolia or Montenegro or Morocco or Ifni or Mozambique or Myanmar or Myanma or Burma or Namibia or Nepal or "Netherlands Antilles" or "New Caledonia" or Nicaragua or Niger or Nigeria or "Northern Mariana Islands" or Oman or Muscat or Pakistan or Palau or Palestine or Panama or Paraguay or Peru or Philippines or Philipines or Phillipines or Phillippines or Poland or Portugal or "Puerto Rico"):ti,ab,kw

- E. (Romania or Rumania or Roumania or Russia or Russian or Rwanda or Ruanda or "Saint Kitts" or "St Kitts" or Nevis or "Saint Lucia" or "St Lucia" or "Saint Vincent" or "St Vincent" or Grenadines or Samoa or "Samoa Islands" or "Navigator Island" or "Navigator Islands" or "Sao Tome" or "Saudi Arabia" or Senegal or Serbia or Montenegro or Seychelles or "Sierra Leone" or Slovenia or "Sri Lanka" or Ceylon or "Solomon Islands" or Somalia or Sudan or Suriname or Surinam or Swaziland or Syria or Tajikistan or Tadzhiestan or Tadjikistan or Tadhik or Tanzania or Thailand or Togo or "Togolese Republic" or Tonga or Trinidad or Tobago or Tunisia or Turkey or Turkmenistan or Turkmen or Uganda or Ukraine or Uruguay or USSR or "Soviet Union" or "Union of Soviet Socialist Republics" or Uzbekistan or Uzbek or Vanuatu or "New Hebrides" or Venezuela or Vietnam or "Viet Nam" or "West Bank" or Yemen or Yugoslavia or Zambia or Zimbabwe or Rhodesia):ti,ab,kw
- F. (developing or less* NEXT developed or "under developed" or underdeveloped or "middle income" or low* NEXT income or underserved or "under served" or deprived or poor*) NEXT (countr* or nation* or population* or world):ti,ab,kw
- G. (developing or less* NEXT developed or "under developed" or underdeveloped or "middle income" or low* NEXT income) NEXT (economy or economies):ti,ab,kw
- H. low* NEXT (gdp or gnp or "gross domestic" or "gross national"):ti,ab,kw
- I. (low NEAR/3 middle NEAR/3 countr*):ti,ab,kw
- J. (lmic or lmics or "third world" or "lami country" or "lami countries"):ti,ab,kw
- K. ("transitional country" or "transitional countries"):ti,ab,kw
- L. (#A OR #B OR #C OR #D OR #E OR #F OR #G OR #H OR #I OR #J OR #K)

#2 Topic = (evaluat* OR impact* OR benefit* OR poverty* OR empower* OR income* OR profit* OR revenue* OR employ* OR 'labour supply' OR job* OR expenditure* OR consume OR consumes OR consumed OR consumption OR asset* OR housing OR education* OR health* OR nutrition*) OR Title=(evaluat* OR impact* OR benefit* OR poverty* OR empower* OR income* OR profit* OR revenue* OR employ* OR 'labour supply' OR job* OR expenditure* OR consume OR consumes OR consumed OR consumption OR asset* OR housing OR education* OR health* OR nutrition*)

#3 Topic = (microfinance* OR microcredit* OR micro-credit* OR micro-loans* OR microlending* OR financial empowerment* OR access to credit* OR credit programs* OR small loans* OR micro-savings* OR micro-finance* OR Micro-enterprise* OR micro-enterprise* OR microenterprise* OR 'group lending') OR Title = (micro-enterprise* OR 'group lending')

#1 AND #2 AND #3

Appendix 2.2: Inclusion and exclusion criteria for mapping

Criteria	Inclusion	Exclusion
Country context and participant type	<ul style="list-style-type: none"> • Afghanistan • Bangladesh • Bhutan • India • Maldives • Nepal • Pakistan • Sri Lanka • Individual/ household/ microenterprise 	<ul style="list-style-type: none"> • Any other low- or middle-income country studies
Intervention	<ul style="list-style-type: none"> • Microfinance • Microcredit • Micro-insurance (provided it is linked to microfinance) • Bank lending to the poor without collateral • Microsavings • Microenterprise (provided the enterprise is started based on microfinance) • Group-based pooled savings • Pooled group initiative driven farming backed by microsavings or microfinancing schemes • Group lending, group savings • Term lending by MFIs or banks to the poor • Government scheme-based lending by banks to the poor • SHG-based self-financing schemes • SHG-linked enterprise or schemes provided by MFIs 	<ul style="list-style-type: none"> • Studies on unorganised borrowing • Studies on organised strongly collateral-based borrowing, e.g. crop funding • Studies on individual-based savings • Studies on agriculture-driven growth (e.g. a corporate body gives seeds to farmers for a crop with a buy-back option, thus yielding more revenue to the poor) • Studies on co-operatives without microfinance or micro-lending schemes • Studies on individual direct lending by banks • Purely financial studies considering the impact of financing costs for banks or MFIs • Studies forecasting future trends • The current state of microfinance without any impact on the poor (status reports) • Studies dealing with other interventions, whether financial (financial inclusion scheme like banking for all, etc.), technical (development driven by

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		telemedicine initiatives, etc.) or social (benefits driven by cooperative farming, etc.)
Methodologies and study design	Impact evaluation studies using the following study designs: <ul style="list-style-type: none"> • RCT • Quantitative sample survey studies • Before and after impact studies • Experimental studies • Review reports/studies • Perception-based studies backed by quantitative data • Regional/sectoral studies on microfinance initiatives • Studies with control groups defined by location 	<ul style="list-style-type: none"> • Not impact evaluation studies • Studies not backed by quantitative data, such as view point/perception-based studies or future forecast studies • Without a comparison group
Outcomes	<ul style="list-style-type: none"> • Poverty levels • Women's empowerment • Financial protection • Social capital formation • Enhanced access to education, health or sanitation • Improved access to finance • Better living conditions and employment 	<ul style="list-style-type: none"> • Studies on microfinance which do not identify the impact on the poor (for example studies just focused on financing costs for banks due to micro lending)
Type of publication	<ul style="list-style-type: none"> • Published research studies • PhD theses • Organisation reports 	<ul style="list-style-type: none"> • Editorials • Theoretical/conceptual papers • Comment pieces • Newspapers • Conference proceedings
Year	<ul style="list-style-type: none"> • Research published on or after 1990* 	<ul style="list-style-type: none"> • Research published before 1990
Language	<ul style="list-style-type: none"> • Published in English 	<ul style="list-style-type: none"> • Not published in English

* Prior to 1990, impact studies are very few and scarce (based on our search). One of the first models of microfinance, the Grameen Bank, was started in 1983, and this was followed by other interventions across South Asia. During the 1980s, different models of microfinance interventions were attempted, and quantitatively measurable impact studies only started a few years after the intervention were begun. Hence the start date for inclusion in this review is from 1990.

Appendix 2.3: Coding tool

1	Study information <i>(Note: questions in bold italics are validity questions - see the instructions in the next section for details of how to answer these)</i>		
1a	Research question as expressed in study		
1b	Clarity of research question	Done Not done	
1c	Study design - describe		
1d	Methodology - allocation	Done Not done Unclear	
1e	Methodology - control for external circumstances	Done Not done	
1f	Describe the funding sources for the study, and financial or other issues declared		
1g	Researcher bias	Done Not done	
2	Microcredit and non - microcredit conditions	Microcredit group	No - microcredit group
2a	Types of microcredit provided by study (e.g. credit plus, insurance, advice)		
2b	Types of microcredit available in the area (outside the intervention if a trial, generally if an observational study)		
2c	Accessibility of microcredit to disadvantaged groups		
2d	Accessibility of microcredit to women		
2e	Description of conditions	Done Partial Not done	
2f	Confounding interventions - describe (e.g. land reform, aid, employment initiatives, new job opportunities, public-private partnership)		
2g	Confounding interventions	Done Partial Not done	
2h	Duration of participants accessing microcredit	Done Partial Not done	
2i	Duration of microcredit	Done Partial Not done	
2g	Microcredit provider(s)		
2h	Other data on the microcredit provided		

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Suggested marking criteria for assessing validity	Score as:
Clarity of the research question (F)	<p>‘done’ when the question addressed by the research is clear, specific and addressed by the methods and results</p> <p>‘not done’ when there are any major problems with the above</p>
Description of participants (A,F)	<p>‘done’ when the participants in both groups are well described (e.g. gender, marital status, age, level of education, religion, caste, household size and composition, baseline (pre-microcredit) income and assets)</p> <p>‘partial’ when one or two of these ten factors are not well described or only in one group</p> <p>‘not done’ when three or more factors are not well described</p>
Similarity of participants between microcredit and control sites (A,B,F)	<p>‘done’ when a before/after study or when the populations in the microcredit and control sites appear very similar (e.g. geographically close, similar participant characteristics (above), and no consistent trend that puts either group at greater risk of a poor outcome)</p> <p>‘partial’ when there are both similarities and differences, and no consistent trend of disadvantage (or some factors are similar and some unclear)</p> <p>‘not done’ when the two sets of participants exhibit substantial differences (or several factors are unclear)</p>
Methodology - allocation (A, F)	<p>‘done’ when the intervention and control participants are randomly allocated to microcredit or not</p> <p>‘unclear’ when the method of allocation is unclear</p> <p>‘not done’ when allocation to microcredit or not was by a non-random method (e.g. marketing decision, choice of an appropriate population)</p>
Methodology - control for external circumstances (F)	<p>‘done’ where there is assessment of change between baseline and a time point at least three years later in the microcredit group, and this change is compared to change in the control group over the same time period</p> <p>‘not done’ where this design is not used (e.g. simple before after design with no separate control group or separate control group but no before/after assessment)</p>
Duration of microcredit (G)	<p>‘done’ when all the individual participants assessed have had access to microcredit for at least five years</p> <p>‘partial’ when the individual participants assessed have had access to microcredit for 3-5 years or at least 50% have had access for at least 5 years</p> <p>‘not done’ when neither of the above applies</p>
Confounding interventions (B)	<p>‘done’ when a similar presence/absence of other poverty-alleviating interventions (such as land reform, public-private partnership, employment initiatives) is described</p>

	<p>‘partial’ where there are some differences but they are not major</p> <p>‘not done’ where there are any major differences</p> <p>‘unclear’ where the presence or absence of these is not described</p>
Description of conditions (F)	<p>‘done’ when the microcredit and no microcredit conditions are well described (e.g. types available, from which providers, accessibility for disadvantaged, women)</p> <p>‘partial’ when one or two of these factors are not well described</p> <p>‘not done’ when three or more factors are not well described</p>
Researcher bias (A-E)	<p>‘done’ when the study funding and financial interests of the authors are declared, and no bias is apparent</p> <p>‘not done’ when either the funding or financial interests are not declared or potential bias is apparent</p>
Outcome ascertainment (D)	<p>‘done’ when outcome measures are appropriate for both conditions, carried out the same way for both conditions, and appear valid and well executed</p> <p>‘partial’ when any one criteria above is not met</p> <p>‘not done’ in other cases</p>
Attrition bias (C)	<p>‘done’ when the participants who drop out are accounted for by study arm, and there do not appear to be big differences in the numbers dropping out, or their reasons, between arms. In before/after studies, the reasons for dropping out do not appear related to the outcomes assessed; ‘done’ for surveys without follow up</p> <p>‘not done’ when there are important differences in attrition</p> <p>‘unclear’ when not clearly described</p>
Any other validity problems for this study?	<p>‘Done’ if there are no further issues around validity</p> <p>‘not done’ if there are additional validity issues</p>
Summary of validity (I)	<p>Low risk of bias when all criteria above are ‘done’</p> <p>Moderate risk of bias when similarity of participants and confounding of interventions are ‘done’ but one or two other criteria are partial, unclear or not done</p> <p>High risk of bias for all remaining studies</p>

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Evidence for Policy and Practice Information and Co-ordinating Centre (EPPI-Centre)
Social Science Research Unit
UCL Institute of Education, University College London
18 Woburn Square
London WC1H 0NR

Tel: +44 (0)20 7612 6397

<http://eppi.ioe.ac.uk/>

<http://www.ioe.ac.uk/ssru/>

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telephone: +44 (0)20 7947 9556 email: info@ioe.ac.uk