

Bidisha Barooah
Shonar Lala Chinoy
Avantika Bagai
Priyanka Dubey
Ritwik Sarkar
Tanmayata Bansal
Zeba Siddiqui

How effective are group-based livelihoods programmes in improving the lives of poor people?

A synthesis of recent evidence

July 2020

Working
Paper 35

Social protection



International
Initiative for
Impact Evaluation

About 3ie

The International Initiative for Impact Evaluation (3ie) promotes evidence-informed equitable, inclusive and sustainable development. We support the generation and effective use of high-quality evidence to inform decision-making and improve the lives of people living in poverty in low- and middle-income countries. We provide guidance and support to produce, synthesise and quality assure evidence of what works, for whom, how, why and at what cost.

3ie working paper

These papers cover a range of content. They may focus on current issues, debates and enduring challenges facing development policymakers, programme managers, practitioners and the impact evaluation and systematic review communities. Policy-relevant papers in this series synthesise or draw on relevant findings from mixed-method impact evaluations, systematic reviews funded by 3ie, as well as other rigorous evidence to offer new analyses, findings, insights and recommendations. Papers focusing on methods and technical guides also draw on similar sources to help advance understanding, design and use of rigorous and appropriate evaluations and reviews. 3ie also uses this series to publish lessons learned from 3ie grant-making.

About this working paper

This paper synthesises evidence on how group-based livelihoods' programmes – which include financial, human or social capital interventions – can have an impact on a range of economic, human development and social cohesion outcomes.

The content of this paper is the sole responsibility of the authors and does not represent the opinions of 3ie, its donors or its board of commissioners. Any errors and omissions are also the sole responsibility of the authors. All affiliations of the authors listed in the title page are those that were in effect at the time the paper was accepted. Please direct any comments or queries to Bidisha Barooah at: bbarooah@3ieimpact.org.

Funding for this working paper was provided by the Bill & Melinda Gates Foundation. A complete listing of 3ie's donors is on the [3ie website](#).

Suggested citation: Barooah, B, Chinoy, SL, Bagai, A, Dubey, P, Sarkar, R, Bansal, T and Siddiqui, Z, 2020. *How effective are group-based livelihoods programmes in improving the lives of poor people? A synthesis of recent evidence*. 3ie Working Paper 35. New Delhi: International Initiative for Impact Evaluation (3ie). Available at: <https://doi.org/10.23846/WP0035>

3ie Working Paper Series executive editors: Marie Gaarder and David de Ferranti
Editor: Paul Thissen
Production manager: Anushruti Ganguly
Assistant production manager: Akarsh Gupta
Cover photo: Hailey Bartholomew / TEAR Australia

How effective are group-based livelihoods programmes in improving the lives of poor people? A synthesis of recent evidence

Bidisha Barooah
International Initiative for Impact Evaluation (3ie)

Shonar Lala Chinoy
3ie

Avantika Bagai
3ie

Priyanka Dubey
3ie

Ritwik Sarkar
3ie

Tanmayata Bansal
3ie

Zeba Siddiqui
3ie

Working paper 35

July 2020



Acknowledgements

This synthesis report was prepared by 3ie with financial support from Bill and Melinda Gates Foundation. The lead authors are Bidisha Barooah and Shonar Lala Chinoy. Other team members were Avantika Bagai, Priyanka Dubey, Ritwik Sarkar, Tanmayata Bansal and Zeba Siddiqui. We thank Garima Siwach, Mark Engelbert, Sapna Desai, Sohini Paul, Thomas de Hoop and Yamini Atmavilas for their comments. Paul Thissen helped us with editing the paper. The authors are solely responsible for all errors.

Summary

Most of the world's poor earn their living from low-productivity, high-risk subsistence farming. To break out of a low-productivity poverty trap, they require access to financial, human, physical and social capital, collectively referred to as livelihoods assets. One strategy favoured by development agencies and governments to deliver livelihoods assets is through community-based groups.

Such group-based livelihoods initiatives often encompass a wide variety of groups, some of which may be based on gender, economic, social, cultural or ethnic affinity. Through these groups, livelihoods interventions typically promote some mix of group savings and credit; financial and market linkages; trainings for productivity enhancement; self-employment and employment for wages; and access to social protection and public services.

These livelihood interventions are expected to build capabilities of poor people and enable them to participate in economic activities, leading to beneficial economic outcomes and personal empowerment. Groups may build social capital of poor people and thereby lend them voice, improve their bargaining power, and subsequently improve their psycho-social and political empowerment. These changes may lead to favourable cohesion amongst groups and the community in general.

Despite significant and growing investments in group-based livelihoods interventions (GBLI), there is little consensus on how impactful they have been. Some programmes, such as microfinance, have a long and well-examined history. Others, such as self-help groups in India and a variety of savings and producer groups in Africa, have been evaluated much less frequently, despite their increasing popularity in recent decades.

The primary objective of this review is to inform policymakers, practitioners and researchers about the impact of group-based livelihoods' interventions on economic, social and women's empowerment outcomes. A secondary objective is to inform decision makers of the factors, programmatic as well as contextual, that affect the degree to which GBLI programs make an impact.

We systematically review the impact of GBLLs in low- and middle-income countries (L&MICs), with particular attention to women's groups. In a related evidence gap map (EGM), we note that while the number of impact evaluations in this field is over 120, there are still synthesis gaps: areas where there are numerous impact evaluations but a lack of high-confidence systematic reviews. We attempt to synthesise the impact of GBLLs on 13 outcomes, paying particular attention, but not restricting ourselves, to the outcomes where there are synthesis gaps.

Studies included in this review are drawn from the associated 3ie evidence gap map on group-based livelihoods interventions. We included experimental and quasi-experimental studies that used valid counterfactuals as comparisons to establish causality between interventions and outcomes. All our studies examined populations in rural areas or both rural and urban areas of L&MICs, and we excluded studies that were entirely urban-focused. Participants in the programme could be women or both men and women but not men-only. We included interventions that sought to promote livelihoods via enhanced access to financial, human, physical and social capital using groups as a platform for implementation or delivery.

A total of 129 impact evaluation studies fit our inclusion criteria. Among the included studies, the overwhelming majority (93) have focused on financial interventions, with the bulk of these studies (69 studies) examining programmes that offer credit. The next most common type of intervention, with 23 studies, combined financial and human capital. Groups included in our study include formal or informal groups such as microfinance groups, women's self-help groups and village savings groups. More than half the studies evaluate interventions conducted through microfinance or self-help groups (72 studies), resulting in impact evaluations being clustered in Bangladesh and India (73 studies), where these programmes are more common.

We then assessed all 129 studies for risk of bias along five dimensions. The majority of studies do not adequately address selection bias (77 studies). In all, we found 23 studies to exhibit low or medium risk of bias across all five dimensions, and these are the studies included in this review.

We systematically extracted data on the effects of GBLIs on 13 outcomes from these 23 studies to answer our research questions. We included 7 final outcomes: income, consumption, non-financial assets, vulnerability, social cohesion, health and education. We also included 3 first-stage outcomes: savings, loans and productivity. These outcomes were selected based on a simplified analysis of the causal chain of GBLIs. These were also outcomes where we had identified synthesis gaps. For every study that reported on final outcomes, we also extracted data on 3 intermediate outcomes: diversification of livelihoods, investments and labour force participation. These intermediate outcomes form the link between interventions and outcomes. Additionally, we qualitatively summarized the results reported in each paper. We extracted qualitative information on some aspects of program design and implementation such as program participation, type of group, intervention and context of the program.

We used mixed methods for this review. First, we conducted a meta-analysis of the impacts of group-based livelihoods interventions on these 13 final, first-stage and intermediate outcomes. However, this was not always possible and some meta-analyses included a smaller set of studies because not all studies reported on outcomes with comparable indicators. Second, we examined the qualitative impact data from individual studies to report observed patterns and associations and how these compare with the meta-analysis.

Findings on programme characteristics

All but one of the 23 studies in this review evaluated interventions relating to financial capital, either alone or together with human or social capital. Nine studies evaluated programmes that provided only financial capital to beneficiaries. Some programmes offered cash grants, some offered microcredit and some offered savings interventions. Seven studies evaluated programmes in which federated women's self-help groups in rural India offered credit, financial inclusion products and services, agriculture/skills training and access to social programmes. Three studies reviewed programmes with financial and human capital interventions such as business training with cash grants, flexible microcredit with health support and a poverty alleviation fund for income generating activities.

Of the 23 studies, 9 reviewed interventions offered through self-help groups, 7 were delivered through microfinance groups, and the 6 remaining interventions operated through community organizations, village savings and lending associations (VSLAs), rotating savings groups, farmers' cooperatives, farmers' clubs and youth groups.

Findings on programme impacts

Our meta-analysis found that GBLIs had positive but very small impacts on consumption. Our qualitative synthesis suggests that GBLIs led to reduced vulnerability in contexts of extreme deprivation and adverse events such as conflict and climate shocks. They provide much-needed safety nets by providing access to low-cost finance, entitlements and social or institutional support. These programs systematically show better social cohesion outcomes in the form of access to entitlements and intra- and inter-group relationships. We see modest improvements in household and individual savings due to GBLIs. Our findings on loans and livelihoods diversification are interesting. The overall effect on loans is positive and insignificant. Looking closely at individual studies, we observe a clear pattern. In settings of high credit constraints, financial GBLIs are successful in increasing access to finance. However, in settings of high indebtedness, they reduce outstanding loans by providing access to low cost loans which may offset high cost ones. GBLIs are found to be successful in moving poor agrarian households out of their traditional livelihoods. We find that households that participated in GBLIs were 26% more likely to have income generating activities outside the farm as compared to control households.

We are unable to conclude that GBLIs lead to positive impacts on productivity-enhancing investments due to the small number of studies reporting on this intermediate outcome. We do not find consistent impacts of livelihoods programmes on labour force participation or hours of work. We find no impacts on income or assets. This finding suggests a need to further examine the pathways by which this outcome could be affected.

On average the program duration of included studies is 28 months. Contrary to our expectations, we do not find that impacts are consistently correlated to the length of exposure to the programme. Rather, programme participation appears to be a main driver of observed effects. Higher program take-up, in most cases measured as the proportion of the target group that participated in the program, was associated with higher impacts on income, savings and livelihoods diversification. Program features that address severe credit constraints at terms favourable to participants, such as providing access to financial capital, may be effective in improving short-term outcomes such as seasonal food insecurity and access to loans. Financial support when combined with human and social capital interventions such as trainings are particularly helpful in improving final outcomes. In particular, interventions that provide linkages to other social schemes and institutions mostly show high impacts on consumption and related outcomes.

Authors' conclusions

This section offers our recommendations for policy and practitioners. First, program participation in GBLIs averages around 50% of the targeted population. Improving

participation may lead to better realization of program outcomes. Achieving this improvement requires thinking carefully about program design and implementation so that the programmes reach their target populations. Second, we find that financial interventions are more impactful when combined with interventions to improve human capital or social capital. Third, to be transformative and push people out of poverty, careful thought needs to be given to programme design and implementation with particular emphasis on understanding contextual factors. In this endeavour, theory-based evaluations at different stages of the programme cycle will be useful. We call for greater collaboration between evaluators and practitioners while maintaining unbiasedness in assessment.

Contents

Acknowledgements	i
Summary	ii
List of figures and tables	vii
1. Introduction	1
2. Objectives	2
3. Scope	3
4. Theory of Change for GBLIs	5
5. Methods	7
5.1 Types of outcome measures.....	10
5.2 Language and publications status.....	11
5.3 Search methods, data collection and analysis for identification of studies.....	12
6. Results	12
6.1 Description of studies meeting inclusion and exclusion criteria	13
6.2 Risk of bias in included studies	14
6.3 Description of studies included in synthesis	16
6.4 Synthesis of results: meta-analysis	23
6.5 Narrative synthesis of outcomes not included in meta-analysis.....	31
6.6 Narrative synthesis of program characteristics.....	36
7. Discussion	40
7.1 Summary of main results	40
7.2 Limitations	42
7.3 Agreements and disagreements with other studies or reviews.....	43
8. Conclusions	44
8.1 Implications for practice and policy	44
8.2 Implications for research.....	45
Online appendixes	46
References	47

List of figures and tables

Figure 1: Theory of Change.....	7
Figure 2: Risk of Bias Analysis	15
Figure 3: Impact on income	25
Figure 4: Impact on consumption	26
Figure 5: Impact on food consumption or expenditure	26
Figure 6: Impact on loans.....	27
Figure 7: Impact on savings	28
Figure 8: Impact on assets	29
Figure 9: Impact on diversification of livelihoods.....	30
Table 1: Description of intervention categories	9
Table 2: Intervention categories as reported in review.....	9
Table 3: Heat map showing the distribution of evidence	14
Table 4: Description of studies included in synthesis.....	16
Table 5: Number of low or medium risk studies by outcome studied	24
Table 6: Summary of effect sizes of outcomes included in meta-analysis.....	31
Table 7: Correlation coefficients of program characteristics and outcomes	31
Table 8: Impact on food insecurity indicators (vulnerability).....	33
Table 9: Impact on social cohesion	34
Table 10: Impact on investments.....	35
Table 11: Impact on productivity.....	35
Table 12: Impact on labour force participation.....	36

1. Introduction

One in ten people globally subsists on less than 1.90 USD per day, according to the most recent estimates by the World Bank (The World Bank Poverty Data, 2013). The majority of them live in rural areas and are engaged, primarily, in agriculture (Olinto and colleagues, 2013). The 'livelihoods approach' has been adopted as a strategy for poverty reduction by almost all major international development organizations (Brocklesby and Fisher, 2003). This approach is based on the concept of livelihood as a 'means of gaining a living, including capabilities, tangible and intangible assets' (Chambers and Conway, 1992). Set in the capabilities approach (Sen, 1990), livelihoods include the skills, assets and resources that enable a person to live. In this framework, livelihoods go beyond earned income and include all possible sources that enable persons to survive.

Poverty alleviation strategies that mobilize the poor into groups and provide livelihood opportunities, using these groups as platforms, have received much attention among development practitioners. Broadly, such grassroots group-based livelihoods programmes (GBLIs) fall within the larger ambit of community-driven development (CDD), in which communities are mobilised for development activities. Dongiers and colleagues (2003) note that CDD usually includes "strengthening and financing inclusive community groups, facilitating community access to information and forging functional links between community groups and formal institutions." These are groups of people who come together for a common interest, which may be economic or non-economic interests. Examples of community groups are women's groups, credit groups, youth clubs, cooperatives and farmer associations.

Some of the benefits of community groups, discussed in the literature on CDD, are based on the assumption that groups at the grass-root are in a better position to understand the needs of the poor than a distant centralized institution. These can, therefore, better identify the interventions that address the needs of the poor (Dongiers and colleagues (2003), Binswager and Aiyer (2003)). These groups may be effective in reducing observed and unobserved costs incurred by development agencies by improved selection of beneficiaries and monitoring of programmes. For example, Ghatak and Guinane (1999) show that in credit groups, peer monitoring and better screening can provide group members the incentive to repay loans. This, in turn, can make banks more willing to lend to groups.

A different strand of thought on the benefits of groups is based on the logic of collective action. This theory argues that groups of individuals with common interests are able to negotiate and 'counterbalance' the bargaining power of other players. Take the example of farmer cooperatives. Farmers face highly concentrated input and output markets and information asymmetries which reduces their bargaining power with other agents in the market. Uniting into a cooperative can improve their bargaining power vis-à-vis other agents (Staatz, 1983, 1989). In the case of civil society groups, such solidarity can lead to demand for better public goods and services (Dreze and Sen, 1990). Other cited advantages of groups are benefits from the economies of scale that groups may have over individuals and access to social capital (Rankin, 2000). Detractors contend that groups are not inclusive, which increases the threat of elite capture, and they do not take poor capacity of local institutions into account (Mansuri and Rao, 2013; White, Menon and Waddington, 2018). Problems of free riding and co-ordination failures may act as a

disincentive for groups to act cohesively (Olson 2008). Group heterogeneity, tastes and size may influence outcomes of collective action (Banerjee, Iyer and Somanathan (2007). Thus, theoretically, the effectiveness of GBLIs in improving the welfare of poor people is ambiguous.

Despite these competing arguments, global investments in GBLIs have been increasing. The World Bank remains a champion of GBLIs, with 219 CDD projects in 79 countries for a total investment of 21.6 billion USD. Several developing nations have initiated and scaled-up GBLIs, the most famous being the Grameen Bank (Yunus, 1999) and BRAC initiatives in Bangladesh (Chowdhury and Bhuiya, 2004) which started off as programmes for financial access and inclusion. One of the largest group-based livelihoods programmes with a budget of around 4 billion USD, the National Rural Livelihood Mission, has been initiated by the Indian government. Targeted at rural women, this programme mobilises neighbourhood women into groups of 10-20, called self-help groups (SHGs), provides them access to small amounts of credit and financial inclusion services, livelihoods trainings and linkages to public services and institutions (Ministry of Rural Development, Government of India). The typical GBLI aims to alleviate poverty by providing access to human, social, financial and physical capital. This is done through activities such as group saving and lending, providing financial and market linkages, trainings for productivity enhancement, self and wage employment as well as linking groups to entitlements, public services and existing institutions.

In this review, we synthesise the impact of GBLIs that are meant to improve the lives of poor people by enhancing their livelihood options. It is important to do this review because while various group-based interventions are being rolled out or tested in low- and middle-income countries, these are often drawn from models that have shown some promise in another context or sector. For programme implementers and governments to take decisions on which interventions to adopt and how, it is essential that the current evidence encompass diverse livelihood groups and interventions. Our review hopes to facilitate evidence-informed decisions among donors, implementers and governments.

2. Objectives

The primary objective of this review is to inform policymakers, practitioners and researchers about the impact of group-based livelihoods' programmes on economic, social and women's empowerment outcomes. A secondary objective is to inform decision makers of the mechanisms and factors, programmatic as well as contextual, that lead to impacts or lack of it.

With these objectives in mind, we ask the following research questions:

1. What is the effect of group-based livelihoods interventions on outcomes such as savings, loans, productivity, income, assets, consumption, health and education, vulnerability and social cohesion?
2. Do group-based livelihoods interventions lead to changes in intermediate outcomes such as investments, livelihoods diversification and labour force participation?
3. Which contextual and programmatic factors were associated with impacts or lack thereof? Specifically, we wanted to know the relationship between program participation, gender composition of groups and intervention type on observed impacts. We explore if effects were different in a setting of heightened vulnerability.

We do not attempt to compare GBLs to individual livelihood programmes in this review. It is not our intention to compare the merits and demerits of group interventions over individual interventions.

3. Scope

We use the definition of livelihoods as adopted by DFID and proposed by Chambers and Conway in 1992. By this definition, 'A livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living' (DFID, Guidance Sheets). GBLs comprise of strategies to provide access to and make use of livelihoods assets. Livelihood assets are those assets and resources that are considered essential for any person to derive a living. These can be broadly categorized as (i) financial (ii) human and (iii) social capital.

The groups we examine may have been convened for economic (example, for credit, savings or production) or non-economic purposes (example, to provide peer support) and may vary in size, functioning and funding. What is common is that the groups serve as a platform to deliver interventions and programmes for livelihoods promotion and support. Some examples of such groups are self-help groups, microfinance groups, village banks, village savings and loans associations and producer groups.

The GBLs of interest in this review are any of the following three types, alone or in combinations with each other.

1. Interventions that provide or enhance access to and use of financial capital: These types of interventions include those that provide finance or financial inclusion services. Examples of these types of interventions are those that (i) provide group loans, group savings and financial products such as insurance, and/or (ii) financial inclusion services such as opening savings accounts, linking to banks and non-banking financial companies and/or (iii) financial literacy. Group microfinance programmes such as Grameen Bank that provide credit in Bangladesh (Pitt and Khandker 1998) typify such an intervention as well as CARE village savings and loan associations that support group savings, credit and financial training in Africa (Brune and colleagues, 2011).
2. Interventions that provide or enhance human capital: This category includes group-based health and education interventions for development of participants' capabilities which in turn would enable them to better their livelihood options. These may be meant for livelihoods enhancement for individual group members or for the group as a whole. Examples are programmes that provide skills trainings for employment generation and income improvement. We include technical and soft skill trainings in this review. We include health, general education and empowerment programmes only when these are combined with some form of financial intervention. Examples are, The Intervention With Microfinance for AIDS and Gender Equity (IMAGE) in South Africa which combines group microfinance with training on understanding HIV infection, gender norms, domestic violence, and sexuality (Kim and colleagues, 2007); SAFE in Malawi (Weinhardt and colleagues, 2017) and Do Kadam Barabari Ki Ore in Bihar (Jeejeebhoy and colleagues, 2017), India are examples of complementary health and livelihoods' interventions.

3. Interventions that provide and enhance social capital: These are interventions that help the group build, access and make use of social capital. We include interventions that strengthen social capital within group members as well as those that link group members to the larger community and existing public institutions for livelihoods support. Linkages outside the group includes many aspects such as community bonding and social connectedness, especially with leaders and institutions and inclusion in governance. Further, an important role of groups is to link groups to government or non-government programmes. Examples would be interventions that connect groups to government transfers and social support programmes. For example, the Youth Opportunities Programmes (YOP) in Uganda linked farmer cooperatives and microfinance clubs to a government cash transfer programme to set up non-farm businesses (Blattman and colleagues, 2014).

Our review also includes studies that examine programs that combine two or more of the above interventions. For example, Indian self-help groups under the National Rural Livelihoods Mission organize women into credit and savings groups, provide initial capital and link these groups to banks and other public departments for social security transfers (Hoffmann and colleagues, 2018). Similarly, many livelihoods interventions provide a package of financial capital and trainings such as the WINGS programme in Uganda that organized (mostly) women in groups and them provided skills trainings, cash transfers and access to microfinance in post-conflict Uganda (Blattman and colleagues, 2014)

The groups and the interventions included in our review have been studied before to some extent. We were able to identify ten systematic reviews that somewhat overlapped with our review. Four of these systematic reviews have examined financial interventions, mostly access to credit (Mardhani and colleagues (2015), Stewart and colleagues (2012), Vaessens and colleagues (2013) and Maitrot and Nino-Zerzura (2017)). Two studies review financial interventions and human capital interventions in the form of health interventions (Orton and colleagues (2016), Lorenzatti and colleagues (2017)) while one includes trainings for livelihoods generation (Duvendack and colleagues (2011)). These reviews have focussed on microfinance groups primarily. Self Help Groups that provide access to credit as well as group support and other livelihoods support and their impacts on empowerment have been reviewed by Brody and colleagues (2016). Savings interventions have been synthesised by Steinart and colleagues (2018). A recent synthesis of systematic reviews by Duvendack and Palmer (2019) reports over 30 systematic reviews on micro-finance, micro-savings and micro-insurance.

Our synthesis differs from the above in its scope. While it includes diverse groups such as MFIs, SHGs, village banks, savings groups and co-operatives, the interventions are limited to those that can be categorised as directly meant for livelihoods promotion. Moreover, we focus on only three types of livelihoods assets- financial, human and social capital. We do not consider interventions that provide access to natural resources. Stand-alone health, nutrition and empowerment interventions may improve economic and social outcomes. Healthier children may earn higher wages as adults. Building self-confidence in women and providing them adult education may help them increase their incomes. However, we assess that these cannot be considered as direct interventions

for livelihoods promotion and are not included in our review. Our search was not based on type of group but rather on the intervention provided (please see the Methods section for details).

Despite the large number of reviews, synthesis gaps exist as noted by in a related 3ie EGM. Synthesis gaps are those where we were able to identify impact evaluations but there was a lack of high quality systematic review. We could identify synthesis gaps in outcomes such as diversification of livelihoods, productivity, indebtedness and social cohesion. We could identify only low confidence systematic reviews examining the impacts on consumption and vulnerability (Maitrot and Zerzura (2017)). Our review will address these synthesis gaps.

4. Theory of Change for GBLIs

A Theory of Change (TOC) describes the theory, evidence or assumptions explaining the causal links from inputs and activities along intermediate and to final outcomes (Rogers, 2014). Figure 1 presents a simple TOC of how GBLIs are hypothesised to reach their intended outcomes.

GBLIs, especially those that combine multiple interventions, are complex. We start with a set of assumptions to simplify the numerous mechanisms through which GBLIs may work to improve the lives of people in poverty. Our main assumptions are that:

1. Groups effectively mobilise people who are likely to be left out of development programmes such as the poorest of the poor, women, and ethnic and religious minorities. In actuality this may not be true. There is evidence that members of farmer cooperatives are mainly large-scale farmers. In India, Baland and colleagues (2011) found that members of lower castes in mixed-caste groups are more likely to exit SHGs.
2. Groups are sustainable, financial and organizationally. This means that they are able to generate enough of their own resources and can manage their regular operations. Woolcock (1999) shows that the inability to recover loans, cover organizational costs and strained social interactions between and within clients and MFI staff are important causes of failure of MFI groups.
3. There are enabling institutions that help groups to function properly by strengthening them through training and building of their organizational capacity and that these enabling institutions function efficiently. Ground realities may differ.
4. Associated systems and institutions that interact with these groups function well. For example, banks have the funds to lend to groups. Health and education systems are in place to deliver human capital interventions.

Our starting point is the formation of the group. Once groups are formed and all assumptions discussed above hold, livelihoods interventions are initiated by government or non-government agencies or by the group itself. We categorise livelihoods interventions into three broad groups: those that provide, expand and improve access to and use of (i) financial capital, (ii) human capital and (iii) social capital (please see previous section for definitions). We take the case of a programme that provides financial, human and social capital to groups to illustrate our TOC. For the sake of simplicity, we consider an agricultural household to be the unit of analysis.

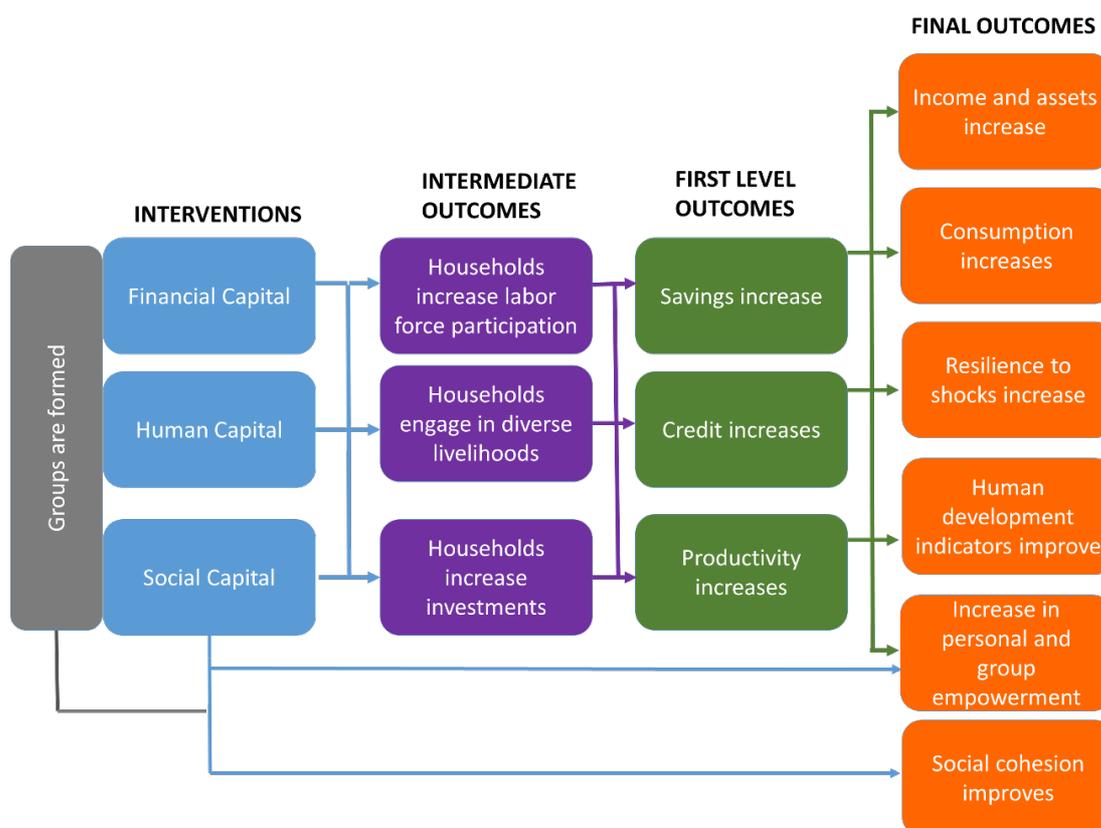
These interventions lead to a set of intermediate outcomes which may be directly attributable to the interventions and which, in turn, lead to other outcomes. Access to livelihoods assets may cause households to start new income generating activities, thereby diversifying livelihood sources. Previously unemployed or underemployed members may be able to join the labour force by making use of financial or human capital as well as newly formed social capital. Some households may choose to invest capital in building economic capabilities and productive activities. The strength of the linkage between interventions and intermediate outcomes is based on the assumption that the GBLI is timely, relevant and respond to the needs of the groups. For example, if only livelihoods training is provided to groups that are credit-constrained we should not expect to see improvements in productivity.

These intermediate outcomes are precursors to a first set of outcomes (first-stage) which manifest in the short to medium run. Higher investments may enable households to increase productivity of labour and capital, provided that the education, trainings, health, technology, assets and inputs that households invested in are of quality (Becker, 1962). Increasing and diversified involvement in economic activities and higher productivity may lead to greater savings as households have surplus and access to credit as collaterals increase (Rosenzweig, 2001). The assumption is that households are able and willing to save and invest instead of using the outputs for consumption entirely and that credit is made available to them (Deaton, 1992). Note the savings and access to credit could be the direct result of some financial and social interventions such as those that provide low-cost loans to groups or link groups to banks.

As household productivity, savings and loans increase, income, consumption and asset accumulation increases. This pathway is supported by much of the standard accepted theoretical work citing capital constraints as curtailing investments amongst the poor (Banerjee and Duflo 2010, de Mel and colleagues. 2008 2012). Access to many livelihoods sources as well as group and social support can lead to a reduction in vulnerability to shocks. Improved economic status can lead to greater access to formal financial markets, which feeds into a chain of higher investments and productivity and incomes. Health and education outcomes, classified as human-development, may be affected directly through human capital interventions, as well as indirectly through improved economic outcomes, provided participants invest in them.

Group functioning is a dynamic function and, with time, groups and their members are likely to become more empowered. Group support can lead to increased empowerment in two ways- one, through the increased autonomy, confidence and support that members gain from their group interactions and the second through improvements in economic status (IFAD 2007). The assumption here is that social norms and power structures can and will change positively toward more equity and inclusion. The theoretical literature relating GBLIs and social cohesion is primarily through the social capital pathway (Putnam, Collier, 1998, Woolcock, 2000). This could be in the form of linking groups to community organizations at local and higher levels or increasing co-operation among and within various groups- social, ethnic and economic.

Figure 1: Theory of Change



5. Methods

This section discusses the criteria for considering studies for this review.

Types of studies: Studies included in this review are drawn from an associated Evidence Gap Map (EGM) on GBLs that 3ie produced (Barooah et al 2019). In the EGM, we included quantitative studies which use valid counterfactuals to establish causality between interventions and outcomes. Thus, only studies that use experimental methods with random assignment or quasi-experimental methods were included.

Types of participants: We included studies that examined programmes in rural areas or both rural and urban areas of L&MICs, leaving out studies that were exclusively urban-focused. Groups could be female-only or male and female mixed groups but not men-only groups. Some studies did not clearly define the sex of participants. In such cases, we assumed that the groups were mixed sex groups. We included programmes where participants were adults (i.e., above 18 years of age) and excluded those aimed at children and young adults such as school-based livelihoods trainings, vocational trainings for teenagers etc. In assessing this criterion, we followed who the programme was intended for instead of who actually participated in the programme. Thus, if a programme was meant for teenagers but it may have allowed older participants, we excluded it.

Types of interventions: Our theory of change identifies three groups of livelihood interventions that could lead to improvement in the lives of the poor: those that provide and improve use of and access to (i) financial capital (ii) human capital (iii) social capital.

To be included in our synthesis, it was necessary that all interventions be through groups. We excluded interventions that may fit into the above defined intervention categories but which were not through groups. Needless to say, there are a large number of interventions that fall under these broad categories. We selected the specific interventions based on feedback received in a consultation workshop with practitioners and policy-makers held in New Delhi on 18th August, 2017. These are shown in Table 1.

The first group of interventions relate to financial capital. Under this category, we include provision of credit, savings, insurance and other financial products such as mutual funds to group members. Similarly, financial services such as opening of bank accounts for groups and members and financial training are important roles that can be channelled through groups and are included. Credit includes joint-liability or group loans from formal sources such as banks and non-banking financial companies and inter-lending within group members. The second group of interventions aim to improve human capital formation to support livelihoods. Under this category, we include trainings to enhance productivity in current livelihoods such as agricultural training or providing market information as well as those that are meant to enable starting new income sources. Important types of interventions are skills training for wage or self-employment that help the poor to diversify out of agriculture. We also include health and nutrition services but only if they are combined with financial capital interventions or trainings.

Interventions that help groups build, access and make use of social capital form the third type of interventions. Social capital is a complex concept encompassing social bonding, social bridging and participation (White, Menon and Waddington, 2018). In our study, we restrict ourselves to interventions that explicitly aim to link groups to existing vulnerability or livelihoods support programmes. For example, Self Help Groups in some Indian states distribute foodgrains under the public distribution system. We exclude programmes exclusively meant to improve group and community ties that do not include a livelihoods component. For example, women's empowerment groups that bring together members for mutual support against domestic violence but do not provide either financial or human capital that can be used for livelihoods enhancement will be excluded.

Table 1: Description of intervention categories

Specific interventions for each group	Description	Examples
A. Financial Capital		
A.1 Credit	Interventions that provide joint-liability group credit from formal or informal sources	Group/Joint-liability loans from banks, loans by group members.
A.2 Non-credit financial products	Interventions that provide financial products other than credit	Savings products, insurance, investment options
A.3 Financial inclusion services	Interventions that provide access to or information on financial products and services	Opening of bank accounts, updating of passbooks, information on financial products
A.4 Financial training	Interventions that provide training on financial management	Managing personal and group finances, book-keeping for groups, understanding pass books
B. Human Capital		
B.1 Trainings	Interventions that provide training to groups for livelihoods promotion and enhancement	Trainings on technology, trainings for wage employment, entrepreneurship trainings such as bargaining, or market information
B.2 Health, Nutrition and Sanitation	Interventions on health, nutrition and sanitation for adults and children. These were included only if combined with trainings or financial capital.	Reproductive health and contraception information, de-worming, immunization.
C. Social Capital		
	Interventions that help the group build, access and make use of social capital.	Access to grants, public distribution systems, public works, legal aid, other social welfare programmes

Many livelihoods programmes provide a bundle of livelihoods interventions instead of a single intervention. For the purpose of our study, we reclassify the interventions reported in Table 1 into the following categories reported in Table 2.

Table 2: Intervention categories as reported in review

EGM intervention categories	Description (refer to intervention in Table 1)	Example
A. Financial	A.1, A.2, A.3, A.4, any combination of these	Provision of group credit; provision of group credit with savings
B. Human	B.1, B.2, any combination of these	Skills trainings; skills trainings with nutrition information
C. Social	C	Linkages with government welfare programmes
D. Financial plus human	Any combination of A and B	Financial and skills trainings; savings product with HIV information
E. Financial plus social	Any combination of A and C	Provision of group credit and linkages to government welfare programmes
F. Human plus social	Any combination of B and C	Enterprise training and linkages to existing government placement programme
G. Financial plus human plus social	Any combination of A, B and C	Provision of credit with maternal and child health services delivered through existing programmes

The following types of interventions are excluded from our synthesis:

1. Interventions not through groups
2. Interventions not targeted at adults (i.e age is 18 years or above)
3. Interventions at male-only groups
4. Access to credit interventions that are not group/joint liability
5. Interventions in urban areas
6. Interventions where groups are mobilised purely for political and social empowerment with no explicit reference to livelihoods
7. Community health and nutrition interventions if these are not combined with a livelihood component as defined in Table 2

5.1 Types of outcome measures

The choice of primary and intermediate outcomes to synthesise was informed by our proposed Theory of Change. The final outcomes included in this review are:

1. Income: We included studies that analyse either household or individual income. Included studies may study income reported on daily, weekly, monthly or annual basis and from more than one source such as from wages and salaries as well as revenue from enterprises.
2. Consumption: We included studies that measure consumption either in terms of amount spent on consumption or imputed its value. If a study reported either one of food or non-food consumption per capita or per household, we retained it. To adequately record food consumption, we included studies that measured this in terms of calorific intake.
3. Non-financial consumption assets: We included studies that measure non-financial consumption assets such as consumer durables and housing. We followed the criteria laid out in the individual studies and did not independently validate if an asset was best categorized as consumption or production asset.
4. Vulnerability: We measured vulnerability in terms of food security and consumption smoothing in response to a shock.
5. Social Cohesion: We included studies that study social cohesion outcomes in the form of group, community and institutional support. Thus, indicators on the presence and quality of relationships in a community, within and across social and economic groups form an important component of social cohesion outcomes. Some examples of social cohesion in our study are access to public services, government institutions and entitlements.
6. Health: We included studies that report impacts on health outcomes of households or individuals. These could be for individuals of any age, such as BMI of adults or height-for-age of children.
7. Education: We included studies that report impacts on education outcomes of children, like school enrolment.

The review includes first stage outcomes such as:

1. Savings: We included studies that reported on savings either in cash or in kind. We included savings in formal institutions such as banks as well as informal savings such as with money-lenders, savings groups or cash/grains kept at home. Along with continuous measures of savings, we included binary outcomes as well such as whether an individual savings at home or in a group or in other sources.

2. Debt: Debt was measured in our included studies as the number and amount of loans, outstanding or newly acquired. We did not gather data on loan history or closed loans. We included loans taken by individuals or households. These loans could be from any source, formal or informal and at any interest rate.
3. Productivity: Included studies measure productivity as output from farm and non-farm activities such as harvest, farm yield, production of manufacturing units. Included studies may or may not convert production to monetary values. Revenue and profits are not considered indicators of productivity and instead included in income.

It includes the following intermediate outcomes:

1. Investment: Investments included resources spent on improving productivity of current or new livelihoods such as inputs in agriculture or businesses or in acquiring trainings. Investments could also be measured in our included studies as acquisition, expenditure, value or use of productive assets. Productive assets are assets such as agricultural land, business infrastructure, agricultural equipment. We note that distinguishing between productive and durable assets may be difficult where the specific utility of an asset may not be specific. A tractor, for example, could be used in agriculture as well as household transportation. Similarly, land could be used for productive purposes or for own use (eg. building own home). In such cases, we followed the categorization proposed by the authors of the study, without adding our own judgement of an asset's possible use. This means that similar assets may be coded as 'non-financial consumption assets' or 'investments' depending on how these were treated in the respective studies. We do not include as investments on health or children's education. Although these are critical inputs, these are likely to influence longer-term outcomes.
2. Diversification of livelihoods: Diversification of livelihood activities was measured as a change in the contribution of non-traditional sector to household income. It included starting new income generating activities, taking up skilled employment by some members of the household and the income accruing to households from businesses and non-agricultural work.
3. Labour force participation: Labour force participation indicators consist continuous variables such as the time spent and number of individuals engaged on productive work. Productive work includes remunerative and non-remunerative work as long it involves production of an output of economic value. Thus, domestic work such as cooking, child care and cleaning done by family members is not considered as labour force participation. However, unpaid domestic work such as work in family enterprises and livestock management is included in this definition. Binary indicators that indicated a change in a person's employment status (i.e from being unemployed to employed) are included.

5.2 Language and publications status

We included studies that are located in academic and policy-related databases and websites in our systematic search. Therefore, we excluded news and magazine articles, progress reports, conference proceedings and book reviews. We excluded dissertations and books, although these would be included if they have been converted into papers. We included papers irrespective of their publication status, including unpublished

manuscripts, working papers, journal articles, and policy and evaluation reports. We excluded all non-English studies because we lacked trained team members who are familiar in languages other than English.

5.3 Search methods, data collection and analysis for identification of studies

We developed a PICOS, which laid out the scope and inclusion and exclusion criteria. The PICOS is a tool that enables examination of a quantitative study based on certain specific parameters related to the Population, Intervention, Control Group, Outcomes and Study Design. An information specialist developed and conducted a systematic search strategy that captured studies (published and unpublished) from 15 databases. We manually searched 10 websites using the key words used in our systematic search. Additionally, we used snowball search methods where we checked references of included studies and tracked citation of key studies to finalise the full dataset of studies to be screened.

We followed a step-by-step screening process starting with removal of duplicates and the moving on to title and abstract screening and finally full text screening. Once the set of papers to be included was finalized, we extracted data on (i) interventions (ii) the outcomes determined by the TOC (iii) study design, (iv) geography (v) group type (vi) implementing agency (vii) gender of members (viii) whether a study carried out heterogeneity or sub-group analysis (ix) type of sub-group. Appendix A presents the detailed methodology we used together with the PRISMA diagram of our study. Appendix B provides our coding tools.

We next assessed the risk of bias of all included studies. We used an existing tool to assess the risk of bias in quasi-experimental and experimental primary studies (Barooh and colleagues, 2017). This tool assessed five types of biases- (i) selection and confounding bias (ii) spillover and contamination of control groups (iii) attrition bias in panel studies (iv) outcome and (v) analysis reporting bias. Additionally, for this study, we assessed the studies for other types of biases arising from implementation challenges, method of data collection and sampling. The tool is available in Appendix C.

We used a standardized tool for extraction of data on outcomes only for the studies that were rated as low or medium risk of bias. We extracted data for only one indicator per outcome per study. We calculated SMDs from regression coefficients of continuous outcomes and risk ratios for dichotomous variables. Additionally, we summarized the results of each intermediate and final outcome. At this stage, we further extracted reported information on program take-up or participation. Please see Appendix D for data extraction tool and Appendix E for detailed description of the formulae used for standardising effect sizes.

6. Results

In this section we present the results of our synthesis. We start by describing the studies that met our inclusion and exclusion criteria. We then go on to elaborate the risk of bias assessment of the included studies. Finally, we synthesised findings from the low and medium risk of bias studies.

6.1 Description of studies meeting inclusion and exclusion criteria

Our systematic and manual search yielded 129 impact evaluations that fit our inclusion and exclusion criteria. Of the 129 studies, 34 use experimental methods while the remaining use quasi-experimental methods. Among quasi-experimental methods, 31 studies employ PSM, 16 difference-in-differences, 11 instrumental variable methods and one regression discontinuity design. 36 studies used methods such as fixed effects to control for time-invariant differences between group participants and non-participants or Heckman selection models.

Interventions that provide access to financial capital are the most studied interventions. Among the included studies, 93 have focused on either provision of credit, financial inclusion services or financial literacy. Even among these, the overwhelming majority (69 studies) have examined programmes that offer credit alone where this is not combined with other financial services. 12 studies have evaluated interventions that combine credit with other financial products, financial inclusion services or financial literacy. 12 studies have looked at financial interventions not related to provision of credit. A distant second (23 studies) have examined interventions that combine financial and human capital. Of these, 14 combine credit with livelihoods training. Access to social capital has been studied by even fewer studies. Six studies have looked at interventions related to social capital, alone or combined with other livelihoods interventions. There were 3 studies which did not adequately describe the type of interventions although some form of livelihoods support was provided to groups.

Of the 129 studies, the majority of studies have evaluated interventions through either SHGs (37 studies) or MFIs (35 studies). A quarter of the studies evaluated interventions with multiple group types. The category entitled “Other” encompasses a wide range of community-based groups. For instance, one programme organises groups consisting of 5 to 30 members that meet regularly for individual and group savings and loans. Another programme organizes beneficiaries into group-based Partner Organizations that may be non-governmental or governmental in nature. Similarly, youth groups and informal revolving savings and credit groups are part of “Others”. Groups that are less represented include producer groups and co-operatives. This could, partly, be due to a limitation in our scope whereby individual liability credit programmes that are ubiquitous among producer groups are excluded.

Impact evaluations tend to be clustered. Bangladesh (38 out of 129) has the highest number of studies followed by India (35). Although Bangladesh has the highest number of studies, most of these have focussed on evaluations of microfinance programmes promoted by private and non-profit organizations. On the other hand, the India studies have examined programmes implemented by a variety of agencies- government, non-profits and for-profit. Evidence from Africa is comparatively more scarce. Collectively there are 29 studies in Sub-Saharan Africa. There are 11 studies that use data from multiple countries.

Table 3 depicts the number of impact evaluations by interventions and outcomes studied. Economic outcomes such as income, consumption/expenditure and non-financial assets have been examined by 50 or more studies. Compared to these, impacts on non-economic outcomes such as health (38 studies), education (27 studies),

vulnerability (12 studies) and social cohesion (14 studies) have been analysed less. While the average number of studies that have analysed final economic outcomes is around 50, the number of studies that have explored the impacts of GBLIs on first-stage outcomes such as productivity, savings and loans range between 22 and 31. 35 papers have studied labour force participation while 12 and 16 studies have examined diversification of income sources and investments respectively.

In summary, we find that the number of impact evaluations on GBLIs is large (129 studies). Yet, evidence is concentrated on some particular types of interventions, outcomes and geographies. More than half of the impact evaluations have studied financial interventions. There is a need for evidence on GBLIs that provide a combination of financial, human and social interventions. Economic outcomes such as income, total consumption and expenditure form the outcomes with the highest number of impact evaluations, while social cohesion has fewer studies. First-stage and intermediate outcomes which form important links to final outcomes have been addressed by comparatively fewer impact evaluations. This suggests that impact evaluations are often not able to examine the full causal chain of impact of GBLIs.

Table 3: Heat map showing the distribution of evidence

	Diversification of Income Sources	Investment	Labor Force Participation	Productivity	Savings	Debt	Vulnerability	Social Cohesion Outcomes	Education	Health	Consumption	Expenditure	Non-financial assets	Income
Financial	7	9	24	17	22	22	8	8	21	26	33	38	32	35
Financial+Human	4	4	6	1	6	6	3	5	2	6	8	8	10	8
Financial+Human+Social		2	1		1	2			1	2		2	1	
Financial+Social								1			2	1	1	2
Human		1	1			1			1		1	1	1	2
Human+Social				1							1			
Others				2						1	2	1	1	2
Social	1		1								1		1	1
Total	12	16	35	22	31	31	12	14	27	38	49	54	50	53

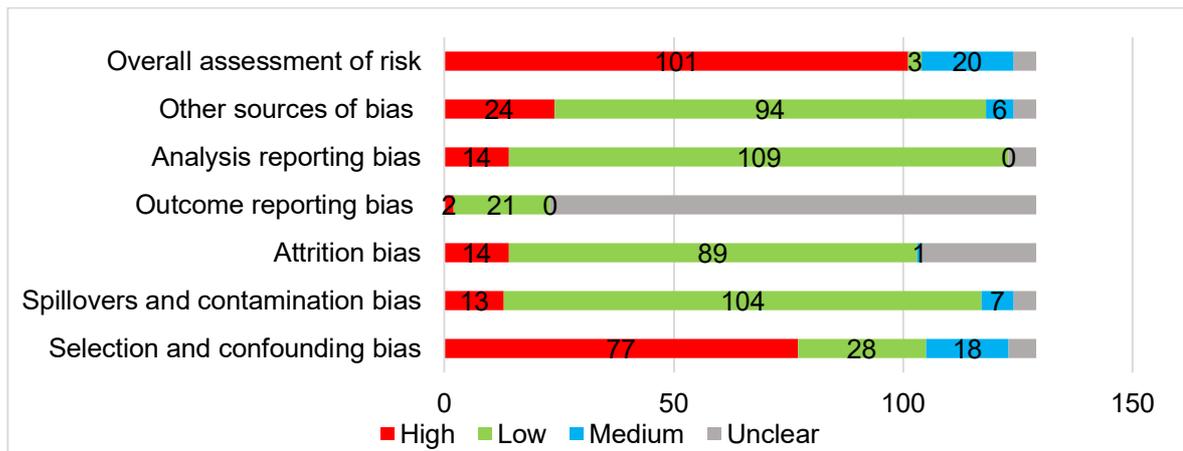
6.2 Risk of bias in included studies

Reviewers rated studies as high, medium or low risk on five types of biases- (i) selection and confounding bias (ii) spillover and contamination of control groups (iii) attrition bias in panel studies (iv) outcome and (v) analysis reporting bias. Reviewers also assessed the studies for other types of biases arising from implementation challenges, method of data collection and sampling following a similar rating system. We then assigned every study an overall risk rating following the rule that this ranking will be equivalent to the highest risk rating received in any of the six risk categories.

Figure 2 shows the distribution of risks by each risk category. The majority of studies do not adequately address selection bias. 77 studies have high risk of selection bias while 28 and 18 studies are low and medium risk respectively. Of the 77 high risk studies, 70 use quasi-experimental methods such as PSM, DID, IV and fixed effects models. Please refer to Appendix F for detailed discussion of risks by study methodology. We assessed

all studies for the possibility of spillover or contamination of the control group. Most studies were successful in reducing contamination of the control group- 104 studies were assessed with a low risk of this type of bias, 13 high risk and 7 medium risk. Low risk of contamination bias studies are able to ensure enough distance between treatment and control groups through methods such as village or cluster level randomization. Studies that use quasi-experimental methods such as PSM or IV with a single post-programme dataset are also able to avoid cross-overs. The majority of our studies have low risk of bias (88 studies) arising due to attrition in the data. Please refer to Appendix G for detailed discussion on risks of bias with examples.

Figure 2: Risk of Bias Analysis



Overall, 23 studies were rated as low or medium overall risk with 3 low risk and 20 medium risk studies. These are the studies included in the synthesis.

6.3 Description of studies included in synthesis

The following 23 studies are included in the synthesis after being rated as having a low or medium risk of bias.

Table 4: Description of studies included in synthesis

Study Name	Primary Study Design	Country	Name of Program	Type of Group	Intervention	Control Group	Overall Risk Assessment	Included in meta-analysis	Included in qualitative synthesis	Heterogeneous effects reported
Blattman and colleagues (2015)	RCT	Uganda	WINGS	SHG	Financial + Human	No intervention	Medium	Yes	Yes	Occupation
Brune and colleagues (2011)	RCT	Malawi	Opportunity International Bank of Malawi	VSLA	Financial	No intervention	Medium	Yes	Yes	
Chemin (2008)	PSM	Bangladesh	BRAC, Grameen Bank and BRDB	MFI	Financial	(i) No intervention areas (ii) non-participants in treated areas	Medium	No	Yes	
Karlan and colleagues (2012)	RCT	Ghana, Malawi, Uganda	CARE program	VSLA	Financial	No intervention	Medium	Yes	Yes	Women and landholding
Karlan and colleagues (2014)	RCT	Mali	SfC program	VSLA	Financial	No intervention	Medium	Yes	Yes	Women and landholding
Deininger and Liu (2013)	DID	India	District Poverty Initiatives Project (DPIP)/Indira Kranti Patham (IKP), Andhra Pradesh	SHG	Financial + Human + Social	Members of newly formed SHGs	Medium	Yes	Yes	Income

Desai and Joshi (2013)	RCT	India	Self Employed Women's Association Program (SEWA), Rajasthan	SHG	Financial + Human + Social	No intervention	Medium	Yes	Yes	Landholding
Feigenberg and colleagues (2013)	RCT	India	Village Financial Services, West Bengal	MFI	Financial	Groups with monthly meetings	Medium	Yes	Yes	
Khandker and colleagues (2015)	Others	Bangladesh	Programmed Initiative for Monga Eradication	MFI	Financial + Human	Non-member	Medium	Yes	Yes	
Mazumder and Wencong (2015)	PSM	Bangladesh	BRDB and AID-COMILLA	MFI	Financial	Non-member	Low	No	Yes	
Crepon and colleagues (2015)	RCT	Morocco	Al Amana	MFI	Financial	No intervention	Medium	Yes	Yes	
Dupas and Robinson (2013)	RCT	Kenya	Independent experiment	ROSC A	Financial	No intervention	Medium	Yes	Yes	Women
Prennushi and Gupta (2014)	PSM	India	District Poverty Initiatives Project (DPIP)/Indira Kranti Patham (IKP), Andhra Pradesh	SHG	Financial + Human + Social	Non-member	Medium	Yes	Yes	Income
Parajuli and colleagues (2012)	RCT	Nepal	Nepal Poverty Alleviation Fund Program	CBO	Financial + Human	No intervention	Medium	Yes	Yes	Women and social groups

Parthasarathy and colleagues (2017)	PSM	India	Pudhu Vaazhvu Project, Tamil Nadu	SHG	Financial + Human + Social	Non-member	Medium	No	Yes	
Ksoll (2016)	RCT	Malawi	Soldev VSLA Project	VSLA	Financial	No intervention	Medium	Yes	Yes	
Christian and colleagues (2018)	DID	India	TRIPTI, Odisha	SHG	Financial + Human + Social	No intervention	Low	Yes	Yes	
Berg and Emran (2018)	IV	Bangladesh	Grameen Bank, BRAC, ASA and BRDB	MFI	Financial	Non-member	Medium	No	Yes	Landholding
Shumeta and D'Haese (2016)	PSM	Ethiopia	Farmers' co-operatives	Cooperatives	Human+ Others	Non-member	Medium	No	Yes	
Blattman and colleagues (2014)	RCT for group-level treatment	Uganda	Youth Opportunities Program	Youth groups	Financial	No intervention	Medium	No	Yes	Women
Hoffmann and colleagues (2018)	RCT	India	JEEVIKA, Bihar	SHG	Financial + Human + Social	No intervention	Low	Yes	Yes	Social groups and Landholding
Greaney and colleagues (2016)	RCT	Kenya, Tanzania, Uganda	CRS SILC program	SHG	Financial	Different intervention	Medium	No	Yes	
Maitra and colleagues (2016)	RCT	India	GBL	MFI	Financial	No intervention	Medium	Yes	Yes	Social groups

Programme characteristics: All but one of the 23 low and medium-risk studies evaluated programmes that contained interventions relating to financial capital either alone or together with human or social capital. Of these, six studies reviewed programmes with interventions related to financial, human and social capital. All of these are set in India and evaluate women's self-help group programmes. These programmes offer credit, financial inclusion products and services, agriculture/skills training and access to social programmes to women. These were the District Poverty Initiatives Project (DPIP)/Indira Kranthi Patham(IKP), Andhra Pradesh (Deininger and Liu 2013, Prennushi and Gupta 2014), the Self Employed Women's Association Programme, Rajasthan (Desai and Joshi 2013), TRIPTI, Odisha (Christian and colleagues 2018), Pudhu Vaazhvu Project (PVP), Tamil Nadu (Parthasarathy and colleagues 2017), and JEEVIKA, Bihar (Hoffmann and colleagues 2017).

Three studies reviewed programmes with financial and human capital interventions. The Women's Income Generating Support (WINGS) programme provides women in Uganda a cash grant, forms savings and credit groups and through these delivers trainings on business skills (Blattman and colleagues 2015). The Programmed Initiative for Monga Eradication (PRIME) offers flexible microcredit and emergency loans to the extreme poor in Bangladesh along with advisory and technical services for income generating activities and basic health support for pregnant or lactating mothers, children and the elderly (Khandker and colleagues 2015). And Parajuli and colleagues (2012) evaluate the Nepal Poverty Alleviation Fund (PAF) programme that mobilizes the poor and marginalized into Community Organizations and offers them cash grants to start income generating activities.

Thirteen studies reviewed programmes that provided only financial capital to beneficiaries. In three programmes, NGOs helped form village savings and loan associations – Soldev in Malawi (Ksoll and colleagues 2016), CARE in Ghana, Malawi and Uganda (Karlan and colleagues 2017), and Saving for Change in Mali (Karlan and colleagues 2014). One programme, operated by Catholic Relief Services, promotes savings and internal lending committees (SILCs), a type of SHG, in Kenya, Uganda and Tanzania (Greaney and colleagues 2016). Two programmes offered savings accounts to different types of groups,, the Opportunity International Bank of Malawi to farmers' clubs in Malawi (Brune and colleagues 2011), and health savings accounts to rotating savings and credit associations in Kenya (Dupas and Robinson 2013) The Youth Opportunities Programme offered cash grants to youth groups in Uganda for non-agricultural skills training and/or business start up costs, with the possibility of winning further cash grants (Blattman and colleagues 2014). Six studies evaluated the microfinance programmes delivered through MFI groups - Al Amana in Morocco (Crépon and colleagues 2015), BRAC, Grameen Bank, BRDB, AID-Comilla and/or ASA in Bangladesh (Chemin 2008, Mazumder and Wencong 2015, Berg and Emran 2018), Village Financial Services in peri-urban Kolkata, India (Feigenberg and colleagues 2013) and Shree Sanchari in West Bengal, India (Maitra and colleagues 2017).

The final study, Shumeta and D'Haese (2016), evaluates farmers' coffee co-operatives in Ethiopia that provide human capital in the form of training sessions, provide inputs and consumables and also market and process coffee for their members.

Of the 23 studies, 8 reviewed interventions offered through self-help groups, 7 were delivered through microfinance groups, and the 8 remaining interventions operated through community organizations, VSLAs, ROSCAs, farmers' cooperatives, farmers' clubs and youth groups.

Programme duration: On average, the programmes evaluated in low and medium risk studies had been in existence for eight years (3 to 14 years) at the time of the evaluation. The actual duration of treatment measured by the evaluation (available for 19 studies) ranged from 1 to 4 years with the average period of treatment evaluated being 28 months.

Programme sponsors: The programmes showed an even mix in terms of funding. Some of the larger programmes were co-funded by state governments in India and the World Bank – DPIP/IKP, JEEVIKA, TRIPTI, PVP and the PAF. The SEWA programme, an NGO, was funded by the government of India's Backward District Plan. The Youth Opportunities Fund in Uganda, too, was funded by the government. A few programmes were funded by private financial institutions such as OIBM Malawi, AI Amana and VFS, and some by governmental and non-governmental micro-finance organisations such as Grameen Bank, BRAC, BRDB, AID-Comilla and PKSf. The WINGs, VSLA and SILC projects were sponsored by NGOs – AVSI, SOLDEV, CARE and Catholic Relief Services. The Saving for Change program was sponsored (in the time period evaluated) by the Bill and Melinda Gates Foundation. The cooperatives, the Kenyan health savings and GBL experiments were self-sponsored.

Programme participants: Many of the low and medium risk studies evaluated programmes that target poor, marginalized women (6/23). The target households were identified through a combination of census, participatory poverty assessment methods or focus group discussions. The DPIP/IKP, which was piloted in 6 of the poorest districts in AP, conducted a "participatory identification of the poor" that considered vulnerability and social exclusion along with quantitative indicators from the 2001 national census to gauge the poverty status of all households in a village (Deininger and Liu 2013, Prennushi and Gupta 2014). Likewise, TRIPTI used a participatory identification process and a village census, to identify extremely poor and vulnerable and poor households for grants (Christian and colleagues 2018). The PVP chose 16 "backward" districts in Tamil Nadu and then selected blocks based on the number of households below the poverty line and the population of socially disadvantaged groups (SC/STs) (Parthasarathy and colleagues 2017). Target households were then selected within each village through a participatory identification process. SEWA focused specifically on women from scheduled tribes. Two tehsils or blocks in Durgapur district (one of the poorest districts in India) were chosen due to the low penetration of NGOS and prior SHGs. All villages in these two blocks were stratified based, first, on mean female literacy rate, next on total village population, and finally on average household size, and 32 villages chosen for the SEWA treatment (Desai and Joshi 2013,). JEEVIKA also targeted women from scheduled tribes and castes and the landless. Hamlets or tolas where the majority of the population was SC/ST were identified through a focus group discussion held in each village (Hoffmann and colleagues 2017).

Three East African programs also focused on poor women, but appeared to have paid less attention to targeting and identifying programme beneficiaries, as compared to the Indian programmes (3/23). The Saving for Change program was intended to target the poorest of

poor women, but those who participated in treatment villages were on average wealthier than non-members. The CARE programs in Ghana, Malawi and Uganda operated in poor villages, and they had mostly women as clients (Karlán and colleagues 2017), and the CRS SILC program in East Africa ostensibly targeted the poorest of the poor (Greaney and colleagues 2016). But neither study describes the specific targeting mechanism.

Two programmes did not specifically target the poor, but had clients who were below the \$1 a day poverty line (2/23). VFS's all-female clients were below the \$1 a day poverty line (Feigenberg et al 2013). And YOP served unemployed youth in a post-conflict setting who, on average, earned less than \$1 a day (Blattman and colleagues 2014). A small percentage of the grants for YOP were reserved for underserved communities (Muslims and orphans).

Only one study focused specifically on the ultra-poor regardless of their gender (Khandker and colleagues 2015) (1/23). PRIME's target was "poor women-headed households (including widows, divorced and abandoned women), family households with irregular incomes from manual labour and those dependent on child or migration labour, and families with disabled or elderly members." Their eligibility criteria, in addition to owning less than 0.5 acre of land, was to have a monthly income less than \$25 and to work primarily as a daily wage labourer.

Two studies focused on marginalized persons (2/23). In Nepal, the PAF selected villages in one of 40 poorest districts based on a qualitative and quantitative assessment of need and feasibility, striving to reach groups that have "traditionally been excluded by reasons of gender, ethnicity, caste and location" (Parajuli and colleagues 2012). And AVSI asked communities to suggest marginalized villagers for WINGS in two war torn districts requiring three-quarters of the group be young women (Blattman and colleagues 2015).

Four studies had programmes that targeted participants based on land ownership (4/23), as is common with Bangladeshi microfinance. Those with less than 0.5 acres of land were eligible for Grameen Bank, BRAC, ASA, and BRDB (Chemin 2008, Berg and Emran 2018). The GBL scheme focused on households with less than 1.5 acres of land (Maitra and colleagues 2016). However, as Chemin points out, eligibility criteria are often not adhered to with almost a quarter of participants owning more than 0.5 acres. Under GBL, the authors restricted the sample to households owning less than 1.5 acres of land, implying that targeting was not perfect. Brune and colleagues (2011) also focused on small land holders – farmers, mostly male, growing tobacco as a cash crop.

Two programmes did not target any specific group (2/23). The AI Amana programme was open to anyone running an economic activity other than non-livestock agriculture for a year (Crépon and colleagues 2015). And members of the cooperatives in Ethiopia were mostly larger land-holding coffee farmers in two regions (Shumeta and D'Haese 2016). The remaining three studies did not specify their target group (3/23).

Analysis of heterogeneous effects: Half of the studies reported heterogeneous effects along dimensions such as gender, social group and indicators of economic status such as landholding and income.

Three studies reported impacts by baseline household income. Deininger and Liu (2013) and Prennushi and Gupta (2014) reported results for the poor, poorest of poor and non-

poor households as measured by income. Karlan and colleagues (2013) reported results by household consumption and wealth, as well as the type of household, ethnicity and type of replication of the programme. Hoffmann and colleagues (2017) differentiate results according to belonging to a scheduled caste and tribe, as well as by landlessness or residing in a Kosi area. (Parajuli and colleagues (2012) also reported impact on disadvantaged households qualitatively in the text but not for all outcome variables).

Three studies report results by landholding status – Desai and Joshi (2013), Berg and Emran (2018) and Maitra and colleagues (2017). The former also differentiated results by level of education, and the latter by gender of head of household and caste status. Karlan and colleagues (2017) report heterogeneity of findings during times of drought or a bad harvest. Blattman and colleagues (2015) report impact by future orientation and purchasing autonomy (but only for impact of supervision). Brune et al (2011) look at impacts on farmers across different time periods (pre and post planting). And Shumeta and D’Haese (2016) look at heterogeneous treatment effects between cooperatives, across cooperative membership, in demographic characteristics, in the size of coffee land owned, in market access and location.

Three studies (of the 12 studies not targeted exclusively to women) reported impact for females (Dupas and Robinson 2013, Blattman and colleagues 2014 and Parajuli and colleagues 2012). Additionally, Dupas and Robinson (2013) reported results broken out for providers, present-biased individual or for being married (if female). Blattman and colleagues (2014) also analyzed impact by a variety of effects – including being in a skilled trade, working capital (initial asset wealth, savings and lending, and perceived credit access), human capital and ability (education, working memory, and health), and patience (10 self-reported measures of time preferences, including both patience and self-control). Parajuli and colleagues (2012) reported impacts on girls’ enrolment and underweight status.

Programme cost, benefit and returns: Eleven studies had data on programme costs. In decreasing order of programme cost, JEEVIKA cost \$199.5 million, the DPIIP/IKP cost \$150-150.6 million, the Nepal PAF was \$75-92.5 million (our calculations), CRS’s SILC programme was \$42 million (our calculations) SEWA was \$9.9 million, Saving for Change was \$7.1 million (our calculations), WINGS was \$3.8 million (our calculations), VFS was \$0.6 million, Soldev was \$0.2 million and GBL was \$25,280 (our calculations). The average cost of the CARE VSLA programme per household in Malawi and Uganda was \$7 and \$11, respectively.

Two studies had estimated the benefit-cost ratio of their programmes and we were able to calculate the benefit-cost of a third. When benefits are measured in terms of per capita consumption expenditure (in USD), DPIIP/IKP varied in benefit-cost from 0.64:1 in an extremely conservative scenario to 3.77:1 for a more optimistic scenario (Deininger and Liu 2013). The WINGS programme showed a 5:1 benefit-cost ratio (Blattman and colleagues 2015) with benefits being measured by consumption. The Soldev VSLA programme showed a 1.29:1 benefit-cost ratio (our calculations) (Ksoll and colleagues 2016). The CARE VSLAs resulted in no significant benefits on income and consumption and the authors did not translate the less tangible benefits of the program into monetary terms (Karlan and colleagues 2017).

Six studies measured rates of return of financial capital. WINGs programme had a 24% internal rate of return (using consumption measures) and a 16% return (using earnings measures) (Blattman and colleagues 2015). (The authors were unable to reject zero or negative rates of return if one includes the costs of supervision in the programme.) The YOP programme had annual earnings returns of 30–50% the size of the initial cash grant (Blattman and colleagues 2014). GBL borrowers earned a statistically significant rate of return of 37% on potato cultivation, but no significant return on the cultivation of all major crops (Maitra and colleagues 2017). Grants under the Nepal PAF showed a 130% return in 2 years time (Parajuli and colleagues 2012). Al-Amana loans had an average return of 140% in earnings before repayment of interest in the second year of treatment (Crépon and colleagues 2015). The SFC programme showed a highly significant ROI on assets of 243% (using program costs plus SFC savings contributions) but an insignificant ROI on consumption benefits (Karlan and colleagues 2013).

6.4 Synthesis of results: meta-analysis

In this section, we present the results of our meta-analysis of the low and medium risk of bias studies to examine the impacts of group-based livelihoods interventions on the outcomes described earlier.

We could extract the data needed for calculating effect sizes from sixteen of the 23 studies. The remaining eight studies did not fully report baseline means, standard deviations or sample sizes by treatment status. For example, we were not able to include Chemin (2008) as this paper did not report standard errors or standard deviations of outcomes. We were not able to include Prennushi and Gupta (2014) as the paper did not report the number of treatment and control for each income strata while reporting outcomes by the strata. We excluded Berg and colleagues (2018), Mazumdar and Wencong (2015) and Shumeta and D'Haese (2016) because we could not accurately obtain the treatment and control group sample numbers. We do not include Blattman and colleagues (2015) in our meta-analysis because the study provides a range of impact estimates to account for missing data. We were unsure which estimate was reflective of the true estimate to use for our analysis.¹ Even though we could compute at least some effect sizes for sixteen studies, not all of them reported on the same outcomes. For example, seven studies reported impacts on income while only three reported on productivity. In some cases, studies may report on the same outcome but the indicators may be non-comparable. For instance, food security has been measured in some studies as the number of meals consumed by a household as well as by a binary indicator of whether a household skipped any meals within the reference period. We calculated SMD for continuous variables and Risk Ratio (RR) for binary outcomes. We do not meta-analyze outcomes that have three or fewer studies. Acknowledging heterogeneity in the context as well as interventions of the studies included in our meta-analysis, we report pooled effect sizes using random-effects model. In our narrative synthesis, we include all 23 studies. Table 5 summarizes this information for each outcome.

¹ Other studies too have depicted a range of estimates but they have typically tended to remain consistent with the main findings. This was not the case with Blattman and colleagues (2015)

Table 5: Number of low or medium risk studies by outcome studied

	Income	Consumption	Assets	Social Cohesion	Vulnerability	Savings	Loans	Investments	Livelihoods Diversification	Labour Force Participation	Productivity
Number of studies reporting on outcome	7	12	7	7	8	7	10	7	6	6	6
Number of studies included in meta-analysis	6	9	5			6	7		5		
Number of studies for qualitative synthesis	7	12	7	7	8	7	10	7	6	6	6

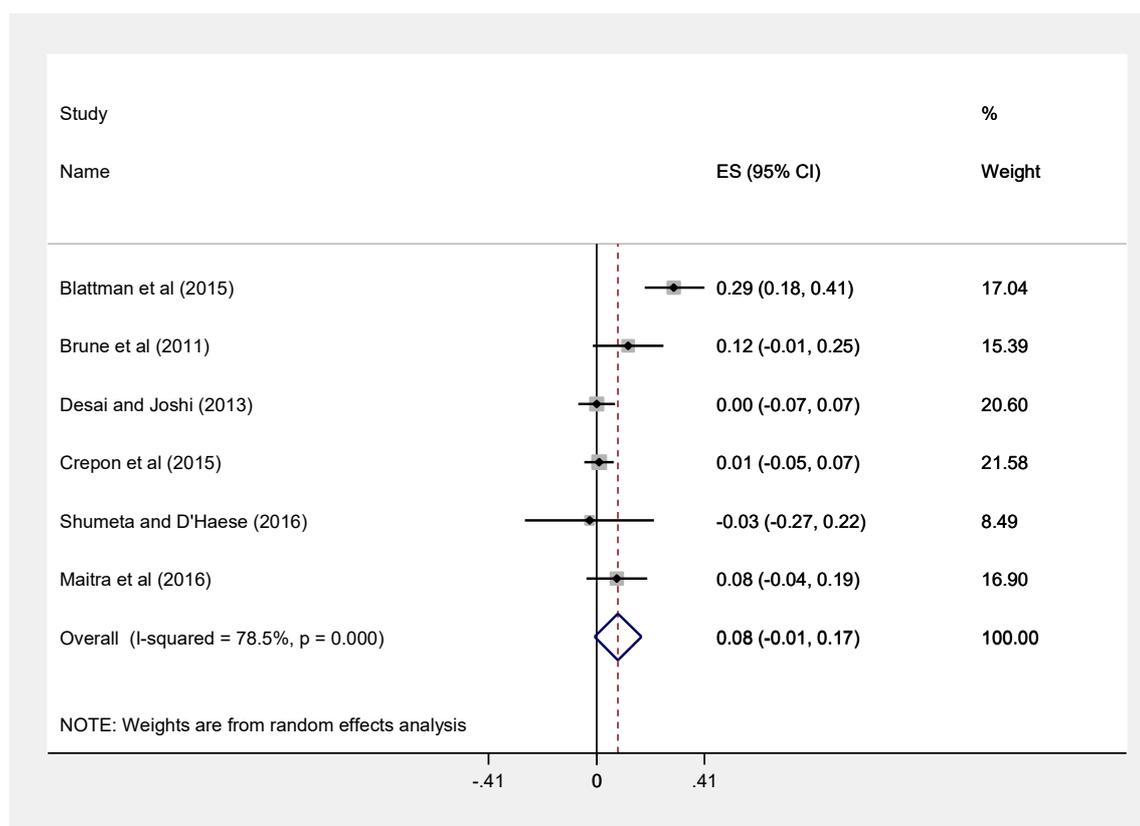
6.4.1 Impact on income

Six studies provided the data needed for meta-analysis and could be used to summarize the impacts of group-based livelihoods interventions on income. We present the same results using random effects in Figure 3. We observe that the impact on income increases with random effects but is insignificant (SMD=0.08, CI=-0.01, 0.09). Overall, we cannot conclude the GBLIs lead to an increase in incomes. We note the high degree of heterogeneity across the effect sizes of individual papers ($I^2=78.5\%^2$).

Looking at the effect sizes of individual papers, we see positive and significant impacts of the WINGS program in Uganda. Similarly, another study by (Blattman et 2014) that examines the impact of cash grants to youth group in Uganda and which we did not include in our meta-analysis finds high impacts on cash earnings of men and women. Men report a 29% increase in cash earnings while women report this as 73%. Studies in other countries (such as Morocco, India, Malawi and Ethiopia) have not found significant impacts on income.

² I-squared of 0-40% suggests that heterogeneity may not be important, 30-60% may represent moderate heterogeneity and 50-90% may represent high heterogeneity (https://handbook-5-1.cochrane.org/chapter_9/9_5_2_identifying_and_measuring_heterogeneity.htm)

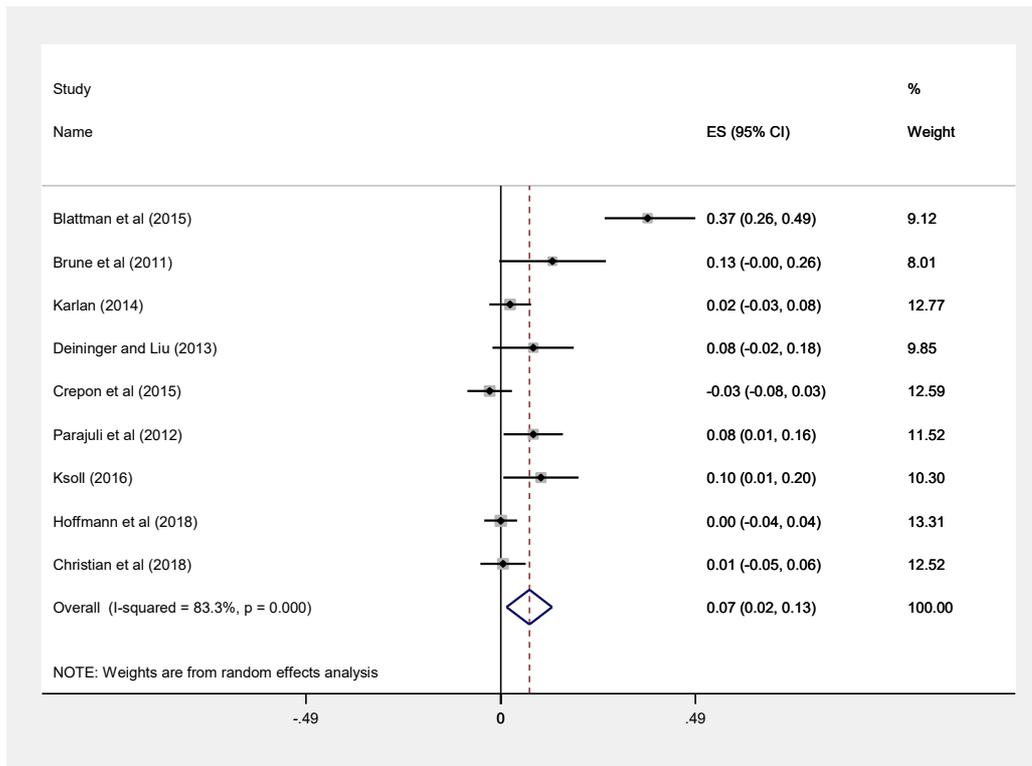
Figure 3: Impact on income



6.4.2 Impact on consumption

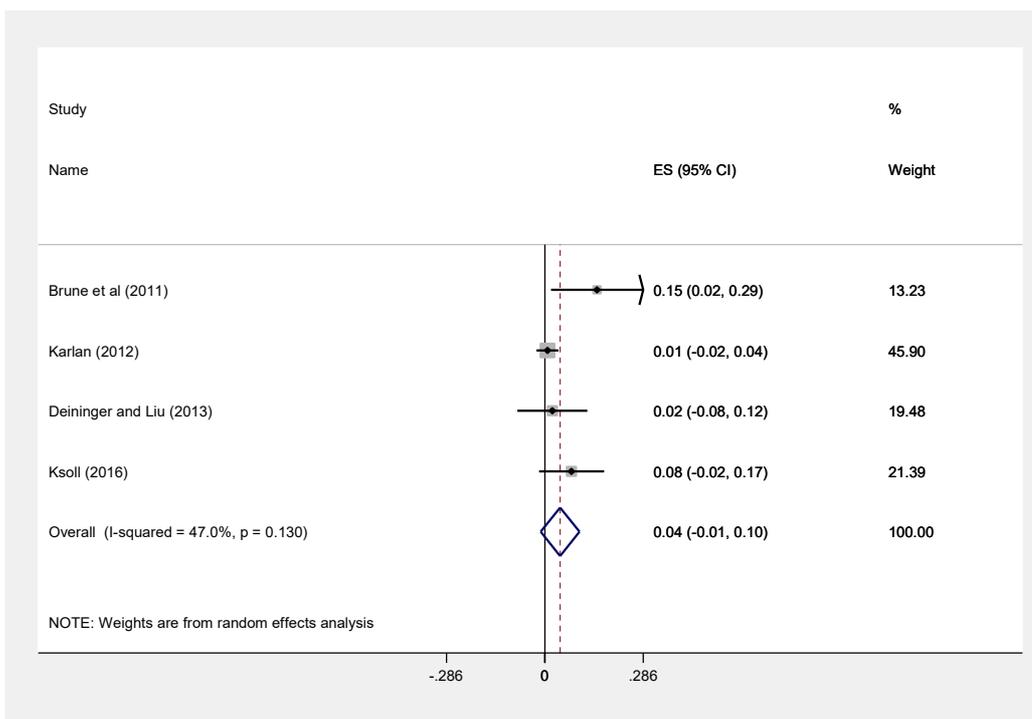
We use nine papers to meta-analyse the impact on total consumption. We see small but significant effects overall (SMD=0.07, CI=0.02, 0.13). These small effects remain significant if we restrict ourselves to the seven RCTs (SMD=0.08, CI=0.01, 0.16). Looking at the forest plot below, it appears that our overall effect may be driven by the large consumption effect reported in Blattman and colleagues (2015). Indeed, we find that dropping this study reduces overall effect size and makes it insignificant (SMD=0.031, CI= -0.002, 0.065). We could not include two studies (Chemin 2008, Prennushi and Gupta 2014) in our meta-analysis. Chemin 2008 find that when compared with a matched sample of individuals within the same village, micro-finance participants in Bangladesh report lower per capita expenditure. Prennushi and Gupta (2014) find that the IKP programme in India led to a 44% increase in per capita total expenditure among the poorest participant households compared to the poorest non-participant households. However, this increase was weakly significant (at 10%). Overall, we do not find convincing and consistent results of GBLIs on consumption.

Figure 4: Impact on consumption



We analyse results on the value of food consumption or expenditure from four papers. We find that the overall effect on food consumption is insignificant (SMD=0.045, CI= - 0.012, 0.10).

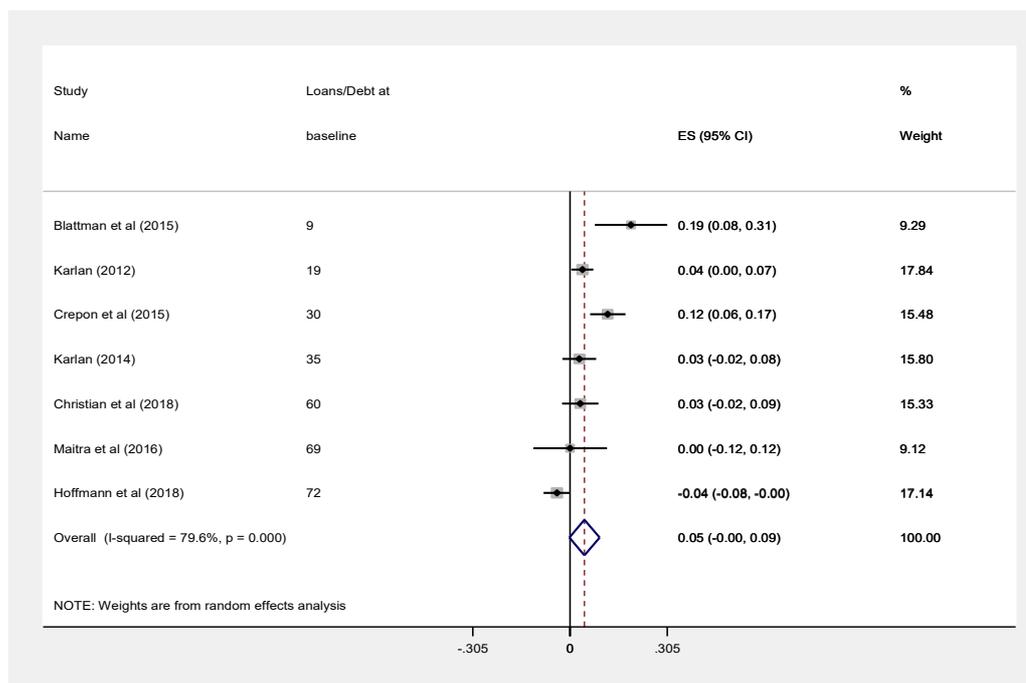
Figure 5: Impact on food consumption or expenditure



6.4.3 Impact on loans

We use seven studies to meta-analyze the impact of livelihoods programmes on indebtedness. This is measured across studies as the total value of loans from all sources. The overall effect is positive but insignificant (SMD= 0.046, CI= -0.002, 0.093). The largest effect size is reported by Blattman and colleagues (2015) who find that current loan amounts increased by 0.19 SD due to GBLs in Uganda. Hoffman and colleagues (2018) report negative and significant impacts on current loans in India. The overall effect remains insignificant if we conduct the analysis keeping only the experimental studies. Systematic reviews on microcredit (REF) have argued that financial inclusion and credit are effective in improving human lives when these address existing credit gaps. In situations, where credit is not constrained, such programmes may be ineffective. Three studies, Blattman and colleagues (2015), Karlan and colleagues (2012) and Crepon and colleagues (2015), find positive and significant impacts of GBLs on access to credit. In all of these, baseline credit constraint was high. Blattman and colleagues (2015) is set in a post-conflict environment where formal and informal credit markets are non-existent. In Morocco, the microfinance intervention studied by Crepon and colleagues (2015) was the first of its kind in the region. The average percentage of households with some form of loan (formal or informal) was 30% at baseline. In such a setting, providing access to finance helped bridge the existing credit gap. On the other hand, we see insignificant impacts on studies with higher baseline indebtedness (Christian and colleagues (2018), Maitra and colleagues (2016)). In Hoffman and colleagues (2018), on the other hand, indebtedness at baseline was high and 81% of households had some outstanding debt at baseline. The paper argues that access to low-cost credit can help indebted households to pay off their outstanding loans. In Figure 6, the percentage of households with loans at baseline is plotted along the Y-axis along with the SMD. We see that as the percentage of households with loans in baseline increases, the SMD of the effect of GBLs on current outstanding loan amount decreases.

Figure 6: Impact on loans

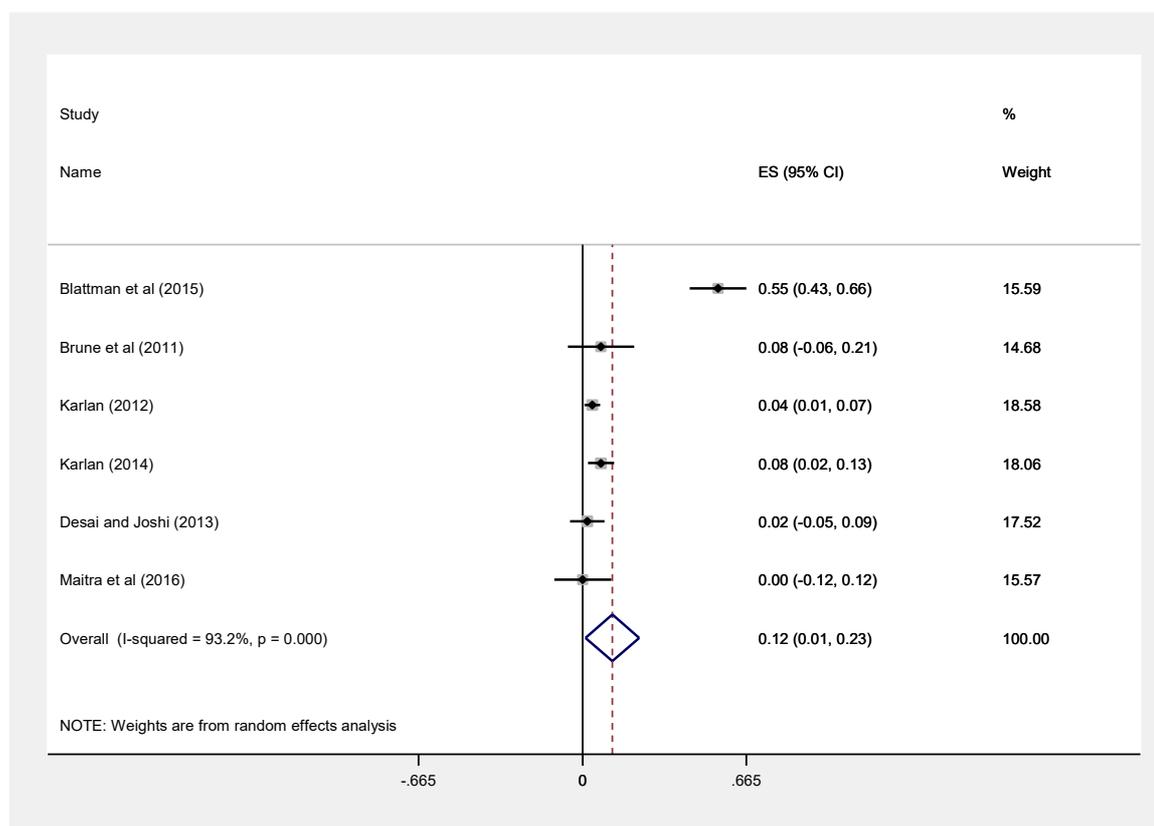


We could not include three studies in the meta-analysis of loans. However, we find a coherent pattern of effects from these studies as well. Prennushi and Gupta (2014) find that women who participated in the IKP programme in India were able to borrow up to two and half times more than non-participants with the impact being higher for poorer women. Desai and Joshi (2013) find that SHG members in Rajasthan, India were more likely to have reported taken a loan from formal or informal sources than non-members. Ksoll and colleagues (2016) show that households in villages with the SOLDEV savings programme were more likely to have taken loans for investments compared to households in villages without the programme. In both the studies, we see low prevalence of credit at baseline with less than 10% of households reporting having taken loans.

6.4.4 Impact on savings

Six studies contained information on amount of savings and could be used for meta-analysis. In Figure 7, we show the standardized effect sizes of amount of savings from the six studies. Overall, the pooled effect size suggests positive impacts on savings (SMD= 0.12, CI= 0.01, 0.23). The point to note while drawing conclusions for GBLIs in general is that the interventions in each of the studies used in the meta-analysis had an essential savings component. Karlan (2012, 2014) and Brune and colleagues (2011) examine the impact of savings groups. In Blattman and colleagues (2015), Desai and Joshi (2013) and Maitra and colleagues (2016), individuals were organized into self-help or microfinance groups that mandated savings. We cannot conclude from our findings that other types of GBLIs, such as those that provide only credit or only trainings and do not include savings, will lead to increases in savings.

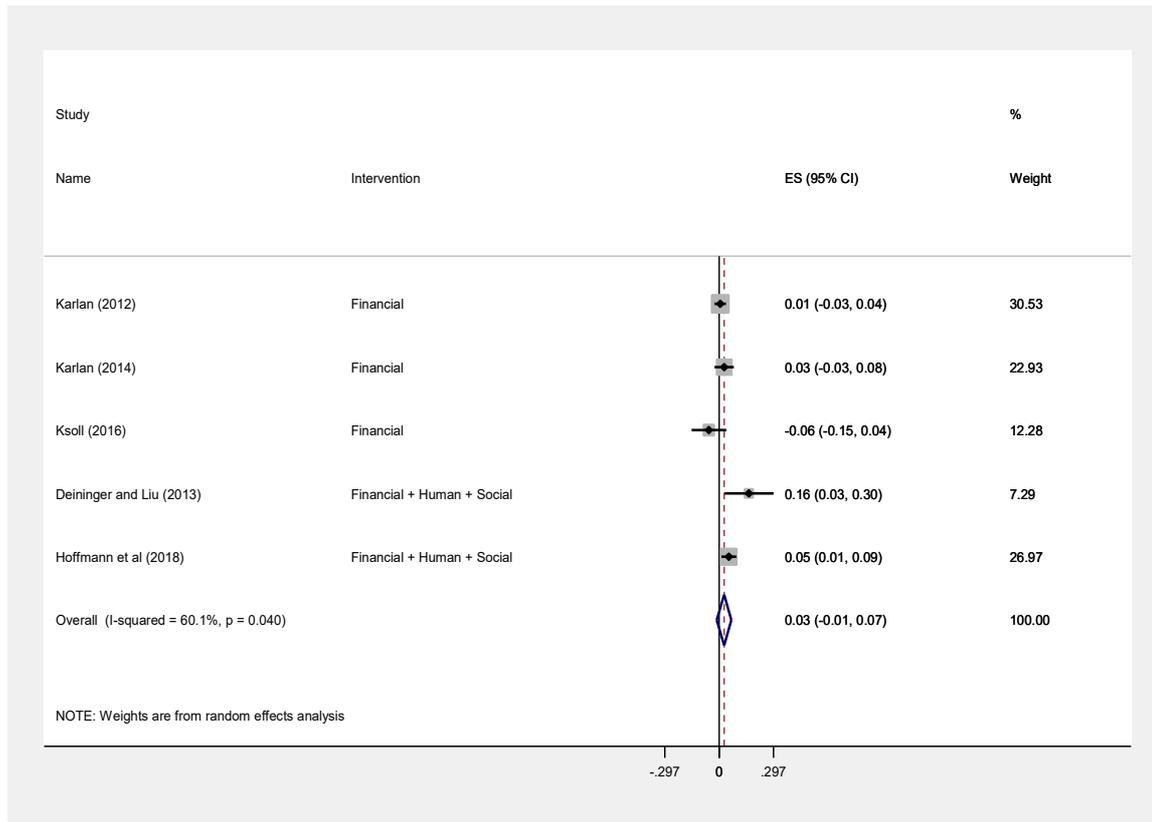
Figure 7: Impact on savings



6.4.5 Impact on assets

We are able to use five studies to examine the impact of GBLs on assets. The overall impact on assets is insignificant (ES=0.027, CI=-0.013, 0.067). Two studies report positive effects of GBLs on household assets. Both of these evaluate the impact of SHGs in India (Deininger and Liu (2013), Hoffman and others (2018)). The remaining three studies find no impact of savings groups in Africa (Karlan and colleagues (2012, 2014), Ksoll (2016)).

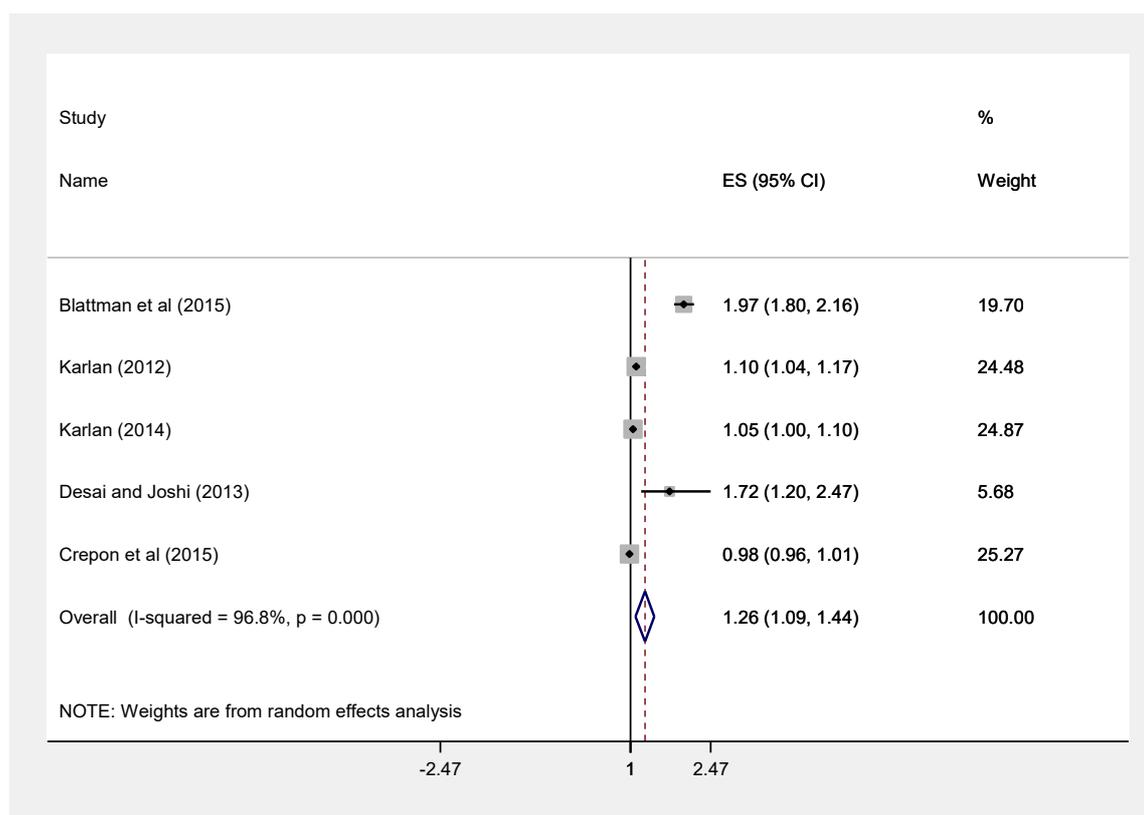
Figure 8: Impact on assets



6.4.6 Impact on livelihoods diversification

We use five studies to examine the overall impact of GBLs on livelihoods diversification. The pooled risk ratio of having a livelihood activity outside agriculture is positive and significant (RR=1.264, CI=1.092, 1.436). Households or individuals with access to GBLs are 26% more likely to be engaged in income generating activities outside agriculture than those that do not have access to any livelihood programmes.

Figure 9: Impact on diversification of livelihoods



6.4.7 Summary of meta-analysis

Table 6 displays the summary of the pooled effects on income, consumption, loans, savings, assets and livelihoods diversification. We see that GBLs lead to small but positive impacts on savings, consumption and livelihoods activities when compared with not having any livelihood programmes. We see no impact overall on income, loans and assets. If we restrict our analysis to studies that employ randomized designs, we see consistent pattern of results. However, our overall results seem to be driven by studies that report very large effect sizes. Once we remove the outliers, we see a small and positive impact on savings alone. The impacts on consumption and livelihoods diversification become insignificant.

We further study variations in the observed pooled effects by examining the correlation between SMDs and five programme or contextual characteristics. Table 7 shows the correlation coefficient between the standardized effect sizes and programme characteristics. The first row shows that the correlation between programme uptake and the pooled effects on outcomes. Programme uptake in our studies ranged from 96% to 17% with an average of 48%. SMD of the impact of GBLs on income is positively correlated with uptake of the programme. Uptake is also positively correlated with effect sizes of savings and livelihoods diversification (significant at 10%). The correlation coefficient between uptake and SMD of loans and consumption is insignificant. While this analysis does not tell us anything about the statistical significance of effects, we can conclude that high programme uptake is associated with higher impacts on income.

Table 6: Summary of effect sizes of outcomes included in meta-analysis

	Effect				Dropping outliers			RCTs		
		SMD/ RR	Lower CI	Upper CI	ES	Lower CI	Upper CI	ES	Lower CI	Upper CI
Income	SMD	0.08	-0.004	0.087	0.022	-0.016	0.061	0.092	-0.004	0.188
Consumption	SMD	0.072	0.015	0.129	0.031	-0.002	0.065	0.085	0.012	0.158
Savings	SMD	0.121	0.012	0.23	0.044	0.02	0.068	0.121	0.012	0.23
Livelihood activities	RR	1.264	1.092	1.436	1.05	0.971	1.129	1.264	1.092	1.436
Loans	SMD	0.046	-0.002	0.093	0.031	-0.014	0.075	0.049	-0.007	0.106
Assets	SMD	0.027	-0.013	0.067	0.027	-0.013	0.067	0.027	-0.013	0.067

We next look at the correlation coefficient between length of exposure to the programme and effect sizes. The correlation coefficient on income, consumption, savings and livelihoods is insignificant while that on loans is negative and significant. This suggests that studies with shorter programme exposure reported relatively high effects on outstanding loans. Women's groups, contexts of increased vulnerability and financial plus programmes are not associated with higher impacts on income, loans, consumption and savings. However, women's groups and financial plus programmes are found to have reported higher effects on livelihoods diversification that mixed groups and purely financial programmes.

Table 7: Correlation coefficients of program characteristics and outcomes

	Income	Loans	Consumption	Savings	Livelihoods diversification
Uptake of the programme	0.8195*	0.2728	0.5484	0.8003*	0.8560*
Length of exposure to programme	-0.4174	-0.6861*	-0.2813	-0.4191	-0.3139
Women only groups	0.4135	-0.1126	0.2325	0.3312	0.9752*
Vulnerable context	0.4135	0.1237	0.2803	0.2931	0.4755
Financial plus human or social capital	0.0921	0.0977	0.2259	0.5847	0.9752*
Number of studies	6	7	7	6	5

Caution needs to be exercised in interpreting the pooled effect sizes in our meta-analysis. We observe a high degree of heterogeneity across studies in almost all outcomes. The I-squared reported are above 75% for all analysis, even when we employ random effects model. This suggests that the observed pooled effects may be inconsistent.

6.5 Narrative synthesis of outcomes not included in meta-analysis

In this section, we synthesize findings on the impact of GBLIs on the outcomes that we could not use in our meta-analysis- namely, vulnerability, social cohesion, investments and labour force participation.

6.5.1 Impact on health and education outcomes

Our examination of included studies suggest there are gains to children's education but no impacts on health. Four papers have reported on education outcomes while five report on health outcomes. Chemin and colleagues (2008) find that girls' enrolment in school was almost 5% higher among microfinance participants in Bangladesh compared to non-participants. This difference was 3% for boys' enrolment. The authors attribute the higher impact on girls to their low attendance at baseline. Compared to an enrolment rate of 60% among boys, baseline enrolment rate of girls was 56%. Karlan and colleagues (2012) find the opposite in a study conducted in Ghana, Malawi and Uganda- primary school enrolment increased by 2.3% among boys in villages with VSLA programme while this was 1.9% for girls. Baseline enrolment rate was high in this study (close to 80%). Provision of cash grants and trainings to community groups under the PAF programme led to a 4.2 percentage point increment in school enrolment among 6 to 15 year olds in Nepal from a baseline of 72%. The observed improvement in educational outcomes seems to be driven by increases in per capita expenditure. Crepon and colleagues (2015) on the other hand find no significant increase in school enrolment due to the AI-Amana microfinance intervention. Given the poor uptake of the programme, this result is not surprising. None of the five studies that report on health outcomes find improvements in these due to GBLIs.

6.5.2 Impact on vulnerability

We summarize findings from seven papers that report on measures of food insecurity in Table 8. The indicators used to measure food insecurity in these papers cover different aspects of vulnerability. While some studies report on indicators that have a positive correlation with food security (such as increase in the number of meals) others use indicators that have a negative correlation (such as a decline in the number of days with no meals). Pooling effects across such diverse indicators may not be appropriate in this case. We, therefore, present a summary of findings here. We see that GBLIs had a significant impact in improving food security in times of increased economic stress. In post-war Uganda, a cash grant to groups of young people, mostly women, led to a significant decrease in the times a household went hungry (SMD=-0.1351, CI=-0.2485, -0.0218). In India, membership in SHGs helped households maintain similar levels of food expenditure before and after a natural disaster (SMD=-0.0042, CI=-0.0613, 0.0529). In Nepal, a programme targeted at the poorest districts led to significant reduction in hunger (SMD=-0.1138, CI= -0.1854,-0.0422). Similarly, access to a flexible microfinance scheme helped the ultra-poor to reduce seasonal food insecurity in Bangladesh (RR=0.82 CI=0.7641, 0.8799). Savings programmes in Ghana, Malawi, Uganda and Mali, resulted in fewer households reporting food insufficiency. The one exception is a savings programme in Malawi which had a positive but insignificant impact on food security of rural households in Malawi. However, the contextual difference between this and the rest of the studies is that this evaluation was not conducted during a period of non-normal economic stress and vulnerability. The overall pattern suggests that GBLIs that provide financial and human capital support to vulnerable groups have been effective in reducing vulnerability and increasing food security.

Table 8: Impact on food insecurity indicators (vulnerability)

Study Name	Country	Vulnerable Context	Intervention	Indicator	ES, CI
Blattman and colleagues (2015)	Uganda	Yes, Post-conflict	Financial + Human	Times a household went hungry, last week	ES=-0.1351 (CI=-0.2485, -0.0218)
Parajuli and colleagues (2012)	Nepal	Yes, Post-conflict	Financial + Human	Times food insufficient in the last 6 months	ES=-0.1138 (CI=-0.1854, -0.0422)
Ksoll and colleagues (2016)	Malawi	No	Financial	Number of meals in the past day	ES= 0.0121 (CI= -0.0821, 0.1064)
Christian and colleagues (2018)	India	Yes, Post-natural disaster	Financial + Human + Social	Expenditure on food post disaster	ES=-0.0042 (CI=-0.0613, 0.0529)
Khandker and colleagues (2014)	Bangladesh	Yes, post seasonal famine	Financial + Human	Household had starvation in monga period	RR=0.808 (CI=0.7482, 0.8726)
Karlan and colleagues	Ghana, Malawi, Uganda	Yes, 64% household receive an economic shock	Financial	Household reported adults skipping meals	RR= 0.9639 0.9409 0.9875
Karlan and colleagues	Mali	Yes, post-conflict and drought	Financial	Household reported not having enough food to eat	RR= 0.925 0.8648 0.9894

6.5.3 Impact on social cohesion

Social cohesion outcomes are measured differently across the six studies that report on them. In Table 9 below, we report the indicators used to measure social cohesion. These clearly capture different dimensions of social cohesion. While some measure social contact in terms of number and quality of group interactions (Feigenberg and colleagues (2013), Blattman and colleagues (2015)), others measure social cohesion as access to local public systems (Christian and colleagues (2018), Desai and colleagues (2016)). Most studies find significant and positive impacts on the reported social cohesion outcomes (Table 9). Hoffman and colleagues (2018) found that delays in programme implementation meant that the SHG programme had not yet started its linking groups to other public services and programmes. On the other hand, in the two studies where GBLIs led to improved access to public services and programmes, establishing such linkages are an explicit programme component (Prennushi and Gupta (2014), Desai and colleagues (2016)). Karlan and colleagues (2012) find no impact on community participation due to VSLAs. While the paper does not discuss the reason for the lack of impact, promoting social cohesion does not seem to be an integral part of the primarily financial intervention. This indicates that group formation alone does not lead to social cohesion but rather requires concentrated efforts. This is upheld by Feigenberg and colleagues who find that increasing group meetings of MFIs led to better social contact and community participation among women.

Table 9: Impact on social cohesion

Study Name	Indicator	Impact	Explanation given for impact/non-impact
Blattman and colleagues (2015)	Index of social support received; community participation	Social support and community participation increased in group intervention arm	Active support to groups on group functioning
Feigenberg and colleagues (2013)	Social contact index	Social contact outside group meetings increased as a result of weekly meetings of MFI groups compared to the control of monthly meetings.	Increased number of group meetings
Prennushi and Gupta (2014)	Probability of benefitting from four social programmes	Participants in SHG programme were more likely to access NREGS, MDM and other programmes	Linkages with other programmes was part of the IKP programme.
Christian and colleagues (2018)	Six indicators of civic engagement	Participants in SHG programme were more likely to know local government officials	Public action was higher as entitlements was an important component of TRIPTI.
Desai and colleagues (2016)	Access to public services	Villages with programme were more likely to have access to piped water	Information on entitlements was an important part of the programme. Groups received sustained support from SEWA to access entitlements.
Hoffmann and colleagues (2018)	Access to entitlements	No impact on access to entitlement	Convergence programmes were not initiated by JEEVIKA at the time of endline.
Karlan (2012)	Community participation	No impact on community participation	Not discussed

6.5.4 Impact on investments

We present standardized effect sizes of the impact on investments in productive activities from six studies in Table 10. We do not attempt to meta-analyse the impact on investments because of differences in the definition of investments (for example, inputs versus productive assets in agriculture) and the lack of clarity of which assets are included among productive assets. Crepon and colleagues (2015) report a positive and significant increase in the total assets for self-employment activities due to the provision of micro-credit. Similarly, Blattman and colleagues (2015) find a significant improvement in productive assets (z-scores) due to cash grants and savings groups interventions. The remaining four studies do not find any impact on investment indicators. For example, Hoffman and colleagues (2018) find no significant change in an index of productive assets as a consequence of SHGs in India. Savings interventions (Brune and colleagues (2011), Karlan and colleagues (2012, 2014)) do not appear to have increased expenses on inputs in agriculture. In summary, we cannot systematically identify any pattern of impact on investments due to GBLIs.

Table 10: Impact on investments

Study Name	Group Type	Indicator	ES/CI
Brune and colleagues (2011)	Savings groups	Value of Inputs in agriculture	ES= 0.0001, CI= -0.1338 0.134
Crepon and colleagues (2105)	Micro-credit	Total assets in self-employment	ES= 0.0627, CI=0.0069 0.1185
Hoffman and colleagues (2018)	SHGs	Productive asset index	ES=0.0105, CI=-0.0519, 0.0308
Karlan and colleagues (2012)	VSLA	Expenditure on agricultural inputs	ES=0.0205, CI=-0.0113, 0.0523
Karlan and colleagues (2014)	VSLA	Total expenditure on animal care	ES=0.0493, CI=-0.0032, 0.1018
Blattman and colleagues (2015)	SHGs	Productive assets z-score	Beta= 0.397***

6.5.5 Impact on productivity

Looking at the five studies that have reported on productivity, we see an inconsistent pattern of impacts. While formation of VSLAs in Mali (Karlan and colleagues 2012) and Malawi (Ksoll and colleagues 2015) have not led to improvement in value or quantity of farm outputs, one study finds some impact of such groups in Ghana, Malawi and Uganda (Karlan and colleagues 2014). The effect of microfinance on farm outputs was 0.07 SD in Morocco (Crepon and colleagues 2015). Shumeta and De'Hasse (2016) do not find any impact of co-operative membership on farm productivity.

Table 11: Impact on productivity

Study name	Group	Indicator	Estimate, confidence interval	Description of results
(Karlan and colleagues 2012)	VSLA	Value of harvest	ES = -0.0075 CI = -0.0395, 0.0245	
(Karlan and colleagues 2014)	VSLA	Value of agricultural output (female farmers)	ES = 0.0547 CI = 0.0119, 0.0975	
(Crepon and colleagues 2015)	MFI	Value of output from farms	ES = 0.0797 CI = 0.0239, 0.1355	
(Ksoll and colleagues 2015)	VSLA	Quantity of output harvest		No increase
Shumeta and De'Hasse (2016)	Others	Yield per hectare		No increase

6.5.7 Impact on labour force participation

We report standardized effect sizes from three studies on the impact of livelihoods programmes on labour force participation. We do not observe any pattern on labour force participation of women or households. The effect size is positive and significant in Uganda, while negative and insignificant in Morocco and India. Two papers report on labour force participation but we do not include these in the meta-analysis. Blattman and colleagues report a positive and significant improvement in labour force participation among young adults (unstandardized effect size of 32.2 ($p < 0.01$)) for the YOP programme in Uganda. On the other hand, Chemin 2008 find no significant improvement in female labour supply as a result of microfinance in Bangladesh. In summary, we

cannot reach a conclusion on the impact of labour force participation as a result of livelihoods programmes. The difference in findings of individual studies may be driven by context as well as the type of intervention.

Table 12: Impact on labour force participation

Study Name	Country	Intervention	Indicator	ES/CI
Blattman and colleagues (2015)	Uganda	Financial+ Human	Average work hours per week by women	ES=0.3219 CI=0.208, 0.4357
Crepon and colleagues (2015)	Morocco	Financial	Total hours worked by household members over past 7 days	ES=-0.0376 CI=-0.0934, 0.0182
Hoffman and colleagues (2018)	India	Financial + Human	Proportion women work for income	ES=-0.0132 CI= -0.0546, 0.0281

6.6 Narrative synthesis of program characteristics

Take-up or programme participation: 15 studies reported on the proportion of households or individuals participating in the programme. Participation rates in our synthesis ranged from 14% to 90%. Some studies compared participants to non-participants in which case we considered them high-participation. Studies with very high participation rates (above 80%) consistently report positive impacts on income, consumption, social cohesion and reducing vulnerability. Studies with very low participation rates (less than 20%) are less effective. However, we do not observe any systematic pattern in correlation between participation and outcomes for studies that report a mid-range of participation. For example, around 60% of women were members of SHGs in the Bihar and Andhra Pradesh SHG studies. Neither find any improvement in consumption per capita. On the other hand, around 68% of sample women were SHG members in Orissa but the study finds that this was effective in consumption smoothing in a time of catastrophe. When it comes to final outcomes, it does appear that high take up rates matter although this relationship may not be linear. We are unable to draw firm conclusions about the relationship between participation and intermediate outcomes. For example, savings groups led to rise in loans taken in treatment units in Uganda and Malawi in spite of diverse participation rates (97% and 45% respectively).

Duration of the programme: Longer term programmes are not necessarily more effective. Deininger and Liu (2013) find that longer exposure (between 3.5 years to 6 years) to the DPIP/IKP programme in Andhra Pradesh resulted in higher impacts on consumption, nutrition and asset accumulation as compared to those exposed for less than 3 years. A one-year exposure seems ineffectual, with significant differences appearing at the 2-year mark (between 2001 and 2003 and 2002 and 2004 pairs of groups). However, the JEEVIKA evaluation found that impacts observed early on (in the first 3 years of programme implementation) were not sustained at scale (Hoffman and colleagues 2017). Both the quality of facilitation and the amount lent to SHGs declined in the second phase of JEEVIKA implementation in Bihar. Staff observed that “manpower, money and monitoring” which were key factors for success in the first phase, were ignored in the second phase. Similarly, Prennushi and Gupta do not report consistently high impacts on early SHG participants compared to mid and late-joiners.

Type of intervention: The most ideal method to answer the question of what type of interventions are effective in improving economic outcomes would have been a study that provides different combinations of interventions across treatment arms. However, none of our included studies had such a design. In the absence of this, we systematically perused all papers for information on mechanisms of impact. We assessed whether a paper attributes impacts (or lack of it) to the specific type of intervention. In particular, we examined if papers are able to highlight the added value of human and social capital interventions when combined with financial interventions.

There is evidence that trainings and linkages to other social programmes helped improve the impact of credit interventions. For instance, in Dungarpur, Rajasthan, SEWA's vocational and financial capacity-building training resulted in better non-farm employment and higher savings (Desai and Joshi 2013). Likewise, in Andhra Pradesh, SHG participants were further identified as those that received a programme that linked them to 'rice credit' and those that did not receive this benefit. The authors find significant improvements in energy and protein impact for rice-credit programme participants but in keeping with general findings no improvement in consumption per capita (Deininger and Liu 2013). Similarly, in Orissa, women in TRIPTI areas were likely to have higher civic engagement than non-TRIPTI areas which may have helped them to access aid from local governments along with easy access to SHG credit. On the other hand, Hoffman and colleagues find significant reduction in high cost debt and no impact on consumption in Bihar or improvement in access to entitlements. They argue that 2 years into the programme, SHGs had been initiated and credit-linked but the ability of external linkages to affect consumption had not yet been established. In Bangladesh, NGO programmes that combined microfinance with human and social capital interventions were successful in better loan utilization capacity of participants compared to participants in a government program that provided only finance (Mazumder and Wencong 2015).

Many of the credit interventions were successful because they addressed real credit constraints with available credit. For instance, credit constraints in northern Uganda were extreme with just 4% of the sample having access to a loan. The WINGS programme addressed this directly by providing cash grants and group encouragement which increased social capital and risk-pooling through ROSCAs and informal insurance (Blattman and colleagues 2015). The study on YOP cash grants, too, suggests that credit constraints play a large role for the young and unemployed (Blattman and colleagues 2014). A third had loans but the median loan was small, under \$7. Only 10% could obtain a large loan of \$580. In addition, returns to the grant were high amongst those severely constrained - working capital at baseline was inversely correlated with treatment effect on earnings. In Ethiopia, however, many cooperatives were in debt and not able to provide needed credit to their members (Shumeta and D'Haese 2016).

The terms and size of credit mattered too. In Bihar, under JEEVIKA large amounts of low-cost credit reduced debt-servicing costs substantially (Hoffman and colleagues 2017). In Bangladesh, the flexibility of PRIME microcredit with lower interest rates and flexible repayment terms reduced seasonal deprivation amongst the ultra poor more than regular microfinance (Khandker and colleagues 2015). Being a member of an MFI improved food security in the Monga season, perhaps due to the introduction of flexible loan contracts in the early 2000s, low microcredit rates and early withdrawal of savings offered under Grameen-II (Berg and Emran 2018).

On the contrary, Chemin (2008) finds that women having access to microfinance would have seen greater increases in hours of labour had their loan size been as large as those of men. BRDB participants were charged high interest rates for loan durations that were not long enough for beneficiaries to recoup investments (Mazumder and Wencong 2015). In Morocco, there was essentially no formal credit alternative to Al Amana, yet the take up of the credit programme was extremely low. The authors attribute this to high risk averseness and the perception that returns to MFI loans are low (Crépon and colleagues 2015).

Vulnerable context: Livelihoods programmes have been effective in contexts of increased economic stress. In post-conflict Nepal, a livelihoods support programme led to an increase in consumption and food-security and improved school enrolment rates of children. In Rajasthan, SHG participation enabled landless women to increase income and women, in general, to find employment in non-farm activities after a drought led to a reduction in farm jobs. In Orissa, being in an SHG treatment area helped households maintain similar levels of consumption after being affected by a devastating hurricane. Thus, in contexts of increased vulnerability, group-based livelihoods programmes that provide access to financial capital and local institutions may be effective as in acting as much-needed social security nets. The mechanisms for doing this may differ, however. In post-war Uganda, the increase in income and consumption can be attributed to increased access to loans, formal and informal. In Rajasthan, this was due to vocational trainings and business trainings as well as access to social welfare programmes. In Orissa, reduced vulnerability is attributed by the authors to access to loans and improved access to social capital such as the local government. Thus, groups play an important role in developing social capital, thereby, providing formal and informal security nets. We assessed the papers for a discussion on local gender norms related to women's status in the community. While many papers comment on the status of women, none have examined if this explains impacts.

Equity: The Indian SHG programmes seem to benefit the poor and especially the landless. Deininger and Liu (2013) demonstrate DPIP/IKP had large and significant impacts for the poor on food consumption and nutritional intake. But it did not have significant impacts for the poorest of the poor or the non-poor, except on nonfinancial assets of the poorest. Prennushi and Gupta (2014), using a DID design, find the poorest of the poor benefited more than the poor for every outcome as well as Scheduled Tribes (but the data on Scheduled Tribes is not reported). Desai and Joshi (2013) find that SEWA benefited landless women more. They were 16% more likely to participate in group programmes, have modestly higher cash incomes (perhaps due to their prioritization in NREGA), but are less likely to know where to express grievances and to express grievances themselves over water. (The authors state that this may be due to higher opportunity costs that landless women face.) JEEVIKA, too, reduced the informal interest rate faced by landless households and may have had an impact on their asset position (Hoffmann and colleagues 2017). Unfortunately, the PVP study (Parathasarathy and colleagues 2017), the second SEWA study (Desai and colleagues 2016) and the TRIPTI study (Christian and colleagues 2018) do not identify effects by the poorest of the poor or other disadvantaged groups.

Similarly, the Nepal PAF intervention exhibited a slightly higher impact for disadvantaged communities and girls. Food insecurity declined by 24% for marginalized castes (dalits

and janajatis) compared to the average decline of 22%. And girls appear to have benefited more than boys in terms of school enrolments which went up by 21% versus 14% for all school-age children.

In most studies, financial capital interventions benefited those who were suffering from a credit constraint. The WINGS intervention and YOP were both set in post-conflict contexts where capital is scarce and the economy is on the verge of rebounding. In such settings, a cash grant to the ultra poor or motivated youth could have high returns (Blattman and colleagues 2015, Blattman and colleagues 2014). This may be especially true for women when compared to the control group. While the effect on capital stocks is similar for both genders (UGX 257,000 for men and UGX 165, 200 for women), treatment women increase their stocks more than 100% relative to control women by 2012, whereas treatment men increase stocks by 50% relative to control men. Earnings over a 4-year duration increase by UGX 17, 949 for men (a 29% increase over control men), and by UGX 18,630 (a 73% increase over control women). The first-time users of microfinance who benefited from VFS in a peri-urban slum setting in Kolkata may also be considered in this category of credit-constrained women, relative to their peers. (Their largest loan was Rs. 4178.90 on average relative to Spandana customers who had taken on average a loan of Rs. 36,792.60) (Feigenberg and colleagues 2013).

Flexible microfinance seems to benefit the ultra poor the most. Berg and Emran (2018) note that flexible loan contracts are especially helpful for those who have 1 meal a day i.e. the poorest of the poor at the brink of starvation. Those who rely on 2 to 3 meals a day also benefit but to a lesser extent. Khandker et al (2015) note that PRIME reduces deprivation more during the *monga* period than the *non-monga* period. The ultra-poor also choose to participate more in PRIME than regular microfinance precisely due to its flexible design.

For more typical microcredit interventions such as Grameen Bank, BRDB, BRAC and Aid Comilla, more established and economically secure customers seem to maximize the returns on capital they receive. Chemin (2008) finds that customers who are males, have high savings, high paternal education levels, high dairy product sales and high agricultural as well as non-agricultural household wages maximize ratios of benefits to costs (Chemin 2008). Likewise, customers with larger farm sizes, experience and economic strength were significantly more likely to be politically, economically and socially empowered by microfinance participation (Mazumder and Wencong 2015). Cooperatives in Ethiopia, too, were more effective when their household head is relatively older, educated and with a larger coffee farm (Shumeta and D'Haese 2016).

Psychological or personality traits of individuals clearly affect their behavior and therefore their treatment effect as well. Net providers, as Dupas and Robinson (2013) call them, provide more loans/gifts in the community than they tend to receive. Such people invest 719.04 Ksh more on preventative health due to the ROSCA Health Pot intervention with married women who are net providers of loans/gifts investing 1007.78 Ksh more. Individuals who are present-biased (that is they exhibit a higher discount rate for the present than the future) invested 377.23 Ksh more on preventative health due to the Health Pot intervention. Likewise, commitment accounts are likely to be most effective for cash crop farmers where sales can be directed into bank accounts automatically by the buyer, even though these farmers may have higher income than the average farmer.

The commitment accounts may help these farmers increase inputs by being less altruistic towards those in their social network (Brune and colleagues 2011).

7. Discussion

7.1 Summary of main results

This review synthesised the evidence on how GBLIs made up of financial, human or social capital interventions affected a range of economic outcomes, human development outcomes, and social cohesion outcomes. It explored programme-related and contextual factors that may be correlated with observed impacts and could potentially drive these. While 129 impact evaluations met our inclusion criteria, we included 23 studies that were assessed to have a low or medium risk of bias in our synthesis.

We conducted a meta-analysis to summarize the impact of GBLIs on income, consumption, assets, savings, loans and livelihoods diversification. As the number of studies with comparable indicators for outcomes such as vulnerability, social cohesion, health, education, productivity, labour force participation was too low to allow meta-analysis, we used narrative synthesis to examine the impacts on these outcomes. We systematically examined if programme uptake, duration, gender composition of groups, type of intervention and vulnerable contexts influence programme impacts. Again, our three fundamental research questions are as follows.

1. What is the effect of group-based livelihoods interventions on outcomes such as savings, loans, productivity, income, assets, consumption, vulnerability, health, education and social cohesion?
2. Do group-based livelihoods interventions lead to changes in intermediate outcomes such as investments, livelihoods diversification and labour force participation?
3. Which contextual and programmatic factors were associated with impacts or lack thereof?

Research Question 1: What is the effect of group-based livelihoods interventions on outcomes such as savings, loans, productivity, income, assets, consumption, vulnerability, health, education and social cohesion?

For first-stage outcomes, our synthesis finds that GBLIs that include savings promotion as part of their intervention lead to modest increases in household savings (SMD=0.121). GBLIs are effective in increasing access to credit in situations where credit is highly constrained. We are able to show that GBLIs that provide financial support in situations where access to credit at baseline is low have the higher impacts on outstanding loans. We are unable to draw conclusions on the impact of GBLIs on productivity because of too few studies.

For final outcomes, we find that GBLIs, on average, have a significant and positive impact on consumption (SMD=0.072). These programs are particularly helpful in ensuring food security and enabling households to smooth consumption in contexts of increased vulnerability. We find better social cohesion outcomes in programmes that provide sustained support to groups and linkages to public institutions and welfare programmes. We find no systematic improvements in education outcomes of children

and, certainly, no impacts on health related outcomes. We see no impacts on assets accumulation by households but add the caveat that the measurement of assets has varied considerably across studies.

Research Question 2: Do group-based livelihoods interventions lead to changes in intermediate outcomes such as investments, livelihoods diversification and labour force participation?

Our analysis of investment in productive activities does not reveal any consistent impact of GBLIs on this outcome. Similarly, the impact of GBLIs on labour force participation as measured by hours of work is ambivalent. But we are constrained by the number of studies that report on these intermediate outcomes. Our findings on livelihoods diversification are more interesting. Here we see that GBLIs are successful in enhancing income generating activities of households. Households with access to GBLIs were 26% more likely to have income generating activities such as petty businesses and wage work outside traditional agriculture.

Research question 3: What contextual and programme-related characteristics of these interventions determined or explained impacts or lack thereof?

We summarize findings from our narrative synthesis to inform this research question. We extracted data on programme features, implementation and contexts where these were available. We systematically looked for common patterns and arguments made in the research papers to inform our findings.

Programme characteristics: We find that uptake of GBLIs is far from universal. The average program uptake across our 23 studies was 50% with half of the targeted population not participating in the programs. This is an important condition for explaining observed program impacts. We find a significant and positive relationship between program uptake and standard effect sizes on income, savings and livelihoods diversification. Contrary to our expectations, we do not find that impacts are consistently correlated to the length of exposure to the programme. Rather, programme characteristics such as providing access to financial capital that address severe credit constraints and at terms favourable to participants may be more effective in improving short-term outcomes such as seasonal food insecurity and access to loans. Financial support combined with trainings are more impactful in improving economic outcomes than those where only financial support is provided. Interventions that provide linkages to other social schemes and institutions mostly show higher impacts on consumption. In the absence of these, financial programmes may not be as effective.

Context: We find that GBLIs that provide financial support and links to social programs led to reduced vulnerability in contexts of extreme deprivation and adverse events such as conflict and climate shocks. They provide the much needed safety nets by providing access to low cost finance, entitlements and social or institutional support. In settings of high credit constraints, financial programmes provide access to finance while in settings of high indebtedness, they reduce debt burden by providing access to low cost loans which can offset high cost ones.

Who benefits: The Indian SHG programme seems to be effective in reaching the poor and landless women. All studies that report on heterogeneous impacts of Indian SHGs find improvements in access to loans, savings and consumption of the poor compared to

the non-poor. Similarly, the Nepal PAF intervention exhibited a slightly higher impact for disadvantaged communities and girls. The highest impacts in all outcomes were reported as a result of cash grants to women in post-conflict Uganda. Flexible rate microcredit helped the ultra-poor to achieve food security during periods of food shortage. However, regular microfinance systematically excluded the resource-poor.

7.2 Limitations

In this review, we include studies that were assessed to be low or medium risk of bias based on a tool that was customized for the requirements of this study. Thus, we do not examine the full set of studies that met our inclusion and exclusion criteria. The tool we used differs from standardized tools that have been used in other reviews. The use of a different risk of bias tool may therefore lead to summarizing over a different set of studies.

Although the number of studies included in our synthesis is 23, we are able to use a maximum of seven for our meta-analysis. The challenges we faced were three-fold. First, not all studies reported on all outcomes. In particular, the number of studies that reported intermediate outcomes such as labour force participation and diversification were fewer. Second, outcome indicators were constructed differently across studies. For example, while some studies reported savings in terms of amount saved, others used dichotomous variables that measured the number of persons who saved any amount. For dichotomous variables, we calculated the risk-ratios while for continuous variables we present SMDs. Where possible we tried to triangulate findings from similar outcomes in such cases. Third, we could not use three studies for meta-analysis because of missing or unclear data.

As the I-squared statistics reported in our meta-analyses suggest, the studies used in meta-analysis show high heterogeneity. Heterogeneity is observed in context as well as interventions. We have classified interventions into the broad categories of financial, human and social capital. Yet within each category, the sub-category of interventions vary. For example, credit and savings interventions are clubbed together into financial interventions. However, the two interventions have different objectives and group-functioning arrangements. Different credit products have different terms. Similarly, trainings vary in their content and delivery. Our narrative synthesis is better able to address these nuances.

We faced challenges with our qualitative narrative synthesis as well. Quite a few studies did not include an adequate description of programme participation, context and local economy. This limited the studies we could use for our synthesis. We did not come across any study that examined social norms as mechanisms for impact on economic intermediate and final outcomes. During screening we retained studies if they reported on at least one final outcome. We do not include studies that focussed solely on improving group functioning and programme implementation if these do not examine impacts on outcomes. For example, we excluded studies that aim to increase repayments through behaviour change. This is an important gap that remains to be addressed.

The qualitative data we use for our synthesis is based on information reported in the individual papers. We do not verify these against project documents or other related qualitative formative or process evaluations of the same programme. There may be some programme and context related factors not discussed in the papers that may be influential in determining programme impacts. We are unable to record or synthesise these factors. Thus, we do not claim to have studied all factors that lead to program effects exhaustively.

The potential biases in our review process are limited. The meta-analysis and qualitative data synthesis were done independently by two different team members. Where we found that the meta-analysis and narrative synthesis reported common findings, we were able to draw robust conclusions. Where there was divergence in findings from the two types of analysis, we report these.

7.3 Agreements and disagreements with other studies or reviews

Some of our findings resonate with those reported in other systematic reviews. The small impacts on income and consumption have been supported by Duvendack and colleagues (2019), Maitrol and Nino-Zerzura (2017), Gopaldaswamy and colleagues (2017). Duvendack and colleagues (2019) in their review of systematic reviews on financial inclusion programmes conclude that the impact of such programmes has been small. Gopaldaswamy and colleagues (2017) reach a similar conclusion from meta-analysis of 11 studies on the impact micro-finance interventions on income and from 13 studies on consumption/expenditure.

Our narrative synthesis suggests that group-based livelihoods programmes lead to improvement in social cohesion outcomes in the form of group and community support as well as access to community institutions. This is in contrast to White, Menon and Waddington (2018) who do not find any impact of community based development on social cohesion outcomes. A possible explanation of this divergence may lie in the different types of interventions that the two reviews included. White and colleagues review community driven development programmes for infrastructure building while we included those communities driven programmes that provide direct livelihood support. The theory of change and first level outcomes differ between the studies.

We find positive but insignificant impacts on savings. This differs from the findings in Steinert and colleagues (2018) in which the authors find significant improvement in small savings due to savings interventions in Sub-Saharan Africa. However, the overlap of included impact evaluations between this review and ours is of four studies- focused on either VSLAs or ROSCAs.

The need to study indebtedness has been reiterated in our EGM as well as Duvendack and colleagues (2019). We attempt to do so in this review. Our findings suggest that in settings of extreme credit constraint, livelihoods programmes that provide access to financial capital in terms favorable to the poor would lead to higher indebtedness while in cases of where indebtedness is high, this helps to pay off loans. A similar suggestion has been provided by Stewart and colleagues (2012) who caution against providing high cost but easy loans to the poor and indebted.

Overall we do not find impact of such programmes on diversifying out of agricultural work or leading to new income generating activities. Directions of effects are determined by the context and the functioning of the local economy to create enough demand for non-agricultural products and services. Duvendack and colleagues (2019), Maitrot and Nino-Zerzura (2019) and Gopaldaswamy (2017) too conclude that current financial inclusion and microfinance programmes can hardly be considered structurally transformative.

Our narrative synthesis indicates that interventions that combine human and social capital interventions with financial capital are more promising in creating sustained income gains and vulnerability reduction. This has been the conclusion of all cited reviews. In particular, all reviews call for inclusion of trainings and skills programmes with financial access to improve economic outcomes. We additionally highlight the important role that groups can play in establishing important linkages to other local government institutions.

Most reviews that have focused on MFIs alone (Duvendack and colleagues 2011, Stewart and colleagues 2012) have highlighted that these institutions may be exclusionary by providing access to finance to the relatively well-off. However, these studies are dated. Using more recent evidence, we find that a number of programmes—MFIs and non-MFIs—have been initiated targeting the poorest of the poor that provide easy finance at terms acceptable to the poor (no collateral, flexible payment etc.) and additionally provided non-financial support (financial literacy, management and skills trainings). These recent programmes may be effective in targeting the poorest.

8. Conclusions

8.1 Implications for practice and policy

Our results are based on a small but high quality group of studies. Our findings suggest small but positive effects of GBLs on consumption, savings and income generating activities. Where such programmes have shown the most effectiveness is when these have acted as social safety nets during periods of increased stress or shocks. If GBLs are expected to be transformative, they will require careful examination of their design and implementation, given that their uptake is not universal. This review provides some insights on what contributes to making GBLs effective in improving economic outcomes.

1. Designing financial interventions to match the need of the population is important. Cash grants in Uganda, an initial fund to SHGs in India, and flexible repayment terms to the ultra-poor in Bangladesh have been effective in improving outcomes such as income and food security.
2. Financial interventions combined with human capital interventions such as vocational trainings and business skill development programmes show potential for moving people out of low-productivity agriculture.
3. Groups play an important role in improving access to social capital. This access may be through two channels: (i) increasing group support to members or (ii) linking groups to institutions. However, these channels require sustained capacity building of groups. For instance, in Bihar, SHGs were not successful in enhancing access to entitlements even after 2 years of the programme, because such an initiative had not been undertaken by the government at the time of the

evaluation. On the other hand, in Andhra Pradesh, establishing such linkages with institutions was an important part of programme roll-out.

4. Our review suggests that some GBLIs have low participation rates. Lower participation rates are correlated with poor impacts on people's welfare. We were unable to examine the main drivers of program participation. For example, low participation rates could be an indicator of a program that was not designed to meet the needs of the target population, a poorly implemented program that did not reach participants, or both.
5. Our findings imply that implementers require a thorough and deep understanding of context in which programmes will be implemented, including an assessment of local needs to design programmes. A clearly defined theory of change, based on verified assumptions, is required in the early stage of programme conceptualization. We found little information on what resources other than financial went into programme implementation. This requires further exploration.

8.2 Implications for research

In this section, we discuss the implications for research in this field.

1. The quantity of impact evaluations in this field has increased as has the quality of impact evaluations. The majority of studies with low or medium risk of bias, on which this review is based, have been produced in the mid or late 2000s. Selection bias remains the biggest threat to impact evaluations. Quasi-experiments may not adequately control for this. While RCTs are able to control for this to a large extent by randomizing at a higher level, these are often challenged by low take-up which reduces the power of experiments. Thus, ensuring compliance is a requirement to improve the quality of impact evaluations. Working closely with implementation partners, while ensuring unbiasedness, is a suggestion for better impact evaluations.
2. Impact evaluations report on a range of final outcomes. However, the proportion reporting on intermediate outcomes is lower. Evaluations would benefit from examining outcomes along the causal chain to inform how programmes work or do not. Similarly, many details on programme implementation are not discussed such as cost-effectiveness, personnel, or protocol for implementation. Contextual details are often missing and it is unclear why the programme is expected to work in the setting.
3. Impact evaluations are concentrated in South Asia while a number of livelihoods programmes are being implemented in Africa, drawing from the South-Asian experience. But as we noted, context may influence the implementation, mechanisms and impacts of the programme. In particular, the role played by gender norms is an important aspect that needs exploration.

Online appendixes

Online appendix A: EGM Methodology & PRISMA

<https://www.3ieimpact.org/sites/default/files/2020-07/WP35-Online-appendix-A-EGM-Methodology-%26-PRISMA.pdf>

Online appendix B: EGM Coding Tool

<https://www.3ieimpact.org/sites/default/files/2020-07/WP35-Online-appendix-B-EGM-Coding-Tool.pdf>

Online appendix C: Risk of Bias Coding Tool

<https://www.3ieimpact.org/sites/default/files/2020-07/WP35-Online-appendix-C-Risk-of-Bias-Coding-Tool.pdf>

Online appendix D: Data Extraction Tool – Low and Medium Studies

<https://www.3ieimpact.org/sites/default/files/2020-07/WP35-Online-appendix-D-Data-Extraction-Tool%E2%80%93Low-and-Medium-Studies.pdf>

Online appendix E: Measurement of Treatment Effects

<https://www.3ieimpact.org/sites/default/files/2020-07/WP35-Online-appendix-E-Measurement-of-Treatment-Effects.pdf>

Online appendix F: Detailed discussion on Risk of Bias

<https://www.3ieimpact.org/sites/default/files/2020-07/WP35-Online-appendix-F-Detailed-discussion-on-Risk-of-Bias.pdf>

References

Impact Evaluations and Systematic Reviews included in Gap Analysis

Adebayo, C.O., Sanni, S.A. and Baiyegunhi, L.S., 2012. Microcredit scheme impact and food security status of beneficiaries in Kaduna State, Nigeria: A propensity score matching approach. *African Journal of Agricultural Research*, 7(37), pp.5191-5197.

Aggarwal, S., Francis, E. and Robinson, J., 2018. Grain today, gain tomorrow: Evidence from a storage experiment with savings clubs in Kenya. *Journal of Development Economics*, 134, pp.1-15.

Alam, S., 2013. The impact of credit and non-credit aspects on self-employment profit: A comparison of microcredit programmes and commercial lenders in rural Bangladesh. *The Journal of Developing Areas*, 47(1), pp.23-45.

Ali, Z. and Ahmed, M., 2014. Public Sector Microfinance and Rural Wellbeing: Evidence from BRDB. *Bangladesh Development Studies*, 37(3), pp.27-49.

Angelucci, M., Karlan, D. and Zinman, J., 2015. Microcredit impacts: Evidence from a randomized microcredit programme placement experiment by Compartamos Banco. *American Economic Journal: Applied Economics*, 7(1), pp.151-82.

Angioloni, S., Kudabaev, Z., Ames, G.C. and Wetzstein, M.E., 2013. *Microcredit impact in Kyrgyzstan: A Case Study* (No. 1373-2016-109272).

Asim, S., 2009. Evaluating the impact of microcredit on women's empowerment in Pakistan.

Attanasio, O., Augsburg, B., De Haas, R., Fitzsimons, E. and Harmgart, H., 2015. The impacts of microfinance: Evidence from joint-liability lending in Mongolia. *American Economic Journal: Applied Economics*, 7(1), pp.90-122.

Augsburg, B., 2009. The impact of a dairy intervention in rural India: evidence from realised outcomes and expected returns to investment. *Journal of Development Effectiveness*, 1(2), pp.147-170.

Awunyo-Vitor, D., Abankwah, V. and Kwansah, J.K.K., 2012. Women participation in microcredit and its impact on income: a study of small-scale businesses in the Central Region of Ghana. *American Journal of Experimental Agriculture*, 2(3), pp.502-515.

Berg, C.N. and Shahe Emran, M., 2018. Microfinance and vulnerability to seasonal famine in a rural economy: Evidence from monga in Bangladesh.

Berg, C., Emran, M.S. and Shilpi, F., 2013. Microfinance and moneylenders: long-run effects of MFIs on informal credit market in Bangladesh. The World Bank.

Berhane, G. and Gardebroke, C., 2011. Does microfinance reduce rural poverty? Evidence based on household panel data from northern Ethiopia. *American Journal of Agricultural Economics*, 93(1), pp.43-55.

- Bhattacharya, J. and Banerjee, S., 2014. Group Participation and Women Empowerment: Matching as an Evaluation Estimator—A District-Level Study in West Bengal, India. *Poverty & Public Policy*, 6(2), pp.176-194.
- Binh N., C. K., Nuestro, M., and Mendez-Santos, J., 2012. Microfinance Development Strategy 2000: Sector Performance and Client Welfare, Reference Number: SES:REG 2012-10, Independent Evaluation, Asian Development Bank.
- Blattman, C., Fiala, N. and Martinez, S., 2013. Generating skilled self-employment in developing countries: Experimental evidence from Uganda. *The Quarterly Journal of Economics*, 129(2), pp.697-752.
- Blattman, C., Green, E., Jamison, J., Lehmann, M. and Annan, J. (2015). The Returns to Microenterprise Support Among the Ultra-Poor: A Field Experiment in Post-War Uganda. *National Bureau of Economic Research*, Working Paper 21310.
- Brannen, C. and D. Sheehan-Connor, 2016. Evaluation of the impact of Village Savings and Loan Associations using a novel survey instrument. *Development Southern Africa*, pp. 1-16.
- Brody, C., de Hoop, T., Vojtkova, M., Warnock, R., Dunbar, M., Murthy, P., and Dworkin, S., 2015. Economic Self-Help Group Programmes for Improving Women's Empowerment: A Systematic Review. *Campbell Systematic Reviews* 2015:19.
- Brune, L., Gine, X., Goldberg, J. and Yang, D., 2013. Commitments to save: a field experiment in rural Malawi.
- Brunie, A., Fumagalli, L., Martin, T., Field, S. and Rutherford, D., 2014. Can village savings and loan groups be a potential tool in the malnutrition fight? Mixed method findings from Mozambique. *Children and Youth Services Review*, 47, pp.113-120.
- Bundervoet, T., Annan, J. and Armstrong, M., 2011. Urwaruka Rushasha": A Randomized Impact Evaluation of Village Savings and Loans Associations and Family-Based Interventions in Burundi. *New York: International Rescue Committee*.
- Buttenheim, A., 2006. Microfinance Programmes and Contraceptive Use: Evidence from Indonesia. California Center for Population Research, Online Working Paper Series, CCPR-020-06.
- Casini, P., Vandewalle, L. and Wahhaj, Z., 2015. Public good provision in Indian rural areas: the returns to collective action by microfinance groups. *The World Bank Economic Review*, 31(1), pp.97-128.
- Chemin, M., 2008. The benefits and costs of microfinance: Evidence from Bangladesh. *Journal of Development Studies*, 44 (4), pp. 463-484.
- Chowdhury, S. S. and Chowdhury, S. A., 2011. Microfinance and Women Empowerment: A Panel Data Analysis Using Evidence from Rural Bangladesh. *International Journal of Economics and Finance*, 3 (5), pp. 86-96.
- Christian, P., 2015. The Distributional Consequences of Group Procurement: Evidence from a Randomized Trial of a Food Security Programme in Rural India. World Bank.

- Christian, P., Kandpal, E., Palaniswamy, N. and Rao, V., 2018. Safety nets and natural disaster mitigation: evidence from cyclone Phailin in Odisha. The World Bank.
- Coleman, B. E., 2006. Microfinance in northeast Thailand: Who benefits and how much? *World Development*, 34 (9), pp. 1612-1638.
- Crépon, B., Devoto, F., Duflo, E. and Parienté, W., 2015. Estimating the impact of microcredit on those who take it up: Evidence from a randomized experiment in Morocco. *American Economic Journal: Applied Economics*, 7(1), pp.123-50.
- Cuong, N.V., 2008. Is a governmental Micro-Credit Programme for the poor really pro-poor? Evidence from Vietnam. *The Developing Economies*, 46(2), pp.151-187.
- Czura, K., 2010. Impact Assessment of Microfinance in Sri Lanka. Sri Lankan - German Development Cooperation.
- Czura, K., 2015. Do flexible repayment schedules improve the impact of microcredit? Evidence from a randomized evaluation in rural India. Munich Discussion Paper No. 2015-20, Online at <http://epub.ub.uni-muenchen.de/26608/>.
- Datta, U., 2015. Socio-economic impacts of JEEViKA: a large-scale self-help group project in Bihar, India. *World Development*, 68, pp.1-18.
- Davidson, T. and Sanyal, P., 2017. Associational participation and network expansion: Microcredit self-help groups and poor women's social ties in rural India. *Social Forces*, 95(4), pp.1695-1724.
- De Hoop, T., van Kempen, L., Linssen, R. and van Eerdewijk, A., 2014. Women's autonomy and subjective well-being: how gender norms shape the impact of self-help groups in Odisha, India. *Feminist Economics*, 20(3), pp.103-135.
- Deininger, K. and Liu, Y., 2009. Economic and social impacts of self-help groups in India. The World Bank.
- Deininger, K. and Liu, Y., 2013. Evaluating Programme Impacts on Mature Self-Help Groups in India. *World Bank Economic Review*, 27 (2), pp. 272-296.
- Delavallade, C., Dizon, F., Vargas Hill, R., Petraud, J.P., 2015. Managing risk with insurance and savings: Experimental evidence for male and female farm managers in West Africa. IFPRI, Discussion Paper 01426.
- Demont, T., 2014. Microcredit as insurance: Evidence from Indian Self-Help Groups.
- Deresse, F.N. and Calfat, G., 2014. Impact of integrated programmes for monthly households consumption expenditure: Empirical evidence from Northern Ethiopia. IOB, University of Antwerp, Working Paper / 2014.10.
- Desai, R.M. and Joshi, S., 2013. Collective action and community development: Evidence from self-help groups in rural India. The World Bank.
- Dupas, P. and Robinson, J., 2013. Why don't the poor save more? Evidence from health savings experiments. *American Economic Review*, 103(4), pp.1138-71.

- Duvendack, M., Copestake, J., Hooper, L., Loke, Y., Palmer-Jones, R. and Rao, N., 2011. Systematic Review. What is the evidence of the impact of microfinance on the well-being of poor people? London, UK, EPPI-Centre, Social Science Research Unit, Institute of Education, University of London: 184 pp.
- Duvendack, M. and Palmer-Jones, R., 2012. High noon for microfinance impact evaluations: re-investigating the evidence from Bangladesh. *The Journal of Development Studies*, 48(12), pp.1864-1880.
- Duvendack, M. and Palmer-Jones, R., 2011. The microfinance of reproduction and the reproduction of microfinance: understanding the connections between microfinance, empowerment, contraception and fertility in Bangladesh in the 1990s.
- Feigenberg, B., Field, E. and Pande, R., 2013. The economic returns to social interaction: Experimental evidence from microfinance. *Review of Economic Studies*, 80(4), pp.1459-1483.
- Ferguson, M., 2012. SILC Innovations Research Brief 1: Poverty Outreach in Fee-for-Service Savings Groups,
- Fofana, N., Antonides, G., Niehof, A. and Van Ophem, J., 2015. How Microfinance Empowers Women in Cote d'Ivoire. *Review of Economics of the Household*, 13 (4), pp. 1023-1041.
- Garikipati, S., 2012. Microcredit and women's empowerment: Through the lens of time-use data from rural India. *Development and Change*, 43(3), pp.719-750.
- Ghalib, A.K., Malki, I. and Imai, K.S., 2015. Microfinance and household poverty reduction: Empirical evidence from rural Pakistan. *Oxford Development Studies*, 43(1), pp.84-104.
- Giné, X. and Mansuri, G., 2014. Money or ideas? A field experiment on constraints to entrepreneurship in rural Pakistan. The World Bank.
- Giné, X. and Karlan, D.S., 2014. Group versus individual liability: Short and long term evidence from Philippine microcredit lending groups. *Journal of development Economics*, 107, pp.65-83.
- Greaney, B.P., Kaboski, J.P. and Van Leemput, E., 2016. Can self-help groups really be "self-help"? *The Review of Economic Studies*, 83(4), pp.1614-1644.
- Hoffmann, V., Rao, B., Datta, U., Sanyal, P., and Surendar, V., 2017. Poverty and empowerment impacts of the Bihar Rural Livelihoods Project, 3ie Grantee Final Report. New Delhi: International Initiative for Impact Evaluation (3ie).
- Hoffmann, V., Rao, V., Surendra, V. and Datta, U., 2017. Relief from usury: Impact of a community-based microcredit programme in rural india. The World Bank.
- Husain, A. M. M., Halder, S. R., Mallick, D., Farashuddin, F., Hossain, A., Amin, N., Banu, D., Akter, S., Chowdhury, S. N., and Sen, R., 1998. Poverty Alleviation and Empowerment The Second Impact Assessment Study of BRAC's Rural Development Programme. BRAC Research and Evaluation Division.

- Imai, K.S., Arun, T. and Annim, S.K., 2010. Microfinance and household poverty reduction: New evidence from India. *World Development*, 38(12), pp.1760-1774.
- Imai, K.S. and Azam, M.S., 2012. Does microfinance reduce poverty in Bangladesh? New evidence from household panel data. *Journal of Development studies*, 48(5), pp.633-653.
- Islam, A., 2008. Who benefits from microfinance? The impact evaluation of large scale programmes in Bangladesh (No. 29/08). Monash University, Department of Economics.
- Islam, A., Maitra, C., Pakrashi, D. and Smyth, R., 2016. Microcredit programme participation and household food security in rural Bangladesh. *Journal of Agricultural Economics*, 67(2), pp.448-470.
- Islam, A. and Pakrashi, D., 2014. *The microcredit puzzle: labour supply behaviour of rural households in Bangladesh*(pp. 14-24). Monash Univ., Department of Economics.
- Jejeebhoy, S.J., Santhya, K., Acharya, R., Zavier, A.F., Pandey, N., Singh, S.K., Saxena, K., Rampa, S., Basu, S. and Gogoi, A., 2017. *Empowering women and addressing violence against them through self-help groups (SHGs)*. New Delhi, India: Population Council.
- Joshi, S., Palaniswamy, N., & Rao, V., 2015. How do Self-Help Groups empower women and reduce poverty—and by how much do they do so? Evidence from Odisha., 6-35.
- Kaboski, J.P. and Townsend, R.M., 2005. Policies and impact: An analysis of village-level microfinance institutions. *Journal of the european economic Association*, 3(1), pp.1-50.
- Karlan,D., Morduch, J., Thuysbaert, B., 2013. Final Impact Evaluation Of The Saving For Change Programme In Mali, 2009-2012. Bureau of Applied Research in Anthropology, University of Arizona & Innovations for Poverty Action.
- Karlan, D., Thuysbaert, B. and Gray, B., 2017. Credit with health education in Benin: a cluster randomized trial examining impacts on knowledge and behavior. *The American journal of tropical medicine and hygiene*, 96(2), pp.501-510.
- Karlan,D., Thuysbaert, B., Udry, C., Cupito, E., Naimpally, R., Salgado, E., and Savonitto, B., 2012. Impact Assessment of Savings Groups - Findings from Three Randomized Evaluations of CARE Village Savings and Loan Associations programmes in Ghana, Malawi and Uganda. Innovations for Poverty Action.
- Kebebe, E. and Shibru, F., 2017. Impact of alternative livelihood interventions on household welfare: Evidence from rural Ethiopia. *Forest Policy and Economics*, 75, pp.67-72.
- Khandker, S.R., 2000. Savings, informal borrowing, and microfinance. *Bangladesh Development Studies*, 26(2-3), pp.49-78.
- Khandker, S.R., 2005. Microfinance and poverty: Evidence using panel data from Bangladesh. *The World Bank Economic Review*, 19(2), pp.263-286.

- Khandker, S.R., Khalily, M.B. and Samad, H.A., 2015. Mitigating seasonal hunger with microfinance in Bangladesh: how does a flexible programme compare with the regular ones?. *Journal of Development Effectiveness*, 7(1), pp.23-42.
- Khandker, S.R. and Samad, H.A., 2013. Microfinance Growth and Poverty Reduction in Bangladesh: What Does the Longitudinal Data Say? (Vol. 16). Dhaka: Institute of Microfinance.
- Khandker, S.R. and Samad, H.A., 2018. Bangladesh's Achievement in Poverty Reduction: The Role of Microfinance Revisited. In *Economic and Social Development of Bangladesh* (pp. 177-198). Palgrave Macmillan, Cham.
- Khanna, M., Kochhar, N. and Palaniswamy, N., 2015. A retrospective impact evaluation of the Tamil Nadu empowerment and poverty alleviation (Pudhu Vaazhvu) project. *The Journal of Development Studies*, 51(9), pp.1210-1223.
- Khun, S. and Chamrathirong, A., 2011. Impact of microcredit programme on rural out-migration for employment: Evidence from village revolving fund programme in Kanchanaburi Province, Thailand. *Journal of Population and Social Studies [JPSS]*, 20(1), pp.3-23.
- Kim, J.C., Watts, C.H., Hargreaves, J.R., Ndhlovu, L.X., Phetla, G., Morison, L.A., Busza, J., Porter, J.D. and Pronyk, P., 2007. Understanding the impact of a microfinance-based intervention on women's empowerment and the reduction of intimate partner violence in South Africa. *American journal of public health*, 97(10), pp.1794-1802.
- Kondo, T., Orbeta Jr, A., Dingcong, C. and Infantado, C., 2008. Impact of microfinance on rural households in the Philippines. *IDS bulletin*, 39(1), pp.51-70.
- Ksoll, C., Lilleør, H.B., Lønborg, J.H. and Rasmussen, O.D., 2016. Impact of Village Savings and Loan Associations: Evidence from a cluster randomized trial. *Journal of Development Economics*, 120, pp.70-85.
- Kundu, A., 2010. Joint versus Individual Liability in Microfinance—A Comparative Impact Evaluation Through Natural Experiment.
- Kundu, A., 2012. Can Microfinance Programme and NREGS Jointly Improve the Economic Condition of the Participating Rural Households? A Social Experiment. *Asian Journal of Empirical Research*, 2(2), pp.40-54.
- Kundu, A., 2013. Mobilization of Personal Savings among Microfinance-Participating Households: A Survey in West Bengal, India. *Journal of Rural Cooperation*, 41(2).
- Landmann, A. and Frölich, M., 2013. Can microinsurance help prevent child labour? An impact evaluation from Pakistan.
- Lorenzetti, L.M., Leatherman, S. and Flax, V.L., 2017. Evaluating the effect of integrated microfinance and health interventions: an updated review of the evidence. *Health policy and planning*, 32(5), pp.732-756.

- Lyngdoh, B.F. and Pati, A.P., 2010. Microfinance Intervention and Socio-Economic Transformation: An Application of Propensity Score Matching and Difference-in-Difference Technique.
- Ma, W. and Abdulai, A., 2016. Does cooperative membership improve household welfare? Evidence from apple farmers in China. *Food Policy*, 58, pp.94-102.
- Madhani, F.I., Tompkins, C., Jack, S.M. and Fisher, A., 2015. Participation in micro-finance programmes and women's mental health in South Asia: A modified systematic review. *The Journal of Development Studies*, 51(9), pp.1255-1270.
- Maitrot, M. and Niño-Zarazúa, M., 2017. Poverty and wellbeing impacts of microfinance: What do we know?.
- Maitra, P., Mitra, S., Mookherjee, D. and Visaria, S., 2017. The Equity Impacts of Targeted Smallholder Agricultural Credit.
- Maity, S. and Sarania, R., 2017. Does microfinance alleviate poverty and inequality? Studying self-help groups in Bodoland, Assam. *Development in Practice*, 27(7), pp.1006-1019.
- Mazumder, M.S.U. and Wencong, L., 2015. Does Microfinance Impact on Rural Empowerment in Bangladesh? Differences Between Governmental and Non-Governmental Microfinance Programmes. *Sustainable Development*, 23(3), pp.135-152.
- McIntosh, C., 2008. Estimating treatment effects from spatial policy experiments: an application to Ugandan microfinance. *The Review of Economics and Statistics*, 90(1), pp.15-28.
- McKernan, S.M., 2002. The impact of microcredit programmes on self-employment profits: Do noncredit programme aspects matter?. *Review of economics and statistics*, 84(1), pp.93-115.
- Menon, N., 2006. Non-linearities in returns to participation in Grameen Bank programmes. *The Journal of Development Studies*, 42(8), pp.1379-1400.
- Montgomery, H. and Weiss, J., 2011. Can commercially-oriented microfinance help meet the millennium development goals? Evidence from Pakistan. *World Development*, 39(1), pp.87-109.
- Montgomery, H., 2005. Meeting the Double Bottom Line: The Impact of Khushali Bank's Microfinance Programme in Pakistan.
- Morduch, J., 1998. *Does microfinance really help the poor?: New evidence from flagship programmes in Bangladesh*. Research Programme in Development Studies, Woodrow School of Public and International Affairs.
- Mwansakilwa, C., Tembo, G., Zulu, M.M. and Wamulume, M., 2017. Village savings and loan associations and household welfare: Evidence from Eastern and Western Zambia. *African Journal of Agricultural and Resource Economics*, 12(311-2017-731), p.85.

- Nanda, P., 1999. Women's participation in rural credit programmes in Bangladesh and their demand for formal health care: is there a positive impact? 1 1. *Health Economics*, 8(5), pp.415-428.
- Nghiem, S., Coelli, T. and Rao, P., 2012. Assessing the welfare effects of microfinance in Vietnam: Empirical results from a quasi-experimental survey. *Journal of Development studies*, 48(5), pp.619-632.
- Nyyssölä, M., Pirttilä, J. and Sandström, S., 2012. Helping poor farmers to help themselves: Evidence from a group-based aid project in Mozambique (No. 2012/88). WIDER Working Paper.
- Olofsgård, A., Joshi, S. and Desai, R.M., 2016. *Can the Poor Be Mobilized? Cooperation and Public Goods in Rural India*(No. 40). Stockholm School of Economics, Stockholm Institute of Transition Economics.
- Orton, L., Pennington, A., Nayak, S., Sowden, A., White, M. and Whitehead, M., 2016. Group-based microfinance for collective empowerment: a systematic review of health impacts. *World Health Organization. Bulletin of the World Health Organization*, 94(9), p.694.
- Osmani, L.N.K., 2007. A breakthrough in women's bargaining power: The impact of microcredit. *Journal of International Development: The Journal of the Development Studies Association*, 19(5), pp.695-716.
- Owuor, G., 2009. Is micro-finance achieving its goal among smallholder farmers in Africa? Empirical evidence from Kenya using propensity score matching (No. 1005-2016-79289).
- Parajuli, D., Acharya, G., Chaudhury, N. and Thapa, B.B., 2012. Impact of Social Fund on the Welfare of Rural Households: Evidence from the Nepal Poverty Alleviation Fund. The World Bank.
- Parthasarathy, R., Rao, V. and Palaniswamy, N., 2017. *Unheard voices: the challenge of inducing women's civic speech*. The World Bank.
- Pitt, M.M., 2000. The effect of nonagricultural self-employment credit on contractual relations and employment in agriculture: The case of microcredit programmes in Bangladesh. *Bangladesh Development Studies*, 26(2), pp.15-48.
- Pitt, M.M., Khandker, S.R., McKernan, S.M. and Latif, M.A., 1999. Credit programmes for the poor and reproductive behavior in low-income countries: are the reported causal relationships the result of heterogeneity bias?. *Demography*, 36(1), pp.1-21.
- Pitt, M. M. and and colleagues. 2003. Credit Programmes for the Poor and the Health Status of Children in Rural Bangladesh *International Economic Review*, 44 (1), pp. 87-118.
- Pitt, M.M. and Khandker, S.R., 1998. The impact of group-based credit programmes on poor households in Bangladesh: Does the gender of participants matter?. *Journal of political economy*, 106(5), pp.958-996.

Pitt, M.M. and Khandker, S.R., 2002. Credit programmes for the poor and seasonality in rural Bangladesh. *Journal of Development Studies*, 39(2), pp.1-24.

Pitt, M.M., Khandker, S.R. and Cartwright, J., 2006. Empowering women with micro finance: Evidence from Bangladesh. *Economic Development and Cultural Change*, 54(4), pp.791-831.

Porter, M., 2016. Effects of microcredit and other loans on female empowerment in Bangladesh: the borrower's gender influences intra-household resource allocation. *Agricultural Economics*, 47(2), pp.235-245.

Prennushi, G. and Gupta, A., 2014. Women's empowerment and socio-economic outcomes: impacts of the Andhra Pradesh rural poverty reduction programme. The World Bank.

Pronyk, P.M., Harpham, T., Busza, J., Phetla, G., Morison, L.A., Hargreaves, J.R., Kim, J.C., Watts, C.H. and Porter, J.D., 2008. Can social capital be intentionally generated? A randomized trial from rural South Africa. *Social science & medicine*, 67(10), pp.1559-1570.

Quisumbing, A. R. and N. Kumar, 2011. Does social capital build women's assets? The long-term impacts of group-based and individual dissemination of agricultural technology in Bangladesh. *Journal of Development Effectiveness*, 3: 2,220-242.

Rajbanshi, R., Huang, M. and Wydick, B., 2012. Measuring Microfinance: Cognitive and Experimental Bias with New Evidence from Nepal. Working paper.

Raza, W., Bhattacharjee, A. and Das, N.C., 2011. *Impact of char development and settlement project on improving the livelihood of char dwellers*. BRAC Working Paper 17. BRAC, Dhaka, Bangladesh.

Razzaque, M.A., 2010. Microfinance and poverty reduction: Evidence from a longitudinal household panel database. *The Bangladesh Development Studies*, pp.47-68.

Setboonsarng, S. and Parpiev, Z., 2008. Microfinance and the millennium development goals in Pakistan: impact assessment using propensity score matching (No. 104). ADB institute discussion papers.

Shahriar, A.Z., 2012. Impact of microfinance on seasonal hardship in Northern Bangladesh: A propensity score matching approach. *Journal of South Asian Development*, 7(1), pp.43-64.

Shirazi, N.S., 2012. Targeting and Socio-Economic Impact of Microfinance: A Case Study of Pakistan. *Islamic Economic Studies*, 130(608), pp.1-56.

Shonchoy, A.S. and Kurosaki, T., 2014. Impact of seasonality-adjusted flexible microcredit on repayment and food consumption: Experimental evidence from rural Bangladesh. Inst. of Developing Economies, Japan External Trade Organization.

Shumeta, Z. and D'Haese, M., 2016. Do coffee cooperatives benefit farmers? An exploration of heterogeneous impact of coffee cooperative membership in Southwest Ethiopia. *International Food and Agribusiness Management Review*, 19(4), pp.37-52.

- Smith, S.C., 2002. Village banking and maternal and child health: evidence from Ecuador and Honduras. *World Development*, 30(4), pp.707-723.
- Spielberg, F., Crookston, B.T., Chanani, S., Kim, J., Kline, S. and Gray, B., 2013. Leveraging microfinance networks to scale up HIV and financial education among adolescents and their mothers in West Bengal: a cluster randomized trial and mixed method evaluation. *Int J Adolesc Med Health*, 17(1), pp.1-10.
- Steele, F., Amin, S. and Naved, R.T., 2001. Savings/credit group formation and change in contraception. *Demography*, 38(2), pp.267-282.
- Stewart, R., Van Rooyen, C., Korth, M., Chereni, A., Da Silva, N.R. and De Wet, T., 2012. Do Micro-credit, Micro-savings and Micro-leasing Serve as Effective Financial Inclusion Interventions Enabling Poor People, and Especially Women, to Engage in Meaningful Economic Opportunities in Low-and Middle-income Countries?: A Systematic Review of the Evidence. EPPI-Centre.
- Swain, R.B., 2012. Differential impact of microfinance delivery mechanism on vulnerability. *Applied Economics Letters*, 19(8), pp.721-724.
- Swain, R.B. and Varghese, A., 2009. Does self help group participation lead to asset creation?. *World Development*, 37(10), pp.1674-1682.
- Swain, R.B. and Varghese, A., 2014. Evaluating the impact of training in self-help groups in India. *The European Journal of Development Research*, 26(5), pp.870-885.
- Swamy, V., 2014. Financial inclusion, gender dimension, and economic impact on poor households. *World development*, 56, pp.1-15.
- Tarozzi, A., Desai, J. and Johnson, K., 2015. The impacts of microcredit: Evidence from Ethiopia. *American Economic Journal: Applied Economics*, 7(1), pp.54-89.
- Vaessen, J., Rivas, A., Duvendack, M., Palmer Jones, R., Leeuw, F.L., Van Gils, G., Lukach, R., Holvoet, N., Bastiaensen, J., Hombrados, J.G. and Waddington, H., 2014. The effects of microcredit on women's control over household spending in developing countries: a systematic review and meta-analysis. *Campbell Systematic Reviews*, 10(8), pp.1-205.
- Weinhardt, L.S., Galvao, L.W., Yan, A.F., Stevens, P., Mwenyekonde, T.N.O., Ngui, E., Emer, L., Grande, K.M., Mkandawire-Valhmu, L. and Watkins, S.C., 2017. Mixed-method quasi-experimental study of outcomes of a large-scale multilevel economic and food security intervention on HIV vulnerability in rural Malawi. *AIDS and Behavior*, 21(3), pp.712-723.
- Zaman, H., 2001. Assessing the poverty and vulnerability impact of micro credit in Bangladesh. *A case study of BRAC. Office of the chief economist and senior vice president (DECVP). The World Bank*, pp.34-36.

Other References

Baland, J.M., Somanathan, R. and Vandewalle, L., 2008, August. Microfinance lifespans: A study of attrition and exclusion in self-help groups in India. In *India Policy Forum*(Vol. 4, No. 1, pp. 159-210). National Council of Applied Economic Research.

Banerjee, A., Duflo, E., Glennerster, R. and Kinnan, C., 2015. The miracle of microfinance? Evidence from a randomized evaluation. *American Economic Journal: Applied Economics*, 7(1), pp.22-53.

Banerjee, A., Duflo, E., Goldberg, N., Karlan, D., Osei, R., Parienté, W., Shapiro, J., Thuysbaert, B. and Udry, C., 2015. A multifaceted programme causes lasting progress for the very poor: Evidence from six countries. *Science*, 348(6236), p.1260799.

Banerjee, A., Karlan, D. and Zinman, J., 2015. Six randomized evaluations of microcredit: Introduction and further steps. *American Economic Journal: Applied Economics*, 7(1), pp.1-21.

Banerjee, A.V. and Duflo, E., 2010. Giving credit where it is due. *Journal of Economic Perspectives*, 24(3), pp.61-80.

Blattman, C., Green, E.P., Jamison, J., Lehmann, M.C. and Annan, J., 2016. The returns to microenterprise support among the ultrapoor: A field experiment in postwar Uganda. *American Economic Journal: Applied Economics*, 8(2), pp.35-64.

Chambers, R. and Conway, G., 1992. *Sustainable rural livelihoods: practical concepts for the 21st century*. Institute of Development Studies (UK).

De Mel, S., McKenzie, D. and Woodruff, C., 2008. Returns to capital in microenterprises: evidence from a field experiment. *The quarterly journal of Economics*, 123(4), pp.1329-1372.

De Mel, S., McKenzie, D. and Woodruff, C., 2012. Business training and female enterprise start-up, growth, and dynamics: Experimental evidence from Sri Lanka. The World Bank.

Duvendack, M., Palmer-Jones, R., Copestake, J.G., Hooper, L., Loke, Y. and Rao, N., 2011. What is the evidence of the impact of microfinance on the well-being of poor people?.

Mader, P. and Duvendack, M., 2019. Impact of Financial Inclusion in Low-and Middle-Income Countries: a Systematic Review of Reviews.

Feigenberg, B., Field, E., Pande, R., Rigol, N. and Sarkar, S., 2014. Do group dynamics influence social capital gains among microfinance clients? Evidence from a randomized experiment in urban India. *Journal of Policy Analysis and Management*, 33(4), pp.932-949.

Feigenberg, B., Field, E.M. and Pande, R., 2010. *Building social capital through microfinance* (No. w16018). National Bureau of Economic Research.

Mader, P. and Duvendack, M., 2019. Impact of Financial Inclusion in Low-and Middle-Income Countries: a Systematic Review of Reviews.

Mansuri, G. and Rao, V., 2004. Community-based and-driven development: A critical review. *The World Bank Research Observer*, 19(1), pp.1-39.

Olinto, P., Beegle, K., Sobrado, C. and Uematsu, H., 2013. The state of the poor: Where are the poor, where is extreme poverty harder to end, and what is the current profile of the world's poor. *Economic Premise*, 125(2), pp.1-8.

Snilstveit, B., Bhatia, R., Rankin, K. and Leach, B., 2017. 3ie evidence gap maps: a starting point for strategic evidence production and use. *New Delhi: International Initiative for Impact Evaluation (3ie)*.

Steinert, J.I., Zenker, J., Filipiak, U., Movsisyan, A., Cluver, L.D. and Shenderovich, Y., 2018. Do saving promotion interventions increase household savings, consumption, and investments in Sub-Saharan Africa? A systematic review and meta-analysis. *World Development*, 104, pp.238-256.

White, H. and Sabarwal, S., 2014. Quasi-Experimental Design and Methods: Methodological Briefs-Impact Evaluation No. 8(No. inpub753).

White, H., Menon, R. and Waddington, H., 2018. Community-driven development: Does it build social cohesion or infrastructure? A mixed-method evidence synthesis.

Wong, S. and Guggenheim, S., 2018. Community-driven development: myths and realities.

Other publications in the 3ie working paper series

The following papers are available from <http://3ieimpact.org/evidence-hub/publications/working-papers>

Social protection: a synthesis of evidence and lessons from 3ie evidence-supported impact evaluations, 3ie Working Paper 34. Tripathi, S, Kingra, KJ, Rathinam, F, Tyrrell, T and Gaarder, M, 2019.

Transparency and accountability in the extractives sector: a synthesis of what works and what does not, 3ie Working Paper 33. Rathinam, F, Cardoz, P, Siddiqui, Z and Gaarder, M, 2019.

Integrating impact evaluation and implementation research to accelerate evidence-informed action, 3ie Working Paper 32. Rutenberg, N and Heard, AC, 2018.

Synthesis of impact evaluations of the World Food Programme's nutrition interventions in humanitarian settings in the Sahel, 3ie Working Paper 31. Kaul, T, Husain, S, Tyrell, T and Gaarder, M, 2018.

Community-driven development: does it build social cohesion or infrastructure? A mixed-method evidence synthesis, 3ie Working Paper 30 White, H, Menon, R and Waddington, H, 2018.

Evaluating advocacy: an exploration of evidence and tools to understand what works and why. 3ie Working Paper 29. Naeve, K, Fischer-Mackey, J, Puri, J, Bhatia, R and Yegbemey, R, 2017.

3ie evidence gap maps: a starting point for strategic evidence production and use, 3ie Working Paper 28. Snilstveit, B, Bhatia, R, Rankin, K and Leach, B (2017)

Examining the evidence on the effectiveness of India's rural employment guarantee act, 3ie Working Paper 27. Bhatia, R, Chinoy, SL, Kaushish, B, Puri, J, Chahar, VS and Waddington, H (2016)

Power calculation for causal inference in social science: sample size and minimum detectable effect determination, 3ie Working Paper 26. Djimeu, EW and Houndolo, DG (2016)

Evaluations with impact: decision-focused impact evaluation as a practical policymaking tool, 3ie Working Paper 25. Shah, NB, Wang, P, Fraker, A and Gastfriend, D (2015)

Impact evaluation and policy decisions: where are we? A Latin American think-tank perspective, 3ie Working Paper 24. Baanante, MJ and Valdivia, LA (2015)

What methods may be used in impact evaluations of humanitarian assistance? 3ie Working Paper 22. Puri, J, Aladysheva, A, Iversen, V, Ghorpade, Y and Brück, T (2014)

Impact evaluation of development programmes: experiences from Viet Nam, 3ie Working Paper 21. Nguyen Viet Cuong (2014)

Quality education for all children? What works in education in developing countries, 3ie Working Paper 20. Krishnaratne, S, White, H and Carpenter, E (2013)

Promoting commitment to evaluate, 3ie Working Paper 19. Székely, M (2013)

Building on what works: commitment to evaluation (c2e) indicator, 3ie Working Paper 18. Levine, CJ and Chapoy, C (2013)

From impact evaluations to paradigm shift: A case study of the Buenos Aires Ciudadanía Porteña conditional cash transfer programme, 3ie Working Paper 17. Agosto, G, Nuñez, E, Citarroni, H, Briasco, I and Garcette, N (2013)

Validating one of the world's largest conditional cash transfer programmes: A case study on how an impact evaluation of Brazil's Bolsa Família Programme helped silence its critics and improve policy, 3ie Working Paper 16. Langou, GD and Forteza, P (2012)

Addressing attribution of cause and effect in small n impact evaluations: towards an integrated framework, 3ie Working Paper 15. White, H and Phillips, D (2012)

Behind the scenes: managing and conducting large scale impact evaluations in Colombia, 3ie Working Paper 14. Briceño, B, Cuesta, L and Attanasio, O (2011)

Can we obtain the required rigour without randomisation? 3ie Working Paper 13. Hughes, K and Hutchings, C (2011)

Sound expectations: from impact evaluations to policy change, 3ie Working Paper 12. Weyrauch, V and Langou, GD (2011)

A can of worms? Implications of rigorous impact evaluations for development agencies, 3ie Working Paper 11. Roetman, E (2011)

Conducting influential impact evaluations in China: the experience of the Rural Education Action Project, 3ie Working Paper 10. Boswell, M, Rozelle, S, Zhang, L, Liu, C, Luo, R and Shi, Y (2011)

An introduction to the use of randomised control trials to evaluate development interventions, 3ie Working Paper 9. White, H (2011)

Institutionalisation of government evaluation: balancing trade-offs, 3ie Working Paper 8. Gaarder, M and Briceño, B (2010)

Impact evaluation and interventions to address climate change: a scoping study, 3ie Working Paper 7. Snilstveit, B and Prowse, M (2010)

A checklist for the reporting of randomised control trials of social and economic policy interventions in developing countries, 3ie Working Paper 6. Bose, R (2010)

Impact evaluation in the post-disaster setting, 3ie Working Paper 5. Buttenheim, A (2009)

Designing impact evaluations: different perspectives, contributions, 3ie Working Paper 4. Chambers, R, Karlan, D, Ravallion, M and Rogers, P (2009) [Also available in Spanish, French and Chinese]

Theory-based impact evaluation, 3ie Working Paper 3. White, H (2009) [Also available in French and Chinese]

Better evidence for a better world, 3ie Working Paper 2. Lipsey, MW (ed.) and Noonan, E (2009)

Some reflections on current debates in impact evaluation, 3ie Working Paper 1. White, H (2009)

Group-based livelihoods interventions aim to build capabilities of people living in poverty and enable them to participate in economic activities, leading to beneficial economic outcomes and personal empowerment. While various group-based interventions are being tested in low- and middle-income countries, these are often drawn from models that have shown some promise in another context or sector and despite significant and growing investments, there is little consensus on how impactful they have been. This paper synthesises evidence on how group-based livelihoods' programmes – which include financial, human or social capital interventions – can have an impact on a range of economic, human development and social cohesion outcomes.

Working Paper Series

International Initiative for Impact Evaluation
202-203, Rectangle One
D-4, Saket District Centre
New Delhi – 110017
India

3ie@3ieimpact.org
Tel: +91 11 4989 4444



www.3ieimpact.org