The Effectiveness of Market Led Development Approaches:

A SYSTEMATIC REVIEW

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AUTHORSHIP OF THE REPORT

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Conflicts of interest

There were no conflicts of interest in the writing of this report.

Use of maps

Maps used in this report serve a purely descriptive purpose. The representation of political boundaries in the maps do not necessarily reflect the position of the Government of UK.

Contributions

The opinions expressed in this publication are not necessarily those of the UK Department for International Development, PwC, the EPPI-Centre and LIRNEasia. Responsibility for the views expressed remains solely with the authors.

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Picture

The pictures on the coverage have been taken by one of the team members during field visits.

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EXECUTIVE SUMMARY

BACKGROUND

Market-led approaches, though variously defined (see for example, FAO, 2007), broadly underline the importance of identifying consumer needs and producing appropriate goods and services or catering to an appropriate market. However, most rural producers lack relevant knowledge in regard to the aims and objectives of market-led development approaches. These producers self-consume their products or sell it to middlemen and are hardly aware of the market demand conditions. It is suggested that lack of knowledge and inaccessibility to consumer-based markets keep the rural poor on the edge of poverty (SDC and DFID, 2008). In addition, though there has been some progress in reduction of poverty rates (for example, World Bank, 2016) a vast majority of the population in LMICs and in particular the South East Asian countries continue to live in rural areas and live in poverty (IFAD, 2011). It is also important to note that for the millions who have moved out of extreme poverty, the gains are often temporary. For example, climatic threats, such as an earthquake in Nepal, have led many to slip back to extreme poverty (NPC-GON, 2015). Under these circumstances characterised by high rates of poverty, inaccessibility to markets and lack of knowledge about market mechanisms, there has been an increased interest in the implementation of market-led approaches to development.

However, the effectiveness of market-led approaches to rural development still remains relatively understudied. Though interventions like micro-finance or rural infrastructure have been subjected to systematic reviews (e.g. Knox et al., 2013; Van Rooyen, 2012), other initiatives involving rural value chains, capacity building, information and knowledge sharing, and other forms of financial support require further examination. In particular, given the predominance of the rural poor in LMIC countries, it is important to assess the effectiveness and whether some lessons could be learnt for implementing the aforesaid market-led approaches in the context of the country of interest – Nepal. This systematic review aims to fulfil this gap and the theory of change is pictorially represented in Figure 1.1.

REVIEW QUESTIONS

The primary review questions guiding the review and informing the scoping exercise are as follows:

1. What is the effectiveness of market-led development approaches among the rural and semi urban population in LMICs?

2. What are the factors that determine the success of different market-led development approaches in subsistence and migrant-driven rural economies?

METHODS

Based on review questions, key concepts and terms were created for the search strategy to collate and screen all relevant articles. Using the search terms, a thorough search was conducted on multiple sources: electronic databases, websites and handsearch of relevant journals (refer appendix 2.2). The search terms

and strategies used are described in appendix 2.4. The initial screening was done at title and abstract level to ensure it meets primary inclusion criteria. Full articles were obtained for those that met the inclusion criteria. Full texts in languages other than English were excluded from this review.

We also collaborated with leading researchers in the field, for their suggestions of published papers, working papers and dissertations that may not be widely available in public realm. To minimise the risk of missing out research studies, we included all studies that meet target regions (LMIC) (refer appendix 2.5 for list of countries), population (excluding articles that study only urban population), broad categorisation of interventions and excluded studies only based on publication date, language and specified interventions such as microfinance and infrastructure. The support of the Advisory Group and EPPI-Centre team was sought from time to time for their suggestions and guidance to minimise missing out relevant studies. The details of the inclusion exclusion criteria is in appendix 2.1.

We searched electronic databases (including ECONLIT, Psyc INFO EBSCO, JSTOR), handsearched refereed journals that focus on the subject area of systematic review including *Economic and Political Weekly*, *Journal of Rural Development*, systematic review databases including DFID's R4D, Cochrane's review evidence library and International Initiative for Impact Evaluation (3ie), key websites including the Consultative Group to Assist the Poor (CGAP), World Bank, IFAD, IDRC and IFPRI. The exhaustive list is attached as appendix 2.3.

We also included handsearching of key journals; for those available in print form only, we undertook handsearching by reading the contents page of each journal issue. We searched for relevant PhD theses published online, and those available in print form in reputed universities and research institutes in India. Handsearch of the journals that focus on the subject area of the systematic review (referred journals) were done. (Refer appendix 2.2).

At the first stage a total of 63,772 studies were identified after an initial search. Screening of titles and abstract reduced the number of articles to 924. In consultation with DFID and QAT it was decided to focus on studies related to the South Asian Region (SAR) and hence the number of studies was further reduced to 291. After subsequent quality assessment, 37 studies were identified for systematic review. Eight studies from this set were chosen for meta-analysis and the entire set of 37 was used for narrative synthesis.

DISCUSSION AND CONCLUSIONS

The systematic review was conducted to answer questions related to effectiveness and factors that contribute to the success of market-led development approaches. A meta-analysis of 8 studies and a narrative synthesis of 37 studies from the South Asian Region (SAR) provided the following conclusions. These conclusions were contextualised to the country of interest: subsistence rural poor of Nepal. The following sections describe types of interventions, impact on social and economic outcomes, and factors that contributed to the effectiveness of these interventions.

TYPES OF INTERVENTIONS FOR MARKET-LED APPROACHES

The four interventions that led to market linkages are Rural Value Chains (RVCs), Capacity Building (CB), Information and Knowledge Sharing (IKS) and Financial Support (FS). A major type of RVC institution that emerges from these studies is that of groups that are created to facilitate market linkages. These groups vary from producers' association to community-based organisations. Secondly, interventions were focused on exposing and linking to existing actors in the value chains such as contract farming of high-yielding seeds. Under-capacity building intervention training emerges as a key type. There were two approaches, a standardised structured approach based on initiation and sustenance of business training, and financial literacy modules or specific training programmes that were designed to impart technical competencies, including crop production methods, harvesting and sorting products, and site visits. Financial support in these studies alludes to the following types of financial products: food and cash transfer; skills and assets transfer; insurance products; cash transfer and risk-contingent credit product. IKS interventions in these studies include mobile phones, televisions, SMS to farmers, and telephones. The review clearly showed the current trend is to offer a bundle of services, viz. financial services along with capacity building; value chain interventions along with capacity building; value chain interventions bundled with capacity building; and information sharing about input and output prices, and so on. Very few studies had studied the impact of only single interventions. Hence, the impact analysis was carried out for both single interventions and multiple intervention combinations, with the latter representing a larger set of studies.

IMPACT ON OUTCOMES

The meta-analysis revealed that the combination of financial services along with capacity building had a positive and significant impact on the outcomes, while providing financial support alone did not have a statistically significant impact. There were not sufficient studies that qualified for meta-analysis to carry out impact of interventions on outcomes in the case of other interventions, or their combinations, to arrive at statistically significant results.

The impact of single interventions viz., CB, FS, IKS (there was no study with only RVC) was compared with multiple combinations of interventions (RVC+CB+FS, RVC+FS, FS+CB). The analysis showed that multiple interventions had a positive and significant impact on both economic and social indicators, while the single interventions had a positive but not significant impact on economic and social outcomes.

More specifically among the economic outcomes, multiple interventions had a significant positive impact on assets, income, consumption/expenditure at household level and profit/revenue/sales of their occupations. Other economic outcomes such as credit, yield, and financial and technical literacy showed positive impact but were not statistically significant. The studies measuring social outcomes were fewer in order to do a more granular analysis.

Table 1.a Impact of interventions on outcome: meta-analysis results

Intervention/ Outcome type	SMD	95% confidence interval		Significance
Multiple interventions	0.13	0.0931	0.166	Positive significant
Single interventions	0.0674	-0.00742	0.142	Positive not significant

Multiple interventions have significant positive impact on outcomes

Table 1.b Impact of interventions on economic and social outcomes

Intervention type	Outcome details	df	SMD	95% confidence interval		Significance
Multiple interventions	Economic	49	0.136	0.0944	0.178	Positive significant
	Social	3	0.0817	0.0489	0.115	Positive significant
Single interventions	Economic	9	0.088	-0.027	0.203	Positive not significant
	Social	4	0.0409	-0.0657	0.147	Positive not significant
Multiple vs. single	Economic	59	0.128	0.0885	0.167	Positive significant
	Social	8	0.0581	0.00311	0.113	Positive significant

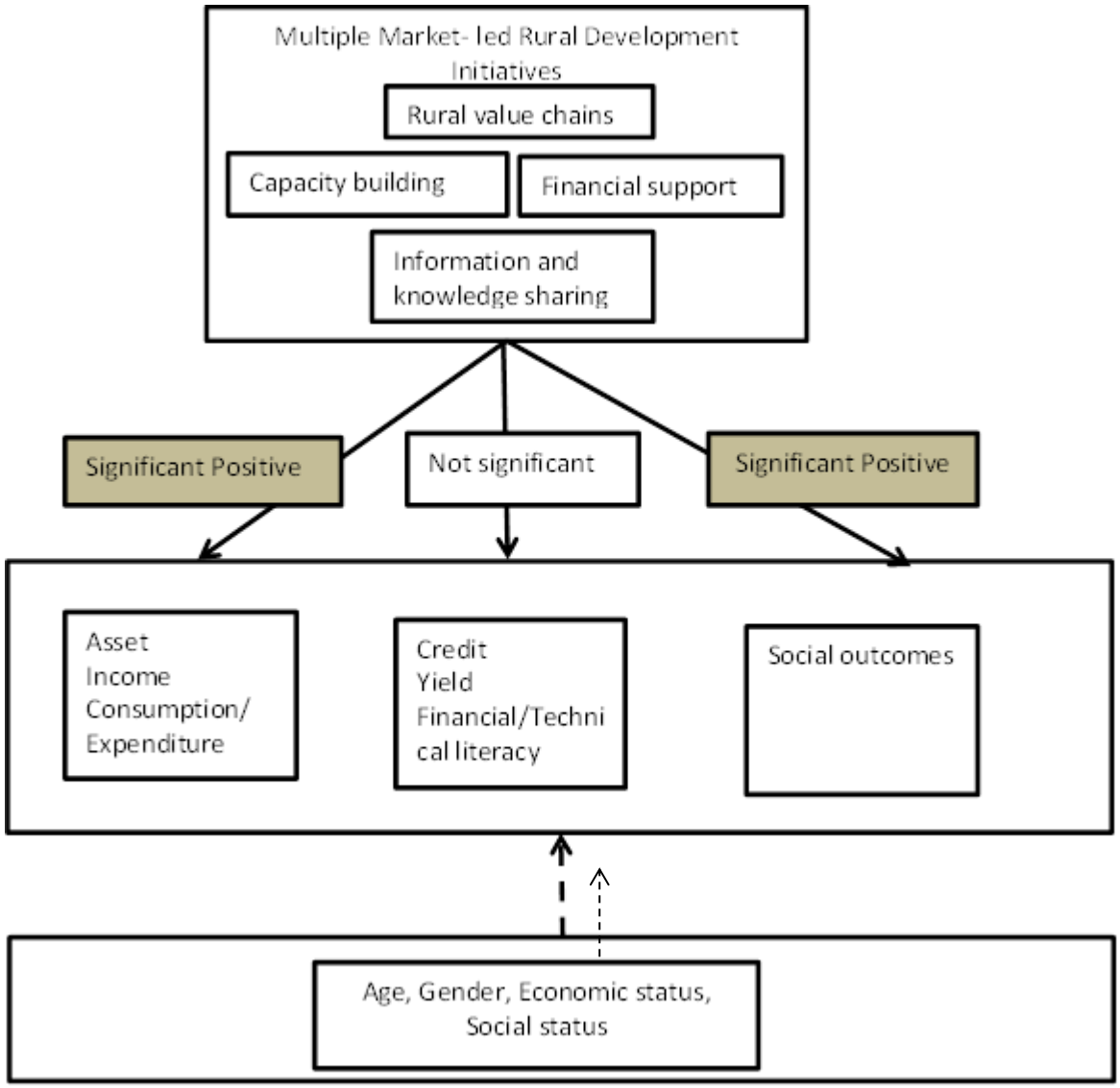
Multiple interventions have significant positive impact on both economic and social outcomes.
Multiple interventions have a more significant positive impact than single interventions.

To summarise, the results of meta-analysis as shown in table 1.1 a and b, indicate that interventions enhanced market linkages leading to increases in consumption/expenditure, sales and profits, resulting in higher income, assets and consumption. However, no significant impact on social outcomes was registered. Further, we find that multiple interventions are positive in enhancing outcomes as compared to single interventions. Outcomes are superior on adopting a multi-pronged approach as compared to single interventions.

FACTORS THAT IMPACT MARKET-LED APPROACHES

Narrative synthesis of 37 studies resulted in the following conclusions on factors that impact the identified interactions. First, effective market linkages require a combination of rural value chains, capacity building interventions, assets and cash transfer. Studies that focus on this combination report significant impact on economic outcomes on households.

Figure 1:Multiple interventions and impacts



However, the effectiveness of the intervention also depends on the target audience. Typically, young men or households headed by women seem to derive maximum benefits from such interventions. Also, identification and choice of market-relevant and appropriate livelihood opportunities (ideally a combination of interventions), rather than a single intervention, in providing training and resources for developing them seem to work. Though the aim of the capacity building interventions is to motivate rural households towards self-employment, economic conditions in the form of higher wages might pull the households towards wage employment.

Second, the formation of groups either as producer association or community-based groups appears to be the most common rural value chain intervention to enhance market-led linkages. For this to be effective and sustainable, the role of facilitators or coordinators of the groups is critical. These facilitators would also play an important role in positively impacting social outcomes of these interventions by building social capital or encouraging gender empowerment. At the same time, studies point out that such groups remain vulnerable to its capture by rural elite and resulting disproportionate gains for this segment.

Third, though mobile phones remain a popular choice for dissemination of crop or livelihood-related information, the adoption of this technology depends on certain socioeconomic factors. Rural young men and those with land are more inclined to use such modern technologies. The adoption also depends, to a large extent, on literacy level and fluency in language.

Fourth, capacity building as an intervention is quite effective in enhancing knowledge and awareness of various livelihood opportunities. Among women in particular, such exercises have resulted in higher levels of financial awareness or literacy – a key economic outcome. But in the absence of opportunities for participation and exposure to market linkages, acquiring this knowledge would remain more theoretical, merely enhancing knowledge and awareness.

CONTEXTUALISATION RESULTS

An important objective of this systematic review was to apply the findings to a particular context – Nepal. Based on the abovementioned conclusions, the following are recommendations for development institutions working in Nepal. Some studies from Nepal (for example, Upreti et al., 2012) highlight some market-led interventions (for example, micro-enterprise development programme by UNDP) that have been introduced in Nepal. This review indicates that such programmes could benefit from a combination of interventions (capacity building, assets and cash transfer) as they have a significant economic impact in countries with a higher population of ultra-poor.

- The review indicates that the combination of interventions should be focused on relevant and appropriate livelihood opportunities. It is suggested that rather than offering a generic prescription, efforts should be made to understand the existing supply chain in Nepal (for example, non-timber forest products (NTFPs), ecotourism, and seed production for high-yielding varieties), dominant players (for example, traders) and their linkages.

- The intervention programmes should be oriented towards technical training, exposure to markets and their workings, and financial support to link the subsistence poor to the markets.
- This review shows that one key component of the rural value chain is creation of groups (mostly women) to carry out various market-led initiatives (for example, producer organisations). This could be an important intervention in Nepal, provided sufficient attention is paid to the role of the facilitator, who plays an important role in the sustenance of the group.
- It should also be pointed out that social and cultural context in Nepal, as is the case with other SAR countries, might not favour women-led initiatives, and hence it is imperative that they are supported by other members of the household. Thus, before the formation of women's groups, steps should be taken to elicit the support (by consultation, persuasion and demonstration) of key members of the households.
- The interventions should also be targeted precisely at the ultra-poor as it is possible that the rich and the elite of the rural economy can appropriate disproportionate benefits of such interventions. This requires prior planning and clear delineation of the target segment, and the creation of filtering mechanisms (for example, appropriate documentary evidence of economic status) for precision targeting.

IMPLICATIONS FOR PRACTICE AND POLICY

Based on key conclusions of this systematic review, the following are some of the implications for policies related to enhancement of market-led linkages.

- Emphasis on interventions that combine elements of rural value chains, capacity building and assets/cash transfer leads to a positive impact on economic outcome and strengthening of market linkages for the rural poor. Thus, programmes that focus on enhancing market linkages should make efforts to identify appropriate livelihood opportunities and offer customised training to enhance skills in the area. In addition, capital or asset support for the participants can lead to enhanced economic outcomes.
- Programmes that focus on creating groups for enhancing market linkages should invest substantial time and resources to ensure identification and selection of facilitators. It is critical, as these facilitators would play a substantial role in sustenance of the group and the eventual realisation of social outcomes like gender empowerment.
- Policies and programmes that target women should ensure that the recipient is supported by members of her household. Resources to persuade and convince key members of the household should be factored in the plans.

FUTURE RESEARCH DIRECTIONS

This review has argued that a combination of interventions is more effective. Further research in this area could go into a fine-grained analysis of the types of combinations and study whether it has varying impact on economic and social outcomes. Impact of interventions on social outcomes like gender empowerment and social capital take a long period of time. Thus, while economic outcomes may be tangible (easily measurable) and relatively quick to manifest, social outcomes require longer time-frame studies. Future research in this area could look at conducting longitudinal studies that measure the effect of market-led interventions on social outcomes.

1. BACKGROUND

Market-led approaches, though variously defined (see for example, FAO, 2007), broadly underline the importance of identifying consumer needs and producing appropriate goods and services for catering to an appropriate market. However, most rural producers lack relevant knowledge in regard to the aims and objectives of market-led development approaches. These producers self-consume their products or sell to middlemen and are hardly aware of the market demand conditions. It is suggested that lack of knowledge and inaccessibility to consumer-based markets keep the rural poor on the edge of poverty (SDC and DFID, 2008). In addition, though there has been some progress in reduction of poverty rates (for example, World Bank, 2016) a vast majority of the population in LMICs and in particular the Southeast Asian countries continue to live in rural areas and live in poverty (IFAD, 2011). It is also important to note that for the millions who have moved out of extreme poverty, the gains are often temporary. For example, climatic threats, such as an earthquake in Nepal, have led many to slip back to extreme poverty (NPC-GON, 2015). Under these circumstances characterised by high rates of poverty, inaccessibility to markets and lack of knowledge about market mechanisms, there has been an increased interest in the implementation of market-led approaches to development.

However, the effectiveness of market-led approaches to rural development still remains relatively understudied. Though interventions like micro-finance or rural infrastructure have been subjected to systematic reviews (e.g. Knox et al., 2013; Van Rooyen, 2012), other initiatives involving rural value chains, capacity building, information and knowledge-sharing, and other forms of financial support require further examination. In particular, given the predominance of the rural poor in LMIC countries it is important to assess the effectiveness and whether some lessons could be learnt for implementing the aforesaid market-led approaches in the context of the country of interest – Nepal. This systematic review aims to fill this gap.

1.1 AIMS AND RATIONALE FOR CURRENT REVIEW

Enhancing rural value chains is seen as a significant pathway for development. Studies suggest that market-focused collaboration among different stakeholders results in numerous benefits for rural households (IOB, 2011; ILO, 2009). Value-added activities in rural areas, such as the processing and packaging of produce, not only increase the potential value of a product but also enhance economic gains for rural producers (ILO, 2009). Similarly, innovative organisations and institutional arrangements – for

example, producers' organisations – can provide rural producers with access to markets, information and knowledge (IFAD, 2012). In addition, it has been suggested that enhancement of value chains creates new employment opportunities. For example, recent empirical studies in Africa indicate that development of high-value agro-industrial value chains (for example, the vegetable export sector in Senegal) creates substantial employment (Maertens, 2009). However, there is no systematic attempt made to identify key activities within value chains and to study the impact they have on rural households in LMICs.

Information and knowledge-sharing on markets, products and opportunities is seen as an intervention with transformative potential. Access to the right information at the right time facilitates rural producers to make informed decisions about their livelihoods and ensures food security. A report by FAO argues that information and communication technologies (ICTs) foster a knowledge-based approach as a viable choice in contrast to the conventional input-intensive agricultural practices. It has been suggested that the introduction of ICTs for knowledge sharing brings efficiencies in the use of natural resources, thus minimising harmful impact on the environment (FAO, 2014). It has been indicated that the poorest households are more likely to have access to mobile phones than to toilets or clean water (World Development Report, 2016). It becomes important to evaluate the impact of increased mobile connectivity in enhancing access to information across a wide arena – information regarding markets, weather forecasts for cultivation and crop protection, enhanced knowledge and skills through internet-based learning and so forth. One of the SDG is universal internet access. Hence, we propose to study interventions that use digital technology as a means to enhance market linkages.

Effective learning processes contribute to social capital formation and in combination serve rural development (UNESCO, 2003). For landless wage earners, technical and vocational training is a potential intervention that will encourage them to climb the wage ladder by taking higher-paying, skilled jobs. Both farm-based and non-farm activities, including establishment of microenterprises to augment their income and status, are potential interventions. In this context the review aims to study the impact of various capacity building programmes on rural development.

Another important intervention is provision of financial services to the poor, including credit, savings and insurance products to overcome risks. However, financial services to the poor – particularly, microfinance interventions – are well researched, and relationships are already established. Hence this review focuses on other forms of financial support, such as crop insurance schemes, which require further research and substantiation.

The systematic review has comprehensively compiled studies relating to lifting men out of poverty in the rural areas of SAR countries through several interventions focused on market linkages. It has looked for interventions in the context of Nepal so as to provide policy for better poverty reduction strategies.

In the above context, we found several studies that focused on Nepal. Blaikie (2002) reviewed 20 years of conflict in Nepal in their study. The results indicate that in 20 years they found very little progress within rural households in terms of social class and forms of production. Williams (2013) reported that participation in community groups reduced migration in conflict-prone areas. On the other hand, Adhikari and Goldey (2009) conducted a study to understand the sustainability of community groups by examining

the factors associated with social capital in villages of a southern district of Nepal. He concluded that social capital can be induced but it is difficult to sustain. Village level cognitive social capital has positive relations with the survival and functioning of groups. The downside of social capital plays an equally important role; rules breaking with impunity and elite capture are problematic. Agency facilitation is crucial to mediate the aspects of social capital and thereby enhance sustainability of groups. Additionally, the transition phase is the most vulnerable phase of group management.

1.2 REVIEW QUESTIONS

The primary questions guiding the review and informing the scoping exercise are:

1. What is the effectiveness of market-led development approaches among the rural and semi urban population in LMICs?
2. What are the factors that determine the success of different market-led development approaches in subsistence and migrant driven rural economies?

The primary questions are unpacked into the following sub-questions:

Primary question 1

1(a) What are the types of rural value chains?

1(b) What are the economic and social outcomes of these rural value chains?

2(a) What different types of capacity building interventions enhance market linkages?

2(b) What are the social and economic outcomes of these capacity building interventions?

3(a) What different types of information and knowledge-sharing mechanisms enhance market linkages?

3(b) What are the social and economic outcomes of these information and knowledge-sharing mechanisms?

4(a) What types of financial support mechanisms (excluding micro-finance) enhance market linkages?

4(b) What are the social and economic outcomes of these financial support mechanisms (excluding micro-finance)?

Primary question 2

1(c) What are the factors that contribute to the success/failure of rural value chains in enhancing market linkages?

2(c) What are the factors that contribute to the success/failure of capacity building measures in enhancing market linkages?

3(c) What are the factors that contribute to the success/failure of information and knowledge-sharing mechanisms in enhancing market linkages?

3(d) What are the factors that contribute to the success/failure of financial support mechanisms (excluding micro-finance) in enhancing market linkages?

1.3 DEFENITION OF INTERVENTIONS

The population of interest in this review is the rural and semi-urban population of the low and middle-income countries (LMICS). We shall determine studies as focusing on LMIC using the World Bank definition that classifies countries based on gross national income (GNI) per capita (http://data.worldbank.org/about/country-classifications). As the volume of available research papers on LMIC was too large to derive meaningful conclusions, it was decided in consultation with QAT and DFID team, to focus on SAR countries. These include Afghanistan, Bangladesh, India, Nepal, Pakistan and Sri Lanka. Rural populations will be determined based on individual study definitions, as they may differ across contexts. Our findings will be contextualised to South Asia, with specific reference to Nepal.

The market-led interventions that have been considered are:

RURAL VALUE CHAINS

The term 'value chain' refers to market-focused collaboration among different stakeholders who produce and market value-added products (IFAD, 2010). Some of the activities to be included under this theme are formation of producer organisations, collective purchase of inputs (seeds, fertilisers, fodder etc.), contract farming, creation of storage facilities, warehouses and quality checking labs, establishment of processing facilities such as milk chilling and dairy plants, food processing units, meat processing units, establishing manufacturing units that produce value-added consumer products such as soaps, jute bags, coir products etc.

CAPACITY BUILDING INTERVENTIONS

UNDP sees capacity development as the process through which individuals, organisations and societies obtain, strengthen and maintain the capabilities to set and achieve their own development objectives over time. Simply put, if capacity is the means to plan and achieve, then capacity development describes the ways to those means (UNDP, 2009). IFAD (2011) identifies two aspects to capacity building: (a)

enhancing the capacity of small producers to benefit from new market opportunities and building their resilience to related risks by strengthening their organisations; (b) building the capabilities of poor rural women and men, including young people, to seize opportunities in agriculture and non-farm activities. This intervention includes activities such as training labour force in crop and livestock production; vocational skills such as carpentry, plumbing, machinery maintenance; business skills for producers and small entrepreneurs; and life skills including financial literacy.

INFORMATION AND KNOWLEDGE-SHARING INTERVENTIONS.

Information and knowledge-sharing for market linkages will include sharing of information relating to market studies/assessments to understand customer demands, dissemination of information regarding availability and prices of inputs, market rates for outputs, information relating to weather, best practices for crop production/animal husbandry using various mediums including internet, mobile phones and associated technologies to improve marketing of produce and for arranging logistics for farmers and entrepreneurs (Digital Dividend, 2016).

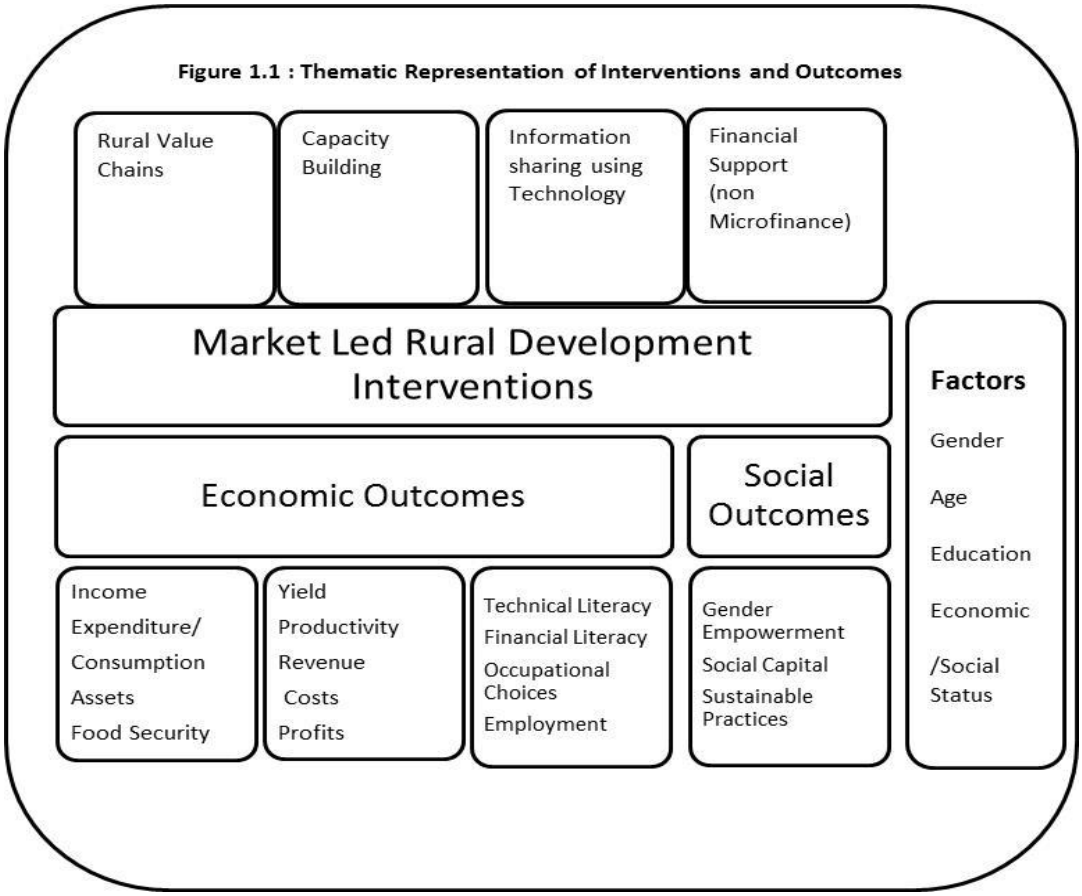
FINANCIAL SUPPORT (EXCLUDING MICROFINANCE) INTERVENTIONS

This category of intervention will cover financial services, products and support services delivered to address financial requirement and constraints of those involved in the rural and semi-urban value chain, including need to access finance, secure sales, procure products, reduce risk and/or improve efficiency within the chain. Warehouse receipts, crop loans, loan guarantee fund, crop insurance products, rainfall insurance products, and livestock insurance are some of the financial instruments that can be covered through this intervention.

We present a summary of the interventions and the questions that are addressed in the systematic review in subsequent sections.

1.4 THEMATIC REPRESENTATION

Four broad interventions were identified viz., rural value chains, capacity building, information sharing using technology and financial support (excluding microfinance). These interventions led to economic outcomes and/or social outcomes that enhance rural development. The effectiveness of these interventions on outcomes is influenced by demographic factors such as age, gender, education and economic and social status of the participants as shown in figure 1.1.



1.5 COMPARISON

We have attempted to conduct subgroup comparisons to compare studies across interventions, across outcomes and across countries. The comparisons we studied are as follows:

a) Comparison between interventions.
b) Comparison of outcomes.
c) Comparison between countries.

We shall compare impact across subsistence and migration population, if sufficient studies of the above are available.

1.6 OUTCOMES

The outcomes of interest under this review are economic and social wellbeing of rural populations in LMICS as shown in table 1.1.

Table1.1 Economic and social outcomes

S. no.	Economic outcomes	Social outcomes
1.	Income	Occupational choice
2.	Consumption/expenditure	Decision making
3.	Savings	Social capital
4.	Investment	Collective resource management
5.	Asset	Food security
6.	Yield	Social expense
7.	Cost	
8.	Profit/revenue/sales	
9.	Technical literacy	
10.	Access to finance	

1.7 STUDY DESIGN

The study designs used in the research papers were carefully assessed for their suitability to the research questions:

- To answer the primary review questions we included all studies that assess impact:
    - Experimental studies (randomised controlled trials)
    - Quasi-experimental studies. This includes studies:
        (a) With a known allocation rule, such as regression discontinuity design and natural experiments.
        (b) With a comparison group using some methods to control for confounding, such as difference-in-differences estimation, instrumental variables estimation, statistical matching, etc.
        (c) Interrupted time series designs.

- To answer the secondary review question on factors influencing effectiveness we will include
    - Cohort studies
    - Case control studies

- Cross-sectional surveys
- Interviews/surveys
- Case studies
- Oral histories
- Secondary analysis studies.

1.8 OUTLINE OF THE REPORT

The report starts with an executive summary, which gives a brief overview of the systematic review. The report is organised into five chapters, excluding the executive summary. The current chapter introduces the report, followed by a detailed description of the methods and search strategies adopted in chapter two. This is followed by chapter three, which describes the characteristics and appraisal of quality of the studies identified. In the fourth chapter, both meta-analysis and narrative synthesis are discussed. In chapter five, the implications are discussed, and limitations and key findings of the review are summarised.

2. METHODS USED IN THE REVIEW

This chapter describes the research process adopted to conduct a systematic review, providing details of search terms used to identify relevant articles in databases, the search strategy used to compile an exhaustive list of studies, methods used for quality assessment to shortlist the final list of studies to be included in the systematic review, and synthesis of findings. The stages and the results obtained in each stage are described in later sections of the chapter.

The steps are listed below:

- Identification of the key terms for the study search.
- Description of the search methods used for identifying the studies for the review.
- Formulation of the inclusion and exclusion criteria to determine the studies to be included for the review.
- Shortlist of studies based on inclusion/exclusion criteria were screened for objectives, outcomes research design including data collection and analyses. This activity was carried out by two lead reviewers to ensure consistency.
- Assessment of risk of bias of shortlisted studies: The studies were screened for selection bias, performance bias, detection bias, attribution bias and reporting bias.
- Classification of studies: The identified studies were divided into two groups – the studies suitable only for narrative synthesis and those that qualified for both meta-analysis and narrative synthesis.
- Effect-size estimation: The effect sizes were estimated with data available in the studies shortlisted for meta-analysis. We used random-effects analysis for estimation of average effects on the different outcomes and for examination of heterogeneity.
- Narrative Synthesis: All studies were analysed for providing a narrative synthesis of interventions and outcomes. The studies were categorised based on the primary interventions. The outcomes of the studies were classified into two main categories viz., economic outcomes and social outcomes. Some studies had multiple interventions as well as multiple outcomes. The narrative synthesis sections provide details of these overlaps.

The process of search to shortlist is documented at every stage of the review procedure to seek expert suggestions and to reduce biases.

2.1 USER INVOLVEMENT IN THE REVIEW

Rigorous research-based evidence emerges from this report that is critical for effective decision making by governments, international funding organisations and financial service providers. This review aims to address the needs of policy-makers, developmental agencies, and financial services providers who support value chain financing.

2.2 USER ENGAGEMENT

The critical audience for the review consist of policy makers, development agencies and value chain service providers. We plan to disseminate the findings across levels of these stakeholders. We propose to conduct a half-day workshop aimed at policy makers and practitioners in a suitable location in India or Nepal. In addition, we plan to disseminate the findings in theme-based conferences across the globe and to publish the findings in relevant academic and policy oriented journals.

2.3 IDENTIFYING AND DESCRIBING STUDIES

DEFINING STUDIES: INCLUSION AND EXCLUSION CRITERIA FOR MAPPING

The first step to a systematic review is developing a comprehensive inclusion and exclusion criteria for identifying studies to be included in the review. A list of electronic databases, journals and websites was identified. An exhaustive search was conducted through the above mentioned sources to identify a set of studies to be considered for screening. Next came a preliminary title screening stage followed by evaluation of the studies based on their abstracts. Then the studies were downloaded and the full articles were assessed for their relevance to the systematic review. The studies that were excluded at each stage were not evaluated further. Only studies that met all the inclusion criteria were chosen for further evaluation. Appendix 2 provides the inclusion and exclusion criteria used for identifying the studies.

Our inclusion focus has been on quantitative studies, including both studies containing quantitative methods and those with a mixed methods approach. Further, we shortlisted studies that contained outcomes selected for this review and those studies that clearly specified the causal linkages between selected interventions and the outcomes.

IDENTIFICATION OF POTENTIAL STUDIES: SEARCH STRATEGY

A comprehensive search strategy was adapted to search across multiple sources viz., electronic database searches, handsearches, website searches, key-author searches, etc., for systematically identifying the studies for the review. The search strategy adopted for electronic databases is described in appendix 4.

ELECTRONIC DATABASES/WEBSITES

An electronic search of bibliographic databases was carried out in Springer Link, ScienceDirect, EBSCO, Emerald, Wiley Online Library, ProQuest, JSTOR, JGATE, SSRN and Taylor and Francis. Databases such as the Cochrane Library and the Campbell Collaboration Library were reviewed. Websites of various international policy think tanks and international donor organisations such as FAO and ILO were also searched to check for any available impact evaluation reports. The website search further enhanced our understanding of the literature in the area.

HANDSEARCH

A list of journals that extensively publish on rural development and poverty alleviation were shortlisted and searched for articles between 1991 and 2016. These studies were manually examined and the references from these articles were further analysed. All these handsearched articles were exported to EPPI-reviewer 4 and were subjected to further screening.

REFERENCE SEARCH

As a further step in the process, the references from all the studies included in the review were searched for possible additional studies that might not have been incorporated in the previous searches.

KEY-AUTHOR SEARCH

The names of the key authors identified from the searches including Karlan, Suresh De Mel were used for further searches for any possible publications that would have been excluded during the electronic or handsearch.

DIRECT CORRESPONDENCE

The potential users of the review from South Asia, particularly the researchers, were contacted for their suggestions on relevant literature that might have been missed. In addition, book collections from reputed publishers (both national and international) from the South Asian countries and reputed universities were browsed. The search engines used were Google and Google Scholar.

The EPPI–Reviewer software was used to manage the entire search process. All the documents, including citations, abstracts and PDF documents were imported into the reviewer for screening. The entire repository of studies was managed using the EPPI-reviewer software. The list of hand-searched journals, the key words/search terms used and web sites searched are presented in appendices 4, 5, 6 and 7, respectively, of this report.

SEARCH STRATEGY: KEYWORDS

The search strategy adopted was in tune with the broad spectrum of interventions included as part of the systematic review. Existing keyword indices were modified to suit the requirements of the search. The keywords and combinations used are described in appendix 6.

SCREENING STUDIES: APPLYING INCLUSION CRITERIA

The screening of studies using inclusion and exclusion were done in three phases. In the first phase, titles and abstracts of all studies were reviewed by five reviewers. To avoid the risk of missing relevant papers the procedure of inclusion/exclusion criteria (see appendix 2) was strictly followed. Only those papers that did not meet the criteria of exclusion such as country, location (rural), and date of publication were excluded from the next phase. Full texts of studies included at this stage were downloaded and were screened. Full texts in languages other than English, which could not be translated within the timeframe of the study, were excluded. All the shortlisted paper from this phase was divided among three reviewers for further screening. In the case of a doubt while screening the paper, discussions were held by all reviewers with the principal investigator to reach a conclusive result. Only those studies that met all inclusion criteria were shortlisted for the quality-appraisal and synthesis.

A brief summary of stages and number of studies identified in each stage is provided in this section. A total of 63,772 studies were uploaded in EPPI Reviewer. Of these, electronic search yielded 14,898 studies and handsearch studies 48,874. Further details are provided in the table 2.1 given below.

Table2.1 Stages of Screening and Number of Articles Shortlisted

S. No	Stages	Number of studies
1.	Studies uploaded	
a)	From electronic databases	14,898
b)	Handsearch of journals	48,874
	Total studies uploaded (a+b)	63,772
2.	Data cleaning (deleted)	1,839
3.	Duplication (deleted)	12,119
4.	Studies considered for title screening	49,814
5.	Studies considered for abstract screening	14,776
6.	Studies considered for full text screening	1,805
7.	Studies considered for scoping	924
8.	Studies from SAR	291
9.	Studies for quality assessment	92
10.	**Total studies selected for systematic review**	**37**
a)	Final list of studies for narrative synthesis	29
b)	Studies selected for meta analysis	8

As the focus of the review is to evaluate the impact of market-led interventions, only studies that used quantitative data analyses were included. News items, speeches, anecdotes, letters, reviews of books and commentaries were excluded. The articles selected for scoping numbered 1,805, as seen in the table 2.1. At the end of this stage, 924 were shortlisted for second full-text screening. From these 924 studies 291

studies were from SAR countries. Based on second full-text screening, 92 studies were shortlisted for quality assessment. The process of quality assessment is described in subsequent sections. Finally, 37 studies were shortlisted out of 92 studies for final report.

QUALITY-ASSURANCE PROCESS

To reduce researcher bias, all the three members of the review group discussed and compared their decisions for coding of included papers. In case of confusion or disagreement between members, the expert members (Dr G. Arun Kumar and Dr M. Suresh Babu) were consulted. All the shortlisted studies passed to the stage of assessing for risk of bias.

QUALITY APPRAISAL AND RISK OF BIAS

In the quality appraisal stage, the included studies were examined for methodological rigour. The shortlisted studies from the full-text screening phase were examined and data was extracted on study design, method of analysis, type of intervention, and other relevant quantitative information.

Studies included in the review were critically appraised according to risk of bias in internal validity and external validity, and publication bias. The assessment of risk of bias was based on (a) quality of attribution methods; (b) the possibility of spill-overs in comparison groups; and (c) outcome and analysis reporting biases. The studies were screened for selection bias, performance bias, detection bias, attribution bias and reporting bias, as discussed in appendices 11 and 13. Two reviewers (Lakshmi Kumar and Vijayalakshmi Balasubramaniam C.) undertook the critical appraisal of the risk of bias. Using the Cochrane collaboration tool for assessing risk of bias, studies were appraised on the basis of scores within six domains (seven criteria): selection bias, performance bias, detection bias, attrition bias, reporting bias, and other bias (Higgins and Green, 2008). Details are provided in appendix 11. Studies were scored as low-risk, high-risk and medium-risk, with low-risk having a score of '3', followed by medium-risk, having a score of '2', and high-risk, having a score of '1' under each criterion. The scores of the studies consequently ranged between 7 and 21, with 21 signifying that the study has the lowest risk, indicating high validity. In case of a study scoring 1 or 2 in any of the indicated seven parameters, that study was classified as medium-risk. Studies scoring 1 or 2 in more than one of the seven parameters are classified as high-risk, indicating low validity. Appendix 13 provides risk assessment for all included studies.

2.4 PUBLICATION BIAS

The publication bias in meta analysis was assessed using funnel-plot measures standard error (SE) in the vertical axis and standardised mean difference in the horizontal axis. The top of the graph indicates large

trials, because studies with large samples have small standard errors and the vertical axis has to be inverted i.e., standard error '0' at the top. The statistical power of the trial is determined by factors such as number of participants who have benefited in the case of dichotomous outcomes, and the standard deviation of the responses in the case of continuous outcomes, in addition to sample size. That is, the standard error is used to summarise other factors (smaller studies with lower quality may have exaggerated effect sizes). Plotting the standard error on the reversed scale places the larger and most impactful studies on top.

2.5 METHODS FOR SYNTHESIS

Firstly, meta-analysis technique was used to synthesise evidence compliant to the use of statistical techniques. It should be noted that this set of studies forms a subset of the total studies identified for synthesis. Secondly, a narrative approach was used to synthesise evidence of studies included. This approach was crucial to address the review question and also in dealing with the heterogeneity in terms of data in the included studies. To differentiate heterogeneity of data between the studies, the textual narration method was adopted, which helped in bringing more clarity to the study contexts.

Impact of all four interventions, i.e. rural value chains, capacity building, information and knowledge-sharing, and financial support were examined from included studies shortlisted. These included studies are from the South Asian countries, namely Bangladesh, India, Nepal, Pakistan and Sri Lanka.

2.6 METHODS ADOPTED FOR META-ANALYSIS

To synthesise evidence from multiple studies, especially quantitative evidence, and to arrive at conclusions, we use meta-analysis (Donna et al., 2000; Haidich, 2010). Meta-analysis combines evidence from independent studies to evaluate its magnitude and statistical significance on the summary effect. The use of meta-analysis has been extensive in medical, social sciences, economic and public-policy research. For performing meta-analysis, quantitative evidence was listed from studies across four interventions. The evidence in the treatment group was compared to the evidence in the control group. Given the diversity of methods followed by studies, we used different effect-size formulae, in each case measuring improvements to the outcome variables.

The process of meta-analysis consisted of the following steps:

- Extraction of parameters to be used in effect-size calculation.
- Selection of effect-size formula to be used for each study.
- Effect-size calculation.
- Collation of effect sizes and merging with study characteristics.
- Meta-analysis across studies by outcomes and sensitivity analysis by removing outliers.

- Meta-analysis across studies based on sub-groups in the context of country, intervention, and risk of bias.

The meta-analysis was carried out on the outcomes obtained from 8 included studies. Among the 8 studies, 4 studies used experimental research (e.g. randomised controlled trial, RCT); 3 studies were before/after studies; and 1 was a cross-sectional design study. The studies have used econometric techniques such as Propensity Score Matching (PSM), bivariate profit model and logistic regression.

The effect sizes were calculated based on reported intervention and intervention leading to sub-outcome or main outcome. These data were collected, along with information on sub-groups such as country and research design. The meta-analysis was performed using EPPI-Reviewer 4.0 on studies from all the four interventions and their impact on economic and social outcomes. The details and results of meta-analyses are discussed in chapter three.

Random-effect analysis was applied because one can reasonably expect effect sizes to differ across studies due to the range of factors, including contextual variation and study design. Contextual variations could be related to location, type of intervention, beneficiary groups, implementation process and duration of participation. Random-effect analysis produces a pool effect size with greater uncertainty attached to it in terms of wider confidence intervals than a fixed-effect model. The calculation details are provided in appendix 15.

The heterogeneity of effect sizes was computed with the statistic 'I' square, a measure proposed by Higgins et al., (2003). This measure captures the proportion of total variance across the total observed effects, which is explained by the heterogeneity between the effect sizes. The 'I' square is not an estimate of any underlying quantity, rather it is a descriptive statistic. Therefore, alternatively, the estimate of the variance of true effect size (that is, ' τ ' square, which is a measure that can be seen as an estimate for the between variance) has been reported. The smaller the ' τ ' square, the narrower the interval confidence around the summary effect.

2.7 LIMITATIONS TO THE APPROACH

Synthesis through meta-analysis is only possible for comparable studies. Comparability could be either on a conceptual level or on similar statistical/econometric approaches. It should also be noted that there exists heterogeneity in outcome variables across studies. As the studies are diverse, comparability issues are more pronounced in studies that are distinctly different or pooled. In the present analysis, diverse econometric methods have been included with comparable intervention and comparable outcomes of studies.

2.8 METHODS USED FOR NARRATIVE SYNTHESIS

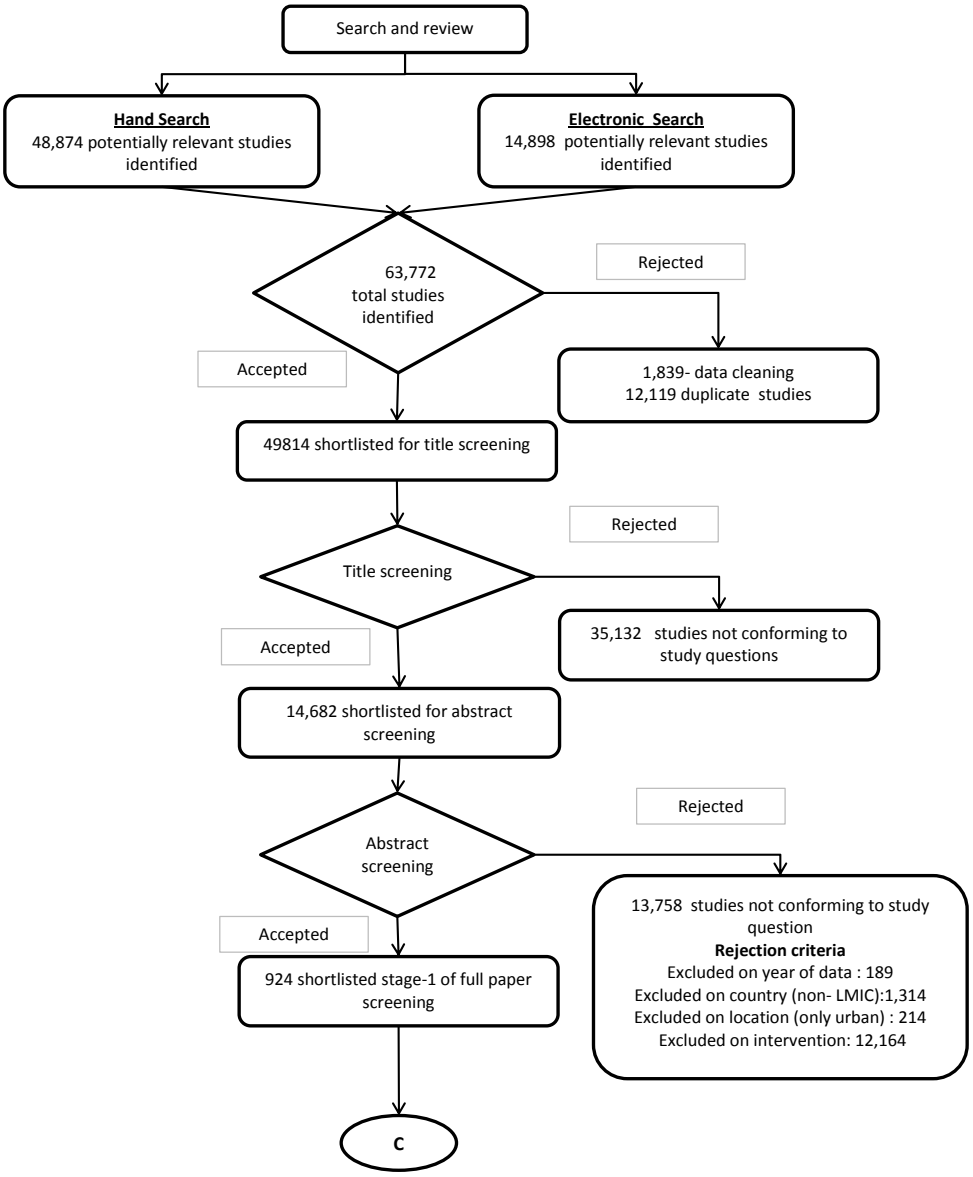
The variables used in the analysis from all interventions were extracted through full-text screening from the shortlisted studies. Major themes in literature were identified and thematic synthesis was carried out to summarise the findings of the primary studies (Dixon and Woods, 2004). Narrative description within

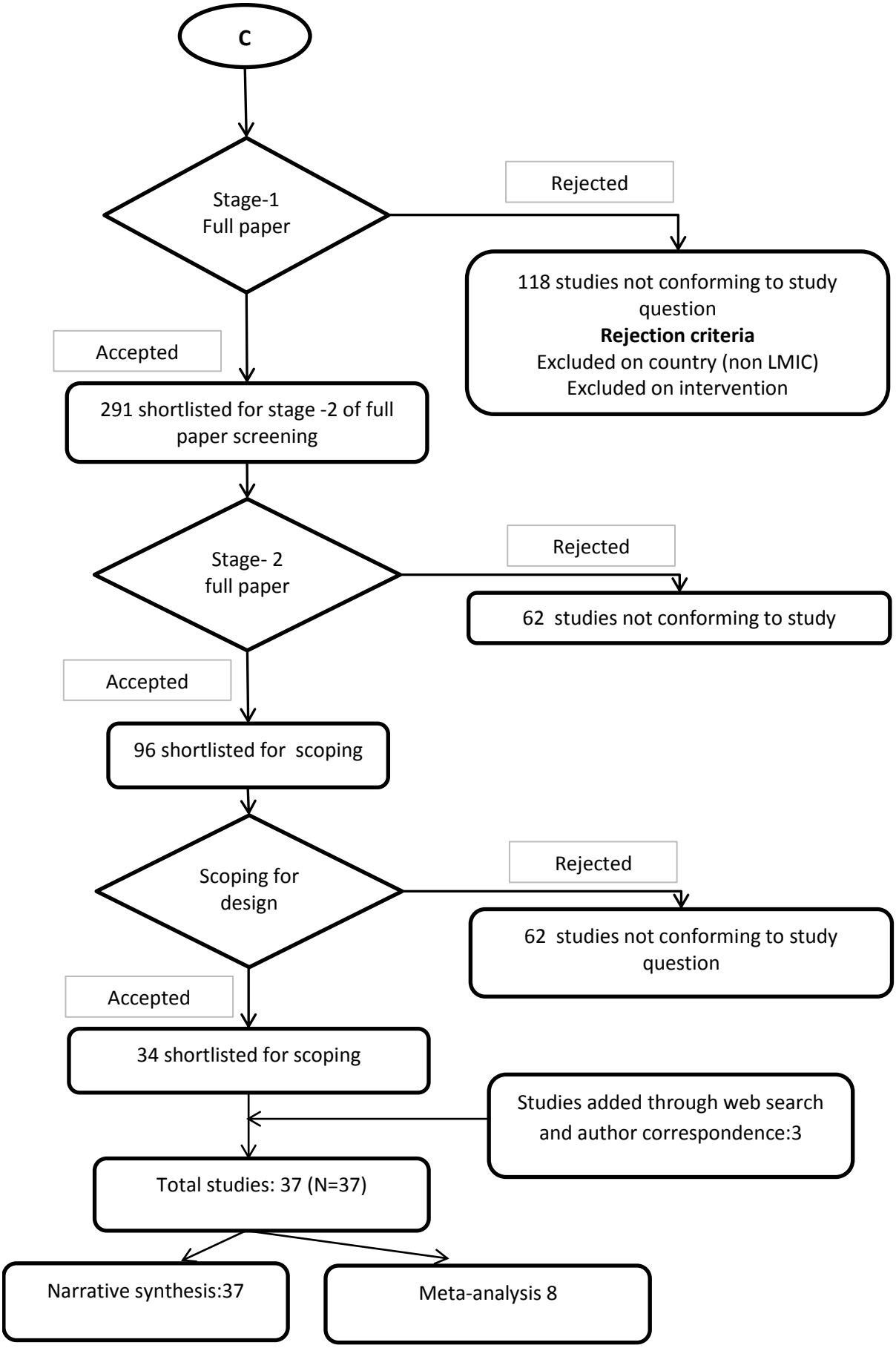
thematic headings based on outcomes clearly highlights the heterogeneity of the studies and contextualises the studies. The narrative syntheses of findings are presented in chapter four.

3 RESULTS OF SEARCH

Thirty-seven studies were selected for the systematic review. The list of included studies is provided in appendix 12. Out of the 37 studies, eight were found to be eligible for conducting meta-analysis and all the studies qualified for narrative synthesis. A schematic overview of the study-identification process is presented in figure 3.1.

Figure 3.1: Search strategy and results




C
Stage-1
Full paper
Rejected
118 studies not conforming to study question
Rejection criteria
Excluded on country (non LMIC)
Excluded on intervention
Accepted
291 shortlisted for stage -2 of full paper screening
Stage- 2
full paper
Rejected
62 studies not conforming to study
Accepted
96 shortlisted for scoping
Scoping for design
Rejected
62 studies not conforming to study question
Accepted
34 shortlisted for scoping
Studies added through web search and author correspondence:3
Total studies: 37 (N=37)
Narrative synthesis:37
Meta-analysis 8

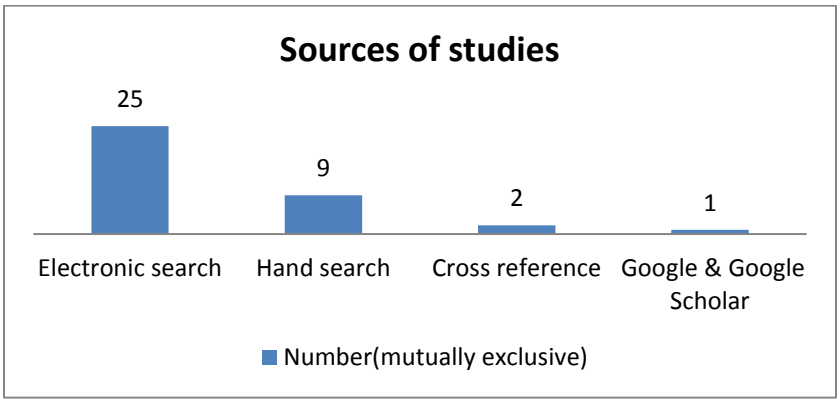
3.2 CHARACTERISATION OF SELECTED STUDIES

A total of 37 studies were included for systematic review. An overview of the quality appraisal of these studies based on sources of study, publication status, country classification, year of publication, intervention type, research design, data type and analytical methods is provided in the following sections.

SOURCES OF STUDIES

Of these studies, 25 emerged from electronic databases, nine by handsearch, two by cross-referencing and one from Google Scholar search. The list of included studies is provided in appendix 12. The percentages are depicted in figure 3.2.

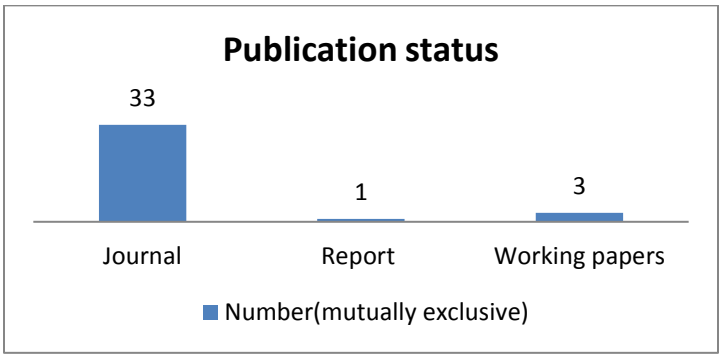
Figure 3.2: Studies based on sources



PUBLICATION STATUS

Categorisation of these 37 studies according to publication types shows that 90% are published in journals, 8% are working paper reports on websites, and 2%, or one study, was published as a report on IFPRI website. The data is presented in figure 3.3.

Figure 3.3: Publication status



COUNTRY CLASSIFICATION

Among the 37 studies, one study was based on cross-country research between India and Nepal. Others were single-country based research reports. The details are presented in table 3.3 below:

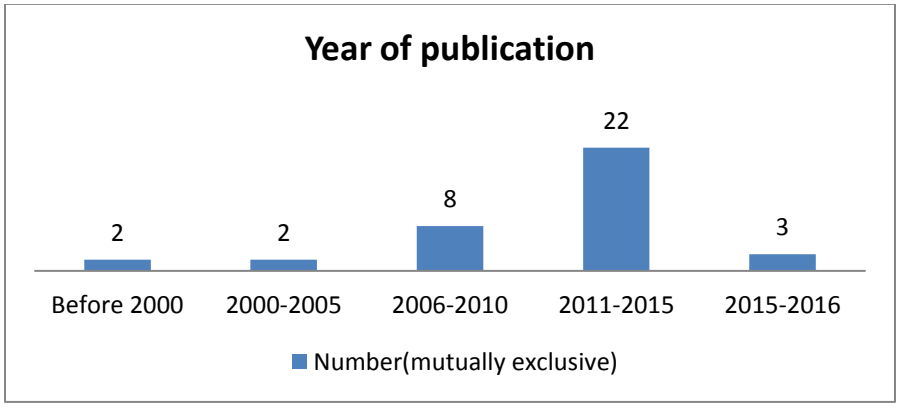
Table 3.3: Countrywise details

No.	Country	Number	Percentage
1.	India	21	55
2.	Bangladesh	7	18
3.	Nepal	6	16
4.	Pakistan	2	5
5.	Sri Lanka	2	5
Total		38	100

YEAR OF PUBLICATION

The studies were classified based on year of their publication. The details are presented in figure 3.4 below. Ninety-five per cent of studies were published post 2000, thereby providing support to our decision to include those published after 1990. Only 5% of studies were published between 1991 and 2000.

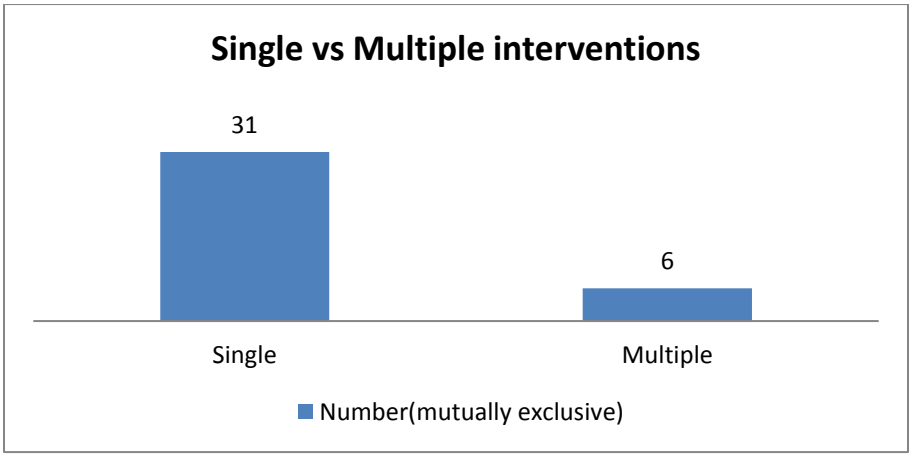
Figure 3.4: Categorisation based on year of publication



CLASSIFICATION BASED ON INTERVENTIONS

Thirty-one studies had single interventions, while six studies were reports of a combination of relevant interventions (figure 3.5). For example, studies conducted by Banerjee et al. (2011), Bauchet et al. (2015), Bandiera et al. (2013) targeting ultra-poor had elements of asset and financial support and capacity building. A study conducted by Choudhary et al. (2012) had rural value-chain intervention along with capacity building activities for women farmers, while one study by Desai and Joshi (2013) had all four interventions. Details are provided in appendix 8.

Figure 3.5: Categorisation based on number of interventions



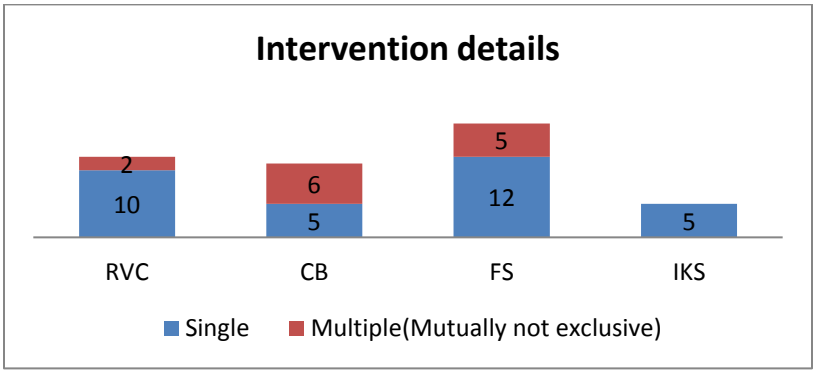
In the table 3.4 and figure 3.6, details of intervention-wise classification are provided. For example, the rural value-chain is studied as a single intervention in nine studies and in combination with other interventions in three studies.

Table 3.4a: Intervention details

Intervention	Number of studies (mutually exclusive)
Only RVC	10
Only CB	5
Only FS	12
Only IKS	5
RVC+CB	1
FS+CB	4
All (RVC+FS+CB)	1
Total	38*

- *(Giné and Mansuri have studied impact of CB on outcomes and FS on outcomes – hence there are 38 entries)*

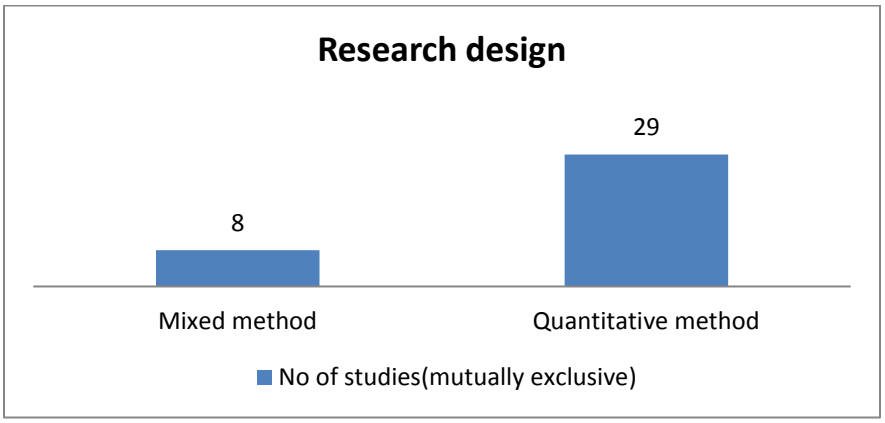
Figure 3.6: Categorisation based on type of interventions



CLASSIFICATION BASED ON RESEARCH METHODS USED

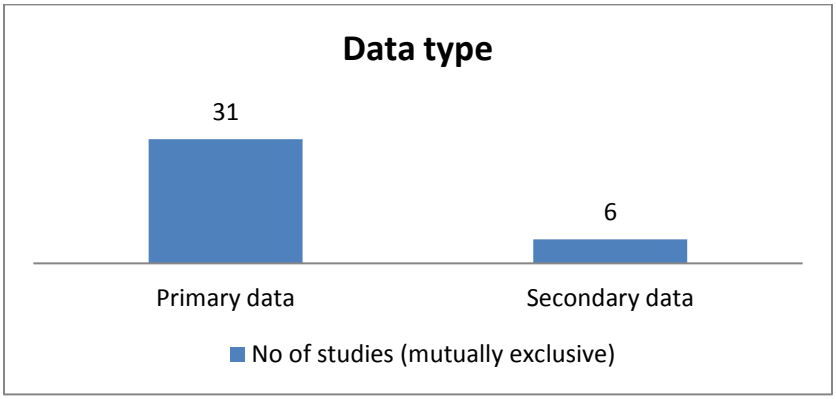
Selected studies differed in their approaches to research terms of data types and analytical methods. Twenty-nine studies adopted exclusive quantitative approaches, while eight reported a mixed-method approach using a combination of qualitative and quantitative data.

Figure 3.7 : Classification based on study type



The eight studies that reported use of qualitative data had interviews as the major source of qualitative data collection. Types of data included for quantitative analysis included primary and secondary data as shown in figure 3.8.

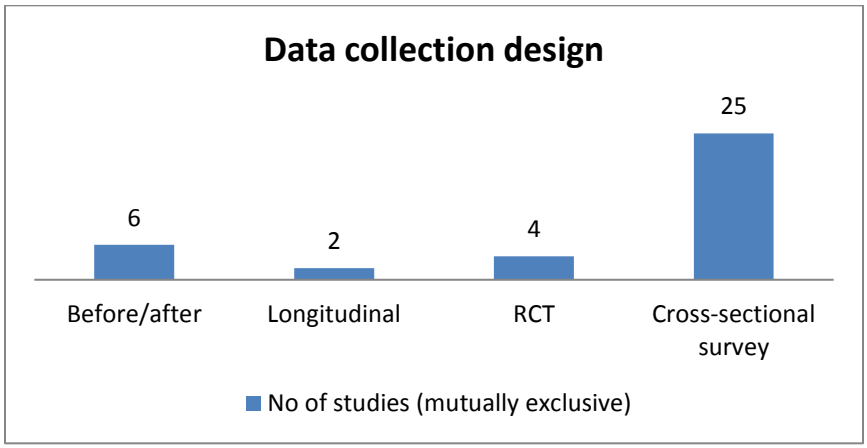
Figure 3.8: Classification based on data type



CLASSIFICATION BASED ON STUDY DESIGN

Most studies used cross-sectional (68%) data collection methods. Classification of studies based on the primary method used for data collection is shown in figure 3.9.

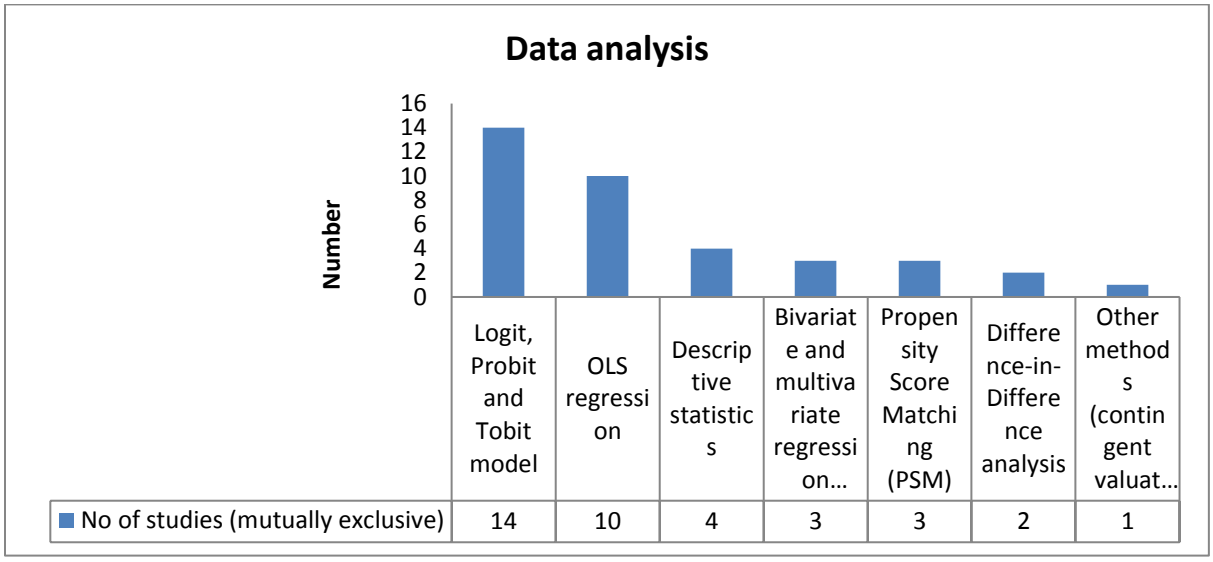
Figure 3.9: Classification based on study design



CLASSIFICATION BASED ON DATA ANALYSIS

A wide variety of econometric methods were used to analyse data as shown in figure 3.10. Some studies (11%) used descriptive studies such as chi-square test for analysing data.

Figure 3.10: Classification based on data analysis

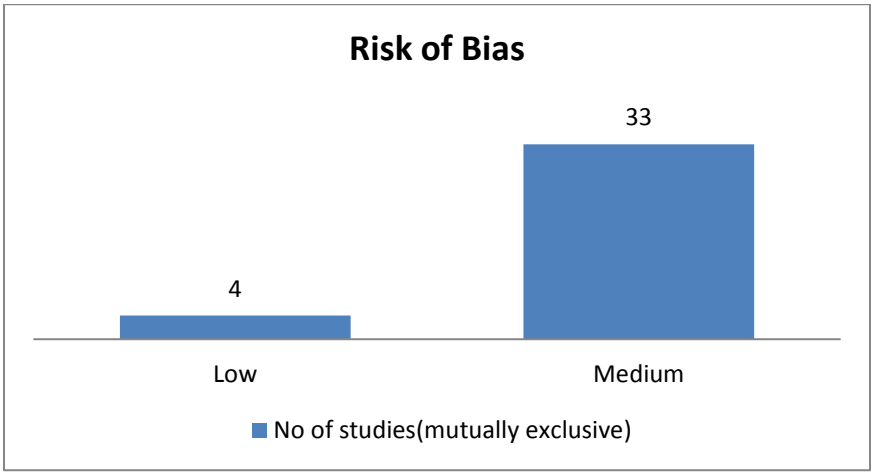


Studies using randomised control trials and experimental design studies with data analysis, difference in differences (DID), statistical matching (SM) and instrumental variables (IV) are assessed and judged as low-threat-to-validity. Cross-sectional studies using multivariate or bivariate methods, and panel studies using simple multivariate methods only, are classified as having a medium threat to validity. All other studies, including cross-sectional (CS) surveys and tabular methods, are classified as having a high threat to validity. The figure 3.11 below provides details of risk assessment of the included studies. Over 89% of studies had medium to low risk.

CLASSIFICATION BASED ON RISK ASSESSMENT

The table presented in appendices 11 and 13 provides a summary of all studies included in the systematic review.

Figure 3.11: Classification based on risk assessment



3.3 COUNTS OF EVIDENCE

The summary of count of evidence from the included studies is provided in table 3.5. The details of count of evidence for all studies included in attached as appendix 14. The evidence has been classified positive, negative or no statistical significance as shown in table 3.6. Among these, 70 evidences were included for meta-analysis

Table 3.5: Description of evidence for analysis			
Evidence by different outcomes		**Meta-analysis**	**Narrative analysis**
1	Economic outcomes	60	364
2	Social outcome	10	255
	Total	**70**	**619**

Table 3.6: Count of evidence				
Outcomes	**Positive impact**	**Negative impact**	**No impact**	**Total**
Economic outcomes	206	44	114	364
Social outcomes	92	19	144	255
Total				**619**

Most of this count of evidence relates to economic outcomes (364), while 255 relate to social outcomes. Further details are provided in the table 3.6.

Table 3.6: Details of counts of evidence based economic outcomes and social outcomes			
A.	**Economic outcomes**	**Meta-analysis**	**Narrative analysis**
1.	Impact on income	8	116
2.	Impact on asset	11	49
3.	Impact on expenditure/consumption	8	28
4.	Impact on revenue/profit/sales	12	21
5.	Impact on yield	4	11
6.	Impact on cost	3	11
7.	Impact on savings	5	9
8.	Impact on credit	2	7
9.	Impact on employment/occupational choices	0	39
10.	Impact on access to finance	1	0
11.	Impact on financial literacy	1	34
12.	Impact on technical literacy	5	38
13.	Impact on market access	0	1
	Sub total	**60**	**364**
B.	**Social outcomes**	**Meta-analysis**	**Narrative analysis**
1.	Impact on decision making	2	91
2.	Impact on food security	4	32

3.	Impact on sustainable environmental practices	0	7
4.	Impact on resource management	0	15
5.	Impact on social capital/expense	4	95
6.	Impact on poverty reduction	0	10
9.	Impact on wellbeing	0	5
	Sub total	**10**	**255**
	Total counts of evidence	**70**	**619**

One of the economic outcomes was eliminated when uploaded in EPPI-reviewer 4. Hence only 69 evidences were used for meta-analysis.

SUMMARY

This chapter shows the search strategy used to identify studies for the systematic review, the characterisation of the selected studies based on their publication status, research design and evaluation of risks of the included studies for the review.

4 IN-DEPTH REVIEW: RESULTS

4.1 QUANTITATIVE SYNTHESIS OF INCULDED STUDIES

In this section, we present the analysis of evidences of the impact of the four market-led rural development interventions on economic and social outcomes. We considered 37 studies for the narrative analysis and eight studies for meta-analysis. Many of the studies reported outcomes of interventions that were a combination of several approaches such as capacity building along with asset transfer, capacity building and value-chains. Hence, we have analysed both the single and multiple interventions and compared the effectiveness of single versus multiple interventions on the outcomes.

4.2 RISK OF BIAS

The list of 37 studies included for systematic review and risk of bias is provided in appendix 13 and in table 4.1 below. Among these studies, four had low risk of bias and 33 had medium risk of bias. All the four studies with low risk of bias have been included for meta-analysis. Four studies with medium risk of biases have also been included for meta-analysis. All the 37 studies have been included for the narrative synthesis.

Table 4.1 Risk of bias of included studies

S. No.	Study & Author	Year	Intervention	Research Design	Study Type	Risk
1.	Adhikari & Goldey	2009	RVC	Cross-sectional survey	Mixed method	Medium
2.	Ahmed et al.	2009	FS+ CB	Before/after	Quantitative	Medium
3.	Akter et al.	2016	FS	Cross-sectional survey	Mixed method	Medium
4.	Akter et al.	2008	FS	Cross-sectional survey	Mixed method	Medium
5.	Alvi & Dendir	2011	FS	Secondary data (National HH survey, 1998)	Mixed method	Medium

S. No.	Study & Author	Year	Intervention	Research Design	Study Type	Risk
6.	Bandiera et al.	2013	FS+ CB	RCT	Quantitative	Low
7.	Banerjee et al.	2011	FS+CB	RCT	Quantitative	Low
8.	Bardhan et al.	2014	IKS	Cross-sectional survey	Quantitative	Medium
9.	Bauchet et al.	2015	FS+ CB	RCT		Low
10.	Briones & Swinnen	2016	RVC	Longitudinal, 10 years data	Mixed method	Medium
11.	Choudhary et al.	2012	CB+RVC	Before/after	Mixed method	Medium
12.	Choudhary et al.	2014	RVC	Cross-sectional survey	Mixed method	Medium
13.	Chowdhury	2006	IKS	Cross-sectional survey	Quantitative	Medium
14.	Desai & Joshi	2013	RVC+CB+FS	Cross-sectional	Quantitative	Medium
15.	Edmonds	2002	RVC	Cross-sectional survey	Quantitative	Medium
16.	Fafchamps & Minten	2012	IKS	Before/after	Quantitative	Medium
18.	Giné & Mansuri	2011	CB, FS	RCT	Quantitative	Low
19.	Goletti et al.	1995	RVC	Time series secondary data of price	Quantitative	Medium

S. No.	Study & Author	Year	Intervention	Research Design	Study Type	Risk
20	Hatlebakk	2011	RVC	Cross-sectional survey	Quantitative	Medium
21.	Janssens	2009	CB	Cross-sectional comparison	Quantitative	Medium
22.	Anup et al.	2015	RVC	Cross-sectional survey	Quantitative	Medium
23.	Kishore et al.	2015	FS	Cross-sectional	Quantitative	Medium
24.	Mishra	1994	FS	Before/after	Quantitative	Medium
25.	Mishra et al.	2016	RVC	Cross-sectional	Quantitative	Medium
26.	Mittal & Meher	2015	IKS	Cross-sectional survey	Quantitative	Medium
27.	Mukherjee	2013	RVC	Before/after	Quantitative	Medium
28.	Naidu	2008	RVC	Cross-sectional	Quantitative	Medium
30.	Panda	2013	FS	Cross-sectional survey	Quantitative	Medium
29.	Panda et al.	2013	FS	Cross-sectional survey	Quantitative	Medium
31.	Sandhu et al.	2012	CB	Cross-sectional survey	Mixed Method	Medium
17.	Sarthak & Singh	2012	FS	Cross-sectional survey	Quantitative	Medium

S. No.	Study & Author	Year	Intervention	Research Design	Study Type	Risk
32.	Shalendra et al.	2013	IKS	Cross-sectional survey	Quantitative	Medium
33.	Shee & Turvey	2012	FS	Secondary data	Quantitative	Medium
34.	Shoji et al.	2012	FS	Before/after	Quantitative	Medium
35.	Singh	2008	CB	Cross-sectional (NSSO 2004-05)	Quantitative	Medium
36.	Tripp et al.	2005	CB	Cross-sectional survey	Quantitative	Medium
37.	Zant	2008	FS	Cross-sectional secondary data	Quantitative	Medium

4.3 META-ANALYSIS DESCRIPTION

In this section we discuss the description of the meta-analysis. Study-wise details and interventions are listed below as table 4.2. The table lists the intervention in each paper, the description of the intervention, as well as the findings of each study. Five studies are combinations of multiple interventions, while only three studies focused the impact of single interventions on economic and social outcomes.

Table 4.2: Studies included for meta-analysis

S.No	Study author/year	Intervention	Description of intervention	Study finding
1.	Ahmed et al. (2009)	FS+CB (multiple)	IFPRI conducted household survey for the study 'Relative Efficacy of Food and Cash Transfer' in Bangladesh	Differential level of income generation, women empowerment, asset creation was found among all four programmes that were implemented

Table 4.2: Studies included for meta-analysis				
S.No	Study author/year	Intervention	Description of intervention	Study finding
2.	Banerjee et al. (2011)	FS+CB (multiple)	This study was implemented with the help of NGO Bandhan in Murshidabad village of West Bengal to examine the impact of TUP	The programme results in increased non-agriculture income, household expenditure/consumption, revenue and assets. There is no significant impact on agriculture income or non-agriculture labour income.
3.	Bauchet et al. (2015)	FS+CB (multiple)	NGO SKS implemented ultra poor programme aimed to establish microenterprises (TUP) with regular cash flows, which would enable 'ultra-poor' households to grow out of extreme poverty	No lasting net impact on income or asset accumulation in South India as wages for unskilled labour rose sharply in the area while the study was implemented, blunting the net impact of the intervention and highlighting one way that treatment effects depend on factors external to the intervention itself, such as broader employment opportunities. However, in the short term, assets in the form of animal holding, credit and savings showed positive impact
4.	Desai & Joshi (2013)	RVC+CB+FS (multiple)	SEWA implemented Women Farmers with Global Potential (WFGP) programme for organising female farmers into producer associations	The programme increased members' non-farm income and access to output markets. It had stronger impacts on members' awareness and utilisation of financial services. It had no significant impact on yield, farm income and total income
5.	Fafchamps & Minten (2012)	IKS (Single)	This study estimates the benefits that Indian farmers derive from market and weather information delivered to their mobile phones by a commercial service called Reuters Market Light (RML)	No statistically significant average effect of treatment on the price received by farmers, crop value added, crop losses resulting from rainstorms, or the likelihood of changing crop varieties and cultivation practices. Moderate positive impact was found regarding information about prices prior to cropping, sharing with other farmers
6.	Giné & Mansuri (2011)	CB, FS (single)	This paper investigates a field experiment by PPAF & NRSP in rural Pakistan	Offering business training leads to increase in sales, while no significant impact is seen on decision-making

Table 4.2: Studies included for meta-analysis				
S.No	Study author/year	Intervention	Description of intervention	Study finding
			where a subset of male and female microfinance clients were offered eight full-time days of business training and the opportunity to participate in a lottery to access business loans	power or HH expenditure. Financial support in terms of lottery has no significant impact on any of these variables
7.	Mishra et al. (2016)	RVC+FS (multiple)	This study investigates the impact of contract farming (CF) in high-yielding varieties (HYV) of paddy seed production on costs, yield, revenue and profits of smallholder farms in Nepal	The study finds a significant positive impact of contract HYV seed farming (with input condition, output conditions and under both conditions) on revenue and a significant reduction in total costs of production. Profits and yield/ha were significantly positive for CFOC and CFBC, while they were not significant under CFIC. Profits were significantly high for CFIC and CFBC, while under CFOC there was no significant effect
8.	Shoji et al. (2012)	FS (single)	This paper uses a unique long panel data from Sri Lanka to examine the mechanism of social capital formation in an imperfect credit market	This paper finds that households facing credit constraints reduce investments in social expenses (social capital). While previous studies argue that social capital improves access to informal credit, this paper shows reverse causality

Table 4.3 below describes the interventions and the counts of evidence. The interventions IKS, CB, RVC+FS and RVC+CB+FS have only one study each. Hence a meta-analysis of these four interventions was not possible. As FS and CB+FS have more than one study, meta-analysis was conducted for FS and CB+FS. The table also describes the economic, social and total outcomes intervention-wise. The meta-analysis of the same has been done. Further details are provided in appendix 16.

Table 4.3: Interventions and counts of evidence

Intervention	No. of studies	Authors (year)	Counts of evidence		
			Economic	Social	Total
IKS	1	Fafchamps & Minten (2012)	6	1	7
CB	1	Giné & Mansuri (2011)*	2	1	3
FS	2	Giné & Mansuri (2011)*	2	1	3
		Shoji et al. (2012)		3	3
CB+FS	3	Ahmed et al. (2009)	16	4	20
		Banerjee et al. (2011)	7	0	7
		Bauchet et al. (2015)	6	0	6
RVC+FS	1	Mishra et al. (2016)	12	0	12
RVC+CB+FS	1	Desai & Joshi (2013)	9	0	9
Total	8*		60	10	70

4.4 META ANALYSIS OF INTERVENTIONS

FINANCIAL SUPPORT N=2

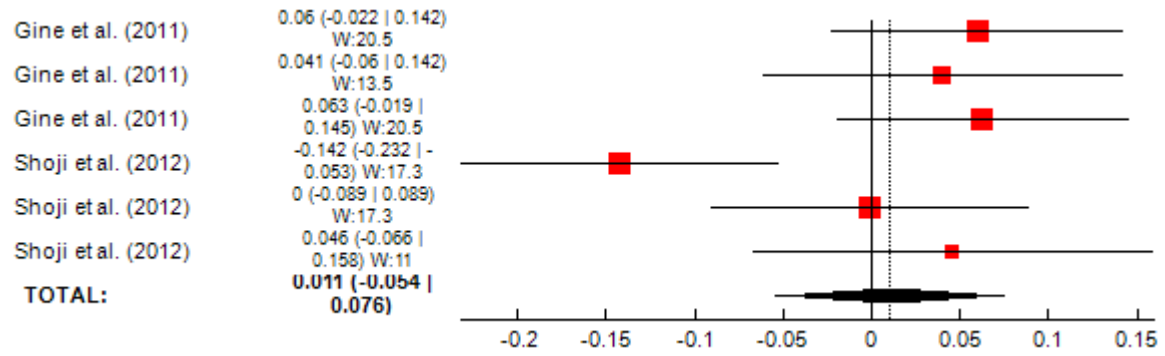
Out of the two studies identified, one had low risk of bias and one had medium risk of bias. Further, out of the two studies, one focused on Pakistan while the other study focused on Sri Lanka. The study based out of Pakistan is Giné et al. (2011), while Shoji (2012) studied the Sri Lankan population.

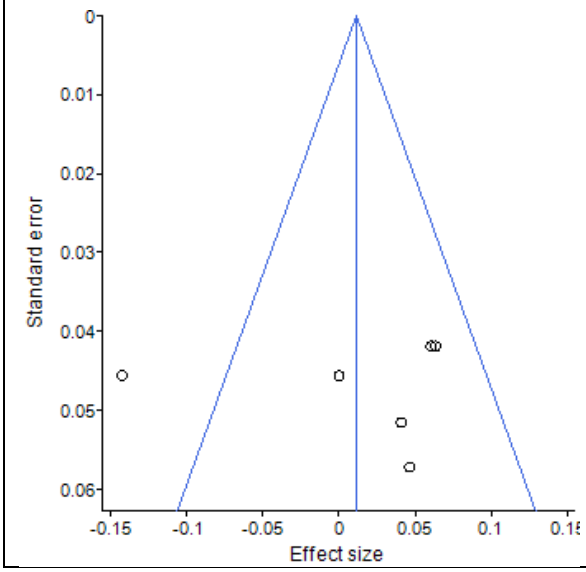
The findings from the meta-analysis from the forest plot in figure 4.1 suggest that the overall effect of the intervention financial services was not statistically significant. It can be noted that the pooled effect size was positive but not significant. As the effect size was low (SMD=0.11, CI= -0.54, 0.0.0759), the results indicated that there is no effect of the intervention on outcomes. The funnel plot from figure 4.1 showed that there was a moderate degree of heterogeneity as I squared is 66.7%. The sample size was small.

Figure 4.1 Meta-analysis results: FS

Random effects model: 0.011 (-0.054, 0.0759)

Heterogeneity: Q = 15; df = 5; p = 0.0102; I-squared = 66.7%; tau-squared = 0.00436.





CAPACITY BUILDING+FINANCIAL SERVICES N=3

Out of the three studies identified, one had low risk of bias and two had medium risk of bias. Further, out of the three studies, one focused on Bangladesh, while two studies focused on India. The study based out

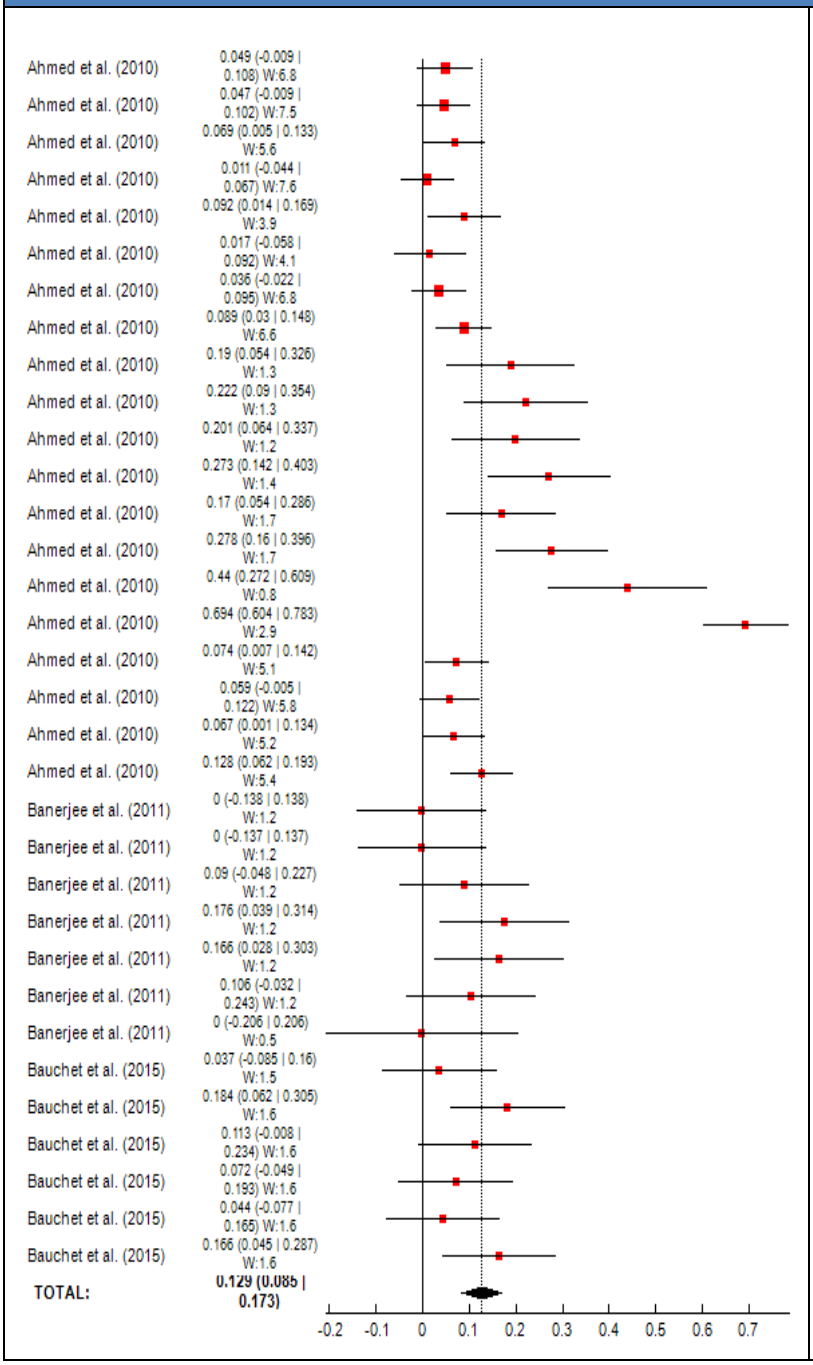
of Bangladesh is Ahmed et al. (2009), while Banerjee et al. (2011) and Bauchet (2015) study the Indian population.

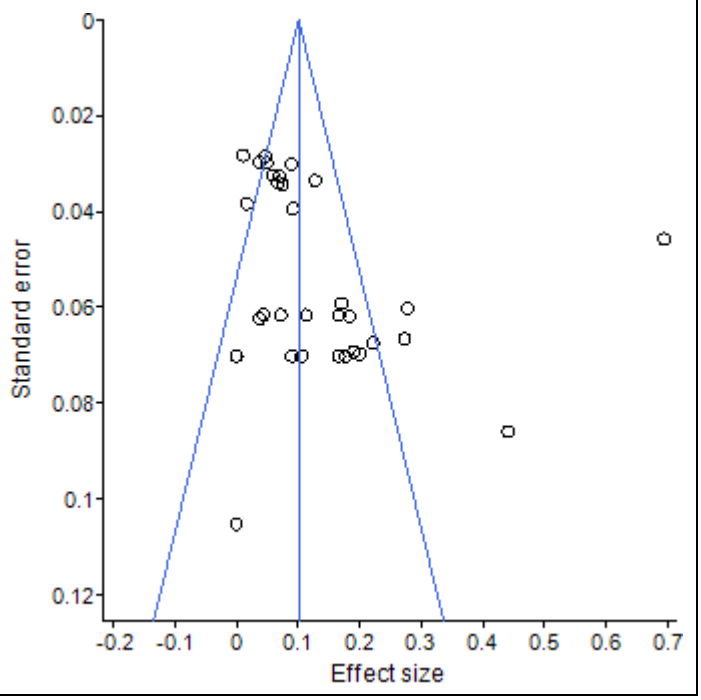
The findings from the meta-analysis from the forest plot in figure 4.2 suggested that the overall effect of the intervention Capacity Building and Financial Services was significant and positive. It can be noted that the pooled effect size was positive and significant. As the effect size was high (SMD=0.129, CI= 0.0846, 0.173), the results indicated that there was a large effect of the intervention (CB+FS) on outcomes. The funnel plot from figure 4.2 showed that there is high degree of heterogeneity as I squared is 87.20%. The sample size was large but with few outliers.

Figure 4.2 : Capacity building and financial support

Random effects model: 0.129 (0.0846, 0.173)

Heterogeneity: Q = 251; df = 32; p = 0; I-squared = 87.2%; tau-squared = 0.0138.



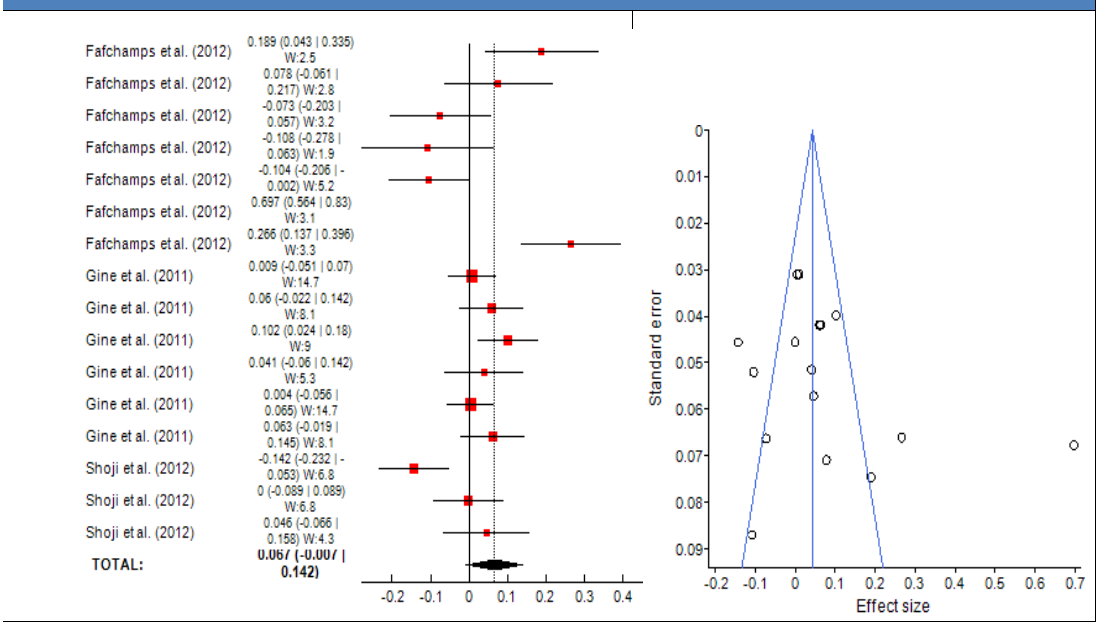


SINGLE INTERVENTIONS N=3

Out of the three studies identified, one had low risk of bias and two had medium risk of bias. Further, out of the three studies, one each focused on Sri Lanka, India and Pakistan. The study based out of Sri Lanka is Shoji (2012), while Fafchamps (2012) studied India, and Giné (2011) focused on the Pakistan population.

The findings from the meta-analysis from the forest plot in figure 4.3 suggested that the overall effect of single interventions was not significant. It can be noted that the pooled effect size was positive but not significant. As the effect size was low (SMD=0.0674, CI= -0.00742, 0.0142), the results indicated that there was hardly any effect of single interventions on outcomes. The funnel plot from figure 4.3 showed that there was a high degree of heterogeneity as I squared is 89.70%. The sample size was moderate with few outliers.

Figure 4.3 Single Interventions



MULTIPLE INTERVENTIONS N=5

Out of the five studies identified, two had low risk of bias and three had medium risk of bias. We also found that the three studies focused on India where Banerjee (2011), Bauchet (2015) and Desai (2013). Ahmed (2009) studies the Bangladesh population, while Nepal is the focus of Mishra (2016).

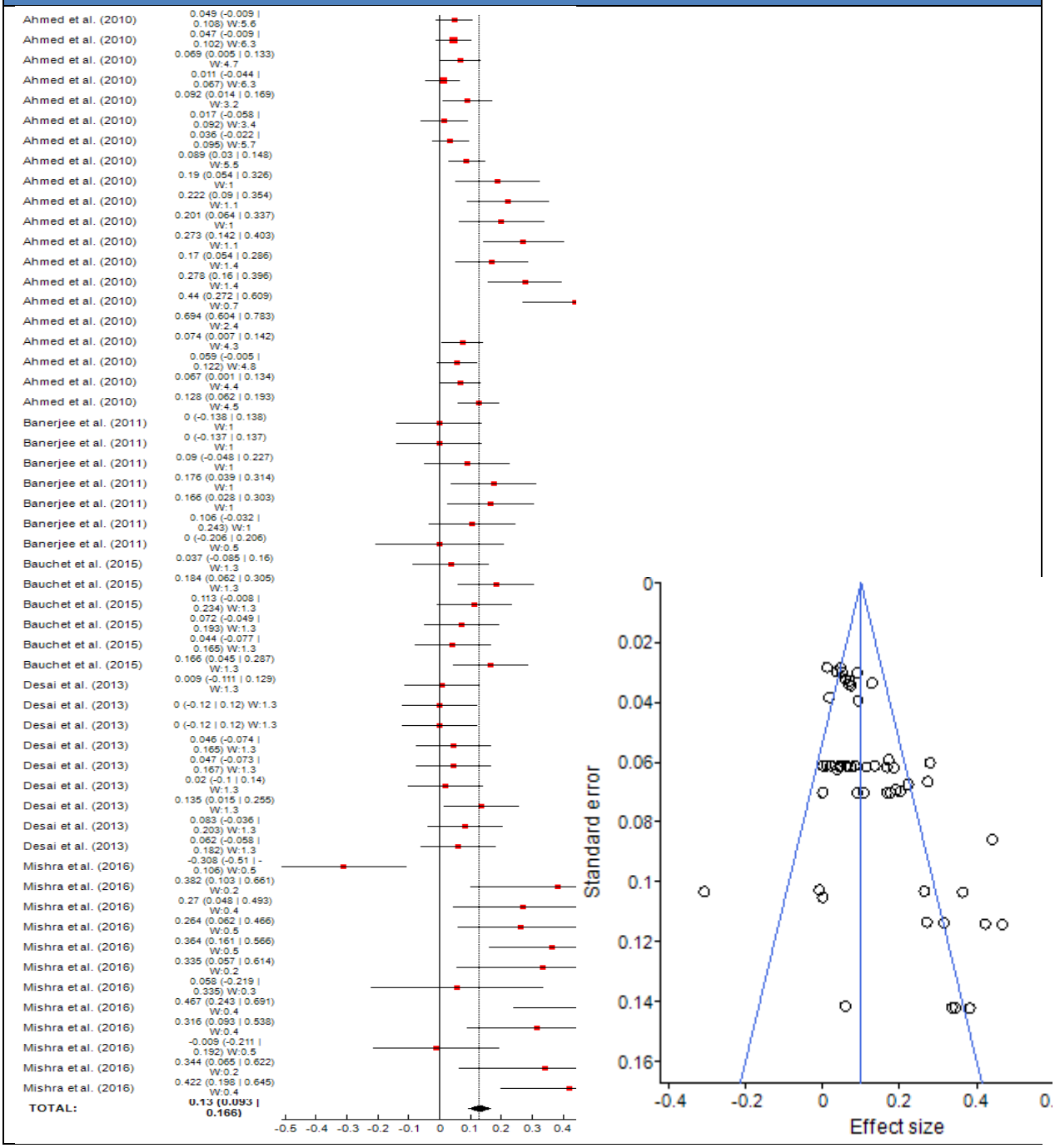
The findings from the meta-analysis from the forest plot in figure 4.4 suggested that the overall effect of multiple interventions was positive. It can be noted that the pooled effect size was positive and significant. As the effect size was high (SMD=0.13, CI=0.0931, 0.166), the results indicated that there was a high effect

of multiple intervention on outcomes. The funnel plot from figure 4.4 showed that there was a high degree of heterogeneity as I squared is 83.4%. The sample size was high with outliers.

Figure 4.4 Meta-analysis results: multiple interventions

Random effects model: 0.13 (0.0931, 0.166)

Heterogeneity: Q = 322; df = 53; p = 0; I-squared = 83.5%; tau-squared = 0.014.

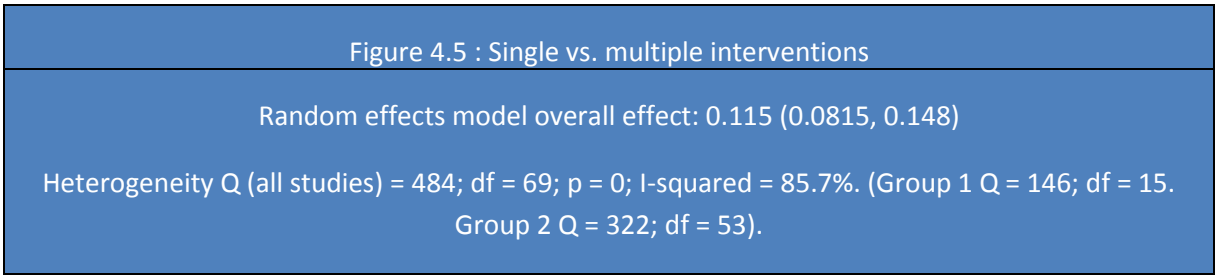


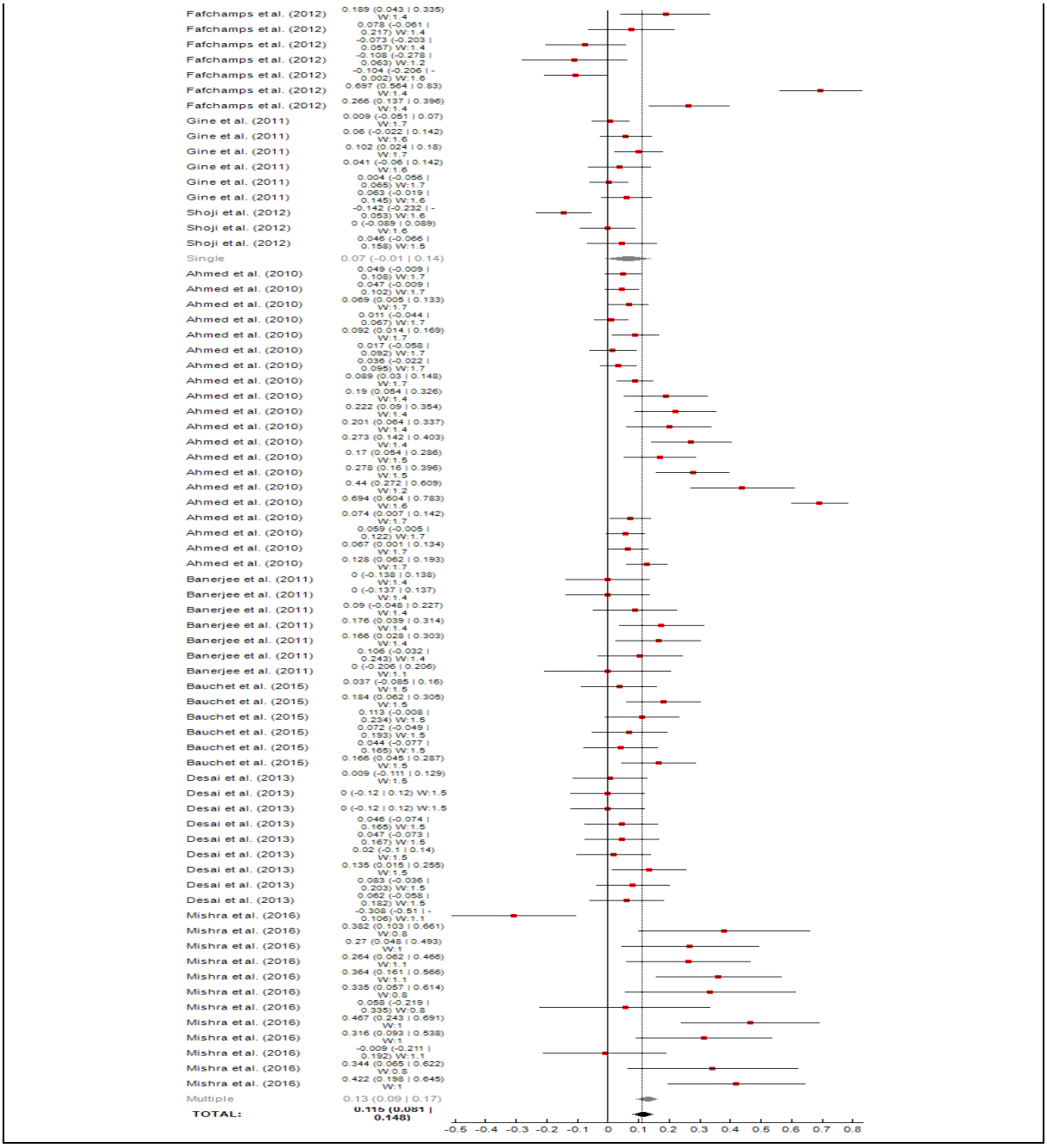
SINGLE VS. MULTIPLE N=8

All the studies came under single or multiple interventions. Out of the eight studies identified, four had low risk of bias and four had medium risk of bias. The studies are Giné (2011, Pakistan), Fafchamps (2012, India), Ahmed (2009, Bangladesh), Banerjee (2011, India), Bauchet (2015, India), Desai (2013, India), Mishra (2016, Nepal), and Shoji (2012, Sri Lanka).

The findings from the meta-analysis from the forest plot in figure 4.5 suggested that between single versus multiple intervention, multiple intervention had a greater impact than single intervention. The overall effect of multiple interventions was significant. It can be noted that the pooled effect size was positive and significant. As the effect size was high (SMD=0.115, CI= 0.0815, 0.148), the results indicated that there was a prominent effect of multiple interventions as compared to single intervention. The funnel plot from figure 4.5 showed that there was a high degree of heterogeneity as I squared is 85.70%. The sample size is large with outliers.

Figure 4.5 : Single vs. multiple interventions





ECONOMIC OUTCOMES N=8

All eight studies had examined the impact of economic outcomes. Four had medium risk of bias and the other four had low-risk of bias. The studies are Giné (2011, Pakistan); Fafchamps (2012, India); Ahmed

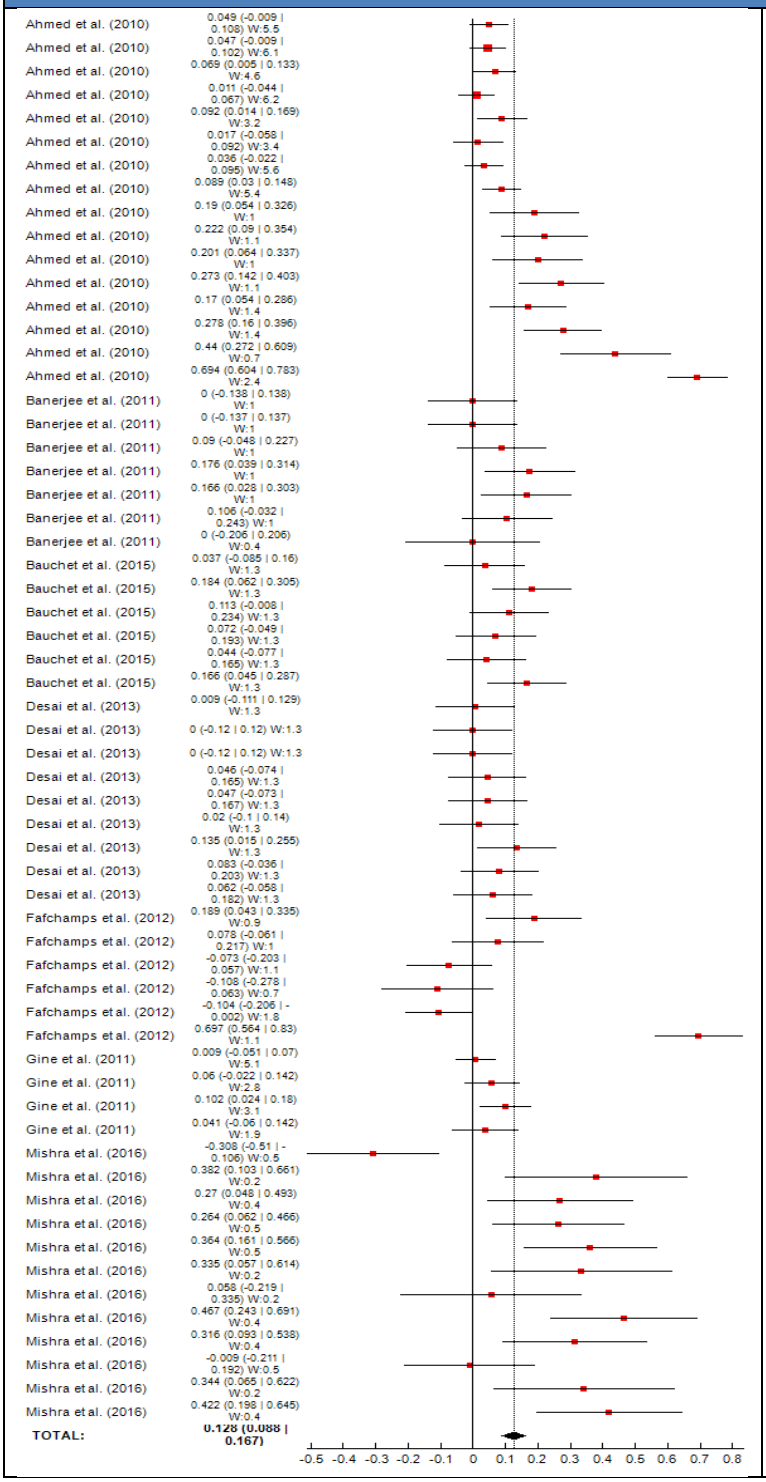
(2009, Bangladesh); Banerjee (2011, India); Auchet (2015, India); Desai (2013, India); Mishra (2016, Nepal); and Shoji (2012, Sri Lanka).

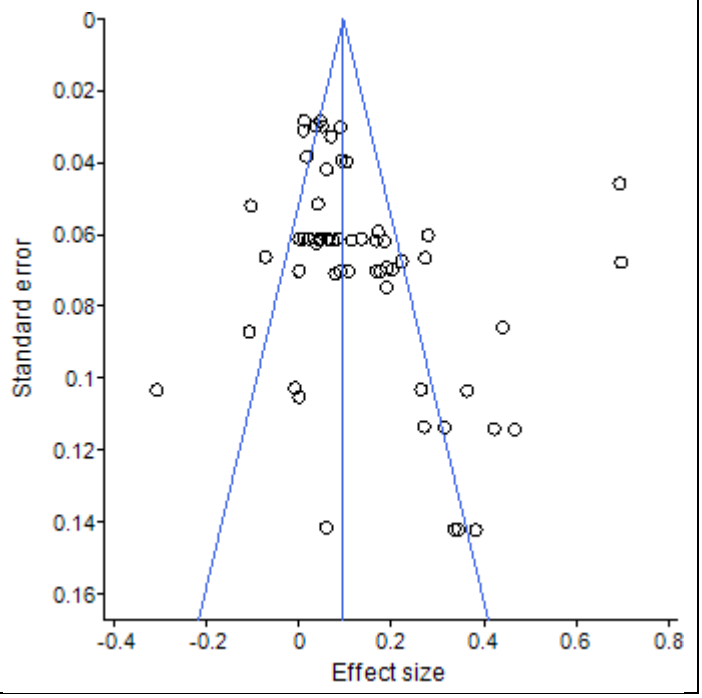
The findings from the meta-analysis from the forest plot in figure 4.6 suggested that economic outcomes have a big impact on market linkages. The overall effect of the economic outcomes was significant. It can be noted that the pooled effect size was positive and significant. As the effect size was high (SMD=0.128, CI= 0.0885, 0.167), the results indicated that there was a large effect of the economic outcomes. The funnel plot from figure 4.6 showed that there was a high degree of heterogeneity as I squared is 86.50%. The sample size is large with outliers.

Figure 4.6 Economic outcome

Heterogeneity: Q = 436; df = 59; p = 0; I-squared = 86.5%; tau-squared = 0.0192.

Random effects model: 0.128 (0.0885, 0.167)





SOCIAL OUTCOMES N=4

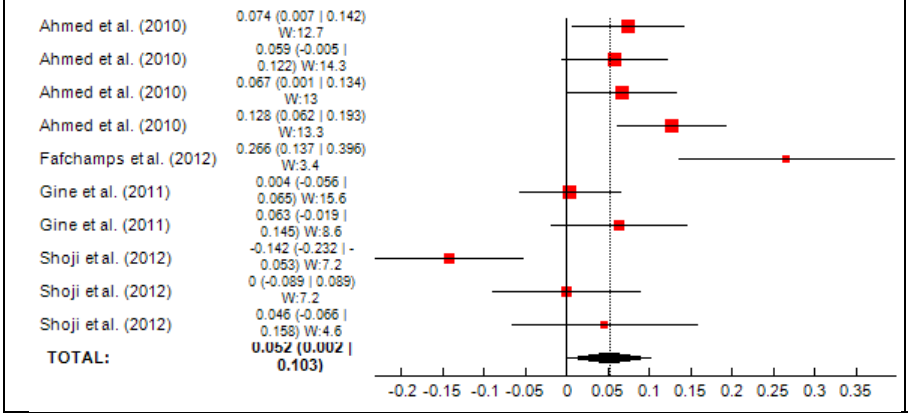
Out of the four studies identified, two had low-risk of bias and two had medium risk of bias. Further, out of the four studies, one each focused on Bangladesh, India, Pakistan and Sri Lanka. The study based out of Pakistan is Giné et al. (2011), while Shoji (2012) studies the Sri Lankan population. Fafchamps (2012) studied the Indian population, and Ahmed et al. (2009) focused on Bangladesh.

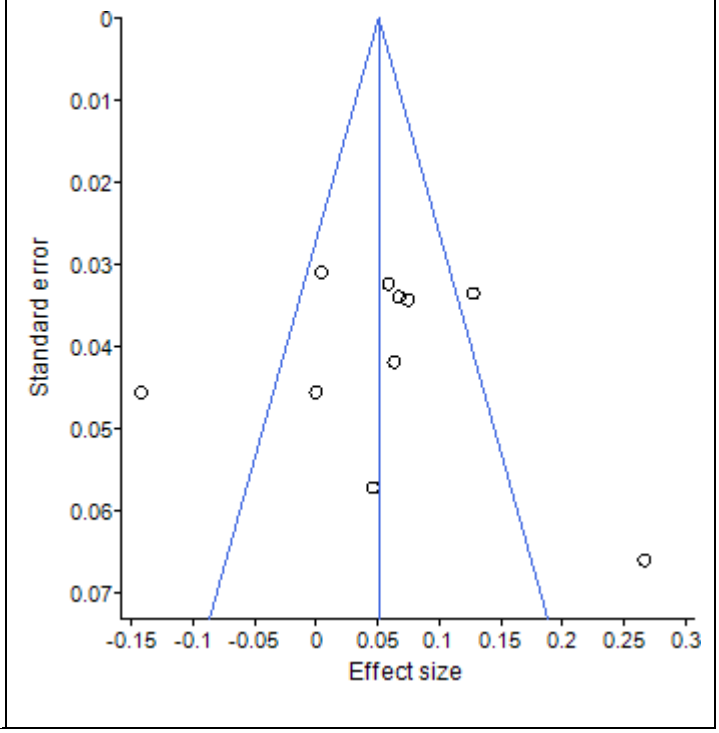
The findings from the meta-analysis from the forest plot in figure 4.7 suggested that the overall effect of social outcomes was significant. It can be noted that the pooled effect size was positive and significant. As the effect size was high (SMD=0.0524, CI= 0.00162, 0.103), the results indicated that there was an effect of social outcomes on market linkages. The funnel plot from figure 4.7 shows that there was a high degree of heterogeneity as I squared is 76.40%. The sample size seems moderate.

Figure 4.7 Meta-analysis results: social outcomes

Heterogeneity: Q = 38.2; df = 9; p = 1.61E-05; I-squared = 76.4%; tau-squared = 0.00496.

Random effects model: 0.0524 (0.00162, 0.103)





4.5 ANALYSIS OF ECONOMIC AND SOCIAL OUTCOMES

The economic and social outcomes were further analysed to understand the impact of interventions on these outcomes. The outcomes that were featured in more than one study were taken for analysis.

Multiple interventions have significant positive impact on both economic and social outcomes as shown in table 4.4a. The final analysis was to understand whether single or multiple interventions had an effect on economic and social outcomes. As can be seen from table 4.4a, we found that multiple interventions had a large effect on economic outcomes, while the same had a lesser effect on social outcomes. Single interventions had hardly any effect on both economic as well as social outcomes. When we compared multiple versus single outcomes we found that the effect of multiple outcomes was larger than the effect on single outcomes.

Table 4.4a Multiple vs. single interventions: outcomes and effect sizes

Intervention type	Outcome details	df	SMD	95% confidence interval		Significance
Multiple interventions	Economic	49	0.136	0.0944	0.178	Positive significant
	Social	3	0.0817	0.0489	0.115	Positive significant
Single interventions	Economic	9	0.088	-0.027	0.203	Positive not significant
	Social	4	0.0409	-0.0657	0.147	Positive not significant
Multiple vs. single	Economic	59	0.128	0.0885	0.167	Positive significant
	Social	8	0.0581	0.00311	0.113	Positive significant

As indicated in table 4.4b below, from the effect size and confidence interval we found that asset, income consumption/expenditure of households showed a significant positive impact as a result of the interventions. However, the interventions had no statistical impact on yield, literacy and social capital. The forest plots and funnel plot of these outcomes are provided in appendix 17. A similar trend was seen among multiple interventions. Multiple interventions had significant positive impact on asset, income,

consumption/expenditure and profit/revenue/sales and no significant impact on yield, credit or financial and technical literacy.

Table 4.4b Impact of all interventions on economic and social outcomes

Outcome type	Outcome details	df	SMD	95% confidence interval		Significance
Economic	Asset	10	0.0526	0.0302	0.0749	Positive significant
	Credit	1	0.0563	-0.0546	0.167	Positive not significant
	Income	7	0.0931	0.0479	0.138	Positive significant
	Consumption/ expenditure	7	0.12	0.047	0.193	Positive significant
	Yield	3	0.187	-0.00893	0.383	Positive not significant
	Profit/revenue/sales	11	0.213	0.0747	0.352	Positive significant
	Financial and technical literacy	5	0.0239	-0.0553	0.103	Positive not significant
Social	Social capital	2	0.053	-0.177	0.283	Positive not significant

Table 4.4c Impact of multiple interventions on economic outcomes

Outcome Details	df	Effect size (RM)	95% confidence interval		Significance
Asset	10	0.0526	0.0302	0.0749	Positive significant
Credit	1	0.0563	-0.0546	0.167	Positive not significant
Income	7	0.0931	0.0479	0.138	Positive significant
Consumption/ expenditure	5	0.159	0.0776	0.241	Positive significant
Yield	1	0.187	-0.00893	0.383	Positive not significant
Profit/revenue/sales	8	0.2	0.0902	0.31	Positive significant
Financial and technical Literacy	1	0.0228	(-0.0619	0.107	Positive not significant

4.6 SUMMARY OF META-ANALYSIS

We had eight studies for the meta-analysis. Among them, four had low risk of bias, while another four had medium risk of bias. Unique interventions were three, namely FS, CB and IKS. RVC was always in combination with these four interventions. Out of the three unique interventions, meta-analysis was not possible for CB and IKS, as three were only one study each in both these interventions. Table 4.5 gives a summary of the meta-analysis.

Table 4.5: Summary of meta-analysis

Intervention/ combination type	SMD	95% confidence interval		Significance	Sources
Financial support	0.011	-0.054	0.0759	Positive not significant	Giné & Mansuri (2011) Shoji et al. (2012)
Capacity building + financial support	0.129	0.0846	0.173	Positive significant	Ahmed et al. (2009) Banerjee et al. (2011) Bauchet et al. (2015)

Single interventions	0.0674	-0.00742	0.142	Positive not significant	Fafchamps & Minten (2012) Shoji et al. (2012) Giné & Mansuri (2011)
Multiple interventions	0.13	0.0931	0.166	Positive significant	Ahmed et al. (2009) Banerjee et al. (2011) Bauchet et al. (2015) Mishra et al. (2016) Desai & Joshi. (2013)

FS had two studies and its effect was not significant. Hence offering financial support alone does not have an effect on market linkages. However, in combination with capacity building (CB), FS interventions had a positive and significant impact. Interventions that combined asset transfer along with specialised training had significant positive impact on outcomes. We also found that single interventions did not impact outcomes as compared to multi-pronged interventions. This does reiterate the importance of multiple interventions to have an impact on the outcomes. Finally, we also find that the multiple interventions had impact on both economic as well as social outcomes. Among economic outcomes, asset, income, consumption/expenditure and profit/revenue/sales show a positive and significant impact while yield, credit, literacy and social capital show positive but not statistically significant results.

4.6 NARRATIVE SYNTHESIS OF INCLUDED STUDIES

The following sections provide a narrative synthesis of the economic and social impact of a range of market-led interventions and the factors influencing those outcomes. The tables summarise the studies identified for each intervention and a summary is provided at the end of each section describing the various types of the intervention, outcomes and factors.

RURAL VALUE CHAINS (RVCS)

A total of 11 studies focused on rural value chains (RVCs) were identified for a narrative synthesis. These studies focused on a few types of RVCs, their economic and social outcomes and factors that contribute to the efficiency of these RVCs. (Table 4.3–4.4).

ECONOMIC OUTCOMES

Eight studies assessed the impact of RVCs on economic outcomes. Table 4.3 provides an overview of the findings in terms of their overall direction of effect.

Table 4.3: Impact of RVCs on income/profits/assets			
Authors	**Description of intervention**	**Outcome/findings**	**Direction of impact**
Choudhary et al. (2012)	This paper highlights the results of an action research to upgrade mountain collectors of medicinal and aromatic plants (MAPs) like Indian bay leaves (Cinnamomum tamala Nees and Eberm) in Chamoli district of Uttrakhand, India	Streamlined marketing through local auctions reduced collectors' risks and led to a three-fold increase in price at the village, which increased household income	Positive
Desai & Joshi (2013)	NGO SEWA implemented a Women Farmers with Global Potential (WFGP) programme for organising female farmers into producer associations	Programme weakly increased members non-farm income and access to output markets	Positive
Anup et al. (2015)	This study was carried with an objective to identify and quantify impacts of ecotourism on environmental conservation, social and cultural heritage preservation, economic development and enhancement of livelihoods	Enhanced income	Positive
Mishra et al. (2016)	This study investigates the impact of contract farming (CF) in high yielding varieties (HYV) of paddy seed production on costs, yield and profits of smallholder farms in Nepal	The study finds a significant positive impact of contract HYV seed farming on revenues, profits and yield, and a significant negative impact on total costs of production. Additionally, very small farms (60.43 ha) with CF in HYV paddy seeds tend to gain the most when it comes to yield per hectare.	Positive
Goletti et al. (1995)	This paper address two main sets of issue, first, the concept and measurement of market integration, and second, the relation between market integration and structural	Degree of market integration moderate	Negative

Table 4.3: Impact of RVCs on income/profits/assets			
Authors	**Description of intervention**	**Outcome/findings**	**Direction of impact**
	factors. The analysis is applied to rice markets in Bangladesh		
Hatlebakk (2011)	Living standards measurement study data from Nepal is used to generalise a model of triadic power involving landlords, multiple agents and labourers.	The shorter the distance to market, the lower the wages for the labourer. Wage discrimination happens across geography, caste and type of labour	Negative
Mukherjee (2013)	This study examines the functioning of a community driven development project implemented by Samrakshan NGO in four villages of Madhya Pradesh	Crop income, retained income and total income do not show statistically observable gains. Marginal increase in food security	Negative
Alonso & Swinnen (2016)	This paper tries to disentangle distortions/rents among the interest group within the consumer and producer group. The paper explicitly considers the impact on several groups along the value chain	No gains for farmers	No impact

TABLE 4.3 SOCIAL OUTCOMES

Of the six studies measuring the impact of RCVs on social outcomes, four measured empowerment and social capital, while three measured outcomes relevant to sustainable practices. See tables 4.4. and 4.5 for a summary of the direction of effect.

Table 4.4: Impact of RVCs on empowerment and social capital			
Authors	**Description of intervention**	**Outcome/findings**	**Direction of impact**
Adhikari & Goldey (2009)	This paper aims to contribute to a better understanding of the sustainability of community groups by examining the factors associated with social capital in villages of a southern district of Nepal	Village level social capital is positively related to survival and functioning of groups	Positive

Desai & Joshi (2013)	NGO SEWA implemented a Women Farmers with Global Potential (WFGP) programme for organising female farmers into producer associations	It had stronger impacts on members' awareness and utilisation of financial services	Positive
Mukherjee (2013)	This study examines the functioning of community driven development project implemented by Samrakshan NGO in four villages of Madhya Pradesh	Community could identify problems and solutions	Positive
Choudhary et al. (2014)	This article describes the typology of value-chains (VC) actors and their roles in the VC, and analyses responses from a major category of actors and facilitators to a set of common factors for improvement of the Indian bay leaf (Cinnamon tamala). VC in India and Nepal	Asymmetrical power relations lead to exploitation of small producers	Negative

Table 4.5: Impact of RVC on sustainable practices

Authors	Description of intervention	Outcome	Direction of impact
Edmonds (2002)	This study uses institutional details about the implementation of this programme to evaluate its impact on the extraction of wood for fuel	Transferring forests to local groups of forest users is associated with a significant reduction in resource extraction	Positive
Choudhary et al. (2012)	This paper highlights the results of an action research to upgrade mountain collectors of medicinal and aromatic plants (MAPs) like Indian bay leaves (Cinnamomum tamala Nees and Eberm) in Chamoli district of Uttrakhand, India	Findings show horizontal coordination that increased awareness and ownership of collectors led to adoption of improved harvesting and sustainable extraction practices	Positive
Anup et al. (2015)	This study was carried with an objective to identify and quantify impacts of ecotourism on environmental conservation, social and cultural heritage	Ecotourism enhances ecological conservation	Positive

	preservation, economic development and enhancement of livelihoods		
Naidu (2009)	This paper studies the impact of differences in economic benefits, wealth, and social classes within the community on collective management of forests.	Moderate wealth heterogeneity and high levels of social diversity are beneficial for collective management	Positive

TYPES

A major type of RVC institution that emerges from these studies is that of groups that are created to facilitate market linkages. Desai and Joshi (2013) study a group of women farmers who have been brought together by an NGO and private sector to form a rural producer association. This association is provided with extensive input and output support. Other studies focus on different community-based organisations to collect forest products and actors along existing value chains (Choudhary et al., 2012; Edmonds, 2002) to develop ecotourism (Anup et al., 2015) and to identify problems and solutions that would enhance the livelihoods of the community (Mukherjee, 2013). One of the papers in this set, Mishra et al. (2016), studies contract farming initiatives in Nepal for producing higher yielding hybrid paddy seeds.

OUTCOMES

In this set of papers, eight studies provide explicit evidence about the impact the RVC interventions have on economic outcomes like income, assets and profit. Some of these studies highlight a positive impact (Desai and Joshi, 2013; Choudhary et al.,2012; Choudhary et al., 2014; Anup et al., 2015; Mishra et al, 2016). For example, Mishra et al. (2016) finds a significant positive impact of contract seed farming on revenues, profits and yield, and a significant negative impact on total costs of production, thus helping the producer. Similarly, Anup et al. (2015) finds enhanced income as an outcome of a participative ecotourism initiative. At the same time, some studies also point out to either negative or no impact on economic gains (Mukherjee, 2013; Alonso and Swinnen, 2016; Goletti et al., 1995). Mukherjee (2013), for instance, in a study of the impact of a community development group to enhance livelihoods found marginal impact on farm and total income for the members.

Four studies document the impact RVCs have on social outcomes related to empowerment and social capital. Desai and Joshi (2013), Mukherji (2013), and Adhikari and Goldey (2009) highlight the positive impact of the interventions. Desai and Joshi (2013), for example, point out that groups of women brought in to form producer associations displayed higher levels of financial awareness and also utilised financial services. Choudhary et al. (2014), on the other hand, points out that asymmetrical power relations among different actors in the bay leaf collection value-chain works against small producers.

A set of studies, three in this group, point out the positive impact RVCs have on sustainable practices (Anup et al., 2015; Choudhary et al., 2012; Edmonds, 2002). A study of community-based resource

management initiatives in Nepal's forests found that forest groups were associated with a significant reduction, close to 14%, in resource extraction (Edmonds, 2002).

FACTORS

Some of these studies identify factors that contribute to the efficiency of RVC interventions in rural settings. The importance of relevant training and the critical role facilitators play in forming and sustaining the groups is highlighted by Adhikari and Goldey (2009). This paper also points out to the possibility of the rich and landed in the rural setting, capturing disproportionate benefits at the expense of the poor and landless. Mukherji (2013) points out that more emphasis on managerial and technical training would have to be provided as rural challenges may leave many tasks incomplete, thus compromising the objectives of the group. Goletti et al. (1995) points out that better road connectivity can act as an impetus for faster market integration. Finally, Mishra et al. (2016) suggests that small farms in Nepal should enter into contract farming with both input (agricultural and financial resources and credit) and output (fixation of advanced price, among other things) conditions.

CAPACITY BUILDING

The tables below summarize the impact of capacity building interventions on social and economic outcomes among rural households. (Table 4.6 to 4.11).

ECONOMIC OUTCOMES

Table 4.6: Overview of directions on effect of capacity building on income/profit/revenue

Authors	Description of intervention	Outcome	Direction of impact
Choudhary (2012)	This paper highlights the results of an action research to upgrade mountain collectors of medicinal and aromatic plants (MAPs) like Indian bay leaves (Cinnamomum tamala Nees and Eberm) in Chamoli district of Uttrakhand, India	Household income	Positive
Giné & Mansuri (2011)	This paper investigates a field experiment by PPAF & NRSP in rural Pakistan where a subset of male and female microfinance clients were offered eight full-time days of business training and the opportunity to participate in a lottery to access business loans of up to	Household income	Positive

	100,000 Rs (USD 1,700), about seven times the average loan size		
Sandhu et al. (2012)	The purpose of this paper is to investigate the entrepreneurship, education and training (EET) needs of small family businesses operating in the agricultural sector of the Indian economy	Profit	Positive
Bandiera et al. (2013)	This study was implemented with collaboration of NGO BRAC to evaluate long-term randomised control trial of the Targeted Ultra Poor (TUP) programme in rural Bangladesh	This paper demonstrates that sizeable transfers of assets and skills enable the poorest women to shift out of agricultural labour and into running small businesses. This shift, which persists and strengthens after assistance is withdrawn, leads to a 38% increase in earnings	Positive

Table 4.7: Overview of directions on effect of capacity building on consumption, expenditure and saving

Authors	Description of intervention	Outcome	Impact
Bandiera et al. (2013)	This study was implemented with the collaboration of NGO BRAC to evaluate long-term randomised control trial of a Targeted Ultra Poor (TUP) programme in rural Bangladesh	Personal consumption expenditure and saving	Positive

Table 4.8: Overview of directions on effect of capacity building on assets/insurance/credit

Authors	Description of intervention	Outcome	Impact
Giné & Mansuri (2011)	This paper investigates a field experiment by PPAF and NRSP in rural Pakistan, where a subset of male and female microfinance clients were offered eight full-time days of business training and the opportunity to participate in a lottery to	Household asset	Positive

	access business loans of up to 100,000 Rs (USD 1,700), about seven times the average loan size		
Bandiera et al. (2013)	This study was implemented with the collaboration of NGO BRAC to evaluate the long-term, randomised control trial of a Targeted Ultra Poor (TUP) programme in rural Bangladesh	Livestock and land owned for cultivation	Positive

Table 4.9 Overview of directions on effect of capacity building on employment/occupational choices

Authors	Description of intervention	Outcome/findings	Direction of impact
Singh (2008)	This paper attempts to analyse the impact of education, skills and vocational training on improving access to non-farm employment	Employment	Positive
Giné & Mansuri (2011)	This paper investigates a field experiment by PPAF & NRSP in rural Pakistan, where a subset of male and female microfinance clients were offered eight full-time days of business training and the opportunity to participate in a lottery to access business loans of up to 100,000 Rs (USD 1,700), about seven times the average loan size	Self-employed households	Positive
Bandiera et al. (2013)	This study was implemented with the collaboration of NGO BRAC to evaluate the long term, randomised control trial of a Targeted Ultra Poor (TUP) programme in rural Bangladesh	Specialised in self-employment	Positive

Table 4.10: Overview of directions on effect of capacity building on knowledge/skills and education

Studies/papers (authors and year)	Description of intervention	Outcome/findings	Direction of impact
Tripp et al. (2005)	This paper assess the introduction of FFS in Sri Lanka and, using the evidence, tries to examine	Insecticide knowledge	Positive

Table 4.10: Overview of directions on effect of capacity building on knowledge/skills and education			
Studies/papers (authors and year)	**Description of intervention**	**Outcome/findings**	**Direction of impact**
	information transmission, range of objective and contribution to social capital		
Choudhary (2012)	This paper highlights the results of an action research to upgrade mountain collectors of medicinal and aromatic plants (MAPs) like Indian bay leaves (Cinnamomum tamala Nees and Eberm) in the Chamoli district of Uttrakhand, India	Knowledge of nursery management	Positive
Giné & Mansuri (2011)	This paper investigates a field experiment by PPAF & NRSP in rural Pakistan where a subset of male and female microfinance clients were offered eight full-time days of business training and the opportunity to participate in a lottery to access business loans of up to 100,000 Rs (USD 1,700), about seven times the average loan size	Impact on business knowledge and practices	Positive
Sandhu et al. (2012)	The purpose of this paper is to investigate the entrepreneurship, education and training (EET) needs of small family businesses operating in the agricultural sector of the Indian economy	Knowledge	Positive
Sarthak & Singh (2012)	Field experiment was conducted with the help of the ILO Microinsurance Innovation Facility in Gujarat	Farmers' education and financial experience are shown to be significantly correlated with achievements in customised tests for ability in mathematics and probability, components of financial literacy	Positive
Janssens (2009)	A community-based development project implemented by NGO Mahila Samakhya to strengthen social capital. This paper investigates	Household education	Negative

Table 4.10: Overview of directions on effect of capacity building on knowledge/skills and education			
Studies/papers (authors and year)	**Description of intervention**	**Outcome/findings**	**Direction of impact**
	the impact of a women's empowerment program in India on trust and cooperation.		

SOCIAL OUTCOMES

Table 4.11: Overview of directions on effect of capacity building on social capital			
Authors	**Description of intervention**	**Outcome**	**Direction of impact**
Janssens (2009)	A community-based development project implemented by NGO Mahila Samakhya to strengthen social capital. This paper investigates the impact of a women's empowerment programme in India on trust and cooperation	Enhanced trust and cooperation	Positive

TYPES

In these studies training is identified as a key intervention. The nature of training, though, varies from a structured, eight-day training programme (Giné and Mansuri, 2011) to longer, self-reflective and participant-led programmes and site visits (Dyutiman et al., 2013; Janssens, 2009; Tripp et al., 2005).

OUTCOMES

The table summarises the studies that focused on capacity building interventions for enhancing market linkages and the impact on economic and social outcomes. Predominantly, most studies report positive impact on economic outcomes. Bandiera et al. (2013) reports an increase of 38% income after a capacity building programme intervention among rural ultra-poor in Bangladesh. Similarly, Choudhary et al. (2012; 2014), in a study of forest produce harvesters in India, finds that upgraded market interventions and training increased their household income. A field experiment in rural Pakistan indicated that business training resulted in better business knowledge and practices, and increases in business and household incomes (Giné and Mansuri, 2011). Studies also report a positive impact on assets because of capacity building interventions (Bandiera et al., 2013; Giné and Mansuri, 2011). Occupation and employment choices are also seen as positively impacted by capacity building interventions (Bandiera et al., 2013; Giné

and Mansuri, 2011). Similarly, knowledge, skills and education have been impacted positively (Tripp et al., 2005; Giné and Mansuri, 2011; Sandhu et al., 2012). Tripp et al. (2005), for example, reports a higher level of knowledge about insecticides and their effects because of farm schools in Sri Lanka.

In India, a community-based women's empowerment programme targeted at the poorest, lower-caste and least-educated households has documented increased trust and cooperation (social capital) among group members and enhanced contribution from the group towards educational and infrastructural projects, like the maintenance of schools, roads and bridges in the community. The study also highlights substantial spillover effects of this programme, wherein observing the lower-caste women in action, others in the community also participated in the programme (Janssens, 2009).

FACTORS

A closer look at these studies reveals the following factors as important for the success of a capacity building programme. Training programmes are translated into action if sufficient opportunities are created for implementation, or the contents are relevant and directly applicable to the tasks at hand. So, small business entrepreneurs in rural Pakistan enhance their business practices by immediately applying them to their businesses – for example, recording sales or maintaining separate accounts for business and household (Giné and Mansuri, 2011). In addition, Bandiera (2013) demonstrates that imparting skills would have to be complemented with a large magnitude of asset transfer for transforming the lives of the poor. A large-scale, randomised control trial in Bangladesh saw ultra poor women given substantial financial assistance ($140 – equivalent to ten times baseline livestock wealth) and provided intensive training and continued assistance. The study reports an increase of 38% in earnings for these women. Evidence from Pakistan indicates that gender differences play an important role in the outcomes of capacity building programmes (Giné and Mansuri, 2011). This study reports that positive effects of capacity building programmes are concentrated with men rather than women and highlights the role of social norms that define the role of women as caregivers and limit their supply to the labour market.

FINANCIAL SUPPORT

Studies in the table above summarise the impact of financial support interventions on economic and social outcomes (tables 4.12–4.17).

ECONOMIC OUTCOMES

Table 4.12 Overview of directions on effect of financial support on consumption/expenditure and savings			
Authors	**Description of intervention**	**Outcome**	**Direction of impact**
Ahmed at al. (2009)	IFPRI conducted household survey for the study 'Relative Efficacy of Food and Cash Transfer In Bangladesh'	Consumption intake, per capita total expenditure and household savings	Positive
Banerjee et al. (2011)	This study was implemented with the help of NGO Bandhan in Murshidabad village of West Bengal to examine the impact of TUP	Consumption	Positive
Bandiera et al. (2013)	This study was implemented with collaboration of NGO BRAC to evaluate the long-term randomised control trial of a Targeted Ultra Poor (TUP) programme in rural Bangladesh	Personal consumption expenditure and saving	Positive

Table 4.13: Overview of directions on effect of financial support on income/asset/credit			
Authors	**Description of intervention**	**Outcome/findings**	**Direction of impact**
Mishra (1994)	This paper analyses the impact of a credit-linked crop insurance scheme – the Comprehensive Crop Insurance Scheme (CCIS) of India – on crop credit or short-term	Insurance schemes increase credit flow	Positive

Table 4.13: Overview of directions on effect of financial support on income/asset/credit			
Authors	**Description of intervention**	**Outcome/findings**	**Direction of impact**
	agricultural credit, especially to small farmers		
Zant (2008)	This paper investigates if crop index insurance is potentially useful for typical cash crop growers in a developing country	Asset protection	Positive
Ahmed at al. (2009)	IFPRI conducted household survey for the study 'Relative Efficacy of Food and Cash Transfer' In Bangladesh	Increase in assets	Positive
Alvi & Dendir (2011)	The data comes from the Household Coping Strategies in Bangladesh (1998–99) surveys conducted by the (IFPRI) in collaboration with (USAID) and the World Bank. The primary purpose of the surveys was to collect information on household food security status, poverty, and response strategies in the aftermath of the 1998 floods in Bangladesh	Access to credit reduces the need for child labour	Positive
Giné & Mansuri (2011)	This paper investigates a field experiment by PPAF & NRSP in rural Pakistan where a subset of male and female microfinance clients were offered eight full-time days of business training and the opportunity to participate in a lottery to access business loans of up to 100,000 Rs (USD 1,700), about seven times the average loan size	Household income	Positive
Shee & Turvey (2012)	This article addresses the problem of collateral-free lending in the context of agricultural development	Risk-contingent credit can increase the supply of credit to collateral-constrained limited resource farmers	Positive

Table 4.13: Overview of directions on effect of financial support on income/asset/credit			
Authors	**Description of intervention**	**Outcome/findings**	**Direction of impact**
Bandiera et al. (2013)	This study was implemented with the collaboration of NGO BRAC to evaluate the long-term, randomised control trial of a Targeted Ultra Poor (TUP) programme in rural Bangladesh	Increase in assets and earnings	Positive
Banerjee et al. (2011)	This study was implemented with the help of the NGO Bandhan in Murshidabad village of West Bengal to examine the impact of TUP	Increase in assets and household income	Positive
Desai & Joshi (2013)	NGO SEWA implemented a Women Farmers with Global Potential (WFGP) programme for organising female farmers into producer associations	Programme weakly increased members' non-farm income and access to output markets	Positive
Bauchet et al. (2015)	NGO SKS implemented an ultra poor programme intended to establish microenterprises (TUP) with regular cash flows, which would enable ultra-poor households to grow out of extreme poverty	No impact on assets and income	No impact
Akter et al. (2008)	The study aimed to assess the commercial viability of a potential crop insurance market in Bangladesh	Insurance, asset protection	Negative

Table 4.14: Overview of directions on effect of financial support on employment/occupational choices			
Authors	**Description of intervention**	**Outcome**	**Direction of impact**
Banerjee et.al (2011)	This study was implemented with the help of NGO Bandhan in Murshidabad	Programme also resulted in enhanced income from non-	Positive

	village of West Bengal to examine the impact of TUP	agricultural enterprises	
Bandiera et al. (2013)	This study was implemented with the collaboration of NGO BRAC to evaluate the long-term, randomised control trial of a targeted ultra poor (TUP) programme in rural Bangladesh	Women take up self-employment	Positive

SOCIAL OUTCOMES

Table 4.15: Overview of directions on effect of financial support on sustainable practices

S. no	Studies/papers (authors and year)	Description of intervention	Outcome	Direction of impact
1.	Panda et al. (2013)	This article examines the merits of crop insurance in adapting to the changing climate	Insurance schemes could encourage farmers to ignore climate-resilient crops	Negative
2.	Kishore et al. (2015)	This study evaluates the impact of a CCT programme (Diesel Subsidy) meant specially to increase the resilience of agriculture to drought	A cash transfer/ subsidy programme does not result in desirable (encourage cultivation) behaviour	Negative

Table 4.16 : Overview of directions on effect of financial support on gender empowerment

Authors	Description of intervention	Outcome	Direction of impact

Ahmed at al. (2009)	IFPRI conducted household survey for the study 'Relative Efficacy of Food and Cash Transfer in Bangladesh'	A food for asset creation and rural maintenance programme had a large impact on women's decision-making and mobility	Positive
Banerjee et al. (2011)	This study was implemented with the help of NGO Bandhan in Murshidabad village, West Bengal, to examine the impact of TUP	Improved emotional wellbeing	Positive
Akter et al. (2016)	The study aims to assess the commercial viability of a potential crop insurance market in Bangladesh	Significant insurance aversion among females	Negative

Table 4.17: Overview of directions on effect of financial support on social capital

Authors	Description of intervention	Outcome/findings	Direction of impact
Shoji et al. (2012)	This paper uses unique, long-panel data from Sri Lanka to examine the mechanism of social capital formation in an imperfect credit market	Poor credit availability lowers trust	Positive

TYPES

These sets of studies allude to the following types of financial products: food and cash transfer (Ahmed et al., 2009); skills and assets transfer (Bandiera et al., 2013); insurance products (Akter et al., 2008; Mishra,

1994; Zant, 2008); cash transfer (Bauchet et al., 2015; Giné and Mansuri, 2011); and risk-contingent credit product (Shee and Turvey, 2012).

OUTCOMES

Ahmed at al. (2009), Bandiera et al. (2013), and Banerjee et al. (2011) highlight the positive impacts on consumption, expenditure and savings. A study of direct asset transfer (and training) in Bangladesh reports a 15% increase in household consumption (Banerjee et al., 2011).

Some papers in this segment point to a positive impact on assets and/or credit when a financial support intervention is introduced (Ahmed at al., 2009; Zant, 2008; Mishra, 1994; Bandiera et al., 2013; Banerjee, 2011). Zant (2008), for example, in a study of smallholder pepper growers in India, found introduction of index insurance reduced crop revenue risk to around 68% of its original level. Similarly, Mishra (1994) found that a comprehensive crop insurance scheme increased the flow of credit to the insured small farmers. Bauchet et al. (2015), in a study of regular cash flows for setting up micro-enterprises in India, found no net impact on assets as the respondents, in an environment where wages were rising, found wage employment to be a better option than self-employment.

Studies by Bandeira (2013) and Banerjee et al. (2011) portray a positive impact of financial support on employment and occupational choices. It is reported that the direct asset transfer programmes resulted in enhanced income from non-agricultural enterprises, and if sustained could lead to sustained income increases for households (Banerjee et al., 2015).

Two studies report a negative impact of financial support on sustainable practices (Panda, 2013; Kishore et al., 2015). Panda (2013) strikes a note of caution by observing that crop insurance may encourage farmers to take up cash crops that could be less climate-resistant. The effect of financial support on social outcomes has been captured by a few papers (Ahmed at al., 2009; Shoji et al., 2012). Ahmed at al. (2009) has indicated a substantial impact on women's decision-making and mobility because of asset transfer.

FACTORS

Gender differences, according to Akter et al. (2016), are seen in aversion towards insurance products. Women with better past experience of money scams avoided such schemes. In addition, financial literacy and the design of insurance products also played a crucial role in the choice or rejection of an insurance product (Akter et al., 2016).

INFORMATION AND KNOWLEDGE-SHARING (IKS)

ECONOMIC OUTCOMES

Five studies were identified under the IKS intervention and the above table summarises the economic and social impact of this intervention (table 4.18–4.19).

Table 3.18 : Impact of IKS on price, market participation			
Authors	**Description of intervention**	**Outcome**	**Impact**
Chowdhury (2006)	This paper examines the impact of access to telecommunications on rural households' factor market participation in Bangladesh	The findings suggest that access to a telephone has a significant positive impact on factor market participation. The difference in market participation between telephone users and non-users is around 14%	Positive
Fafchamps & Minten (2012)	This study estimates the benefits that Indian farmers derive from market and weather information delivered to their mobile phones by a commercial service called Reuters Market Light (RML)	No statistically significant average effect of treatment on the price received by farmers, crop value added, crop losses resulting from rainstorms, or the likelihood of changing crop varieties and cultivation practices	Negative
Shalendra et al. (2013)	This paper tries to integrate the supply chain of horticultural crops by providing need-based information to different players mainly farmers	Age, education level and irrigation were found to be the factors defining the willingness of a farmer to pay for having access to information	NA
Bardhan et al. (2014)	This paper talks about the potential feasibility of launching an information dissemination module by leveraging the ICT infrastructure of the dairy cooperative network	The study has revealed that television and mobile phones are the principal ICT tools used in the study area. The major constraints to information accessibility have been identified as 'respondents' capacity related constraint in using modern ICT tools', 'network and mobile use related constraints' and 'accessibility to ICT services constraints', and these were common in both plains and hills	NA

SOCIAL OUTCOMES

Table 4.19: Impact of IKS on knowledge			
Authors	**Description of intervention**	**Outcome**	**Impact**

Mittal & Mehar (2015)	The paper analyses factors that affect the likelihood of adoption of different agriculture-related information sources by farmers	Increase in knowledge level of farmers about multiple sources of information	Positive

TYPES

Multiple types of information and knowledge-sharing interventions are studied in these papers. Mobile phones (Shalendra et al., 2013), televisions and mobile phones (Bardhan et al., 2014), SMS to farmers (Fafchamps and Minten, 2012), and telephones (Chowdhary, 2006).

OUTCOMES

Though three of these studies focus on the factors that impact on IKS, there are results that point to the economic and social outcomes of this intervention. Chowdhary (2006), in a study of rural households in Bangladesh, finds that telephone use increases farm households' factor market participation by 14%. In other words, the author argues that reduction in information search costs can change the functioning of markets and participation of rural households. On the other hand, Fafchamps and Minten (2012) find no significant impact on the price or revenue for the farmers on usage of RML or an SMS based facility that provided information on farm prices, weather forecasts and crop suggestions.

FACTORS

These studies also point out the factors that enable adoption of IKS. A study in India (Mittal and Mehar, 2015) shows that while farmers use multiple sources of information, the choice also depends on age, education level and farm size. For example, modern ICT tools are positively correlated to education level and farm size. Thus, such technologies are favoured more by rich rather than smallhold farmers. Similarly, willingness to pay for access of information is related to age, education and levels of irrigation (Shalendra et al., 2013). Bardhan et al. (2014) indicates that accessibility to information varies on geography (hills vs. terrain) and is also constrained by the respondents' capacity to use mobile phones.

SUMMARY OF FINDINGS

The narrative synthesis provides the following themes that emerge across the 37 studies.

First, effective market linkages include rural value chains, capacity building interventions, assets and cash transfer. Studies that focus on multiple interventions are effective (for example, Bandiera et al., 2013, reports significant impact on economic and social outcomes on households). However, the effectiveness of the intervention also depends on the target audience. Typically, young men or households headed by women seem to derive maximum benefits from such interventions. Also, identification and choice of

market-relevant (contract farming, financial training) and appropriate livelihood opportunities, rather than generic choice – and providing training and resources for developing them – seem to work. Though the aims of the capacity building interventions are to motivate rural households towards self-employment, economic conditions in the form of higher wages might pull the households towards wage employment (Bauchet, 2014).

Second, formation of groups either as producer association or community-based groups appears to be the most common rural value-chain intervention to enhance market-led linkages. For this to be effective and sustainable, the role of facilitators or coordinators of the groups is critical. At the same time, studies also point out that such groups remain vulnerable to its capture by the rural elite (Adhikari and Goldey, 2009) and resulting disproportionate gains for this segment.

Third, though mobile phones remain a popular choice for dissemination of crop or livelihood-related information, the adoption of this technology depends on multiple socio-economic factors. Rural young men and the landed are more inclined towards using such modern technologies. The adoption also depends, to a large extent, on literacy level and fluency in language.

Fourth, capacity building as an intervention is quite effective in enhancing knowledge and awareness about various livelihood opportunities. In particular among women, such exercises have resulted in higher levels of financial awareness or literacy. But in the absence of markets and opportunities this knowledge would remain more theoretical.

5. DISCUSSION

Interventions focussed on enhancing rural value chains, capacity building, sharing market information and providing financial services to support enhanced market linkages of rural producers.

A major type of rural value-chain intervention that emerges from these studies is formation of groups that are created to facilitate market linkages. These groups vary from producer associations to community-based organisations. Secondly, interventions were focused on exposing and linking to existing actors in the value chains such as contract farming of high-yielding seeds. Under-capacity building intervention training emerges as a key type. There were two approaches, a standardised, structured approach based on initiation and sustenance of business training, and financial literacy modules or specific training programmes that were designed to impart technical competencies including crop production methods, harvesting and sorting products, and site visits. Financial support in these studies alludes to the following types of financial products: food and cash transfer; skills and assets transfer; insurance products; cash

transfer; and risk-contingent credit product. IKS interventions in these studies include mobile phones, televisions, SMS to farmers and telephones.

The analysis from the above sections reveals that a multi-pronged approach focusing on a combination of the four interventions, namely rural value chains, capacity building, information and knowledge-sharing and financial support have a positive and significant impact on enhancing market linkages. Though the impact of information and knowledge-sharing is not significant, the number of studies on information-sharing was too low to be conclusive. It further shows that the impact of interventions on most economic and social outcomes are significant and positive. We conducted an analysis with single and multiple interventions. We found multiple interventions to have significant positive impact as compared to studies focused on single interventions on both economic and social outcomes. Among the economic outcomes, the impact of interventions on assets, income and profit/sales/revenue are significant, positive and large, showing enhanced market linkages. The impact of interventions on consumption and expenditure is also positively significant. We find that the impact of interventions on yield, literacy and social capital is positive but not statistically significant.

FACTORS THAT IMPACT MARKET-LED APPROACHES

First, effective market linkages require a combination of rural value chains, capacity building interventions, assets and cash transfer. Studies that focus on this combination report significant impact on economic outcome of the households. However, the effectiveness of the intervention also depends on the target audience. Typically, young men or households headed by women seem to derive maximum benefits from such interventions. Also, identification and choice of market-relevant and appropriate livelihood opportunities, rather than generic choice, and providing training and resources for developing them seem to work. Though the aims of the capacity building interventions are to motivate rural households towards self-employment, economic conditions in the form of higher wages might pull the households towards wage employment.

Second, formation of groups either as producer association or community-based groups appears to be the most common rural value chain intervention to enhance market-led linkages. For this to be effective and sustainable, the role of facilitators or coordinators of the groups is critical. At the same time, studies also point out that such groups remain vulnerable to its capture by rural elite and resulting disproportionate gains for this segment.

Third, though mobile phones remain a popular choice for dissemination of crop or livelihood-related information, the adoption of this technology depends on multiple socioeconomic factors. Rural young men and the land-holding class are more inclined in using such modern technologies. The adoption also depends, to a large extent, on literacy level and fluency in language.

Fourth, capacity building as an intervention is quite effective in enhancing knowledge and awareness about various livelihood opportunities. In particular, among women such exercises have results in higher levels of financial awareness or literacy. But in the absence of opportunities for participation and exposure

to market linkages, participation in this knowledge would remain more theoretical, merely enhancing knowledge and awareness.

DEPARTURE FROM EXISTING SYSTEMATIC REVIEWS

- Three strands of social protection intervention, like the livelihood development programme, cash transfers and graduation programme (a combination of interventions), were analysed by Sulaiman (2015). In all, 48 programmes were taken for the meta-analysis. They found that lump sum or cash transfers have the highest impact-cost ratio followed by livelihood and graduation programmes. However, that also found that the graduation programme had the most rigorous long-term impact in producing positive results.
- Grimm et al., 2015, also made similar findings in a systematic review. The results indicate that creating employment is a complex purpose. Creating more jobs does not lead to lasting business outcomes. It also suggests that enhancing self-employment is easier than expanding employment in existing jobs.

THE REVIEW PROVIDES POINTERS FOR RESEARCH AND POLICY.

- Market-led rural interventions have created an impact on the poor when the intervention is multi-pronged.
- The review also finds that multiple interventions have a better impact than single interventions on the lives of the poor.
- The interventions must seek to maximise opportunities for backward integration of existing markets and their demands, instead of focusing on enhancing present capabilities and seeking market creation.

5.2 LIMITATIONS

The evaluation of outcomes as stated by Duvendach et al. (2011) generally persists in terms of randomised and non-randomised approaches, unbiased control groups and econometric techniques. It is found that when we consider RCTs or before/after methods in terms of comparison, the control groups fail to provide adequate evidence. Although most studies fall into the category of low risk bias, we do include studies that are moderately risky, too. We also find that other than India, which has many studies, the other SAR countries are represented only in small measure. Also, most studies that we analysed which were longitudinal were single country studies. Hence, making generic conclusions is tough as the conditions in different countries are not the same.

The level of errors that data collected from field surveys is low because most data collection is based on recall. Qualitative or case-based studies will probably provide rich results. We also find that interventions

are effective if other members of the family are supportive of the women. This is because the targets of intervention are mostly women; however, they have very little say on the finances of the family.

Hence, non-availability of a large number of studies that were homogenous is a big limitation of our study. We also find that many studies used multiple interventions. This made it difficult to identify studies based only on one of the four interventions.

In spite of the above limitations, we feel that the strength of this systematic review lies in the fact that we reviewed studies from the last 30 years. We have looked at published and unpublished research papers since 1991. We take multiple outcomes, both economic and social, hence this study is not limited in scope.

KEY CONCLUSIONS

- First, what seems to work is identification and choice of market-relevant (contract farming, bay leaf production) and appropriate livelihood opportunities, rather than generic choice (such as animal husbandry), and providing training and resources for developing them.
- Secondly, studies show that focus on multiple interventions is more effective that those that focused only on a single intervention of value-chain enhancement, information sharing, financial support or capacity building.
- Third, formation of groups either as producer association or community-based groups appears to be the most prevalent rural value-chain intervention to enhance market-led linkages. For this to be effective and sustainable, the role of facilitators or coordinators of the groups is critical. At the same time, studies also point out that such groups remain vulnerable to its capture by the rural elite (and resulting disproportionate gains for this segment).
- Fourth, though mobile phones remain a popular choice for dissemination of crop or livelihood-related information, the adoption of this technology depends on multiple socioeconomic factors. Rural young men and land-owners are more inclined in using such modern technologies. The adoption also depends, to a large extent, on literacy level and fluency in language.
- Fifth, capacity building as an intervention is quite effective in enhancing knowledge and awareness about various livelihood opportunities. In particular, among women such exercises have resulted in higher levels of financial awareness or literacy. But in the absence of markets and opportunities this knowledge would remain more theoretical.
- However, the effectiveness of the intervention also depends on the target audience. Typically, young men or households headed by women seem to derive maximum benefits from such interventions. Though the aim of the capacity building interventions is to motivate rural households towards self-employment, economic conditions in the form of higher wages might pull the households towards wage employment.

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LIST OF APPENDICES

APPENDIX 1: AUTHORSHIP OF THE REPORT

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Conflicts of interest

There were no conflicts of interest in the writing of this report.

Contributions

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Picture

The picture on the cover page has been taken by one of the team members during field visit to Bero Mandi (JHARKHAND) for this programme.

APPENDIX 2: INCLUSION AND EXCLUSION CRITERIA

CRITERIA	INCLUSION	EXCLUSION
Country context	Afghanistan Bangladesh Bhutan India Nepal Pakistan Sri Lanka	Any other low- or middle-income country studies
Location	Rural Semi urban	Only urban
Participant type	Individual Household	

Intervention	Rural value chain Agriculture value chain Contract farming Market linkages Capacity building Training Farmer field schools Livelihood training Financial literacy training Technology transfer to households Asset transfer Cash transfer Conditional cash transfer Credit/loan Insurance, crop insurance	Studies on supply chain for non agri-related manufacturing firms Studies on training for bank/ enterprise managers/ students on technology
Methodologies and study design	Impact evaluation studies using the following study designs: RCT Before/after impact studies Experimental studies Quantitative sample survey studies Quantitative perception-based studies Cross-sectional studies with participant and control groups	Studies not backed by primary or secondary quantitative data
Outcomes	**Economic outcomes** Income/assets	Studies not focused on these outcomes (studies on financing costs of banks)

	Expenditure/consumption Credit/insurance/savings Costs/revenue /sale/profit Technical/financial literacy **Social outcomes** Gender empowerment Sustainable practices/collective resource management	Studies focused on performance of credit cooperatives
Type of publications	Published research studies PhD theses Research reports published on organisation websites	Editorials Theoretical/conceptual papers Comment pieces Newspapers Abstract/presentations Conference proceedings
Year	Research published in or after 1990*	Research published before 1990
Language	Published in English	Not published in English

APPENDIX 3: SEARCH STRATEGY FOR ELECTRONIC DATABASES

1. Electronic search of bibliographic databases was carried out in SpringerLink, ScienceDirect, EBSCO, Emerald, Wiley Online Library, ProQuest, JSTOR, JGATE, Taylor and Francis, and Scopus.

2. Systematic review databases, such as the Campbell Collaboration Library of systematic reviews and the Cochrane Library.

3. Key websites: The following key websites are directly linked to development issues and funding agencies.

- PhD thesis abstracts (http://www.sasnet.lu.se/sasnet/sasnet-nordic-dissertations; http://www.library.illinois.edu/asx/southasiancollection/sa_dissertations)
- DFID
- World Bank
- Asian Development Bank (ADB) – https://www.adb.org/
- Association for Asian Studies (AAS) – http://www.asian-studies.org/
- British Association for South Asian Studies (BASAS) – http://www.basas.org.uk/
- Consultative Group to Assist the Poor (CGAP) – https://www.cgap.org/
- Economic and Social Commission for Asia and the Pacific (ESCAP) –http://www.unescap.org/
- International Fund for Agricultural Development (IFAD) – https://www.ifad.org/
- Inter-American Development Bank (IADB) – http://www.iadb.org/en/inter-american-development-bank,2837.html
- International Food Policy Research Institute (IFPRI) – http://www.ifpri.org/
- International Labour Organisation (ILO) – http://www.ilo.org/global/about-the-ilo/lang--en/index.htm
- Labordoc – http://labordoc.ilo.org/
- South Asia Archive and Library Group (SAALG) – http://www.bl.uk/reshelp/bldept/apac/saalg/
- South Asian Network for Development and Environmental Economics – http://www.sandeeonline.org/
- UNESCO Social and Human Science Publications – http://www.unesco.org/new/en/social-and-human-sciences/resources/online-materials/publications/
- UNESDOC – http://www.unesco.org/new/en/unesco/resources/online-materials/publications/unesdoc-database/
- UNICEF and United Nations Children's Fund – http://www.unicef.org/
  United Nations Development Fund for Women (UNIFEM) – https://www.bmz.de/en/what_we_do/approaches/multilateral_cooperation/players/UnitedNations/UNIFEM/index.html
- United Nations Development Programme (UNDP) – http://www.undp.org/content/undp/en/home/operations/about_us.html
- United Nations Population Fund (UNFPA) – http://www.unfpa.org/
- Unites States Agency for International Development (USAID) – https://www.usaid.gov/
- WHO Index Medicus for South-East Asia Region (IMSEAR) – http://www.who.int/library/databases/searo/en/
- World Bank - http://www.worldbank.org/

The search engines that were used are Google and Google Scholar. We have carried out handsearching of key journals; for those available in print form only, we have handsearched by reading the contents page of each journal issue. We have searched for relevant PhD theses published online, and handsearched those available in print form in reputed universities and research institutes in India.

APPENDIX 4: LIST OF ELECTRONIC DATA BASES

S. no	Database	Search criteria	Search phrase used	Subject/publications	Fields search	Hits
1.	ScienceDirect	Expert search	Only search phrase	• Business, management and accounting • Social science • Economics, econometrics and finance	All fields	1,424
2.	Proquest	Advanced search	Only search phrase	All covered in the data base	Titles	451
3.	Scopus	Advanced search	Only search phrase	All covered in the data base	All fields	1,130
4.	JGATE	Advanced search	Title or open search	• Social science • Business, economy and management	Titles only	1,076
5.	SpringerLink	Advanced search	Only search phrase	• Economics • Business and management • Social science (agriculture, information system & application, business info system, wellbeing & quality of life, learning & instruction, sustainable development, public finance, applied ethics and social responsibility)	All fields	1,086
6.	Emerald	Advanced search	Only search phrase	• All covered in the data base	Titles and abstract	2,142
7.	JSTOR	Advanced search	Title or open search	• Business • Economics • Development studies	Titles only	1,157
8.	Taylor & Francis	Advanced Search	Only search phrase	• Development studies	All fields	1,245
9.	Wiley Online Library	Advanced search	Only search phrase	All covered in the data base	All fields	3,484

10.	EBSCO	Advanced search	Only search phrase	All covered in the data base	Titles and abstract	1,703
	Total hits obtained					**14,898**

APPENDIX 5. JOURNALS HANDSEARCH

List of Hand-Searched Journals			
S.No.	**List of hand searched journals**	**Publisher**	**Year**
1.	American Journal of Agricultural Economics	Oxford University Press	1991–2016
2.	Asia Pacific Business Review	Taylor & Francis Online	1994–2016
3.	Asian Economic Policy Review	Wiley	2006–2016
4.	Cambridge Journal of Economics	Oxford University Press	1991–2016
5.	Cesifo Economic Studies	Oxford University Press	1991–2017
6.	Contemporary South Asia	Taylor & Francis Group	1992–2016
7.	Development and Change	Wiley	1991–2016
8.	Development Policy Review	Wiley	1991–2016
9.	Industrial Relations Journal	SAGE	1991–2016
10.	International Labor Review	Wiley	1999–2016
11.	Journal of Asia Business Studies	Emerald	2006–2016
12.	Journal of Asia-Pacific Business	Taylor & Francis Online	1994–2016
13.	Journal of Contemporary Asia	Routledge	1991–2016
14.	Journal of Development Economics	Elsevier	1991–2016
15.	Journal of Development Entrepreneurship	World Scientific	1996–2016
16.	Journal of International Development	Wiley	1991–2016
17.	Journal of Urban Economics	Elsevier	1991–2016
18.	Labour	Wiley	1991–2016
19.	Labour Economics	Elsevier	1993–2016
20.	Modern Asian Studies	Cambridge University Press	1991–2016
21.	Oxford Bulletin of Economics and Statistics	Wiley	1991–2016
22.	Oxford Development Studies	Taylor & Francis Group	1991–2016
23.	Oxford Economic Papers	Oxford University Press	1991–2016
24.	Oxford Review of Economic Policy	Oxford University Press	1991–2016
25.	Population and Development Review	Wiley	1991–2016
26.	Population Studies	Taylor & Francis Group	1991–2016
27.	Review of Economic Dynamics	Elsevier	1998–2016
28.	Review of Income and Wealth	Wiley	1991–2016
29.	Small Business Economics	Springer	1991–2016
30.	Southern Economic Journal	Wiley	2009–2016
31.	The Developing Economies	Wiley	1991–2016
32.	The Economic Journal	Wiley	1991–2016

33.	The Journal of Development Studies	Taylor & Francis Group	1991–2016
34.	The Journal of Economic Perspectives	American Economic	1991–2016
35.	The Quarterly Journal of Economics	Oxford University Press	1991–2016
36.	The Singapore Economic Review	World Scientific	1991–2016
37.	The World Bank Economic Review	Oxford University Press	1991–2016
38.	The World Economy	Wiley	1991–2016
39.	World Bank Research Observer	Oxford University Press	1991–2016
40.	World Development	Elsevier	1991–2016

APPENDIX 6: EPPI-CENTRE KEYWORD SHEET INCLUDING REVIEW-SPECIFIC KEYWORDS AND SEARCH TERMS

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

List of LMIC Countries

- (Africa or Asia or Caribbean or 'West Indies' or 'South America' or 'Latin America' or 'Central America'):ti,ab,kw

- (Afghanistan or Albania or Algeria or Angola or Antigua or Barbuda or Argentina or Armenia or Armenian or Aruba or Azerbaijan or Bahrain or Bangladesh or Barbados or Benin or Byelarus or Byelorussian or Belarus or Belorussian or Belorussia or Belize or Bhutan or Bolivia or Bosnia or Herzegovina or Hercegovina or Botswana or Brasil or Brazil or Bulgaria or 'Burkina Faso' or 'Burkina Fasso' or 'Upper Volta' or Burundi or Urundi or Cambodia or 'Khmer Republic' or Kampuchea or Cameroon or Cameroons or Cameron or Camerons or 'Cape Verde' or 'Central African Republic' or Chad or Chile or China or Colombia or Comoros or 'Comoro Islands' or Comores or Mayotte or Congo or Zaire or 'Costa Rica' or 'Cote d'Ivoire' or 'Ivory Coast' or Croatia or Cuba or Cyprus or Czechoslovakia or 'Czech Republic' or Slovakia or 'Slovak Republic'):ti,ab,kw

- (Djibouti or 'French Somaliland' or Dominica or 'Dominican Republic' or 'East Timor' or 'East Timur' or 'Timor Leste' or Ecuador or Egypt or 'United Arab Republic' or 'El Salvador' or Eritrea or Estonia or Ethiopia or Fiji or Gabon or 'Gabonese Republic' or Gambia or Gaza or Georgia or Georgian or Ghana or 'Gold Coast' or Greece or Grenada or Guatemala or Guinea or Guam or Guiana or Guyana or Haiti or Honduras or Hungary or India or Maldives or Indonesia or Iran or Iraq or 'Isle of Man' or Jamaica or Jordan or Kazakhstan or Kazakh or Kenya or Kiribati or Korea or Kosovo or Kyrgyzstan or Kirghizia or 'Kyrgyz Republic' or Kirghiz or Kirgizstan or 'Lao PDR' or Laos or Latvia or Lebanon or Lesotho or Basutoland or Liberia or Libya or Lithuania):ti,ab,kw

- (Macedonia or Madagascar or 'Malagasy Republic' or Malaysia or Malaya or Malay or Sabah or

Sarawak or Malawi or Nyasaland or Mali or Malta or 'Marshall Islands' or Mauritania or Mauritius or 'Agalega Islands' or Mexico or Micronesia or 'Middle East' Systematic review of quantitative evidence on the impact of microfinance on the poor in South Asia or Moldova or Moldovia or Moldovian or Mongolia or Montenegro or Morocco or Ifni or Mozambique or Myanmar or Myanma or Burma or Namibia or Nepal or 'Netherlands Antilles' or 'New Caledonia' or Nicaragua or Niger or Nigeria or 'Northern Mariana Islands' or Oman or Muscat or Pakistan or Palau or Palestine or Panama or Paraguay or Peru or Philippines or Philipines or Phillipines or Phillippines or Poland or Portugal or 'Puerto Rico'):ti,ab,kw

- (Romania or Rumania or Roumania or Russia or Russian or Rwanda or Ruanda or 'Saint Kitts' or 'St Kitts' or Nevis or 'Saint Lucia' or 'St Lucia' or 'Saint Vincent' or 'St Vincent' or Grenadines or Samoa or 'Samoan Islands' or 'Navigator Island' or 'Navigator Islands' or 'Sao Tome' or

- 'Saudi Arabia' or Senegal or Serbia or Montenegro or Seychelles or 'Sierra Leone' or Slovenia or 'Sri Lanka' or Ceylon or 'Solomon Islands' or Somalia or Sudan or Suriname or Surinam or Swaziland or Syria or Tajikistan or Tadzhikistan or Tadjikistan or Tadzhik or Tanzania or Thailand or Togo or 'Togolese Republic' or Tonga or Trinidad or Tobago or Tunisia or Turkey or Turkmenistan or Turkmen or Uganda or Ukraine or Uruguay or USSR or 'Soviet Union' or 'Union of Soviet Socialist Republics' or Uzbekistan or Uzbek or Vanuatu or 'New Hebrides' or Venezuela or Vietnam or 'Viet Nam' or 'West Bank' or Yemen or Yugoslavia or Zambia or Zimbabwe or Rhodesia):ti,ab,kw

- Asia or Asian or'South Asian' orAfghanistan or Bhutan or Bangladesh or India or Maldives or Nepal or Pakistan or 'Sri Lanka' or Bhutanese or Nepalese or Nepali or Afghan or Afghans or Bangladeshi or Pakistani or Indian or Maldivian or Sri Lankan or Bangladeshis or Pakistanis or Indians or Maldivians or 'Sri Lankans'

- (developing or less* developed or 'under developed' or underdeveloped or 'middle income' or low* income or underserved or 'under served' or deprived or poor*country* or nation* or population* or world):ti,ab,kw

- (developing or less* NEXT developed or 'under developed' or underdeveloped or 'middle income' or low* NEXT income) NEXT (economy or economies):ti,ab,kw

- low* NEXT (gdp or gnp or 'gross domestic' or 'gross national'):ti,ab,kw

- (low NEAR/3 middle NEAR/3 countr*):ti,ab,kw

- (lmic or lmics or 'third world' or 'lami country' or 'lami countries'):ti,ab,kw

- ('transitional country' or 'transitional countries'):ti,ab,kw

Search strategies and terms

We combined search terms for:

- **Interventions:** all the four interventions
- **Countries:** LMIC, South Asian countries & Nepal
- **Study design:** intervention wise outcome evaluations

The following search strings were tested, refined and adapted for different electronic databases. We used different types of search phrases in terms of title (market-led rural development)**,** interventions, outcomes, methods and research designs, and country specification.

Market-led rural development search terms (searching on title, abstract and keywords)

- ('rural value chain' OR 'rural value chains' OR 'rural supply chain' OR 'rural supply chains' OR 'value chain' OR 'supply chain' OR 'value chains' OR 'supply chains' OR 'agriculture value chain' OR 'agriculture value chains' OR 'agriculture supply chain' OR 'agriculture supply chains' OR 'cold chain' OR 'cold storage' OR 'cold chains' OR 'cold storages' OR 'farmer organisation' OR 'producer organisation' OR 'rural warehouse' OR 'commodity trade' OR 'farmer organisations' OR 'producer organisations' OR 'rural warehouses' OR 'commodity trading' OR 'food process' OR 'dairy process' OR 'milk process' OR 'vegetable process' OR 'grain process' OR 'meat process' OR 'fruit process' OR 'pulses process' OR 'oilseeds process' OR 'agriculture process' OR 'food processing' OR 'dairy processing' OR 'milk processing' OR 'vegetable processing' OR 'grain processing' OR 'meat processing' OR 'fruit processing' OR 'pulses processing' OR 'oilseeds processing' OR 'agriculture processing' OR 'agri processing' OR 'agro processing' OR 'agricultural processing') AND ('quality input' OR 'cost of production' OR 'price discovery' OR 'asset protection' OR 'price protection' OR 'individual income' OR 'household income' OR 'consumption' OR 'saving' OR 'employment opportunity' OR 'employment opportunities' OR 'gender equality' OR 'gender equalities' OR 'food security' OR 'food securities' OR 'sustainable environmental practice' OR 'sustainable environmental practices').

- (capacity building OR capacity strengthening OR capacity training OR vocational training OR vocational building OR vocational strengthening OR entrepreneurship building OR entrepreneurship training OR entrepreneurship development OR entrepreneurship strengthening OR entrepreneurial skill OR entrepreneurial development OR entrepreneurial training OR agricultural business training OR skill training OR skill development OR skill strengthening OR skill building OR distance learning OR financial literacy) AND ('knowledge' OR 'skill' OR 'worker productivity' OR 'worker productivities' OR 'labour productivity' OR 'labour productivities' OR 'managerial capability' OR 'managerial capabilities' OR 'individual income' OR 'household income' OR 'gender equality' OR 'gender equalities' OR 'employment opportunity' OR 'employment opportunities' OR 'sustainable environmental practice' OR 'sustainable environmental practices').

- (‘information sharing’ OR ‘information dissemination’ OR ‘knowledge sharing’ OR ‘knowledge dissemination’ OR ‘communication technology’ OR ‘communication technologies’ OR ‘ict’ OR ‘information technologies’ OR ‘information technology’ OR ‘it’ OR ‘digital inequality’ OR ‘digital inequalities’ OR ‘mobile phone’ OR ‘mobile phones’ OR ‘smartphone’ OR ‘smartphones’ OR ‘cell phone’ OR ‘cell phones’ OR ‘e-learning’ OR ‘digital tool’ OR ‘digital technology’ OR ‘digital technologies’ OR ‘internet service provider’ OR ‘internet service providers’ OR ‘radio’ OR ‘broadcast’ OR ‘tv’ OR ‘television’ OR ‘broadband service’ OR ‘broadband services’ OR ‘digital media’) AND (‘enterprise productivity’ OR ‘enterprise productivities’ OR ‘farm productivity’ ‘farm productivities’ OR ‘input utilisation’ OR ‘price discovery’ OR ‘market access’ OR ‘production cost’ OR ‘cost of production’ OR ‘individual income’ OR ‘household income’ OR ‘consumption’ OR ‘saving’ OR ‘food security’ OR ‘food securities’ OR ‘gender equality’ OR ‘gender equalities’ OR ‘employment opportunity’ OR ‘employment opportunities’ OR ‘sustainable environmental practice’ OR ‘sustainable environmental practices’).

- (‘financial support’ OR ‘employment guarantee’ OR ‘employment guarantee scheme’ OR ‘employment guarantee schemes’ OR ‘cash transfer’ OR ‘cash transfers’ OR ‘warehouse receipt finance’ OR ‘warehouse receipt financing’ OR ‘trade finance’ OR ‘repo finance’ OR ‘agricultural finance’ OR ‘agricultural lending’ OR ‘conditional payment’ OR ‘crop loan’ OR ‘crop loans’ OR ‘agricultural loan’ OR ‘agricultural loans’ OR ‘agriculture loan’ OR ‘crop insurance’ OR ‘factoring’ OR ‘commodity finance’ OR ‘commodity financing’ OR ‘repo finance’ OR ‘reverse factoring’ OR ‘loan guarantee’ OR ‘loan guarantees’) AND (‘enterprise productivity’ OR ‘enterprise productivities’ OR ‘farm productivity’ OR ‘farm productivities’ OR ‘input utilisation’ OR ‘price discovery’ OR ‘market access’ OR ‘production cost’ OR ‘cost of production’ OR ‘individual income’ OR ‘household income’ OR ‘consumption’ OR ‘saving’ OR ‘food security’ OR ‘food securities’ OR ‘gender equality’ OR ‘gender equalities’ OR ‘employment opportunity’ OR ‘employment opportunities’ OR ‘sustainable environmental practice’ OR ‘sustainable environmental practices’).

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- (‘capacity building*’ OR ‘capacity strengthening*’ OR ‘capacity training*’ OR ‘vocational training*’ OR ‘vocational building*’ OR ‘vocational strengthening*’ OR ‘entrepreneur* training*’ OR ‘entrepreneur*development*’ OR ‘entrepreneur*strengthening*’ OR ‘entrepreneur* skill*’ OR ‘entrepreneur* building’ OR ‘agri* business training’ OR ‘agri* business training*’ OR ‘skill* training*’ OR ‘skill* development*’ OR ‘skill* strengthening*’ OR ‘skill* building*’ OR ‘distance

learning*’ OR ‘finan* literacy’) (‘knowledge’ OR ‘skill*’ OR ‘worker* productivit*’ OR ‘labour* productivit*’ OR ‘managerial capabilit*’ OR ‘individual* income*’ OR ‘household* income*’ OR ‘gender equalit*’ OR ‘employment opportunit*’ OR ‘sustainable environmental practice*’).

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APPENDIX 7: DETAILS OF WEBSITES SEARCHED

S. No.	Website	Search phrase used	Subject/publication / search limits	Relevant studies included
1.	**Research for Development (R4D)** (http://r4d.dfid.gov.uk/)	Original search phrase used*	**Advanced search** • Search R4D site • Search other sites	Nil
2.	**Department of International Development (DFID)** (https://www.gov.uk)	Original search phrase used*	• All covered in the data base	Nil
3.	**International Initiative for impact evaluation (3ie)** (http://www.3ieimpact.org/en/)	Rural value chain Capacity building Information and knowledge-sharing Financial support	• All covered in the data base	Nil
4.	**World Bank** (http://www.worldbank.org/)	Rural value chain Capacity building Information and knowledge-sharing Financial support	**Advance search** • Language: English • Adobe Acrobat PDF	1
5.	**The Consultative Group to Assist the Poor (CGAP)** (http://www.cgap.org/)	Rural value chain Capacity building Information and knowledge-sharing Financial support	Search limits • South Asian countries	Nil
6.	**United States Agency for International Development (USAID)** (http://www.usaid.gov/)	Rural value chain Capacity building Information and knowledge-sharing Financial support	• All covered in the data base	Nil
7.	**The Abdul Latif Jameel Poverty Action Lab (J-PAL)** (http://www.povertyactionlab.org/)	Rural value chain Capacity building Information and knowledge-sharing Financial support	**Publications Type** • Academic publications **Region** • South Asian countries	1
8.	**The International Food Policy Research Institute (IFPRI)** (http://www.ifpri.org/about-ifpri)	Rural value chain Capacity building Information and knowledge-sharing Financial support	**Publications** • Journal article • Discussion paper • Book chapter • Book • Working paper • Conference paper • Supplementary material **Search Limits**	

S. No.	Website	Search phrase used	Subject/publication / search limits	Relevant studies included
			• Poverty, health, nutrition and agriculture • South Asian countries	
9.	**JOLIS**	Rural value chain Capacity building Information and knowledge-sharing Financial support		Nil
10.	**Google Scholar**	Rural value chain Capacity building Information and knowledge-sharing Financial support		1
11.	**Google**	Rural value chain Capacity building Information and knowledge-sharing Financial support		Nil

APPENDIX 8. LIST OF STUDIES INCLUDED FOR SYSTEMATIC REVIEW& NARRATIVE SYNTHESIS

S. No.	Study & author	Year	Country	Description of intervention	Interven -tion	Research design	Analysis technique	Economic outcomes	Social outcomes	Study findings
1.	Adhikari & Goldey	2009	Nepal	This paper aims to contribute to a better understanding of the sustainability of community groups by examining the factors associated with social capital in villages of a southern district of Nepal	RVC	Cross-sectional survey	Descriptive statistics		Social capital	Social capital can be induced but it is difficult to sustain. Village level cognitive social capital has positive relations with the survival and functioning of groups. Downside of social capital plays an equally important role; rule breaking with impunity and elite capture are problematic. Agency facilitation is crucial to mediate the aspects of social capital and thereby enhance sustainability of groups. Transition phase is the most vulnerable phase of group management

2.	Ahmed et al.	2009	Bangladesh	IFPRI conducted household survey for the study 'relative efficacy of food and cash transfer' in Bangladesh	FS, CB	Before/afterfter	Propensity score matching, regression probit model	Asset, expenditure consumption savings	Food security, occupational choice, decision making	Differential levels of income generation, women empowerment, and asset creation were found among all four programmes that were implemented
3.	Akter et al.	2008	Bangladesh	The study aims to assess the commercial viability of a potential crop insurance market in Bangladesh	FS	Cross-sectional survey	Contingent valuation (cv) method descriptive statistics	Insurance (asset protection)		A uniform structure of crop insurance market does not exist in Bangladesh
4.	Akter et al.	2016	Bangladesh	This paper examines male and female maize farmers' preference heterogeneity in Bangladesh. Department of agricultural extension (DAE)	FS	Cross-sectional survey	Latent class logit model regression, descriptive statistics, choice experimen, random utility model	Insurance (crop insurance)		The results reveal significant insurance aversion among female farmers, irrespective of the attributes of the insurance scheme

5.	Alvi & Dendir	2011	Bangladesh	The data comes from the household coping strategies in Bangladesh (1998–99) surveys conducted by IFPRI in collaboration with USAID and the world bank. The primary purpose of the surveys was to collect information on household food security status, poverty, and response strategies in the aftermath of the 1998 floods in Bangladesh	FS	Secondary data (national HH survey, 1998)	Descriptive statistics, regression, tobit model with household fixed effects	Credit and insurance as independent variables access to credit	Child labour, gender-related employment	Child labour increases with the magnitude of the shock but only if households do not receive credit
6.	Anup et al.	2015	Nepal	This study was carried with an objective to identify and quantify impacts	RVC	Cross-sectional survey	Regression analysis, descriptive statistics	Income, consumption, employment	sustainable environmental practices	Participation in ecotourism, the education level, an increase in productive human capital and an

				of ecotourism on environmental conservation, social and cultural heritage preservation, economic development and enhancement of livelihoods						increase in income had enhanced people's livelihoods. Ecotourism helps in environmental conservation and socioeconomic development
7.	Bandiera et al.	2013	Bangladesh	This study was implemented with collaboration of NGO BRAC to evaluate long term randomised control trial of a targeted ultra-poor (TUP) programme in rural Bangladesh	FS, CB	RCT	Difference-in-difference, OLS regression analysis	Income, asset, expenditure/consumption saving occupation choices, technical/financial literacy, better business practices, decision-making power	Employment opportunities, decision-making, food security, wellbeing	This paper demonstrates that sizeable transfers of assets and skills enable the poorest women to shift out of agricultural labour and into running small businesses. This shift, which persists and strengthens after assistance is withdrawn, leads to a 38% increase in earnings

8.	Banerjee et al.	2011	India	This study was implemented with the help of NGO Bandhan in Murshidabad village of West Bengal to examine the impact of TUP	FS, CB	Before/ after	Randomised controlled trail, OLS regression	Income asset expenditure/consumption credit savings	Food security	The programme results in increased household consumption, wealth, asset and wellbeing, so overall the intervention succeeds in elevating the economic situation of the poorest
9.	Bardha, et al.	2014	India	This paper talks about potential feasibility of launching an information dissemination module by leveraging the ICT infrastructure of the dairy cooperative network	IKS	Cross-sectional survey	Multinomial logit regression, ANOVA	Willingness to pay for ICT (independent variable), capacity constraints (economic and literacy)		The study has revealed that television and mobile phones are the principal ICT to OLS used in the study area. The major constraints to information accessibility have been identified as 'respondents' capacity-related constraint in using modern ICT, 'network and mobile use-related constraints' and 'accessibility to ICT services constraints', and these were common in both plains and hills

10.	Bauchet et al.	2015	India	NGO SKS implemented ultra-poor programme aimed to establish microenterprises TUP with regular cash flows, which would enable 'ultra-poor' households to grow out of extreme poverty	FS, CB	RCT	Regression, linear probability model	Income asset expenditure/consumption credit savings		No lasting net impact on income or asset accumulation in south India as wages for unskilled labour rose sharply in the area while the study was implemented, blunting the net impact of the intervention and highlighting one way that treatment effects depend on factors external to the intervention itself, such as broader employment opportunities
11.	Briones & Swinnen	2016	Pakistan	This paper tries to disentangle distortions/rents among the interest group within the consumer and producer group. The paper explicitly considers the impact on	RVC	Longitudinal, ten years' data	Descriptive statistics, nominal rate of assistance methodology	Revenue/ sale/profits		The paper states that the wheat policy has generally benefitted flour consumers and wheat traders at the expense of wheat farmers, with limited effects on flour millers. The welfare implications of policies can be quite different

				several groups along the value chain						within the 'producer' and 'consumer'
12.	Choudhary et al.	2012	India	This paper highlights the results of an action research to upgrade mountain collectors of medicinal and aromatic plants (maps) like endian bay leaves in Chamoli district of Uttrakhand, India	CB, RVC	Before/after	Descriptive statistics	Technical literacy (agricultural practices), income, market integration, revenue/sale/profits	Sustainable practices	Findings show horizontal coordination that increased awareness and ownership of collectors led to adoption of improved harvesting and management practices. Streamlined marketing through local auctions reduced collectors' risks and led to a three-fold increase in price at the village, which increased household income.
13.	Choudhary et al.	2014	India and Nepal	This article describes the typology of value chain actors and their roles in the chain, and analyses responses from a major category of actors and facilitators to a	RVC	Cross sectional survey	Descriptive statistics ANOVA	Market integration, sales/profits /revenue, technical literacy	Sustainable practices	The results show that bay-leaf VCs are loosely integrated and consist of stakeholders with asymmetrical power relations and different priorities. Traders in India dominate the chains and inappropriate standards lead to the exploitation

				set of common factors for improvement of the Indian bay leaf value chain India and Nepal						of small producers and inequity in the chain
14.	Chowdhury	2006	Bangladesh	This paper examines the impact of access to telecommunications on rural households' factor market participation in Bangladesh	IKS	Cross-sectional survey	Bivariate probit model, two-stage probit model	Market participation		The empirical findings suggest that access to a telephone has a significant positive impact on factor market participation. The difference in market participation between telephone users and non-users is around 14%
15.	Desai & Joshi	2014	India	SEWA implemented women farmers with global potential programme for organising female farmers into producer associations.	RVC, CB, FS	RCT	Propensity matching method, parametric analyses, regression using district level fixed effect	Total income farm income, non-farm income & crop income knowledge and skills	Gender: decision making	Programme weakly increased members' non-farm income and access to output markets. It had stronger impacts on members' awareness and utilisation of financial services

16.	Edmonds	2002	Nepal	This study uses institutional details about the implementation of this programme to evaluate its impact on the extraction of wood for fuel	RVC	Cross-sectional survey	Linear regression, descriptive studies		Sustainable environmental practices collective management & resource utilisation	Transferring forests to local groups of forest users is associated with a significant reduction in resource extraction in communities that receive new forest user groups
17.	Fafchamps & Minten	2012	India	This study estimates the benefits that Indian farmers derive from market and weather information delivered to their mobile phones by a commercial service called Reuters market light (RML). This study was funded by world bank and Thomson Reuters	IKS	Before/after	OLS regression, matching method, heterogeneous effect	Asset, profit/revenue/sales, technical literacy		No statistically significant average effect of treatment on the price received by farmers, crop value-added, crop losses resulting from rainstorms, or the likelihood of changing crop varieties and cultivation practices

18.	Giné & Mansuri	2011	Pakistan	This paper investigates a field experiment by PPAF & NRSP in rural Pakistan where a subset of male and female microfinance clients were offered eight full-time days of business training and the opportunity to participate in a lottery to access business loans of up to 100,000 Rs (USD1,700), about seven times the average loan size	CB, FS	RCT	Regression using OLS method, tobit model, fixed effects	Income, asset expenditure/consumption, profit/revenue/sales,	Decision making	Offering business training leads to increased business knowledge, better business practices and improvements in several household and member outcomes. These effects are mainly concentrated among male clients, however. Among men, business training also leads to lower attrition among baseline businesses and better financial decisions. Women improve business knowledge but show no improvements in other outcomes
19.	Goletti et al.	1995	Bangladesh	This paper address two main sets of issues, first, the concept and measurement of market	RVC	Time series secondary data of price	Descriptive statistics, cointegration	Market integeration		Degree of market integration in Bangladesh is rather moderate. Similarly different measures of market integration respond differently to

				integration and second the relation between market integration and structural factors. The analysis is applied to rice markets in Bangladesh						the same structural factors
20.	Hatlebakk	2011	Nepal	This paper generalises Basu's model of triadic power. For one landlord and multiple merchants the landlord's threat towards a labourer becomes credible in the original stage game. For multiple landlords and merchants we generalise more recent solutions	RVC	Cross-sectional survey	OLS regression, iv	Income (wages and earnings)		This paper finds support for the triadic model. In particular, the influence via the merchants depends on the number of landlords

21.	Kishore, et al.	2015	India	This study evaluates the impact of a CCT programme (diesel subsidy) meant specially to increase the resilience of agriculture to drought	FS	Cross-sectional	Regression model, panel regression with random effect using district level data	Yield, cost of production		Diesel subsidy programme in Bihar was found ineffective. Low awareness and penetration among smallholders, alongside uncertainties and delays in the disbursal of the subsidy, make it ineffective
22.	Janssens	2009	India	Community-based development project was implemented by NGO Mahila Samakhya to strengthen social capital. This paper investigates the impact of a women's empowerment programme in India on trust and cooperation	CB	Cross-sectional comparison	OLS regression, probit model, propensity score matching method		Social capital	The programme significantly increases trust and stimulates contributions to educational and infrastructural community projects. The effect on informal assistance among households is less consistent. The findings suggest substantial spillovers on the wider community. Households who do not participate in the programme themselves but who live in a programme village are

										significantly more trusting and more likely to engage in collective action than households in control villages
23.	Mishra	1994	India	This paper is an attempt to analyse the impact of a credit-linked crop insurance scheme – the comprehensive crop insurance scheme of India – on crop credit or short-term agricultural credit, especially to small farmers	FS	Before/after	Multivariate analysis of variance (MANOVA), OLS regression	Credit, insurance (asset security)		A significant increase in the flow of credit to insured farmers after the introduction of the CCIS. The share of small farmers (with land holdings of two ha or less) in the total loan increased from 19% to 27%
24.	Mishra et al.	2016	Nepal	This study investigates the impact of contract farming (CF) in high yielding varieties of paddy seed production on costs, yield and	RVC , FS	Cross sectional	Propensity matching method, probit regression, nearest neighbour matching kernel-	Revenue, sale, profit, yield, lower cost of production		The study finds a significant positive impact of contract HYV seed farming on revenues, profits, and yield, and a significant negative impact on total costs of production.

				profits of smallholder farms in Nepal			based matching (KBM) and rosenbaum bounds analysis			Additionally, very small farms (60.43 ha) with CF in HYV paddy seeds tend to gain the most when it comes to yield per hectare.
25.	Mittal & Mehar	2015	India	The paper analyses factors that affect the likelihood of adoption of different agriculture-related information sources by farmers	IKS	Cross-sectional survey	Multivariate probit model, regression, descriptive statistics	Technical literacy (agricultural practices)		The results show that farmers use multiple information sources that may be complementary or substitutes to each other and this also implies that any single source does not satisfy all information needs of the farmer
26.	Mukherjee	2013	India	This study examines the functioning of a community-driven development project implemented by Samrakshan NGO in four villages of Madhya Pradesh	RVC	Before/after	Difference-indifference, OLS, regression analysis, non-parametric analysis	Income (total income, crop incom) credit	Food security, collective management & resource utilisation migration	CDD project led to greater exposure to risk and no gains in productivity for the community

27.	Naidu	2008	India	This paper conducts a statistical investigation into the impact of differences in economic benefits, wealth, and social classes within the community on collective management of forests	RVC	Cross-sectional	Tobit model, log likelihood statistics		Collective resource management	Moderate wealth heterogeneity is beneficial. However, at high levels and in the presence of benefit heterogeneity, it decreases collective management. At high levels of social diversity, collective management is high
28.	Panda	2013	India	This article examines the merits of crop insurance in adapting to the changing climate	FS	Cross-sectional survey	Logit regression, odd ratios, descriptive statistics	Income (farm) insurance		Lack of awareness and the complicated process of agricultural insurance were found to be major obstacles to the uptake of crop insurance schemes among small and marginal farmers
29.	Panda et al	2013	India	This study examines the factors that give rise to adaptive capacity among households	FS	Cross-sectional survey	Descriptive statistics, logit regression model	Income (farm), insurance, technical literacy		The study finds that a large number of indicators of adaptive capacity to correlate with one or more adoptions taken

								(adaptive capacity)		
30.	Sandhu,et al	2012	India	The purpose of this paper is to investigate the entrepreneurship, education and training (EET) needs of small family businesses operating in the agricultural sector of the Indian economy	CB	Cross-sectional survey	Descriptive statistics, logistic regression	Revenue, profit, income financial literacy		The paper reports that there is a knowledge gap in the agricultural sector of India. Results show that owner/managers of small family businesses have low levels of EET and hence higher needs
31.	Sarthak & Singh	2012	India	Field experiment was conducted with the help of ILO micro-insurance innovation facility in Gujarat	FS	Cross-sectional survey	Ordered logit regression model, descriptive statistics, maximum likelihood estimator	Financial literacy		Farmers' education and financial experience is shown to be significantly correlated with achievements in customised tests for ability in mathematics and probability, which are taken as the two components of cognitive ability. Cognitive ability, in turn, predicts financial aptitude and debt literacy, the two

										components of financial literacy
32.	Shalendra et al.	2013	India	This paper tries to integrate the supply chain of horticultural crops by providing need-based information to different players, mainly farmers	IKS	Cross-sectional survey	Logistic regression, descriptive statistics	Asset, technical literacy		Age, education level and irrigation have been found to be the factors defining the willingness of a farmer to pay for having access to information
33.	Shee & Turvey	2012	India	This article addresses the problem of collateral-free lending in the context of agricultural development	FS	Secondary data (prices of pulses)	Descriptive statistics & risk contingent model	Credit (collateral-free lending), insurance		This article offers a solution to collateral-free lending with risk-contingent credit. This article investigated the pricing of commodity-linked credit for a one-period operating loan and a farm mortgage. In each case, an option – or insurance – is included in the credit

34.	Shoji et al.	2012	Sri Lanka	This paper uses a unique long-panel data from Sri Lanka to examine the mechanism of social capital formation in an imperfect credit market	FS	Before/after	Descriptive statistics, regression, linear probability model, bivariate probit model	Credit	Social capital formation	This paper finds that households facing credit constraints reduce investments in social capital. Furthermore, temporal declines in investment persistently reduce general trust, trust in villagers, and trust in business partners. While previous studies argue that social capital improves access to informal credit, this paper shows reverse causality.
35.	Singh	2008	India	This paper attempts to analyse the impact of education, skills and vocational training on improving access to non-farm employment	CB	Cross-sectional (NSSO 2004–5)	Descriptive statistics, multinomial logistic regression	Employment (non-farm work)	Gender (employment)	This paper finds that education, skills, vocational training, social status, asset ownership have a significant bearing on access to non-farm work

36.	Tripp et al.	2005	Sri Lanka	This paper assess the introduction of FFS in Sri Lanka using the evidence this paper tries to examine information transmission, range of objective and contribution to social capital	CB	Cross-sectional survey	Descriptive statistics	Technical literacy	Sustainable environmental practices	Farmer field schools can contribute to increasing farmers' skills and lowering insecticide use in rice
37.	Zant	2008	India	This paper investigates if crop index insurance is potentially useful for typical cash crop growers in a developing country	FS	Cross-sectional secondary data (spice board)	Descriptive statistics	Insurance crop protection revenue		Affordable and feasible index insurance reduces crop revenue risk to around 68% of its original level, while a reduction to 50% of this level can be achieved with ideal insurance

APPENDIX 9: DESCRIPTION OF STUDIES INCLUDED FOR META-ANALYSIS

S. no.	Study author/year	Estimation method	Estimation detail	Variance	Other statistics/description	Effect-size calculation based on EPPI-4 reviewer meta-synthesis classification	Evidence from study
1.	Ahmed et al (2009)	Before–after (PSM)	Probit regression	p-value & t-value	Treatment and control group, N, p-value and t-values are reported	Continous: N, mean and SD	20
2.	Banerjee et al. (2011)	RCT	Regression	p-value	Treatment and control group, N and P-values are reported	Continous: N, mean and SD	7
3.	Bauchet et al. (2015)	RCT	Regression	p-value	Comparison between two groups (SEWA – participants & non-participants), N, treatment mean, control mean and p-values are reported	Continous: N, mean and SD	6
4.	Desai & Joshi (2014)	Before–after (PSM)	Logistic regression	p-value	Comparison between two groups (SEWA participants & non-SEWA participants), N, treatment mean, control mean and p-values are reported	Continous: N, mean and SD	9
5.	Fafchamps & Minten (2012)	RCT	Regression	t-value	Treatment and control group, N and t-values are reported	Continous: N, mean and SD	7
6.	Giné & Mansuri (2011)	Experimental	Regression	t-value	Comparison between two groups (business training & lottery winners vs. non-business training & lottery winners), N, treatment mean, control mean and p-values are reported	Continous: N, Mean and SD	6
7.	Mishra (2016)	Cross-sectional	Logistic regression	t-value	Comparison between two groups (independent farmers vs. contract farmers), N, treatment mean, control mean and t-values are reported	Continous: N, Mean and SD	12

8.	Shoji et al. (2012)	Before–after	Probit regression	Mean difference	Comparison between two groups (credit constrained vs credit unconstrained) N, mean and SD are reported	Continous: N, mean and SD	3

APPENDIX 10: DATA CODING AND EXTRACTION TOOL – FOR ASSESSING QUALITY OF STUDIES

Section I: Aims and rationale of the study

S.No.	Question	Rating	Details	Score
1.	What are the broad aims of the study?	• Explicitly stated (1) • Not stated/unclear (0)		
2.	Was the study informed by, or linked to, an existing body of empirical and/or theoretical research?	• Explicitly stated (1) • Not stated/unclear (0)		
3.	Do authors report how the study was funded?	• Explicitly stated (1) • Not stated/unclear (0)		
4.	When was the study carried out? *(State the year the authors have stated. If not, give a 'not later than' date by looking for a date of first submission to the journal, or for clues like the publication dates of other reports from the study)*	• Explicitly stated (1) • Not stated/unclear (0)		
5.	What are the study research questions and/or hypotheses? *(Research questions or hypotheses operationalise the aims of the study. Please write in authors' description if there is one. Elaborate if necessary, but indicate which aspects are reviewers' interpretations)*	• Explicitly stated (1) • Not stated/unclear (0)		
6.	Do authors report how the study was funded?	• Explicitly stated (1) • Not stated/unclear (0)		

Section II: Intervention description in the study

S. no.	Question	Rating	Details	Score
7.	Aim(s) of the intervention	• Explicitly stated (1) • Not stated/unclear (0)		
8.	Has the study stated the causal pathways or theory of change for the intervention?	• Explicitly stated (1) • Not stated/unclear (0)		
9.	How long has it been since the intervention was implemented?	• Explicitly stated (1) • Not stated/unclear (0)		

Section III. Study method

S. no.	Question	Rating	Details	Score
10.	Overall design of the study	• Quantitative (1) • Qualitative (1) • Both (1) • Unclear/other (0)		
11.	Study timing	• Cross-sectional (1) • Panel data (1) • Longitudinal (1) • Before after (1) • Not stated/unclear (0) • Any other (0)		
12.	Details of data collection instruments	• Explicitly stated (3) • Not stated • Unclear (1)		

Section IV: Methods – data analysis

S. no.	Question	Rating	Details	Score
13.	What methods were used to analyse the data?	• Explicitly stated (3) • Not stated unclear (1)		
14.	Do the authors describe strategies used in the analysis to control for bias from confounding variables?	• Yes (1) • No (0)		
15.	Do the authors describe any ways they have addressed the reliability of data analysis?	• Yes (1) • No (0)		

16.	Do the authors describe any ways that they have addressed the validity data analysis? *(Have any statistical assumptions necessary for analysis been met?)*	• Yes (1) • No (0)		
17.	What are the limitations of the study?	• Explicitly stated (1) • Not Stated /unclear (0)		

Section V: Results and Conclusions

<table>
<tr><td></td><td></td><td colspan="5">Tick and give details where relevant</td></tr>
<tr><td rowspan="4">19.</td><td rowspan="4">Indicators/outcomes captured</td><td>Intervention</td><td>Outcome</td><td>Indicator</td><td>Finding</td><td>Significance level</td></tr>
<tr><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>N</td><td>t-stat/z value</td><td>p-value</td><td>S.E.</td><td>Mean/SD</td></tr>
<tr><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>20.</td><td>What are the results of the study as reported by the author?</td><td colspan="5"></td></tr>
<tr><td>21.</td><td>What do the authors conclude about the findings of the study?</td><td colspan="5"></td></tr>
<tr><td>22.</td><td>What are the limitations of the study?</td><td colspan="5"></td></tr>
</table>

Section VI: Quality appraisal questions

S. no.	**Principles of quality**	**Questions**	**Appraisal**	**Score**
23.	Conceptual framing	Does the study acknowledge existing	High (3) Medium (2)	

		research?	Low (1)	
		Does the study construct a conceptual framework?	High (3) Medium (2) Low (1)	
		Does the study pose a research question (or) outline a hypothesis?	High (3) Medium (2) Low (1)	
24.	Transparency	Does the study present or link to the raw data it analyses?	High (3) Medium (2) Low (1)	
		Does the study declare sources of support/funding?	Yes (3) Not applicable (3) No (0)	
		Is there a potential conflict of interest?	Yes (0) No (3)	
25.	Appropriateness	Does the study identify a research design?	High (3) Medium (2) Low (1)	
		Does the study identify a research method?	High (3) Medium (2) Low (1)	
26.	Cultural sensitivity	Does the study explicitly consider any context – specific cultural factors that may bias the analysis/findings?	Explicitly stated (3) Not Stated (2) Unclear (1)	
27.	Sample	Has the sample design and target selection of cases defended and explained clearly?	High (3) Medium (2) Low (1)	
28.	Validity	To what extent is the study internally valid?	High (3) Medium (2) Low (1)	
		To what extent is the study externally valid?	High (3) Medium (2) Low (1)	
29.	Reliability	To what extent are the methods used in the study internally reliable?	High (3) Medium (2) Low (1)	
		To what extent are the tests and methods used in the study reliable across time (stability or test-retest reliability)?	High (3) Medium (2) Low (1)	
30.	Analyses	Has the analytical approach clearly conveyed?	High (3) Medium (2) Low (1)	
		Have the depth and	High (3)	

		complexity of data been conveyed?	Medium (2) Low (1)	
31.	Cogency	Does the author 'signpost' the reader throughout?	High (3) Medium (2) Low (1)	
		To what extent does the author consider the study's limitations and /or alternative interpretations of the analysis?	High (3) Medium (2) Low (1)	
		Are the conclusions clearly based on the study's results?	High (3) Medium (2) Low (1)	
32.	Auditability	Has the research process been clearly documented?	High (3) Medium (2) Low (1)	

Section VII: Overall assessment of the study

	What is the overall quality of the study (taking into account all the quality assessment issues)?	• High • Medium • Low	For questions 23 to 32, High = 3, Medium = 2, Low = 1, can't tell = 0 Scores obtained from the summation of the responses Q 23 TO 32 would be used to determine the overall quality of the study. The rating criteria is as follows: Scores >50 – high quality Scores >25 – medium quality and Scores < 0r =25 – low quality
	Reasons for inclusion		

Section : VII Methods of syntheses

Aim	Type of Study	Method of synthesis	Data extraction
Investigate acceptance feasibility or implementation of the intervention	Qualitative	Narrative synthesis/	Narratives to be determined
		Thematic analysis – configurative	Themes to be determined
		Thematic analysis – aggregative	List possible themes
Assess cause/harm	Quantitative	Statistical – effect sizes, correlation coefficients, regressions coefficients or other	Will be extracted with the assistance of statistical specialist
Assess impact			

APPENDIX 11: RISK OF BIAS ASSESSMENT

1. Selection bias:

Flaws in the design, conduct, analysis and reporting of RCTs can cause an intervention to be underestimated or overestimated. The Cochrane collaboration's tool for assessing risk of bias aims to make the process clearer and more accurate.

1.1 Random-sequence generation

Describe the method used to generate the allocation sequence in sufficient detail to allow an assessment of whether it should produce comparable groups.

• Low-risk

• High-risk

• Unclear

1.2 Allocation concealment

Describe the method used to conceal the allocation sequence in sufficient detail to determine whether intervention allocations could have been foreseen before or during enrolment.

• Low-risk

• High-risk

• Unclear

2. Performance bias:

2.1 Blinding of participants and personnel

Describe all measures used, if any, to blind-trial participants and researchers in terms of knowledge of which intervention a participant received. Provide any information relating to whether the intended blinding was effective.

• Low-risk

• High-risk

• Unclear

3. Detection bias:

3.1 Blinding of outcome assessment

Describe all measures used, if any, to blind outcome assessment in terms of knowledge of which intervention a participant received. Provide any information relating to whether the intended blinding was effective.

• Low-risk

• High-risk

• Unclear

4. Attrition bias:

4.1 Incomplete outcome data

Describe the completeness of outcome data for each main outcome, including attrition and exclusions from the analysis. State whether attrition and exclusions were reported, the numbers in each intervention group (compared with total randomised participants), reasons for which attrition or exclusions where reported, and any re-inclusions in analyses for the review.

• Low-risk

• High-risk

• Unclear

5. Reporting bias:

5.1 Selective reporting

State how selective outcome reporting was examined and what was found.

• Low-risk

• High-risk

• Unclear

6. Other bias:

6.1 Anything else, ideally pre-specified

State any important concerns about bias not covered in the other domains in the tool.

• Low-risk

• High-risk

• Unclear

APPENDIX 12: LIST OF STUDIES INCLUDED

Adhikari, K. P., & Goldey, P. (2010). 'Social capital and its "downside": The impact on sustainability of induced community-based organizations in Nepal'. *World Development*, pp. 184–194.

Ahmed, A. U., Quisuinbing, A. R., Nasreen, M., Hoddinott, J. F., & Bryan, E. (2009). 'Comparing food and cash transfers to the ultra poor in Bangladesh'. Research Report of the International Food Policy Research Institute, (163), pp.1-248.

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Akter, S., Krupnik, T. J., Rossi, F., & Khanam, F. (2016). 'The influence of gender and product design on farmers' preferences for weather-indexed crop insurance'. Global Environmental Change, Part A: Human & Policy Dimensions, pp. 217–229.

Alvi, E., & Dendir, S. (2011). 'Weathering the Storms: Credit Receipt and Child Labor in the Aftermath of the Great Floods (1998) in Bangladesh'. *World Development*, pp. 1398–1409.

Anup,K.C., Rijal, K., & Sapkota, R. P. (2015). 'Role of ecotourism in environmental conservation and socioeconomic development in Annapurna conservation area, Nepal'. *International Journal of Sustainable Development & World Ecology*, pp. 251–258.

Bandiera, O., Burgess, R., Das, N., Gulesci, S., Rasule, I., & Sulaiman, M. (2013). 'Can basic entrepreneurship transform the economic lives of the poor?' International Growth Center.

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Bardhan, D., Singh, P., & Tripathi, S. C. (2014). 'Leveraging Information and Communication Technology Infrastructure of Dairy Cooperative Network: An ex-ante Analysis of Potential Institutional Innovation'. *Agricultural Economics Research Review*, pp. 55–66.

Bauchet, J., Morduch, J., & Ravi, S. (2015). 'Failure vs. displacement: Why an innovative anti-poverty program showed no net impact in South India'. *Journal of Development Economics*, pp. 1–16.

Alonso, E. B., & Swinnen, J. (2016). 'Who are the producers and consumers? Value chains and food policy effects in the wheat sector in Pakistan'. *Food Policy*, pp. 40–58.

Choudhary, D., Kala, S. P., Todaria, N. P., Dasgupta, S., & Kollmair, M. (2014). 'Drivers of Exploitation and Inequity in Non-Timber Forest Products (NTFP) Value Chains: The Case of Indian Bay Leaf in Nepal and India'. *Development Policy Review*, pp. 71–87.

Choudhary, D., Kala, S. P., Todaria, N. P., Rawat, R. B. S., Kunwar, M. S., & Kollmair, M. (2013). 'Upgrading mountain people in medicinal and aromatic plants value chains: lessons for sustainable management and income generation from Uttarakhand, India'. *International Journal of Sustainable Development & World Ecology*, pp. 45–53.

Chowdhury, S. K. (2006). 'Access to a Telephone and Factor Market Participation of Rural Households in Bangladesh'. *Journal of Agricultural Economics*, pp. 563–576.

Desai, R. M., & Joshi, S. (2013). 'Can Producer Associations Improve Rural Livelihoods? Evidence from Farmer Centres in India'. *The Journal of Development Studies*, pp. 64–80.

Edmonds, E. V. (2002). 'Government-initiated community resource management and local resource extraction from Nepal's forests'. *Journal of Development Economics*, pp. 89–115.

Fafchamps, M., & Minten, B. (2012). 'Impact of SMS-Based Agricultural Information on Indian Farmers'. *The World Bank Economic Review*, pp. 383–414.

Giné, X., & Mnsuri, G. (2011). 'Money or Ideas? A Field Experiment on Constraints to Entrepreneurship in Rural Pakistan'. World Bank Group, Policy Research Working Paper.

Goletti, F., Ahmed, R., & Farid, N. (1995). 'Structural determinants of market integration: The case of rice markets in Bangladesh'. *The Developing Economies*, pp. 196–198.

Hatlebakk, M. (2011). 'Triadic Power Relations in Rural Nepal'. *The Journal of Development Studies*, pp. 1739–1756.

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Kishore, A., Joshi, P. K., & Pandey, D. (2015). 'Drought, distress, and a conditional cash transfer programme to mitigate the impact of drought in Bihar, India'. Water International, pp. 417–431.

Mishra, A. K., Kumar, A., Joshi, P. K., & D'souza, A. (2016). 'Impact of contracts in high yielding varieties seed production on profits and yield: The case of Nepal'. *Food Policy*, pp. 110–121.

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Naidu, S. C. (2009). 'Heterogeneity and collective management: Evidence from common forests in Himachal Pradesh, India'. *World Development* , pp. 676–686.

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Panda, A., Sharma, U., Ninan, K. N., & Patt, A. (2013). 'Adaptive capacity contributing to improved agricultural productivity at the household level: Empirical findings highlighting the importance of crop insurance'. *Global Environmental Change*, pp. 782–790.

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Shee, A., & Turvey, C. G. (2012). 'Collateral-free lending with risk-contingent credit for agricultural development: Indemnifying loans against pulse crop price risk in India'. *Agricultural Economics*, pp. 561–574.

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Singh, R. (2008). 'Education, skills and vocational training and access to rural non-farm employment'. *Indian Journal of Labour Economics*, 51(4), pp. 901–909.

Tripp, R., Wijeratne, M., & Piyadasa, V. H. (2005). 'What should we expect from farmer field schools? A Sri Lanka case study'. *World Development*, pp. 1705–1720.

Zant, W. (2008). 'Hot stuff: Index insurance for Indian smallholder pepper growers'. *World Development*, pp. 1585–1606.

APPENDIX 13: RISK OF BIAS ASSESSMENT OF INCLUDED STUDIES

S. no.	Study & author	Year	Intervention	Research design	Study type	Risk
1.	Adhikari & Goldey	2009	RVC	Cross-sectional survey	Mixed method	Medium
2.	Ahmed et al.	2009	FS, CB	Before/After	Quantitative	Low
3.	Akter et al.	2008	FS	Cross-sectional survey	Mixed method	Medium
4.	Akter et al.	2016	FS	Cross-sectional survey	Mixed method	Medium
5.	Alvi & Dendir	2011	FS	Secondary data (National HH Survey, 1998)	Mixed method	Medium
6.	Anup et al.	2015	RVC	Cross-sectional survey	Quantitative	Medium
7.	Bandiera et al.	2013	FS, CB	RCT	Quantitative	Low

8.	Banerjee et al.	2011	FS, CB	RCT	Quantitative	Low
9.	Bardhan & Tripathi	2014	IKS	Cross-sectional survey	Quantitative	Medium
10.	Bauchet et al.	2015	FS, CB	RCT	Quantitative	Low
11.	Briones & Swinnen	2016	RVC	Longitudinal, 10 years data	Mixed method	Medium
12.	Choudhary et al.	2014	RVC	Cross-sectional survey	Mixed method	Medium
13.	Choudhary et al.	2012	CB, RVC	Before/after	Mixed method	Medium
14.	Chowdhury	2006	IKS	Cross-sectional survey	Quantitative	Medium
15.	Desai & Joshi	2014	RVC, CB, FS	Cross-sectional survey	Quantitative	Medium
16.	Edmonds	2002	RVC	Cross-sectional survey	Quantitative	Medium

17.	Fafchamps & Minten	2012	IKS	Before/after	Quantitative	Medium
18.	Giné & Mansuri	2011	CB, FS	RCT	Quantitative	Low
19.	Goletti et al.	1995	RVC	Time series secondary data of price	Quantitative	Medium
20.	Hatlebakk	2011	RVC	Cross-sectional survey	Quantitative	Medium
21.	Janssens	2009	CB	Cross-sectional comparison	Quantitative	Medium
22.	Kishore et al.	2015	FS	Cross-sectional survey	Quantitative	Medium
23.	Mishra	2016	RVC, FS	Cross-sectional survey	Quantitative	Medium
24.	Mishra	1994	FS	Before/after	Quantitative	Medium
25.	Mittal & Mehar	2015	IKS	Cross-sectional survey	Quantitative	Medium

26.	Mukherjee	2013	RVC	Before/after	Quantitative	Medium
27.	Naidu	2008	RVC	Cross-sectional survey	Quantitative	Medium
28.	Panda	2013	FS	Cross-sectional survey	Quantitative	Medium
29.	Panda et al.	2013	FS	Cross-sectional survey	Quantitative	Medium
30.	Sandhu et al.	2012	CB	Cross-sectional survey	Mixed method	Medium
31.	Sarthak & Singh	2012	FS	Cross-sectional survey	Quantitative	Medium
32.	Shalendra et al.	2013	IKS	Cross-sectional survey	Quantitative	Medium
33.	Shee & Turvey	2012	FS	Secondary data (prices of pulses)	Quantitative	Medium
34.	Shoji et al.	2012	FS	Before/after	Quantitative	Medium

35.	Singh	2008	CB	Cross sectional (NSSO 2004–05)	Quantitative	Medium
36.	Tripp et al.	2005	CB	Cross-sectional survey	Quantitative	Medium
37.	Zant	2008	FS	Cross-sectional secondary data	Quantitative	Medium

APPENDIX 14A: COUNT OF EVIDENCES FOR META REPORT

S. no.	Author	Year	Country	Intervention	Research design	Method	Comparison group	Findings outcome	Outcome detail	Treatment n	Treatment mean	Control n	Control mean	T value	P value	Evidence	Strength
1.	Ahmed et al.	2009	Bangladesh	FS+CB	Before–after	Regression	Treatment vs. control	Expenditure/consumption	Impact of IGVGD programme on per capita food expenditure	468		380		2.78	0.006	Positive impact	**
1.	Ahmed et al.	2009	Bangladesh	FS+CB	Before–after	Regression	Treatment vs. control	Food security	Impact of IGVGD program on calorie intake	1785		1620		2.18	0.03	Positive impact	**
1.	Ahmed et al.	2009	Bangladesh	FS+CB	Before–after	Regression	Treatment vs. control	Asset	Productive assets (IGVGD)	2710		1920		1.66	0.098	Positive impact	*
1.	Ahmed et al	2009	Bangladesh	FS+CB	Before–after	Regression	Treatment vs. control	Savings	HH savings (IGVGD)	2038		333	0.847	2.93	0.004	Positive impact	**

S. no.	Author	Year	Country	Intervention	Research design	Method	Comparison group	Findings outcome	Outcome detail	Treatment n	Treatment mean	Control n	Control mean	T value	P value	Evidence	Strength
1.	Ahmed et al.	2009	Bangladesh	FS+CB	Before–after	Regression	Treatment vs. control	Asset	IGVGD livestock asset	3687		1881		1.66	0.098	Positive impact	*
1.	Ahmed et al.	2009	Bangladesh	FS+CB	Before–after	Regression	Treatment vs. control	Expenditure/consumption	Impact of FSVGD programme on per capita food expenditure	515		388		3.46	0.001	Positive impact	***
1.	Ahmed et al	2009	Bangladesh	FS+CB	Before–after	Regression	Treatment vs. control	Food security	Impact of FSVGD programme on calorie intake	2042		1795		1.82	0.07	Positive impact	**
1.	Ahmed et al.	2009	Bangladesh	FS+CB	Before–after	Regression	Treatment vs. Control	Asset	Productive assets (FSVGD)	2360		1553		2.13	0.034	Positive impact	**
1.	Ahmed et al.	2009	Bangladesh	FS+CB	Before–after	Regression	Treatment vs. control	Savings	HH savings (FSVGD)	1304		353		4.64	0	Positive impact	***

S. no.	Author	Year	Country	Intervention	Research design	Method	Comparison group	Findings outcome	Outcome detail	Treatment n	Treatment mean	Control n	Control mean	T value	P value	Evidence	Strength
1.	Ahmed et al.	2009	Bangladesh	FS+CB	Before–after	Regression	Treatment vs. control	Asset	FSVGD: livestock asset	2764		2298		0.4	0.692	No impact	0
1.	Ahmed et al.	2009	Bangladesh	FS+CB	Before–after	Regression	Treatment vs. control	Expenditure/consumption	Impact of FFA programme on per capita food expenditure	443		387		2.94	0.004	Positive impact	**
1.	Ahmed et al.	2009	Bangladesh	FS+CB	Before–after	Regression	Treatment vs. control	Food security	Impact of FFA programme on calorie intake	1838		1644		1.98	0.048	Positive impact	**
1.	Ahmed et al.	2009	Bangladesh	FS+CB	Before–after	Regression	Treatment vs. control	Asset	Productive assets (FFA)	1701		1042		3.16	0.002	Positive impact	***
1.	Ahmed et al.	2009	Bangladesh	FS+CB	Before–after	Regression	Treatment vs. control	Savings	HH savings (FFA)	842		164		5.16	0	Positive impact	***
1.	Ahmed et al.	20	Bangladesh	FS+CB	Before–after	Regression	Treatment vs. control	Asset	FFA livestock asset	1534		1220		0.44	0.659	No Impact	0

S. no.	Author	Year	Country	Intervention	Research design	Method	Comparison group	Findings outcome	Outcome detail	Treatment n	Treatment mean	Control n	Control mean	T value	P value	Evidence	Strength
		09															
1.	Ahmed et al.	2009	Bangladesh	FS+CB	Before–after	Regression	Treatment vs. control	Expenditure/consumption	Impact of RMP programme on per capita food expenditure	520		407		4.12	0	Positive impact	***
1.	Ahmed et al.	2009	Bangladesh	FS+CB	Before–after	Regression	Treatment vs. control	Food security	Impact of RMP programme on calorie intake	1928		1657		3.81	0	Positive impact	***
1.	Ahmed et al.	2009	Bangladesh	FS+CB	Before–after	Regression	Treatment vs. control	Asset	Productive assets (RMP)	2612		2007		1.23	0.219	No Impact	0
1.	Ahmed et al.	2009	Bangladesh	FS+CB	Before–after	Regression	Treatment vs. control	Savings	HH savings (RMP)	7483		519		15.28	0	Positive impact	***
1.	Ahmed et al.	2010	Bangladesh	FS+CB	Before–after	Regression	Treatment vs. control	Asset	RMP D livestock asset	3399		1636		3.04	0.003	Positive impact	**

S. no.	Author	Year	Country	Intervention	Research design	Method	Comparison group	Findings outcome	Outcome detail	Treatment n	Treatment mean	Control n	Control mean	T value	P value	Evidence	Strength
2.	Banerjee et al.	2011	India	FS+CB	RCT	OLS Regression	Treatment vs. control	Income	Agriculture income	429		388			0.201	No Impact	0
2.	Banerjee et al.	2011	India	FS+CB	RCT	OLS regression	Treatment vs. control	Income	Non agri income	429		388			0.012	Positive impact	**
2.	Banerjee et al.	2011	India	FS+CB	RCT	OLS regression	Treatment vs. control	Income	Agri labour income	429		388			0.018	Negative impact	**
2.	Banerjee et al.	2011	India	FS+CB	RCT	OLS regression	Treatment vs. control	Income	Non agri labour income	429		388			0.131	No impact	0
2.	Banerjee et al.	2011	India	FS+CB	RCT	OLS regression	Treatment vs. control	Expenditure/consumption	Per capita average monthly expenditure	429		387			0	Positive impact	***
2.	Banerjee et al.	20	India	FS+CB	RCT	OLS regression	Treatment vs. control	Profit/revenue/sales	Impact of TUP on sold small	265		137			0	Positive	***

S. no.	Author	Year	Country	Intervention	Research design	Method	Comparison group	Findings outcome	Outcome detail	Treatment n	Treatment mean	Control n	Control mean	T value	P value	Evidence	Strength
		11							livestock (if acquired)							impact	
2.	Banerjee et al.	2011	India	FS+CB	RCT	OLS regression	Treatment vs. control	Asset	Impact of TUP on acquired livestock	429		386			0	Positive impact	***
3.	Bauchet et al.	2015	India	FS+CB	RCT	Regression	Treatment vs. control	Asset	Impact of TUP on land ownership acres	558	0.43	476	0.39		0.548	No impact	0
3.	Bauchet et al.	2015	India	FS+CB	RCT	Regression	Treatment vs. control	Asset	Household owns animal	569	12.8	486	7.2		0.003	Positive impact	***
3.	Bauchet et al.	2015	India	FS+CB	RCT	Regression	Treatment vs. control	Income	Impact of TUP on monthly household income per capita	575	312	488	331		0.474	No impact	0
3.	Bauchet et al.	20	India	FS+CB	RCT	Regression	Treatment vs. control	Expenditure/consumption	Impact of TUP on monthly household	575	542	488	587		0.241	No impact	0

S. no.	Author	Year	Country	Intervention	Research design	Method	Comparison group	Findings outcome	Outcome detail	Treatment n	Treatment mean	Control n	Control mean	T value	P value	Evidence	Strength
		15							expenditure per capita								
3.	Bauchet et al.	2015	India	FS+CB	RCT	Regression	Treatment vs. control	Credit	Impact of TUP on household outstanding loan	575	73.6	488	68.4		0.066	Positive impact	*
3.	Bauchet et al.	2015	India	FS+CB	RCT	Regression	Treatment vs. control	Savings	Impact of TUP on household has any savings	575	59.3	488	51		0.007	Positive impact	***
4.	Desai & Joshi	2014	India	RVC+CB +FS	Before–after	Regression	Participant vs. non-participant	Income	Log of total income	449	8.37	663	8.34	NA	0.44	No impact	0
4.	Desai & Joshi	2014	India	RVC+CB +FS	Before–after	Regression	Participant vs. non-participant	Income	Log of farm income	449	7.48	663	7.43	NA	0.741	No impact	0

S. no.	Author	Year	Country	Intervention	Research design	Method	Comparison group	Findings outcome	Outcome detail	Treatment n	Treatment mean	Control n	Control mean	T value	P value	Evidence	Strength
4.	Desai & Joshi	2014	India	RVC+CB+FS	Before–after	Regression	Participant vs. non-participant	Income	Log of non-farm income	449	2.87	663	3.38	NA	0.027	Positive impact	**
4.	Desai & Joshi	2014	India	RVC+CB+FS	Before–after	Regression	Participant vs. non participant	Technical literacy	Awareness of loan options	449	0.29	663	0.74	NA	0	Positive impact	***
4.	Desai & Joshi	2014	India	RVC+CB+FS	Before–after	Regression	Participant vs. non participant	Credit	Loan taken	449	0.03	663	0.15	NA	0	Positive impact	***
4.	Desai & Joshi	2014	India	RVC+CB+FS	Before–after	Regression	Participant vs. non participant	Access to finance	Have bank account	449	0.15	663	0.25	NA	0	Positive impact	***
4.	Desai & Joshi	2014	India	RVC+CB+FS	Before–after	Regression	Participant vs. non-	Yield	Log of total amount harvested	449	1.46	663	1.63	NA	0.31	No impact	0

S. no.	Author	Year	Country	Intervention	Research design	Method	Comparison group	Findings outcome	Outcome detail	Treatment n	Treatment mean	Control n	Control mean	T value	P value	Evidence	Strength
							participant										
4.	Desai & Joshi	2014	India	RVC+CB+FS	Before–after	Regression	Participant vs. non-participant	Profit/revenue/sales	Fraction of harvest sold	449	0.03	663	0.08	NA	0.172	No impact	0
4.	Desai & Joshi	2014	India	RVC+CB+FS	Before–after	Regression	Participant vs. non-participant	Technical literacy	Knowledge of output price prior to sale	449	0.45	663	0.43	NA	0.456	No impact	0
5.	Fafchamps & Minten	2012	India	IKS	RCT	Regression	Treatment vs. control	Technical literacy	Knowledge of output price prior to sale at planting	361		361		2.54		Positive impact	**
5.	Fafchamps & Minten	2012	India	IKS	RCT	Regression	Treatment vs. control	Technical literacy	Change of crop variety since last year	397		398		1.1		No impact	0

S. no.	Author	Year	Country	Intervention	Research design	Method	Comparison group	Findings outcome	Outcome detail	Treatment n	Treatment mean	Control n	Control mean	T value	P value	Evidence	Strength
5	Fafchamps & Minten	2012	India	IKS	RCT	Regression	Treatment vs. control	Technical literacy	Change in cultivation practices last year	455		456		-1.1		No impact	0
5.	Fafchamps & Minten	2012	India	IKS	RCT	Regression	Treatment vs. control	Technical literacy	Avoid output loss at harvest due to heavy rainfall	264		265		-1.24		No impact	0
5.	Fafchamps & Minten	2012	India	IKS	RCT	Regression	Treatment vs. control	Profit/revenue/sales	Log of prices obtained	740		740		-2		Negative impact	**
5.	Fafchamps & Minten	2012	India	IKS	RCT	Regression	Treatment vs. control	Social capital	Shared information farming	461		461		4.05		Positive impact	**
5.	Fafchamps &	2011	India	IKS	RCT	Regression	Treatment vs. control	Profit/revenue/sales	Crop price	462		463		10.6		Positive impact	**

S. no.	Author	Year	Country	Intervention	Research design	Method	Comparison group	Findings outcome	Outcome detail	Treatment n	Treatment mean	Control n	Control mean	T value	P value	Evidence	Strength
	Minten																
6.	Giné & Mansuri	2011	Pakistan	CB	Experiment	Regression	Treatment vs. control (training)	Expenditure/consumption	Log of household expenditure	2080	8.27	2080	8.27		0.76	No impact	0
6.	Giné & Mansuri	2011	Pakistan	CB	Experiment	Regression	Treatment vs. control (training)	Decision making	Decision-making power	2080	2.61	2080	2.51		0.89	No impact	0
6.	Giné & Mansuri	2011	Pakistan	CB	Experiment	Regression	Treatment vs. control (training)	Profit/revenue/sales	Log of average month sales	1266	8.25	1266	8.29		0.01	Positive impact	***
6.	Giné & Mansuri	2011	Pakistan	FS	Experiment	Regression	Treatment vs. control (lottery winners)	Expenditure/consumption	Log of household expenditure	1141	8.32	1142	8.36		0.15	No impact	0
6.	Giné & Mansuri	2011	Pakistan	FS	Experiment	Regression	Treatment vs. control (lottery winners)	Decision making	Decision-making power	1141	2.76	1142	2.59		0.13	No impact	0

S. no.	Author	Year	Country	Intervention	Research design	Method	Comparison group	Findings outcome	Outcome detail	Treatment n	Treatment mean	Control n	Control mean	T value	P value	Evidence	Strength
6.	Giné & Mansuri	2011	Pakistan	FS	Experiment	Regression	Treatment vs. control (lottery winners)	Profit/revenue/sales	Log of average month sales	753	8.32	754	8.36		0.43	No impact	0
7.	Mishra et al.	2016	Nepal	RVC+FS	Cross sectional	Logit regression	Independent farmers vs. CFIC	Cost	Impact of CFIC in total cost	139	80473	298	91250	-3		Positive impact	***
7.	Mishra et al.	2016	Nepal	RVC+FS	Cross sectional	Logit regression	Independent farmers vs. CFIC	Profit/revenue/sales	Impact of CFIC in total revenue per ha	139	108095	298	100330	2.57		Positive impact	**
7.	Mishra et al.	2016	Nepal	RVC+FS	Cross sectional	Logit regression	Independent farmers vs. CFIC	Profit/revenue/sales	Impact of CFIC in total profit per ha	139	27622	298	9079	3.54		Positive impact	***
7.	Mishra et al.	2016	Nepal	RVC+FS	Cross sectional	Logit regression	Independent farmers vs. CFIC	Yield	Impact of CFIC in total yield per ha	139	4277	298	4296	-0.09		No impact	0

S. no.	Author	Year	Country	Intervention	Research design	Method	Comparison group	Findings outcome	Outcome detail	Treatment n	Treatment mean	Control n	Control mean	T value	P value	Evidence	Strength
7.	Mishra et al.	2016	Nepal	RVC+FS	Cross sectional	Logit regression	Independent farmers vs. CFOC	Cost	Impact of CFOC in total cost	60	101700	298	91250	2.7		Positive impact	***
7.	Mishra et al.	2016	Nepal	RVC+FS	Cross sectional	Logit regression	Independent farmers vs. CFOC	Profit/revenue/sales	Impact of CFOC in total revenue per ha	60	115641	298	100330	2.37		Positive impact	***
7.	Mishra et al.	2016	Nepal	RVC+FS	Cross sectional	Logit regression	Independent farmers vs. CFOC	Profit/revenue/sales	Impact of CFOC in total profit per ha	60	13940	298	9079	0.41		No impact	0
7.	Mishra et al.	2016	Nepal	RVC+FS	Cross sectional	Logit regression	Independent farmers vs. CFOC	Yield	Impact of CFOC in total yield per ha	60	4956	298	4296	2.43		Positive impact	**
7.	Mishra et al.	2016	Nepal	RVC+FS	Cross sectional	Logit regression	Independent farmers vs. CFBC	Cost	Impact of CFBC in total cost per ha	106	92764	298	91250	2.39		Positive impact	**
7.	Mishra et al.	20	Nepal	RVC+FS	Cross sectional	Logit regression	Independent	Profit/revenue/sales	Impact of CFBC in total revenue per ha	106	120456	298	100330	4.13		Positive	***

S. no.	Author	Year	Country	Intervention	Research design	Method	Comparison group	Findings outcome	Outcome detail	Treatment n	Treatment mean	Control n	Control mean	T value	P value	Evidence	Strength
		16					farmers vs. CFBC									impact	
7.	Mishra et al.	2016	Nepal	RVC+FS	Cross sectional	Logit regression	Independent farmers vs. CFBC	Profit/revenue/sales	Impact of CFBC in total profit per ha	106	27692	298	9079	2.79		Positive impact	***
7.	Mishra et al.	2016	Nepal	RVC+FS	Cross sectional	Logit regression	Independent farmers vs. CFBC	Yield	Impact of CFBC in total yield per ha	106	5019	298	4296	3.73		Positive impact	***
8.	Shoji et al.	2012	Sri Lanka	FS	Before–after	Linear probability model	Participant vs. non-participant	Social capital	Expense for ceremonies	572	0.53	3038	0.6	NA	NA	No impact	0
8.	Shoji et al.	2012	Sri Lanka	FS	Before–after	Linear probability model	Participant vs. non-participant	Social capital	Participation in community work	572	0.66	3038	0.66	NA	NA	No impact	0

S. no.	Author	Year	Country	Intervention	Research design	Method	Comparison group	Findings outcome	Outcome detail	Treatment n	Treatment mean	Control n	Control mean	T value	P value	Evidence	Strength
8.	Shoji et al.	2012	Sri Lanka	FS	Before–after	Linear probability model	Participant vs. non-participant	Social capital	Participation in irrigation maintenance	358	0.26	2100	0.24	NA	NA	No impact	0

APPENDIX 14B. COUNT OF EVIDENCES FOR ALL STUDIES

1) Title	Social Capital and its 'downside': the impact on sustainability of induced community-based organisations in Nepal.
Study author	Adhikari and Goldey (2009)
Year	2009
Country	Nepal
Segment	Rural
Intervention 1	RVC
Intervention details	Impact of sustainability on community-based organisation
Data type	Primary
Study type 1	Mixed method
Treatment group	
Control group	
Total	129 community-based organisations
Design	Cross-sectional
Data analysis method	Descriptive statistics
Analysis instrument	Correlation coefficient
Detail	Descriptive statistics
Study validity Check	NO

Study type 2	Quantitative		
Outcome	Variable	Outcome	Strength
Economic outcome			
Social outcome	1) Correlation between aspect of social capital and density of functioning group 2) Correlation between aspect of social capital and density of existing group 3) Correlation between Overall rules keeping and functioning score of 2 year and older group 4) correlation between cognitive social capital and functioning score of 2 year and older group 5) correlation between bonding trust and functioning score of 2 year a correlation between bonding trust and functioning score of 2 year and older group and older group 6) correlation between overall norms of reciprocity and functioning score of 2 year and older group 7) correlation between norms of collective action reciprocity and functioning score of 2 year and older group 8) correlation between norms breached and functioning score of 2 year and older group 9) correlation between political division and functioning score of 2 year and older group	1) social capital 2) social capital 3) social capital 4) social capital 5) social capital 6) social capital 7) social capital 8) social capital 9) social capital 10) social capital	1) positive 2) positive 3) positive 4) positive 5) positive 6) positive 7) positive 8) Negative 9) Negative 10) Negative

	10) correlation division in villages and functioning score of two year and older group		
Factor	NA	NA	NA

2) Title	Comparing food and cash transfers to the ultra poor in Bangladesh
Study author	Ahmed et al. (2009)
Year	2009
Country	Bangladesh
Segment	Rural
Intervention 1	FS
Intervention details	Comparing cash transfer among ultra poor
Data type	Primary
Study type 1	Quantitative
Treatment group	300
Control group	200
Total	1200 HH
Design	Before/after

Data analysis method	Propensity score matching & probit model		
Analysis instrument	Regression		
Detail	Probit regression		
Study validity check	NO		
Study type 2	Quantitative		
Outcome	Variable	Outcome	Strength
Economic outcomes	1) Impact of IGVGD program on per capita food expenditure 2) Impact of FSVGD program on per capita food expenditure 3) Impact of FFA program on per capita food expenditure 4) Impact of RMP program on per capita food expenditure 5) difference between treatment and control on the basis of per capita total expenditure per month (IGVGD) 6) difference between treatment and control on the basis of per capita total expenditure per month(FSVGD) 7) difference between treatment and control on the basis of per capita total expenditure per month(FFA) 8) difference between treatment and control on the basis of per capita total expenditure per month (RMP) 9) difference between treatment and control on the basis of consumption	1) Expenditure/Consumption 2) Expenditure/Consumption 3) Expenditure/Consumption 4) Expenditure/Consumption 5) Expenditure/Consumption 6) Expenditure/Consumption 7) Expenditure/Consumption 8) Expenditure/Consumption 9) Expenditure/Consumption 10) Expenditure/Consumption 11) Expenditure/Consumption 12) Expenditure/Consumption 13) Asset 14) Asset 15) Asset 16) Asset 17) Asset 18) Asset 19) Asset	1) Positive 2) Positive 3) Positive 4) Positive 5) Positive 6) Positive 7) Positive 8) Positive 9) Positive 10) Positive 11) Positive 12) Positive 13) Positive 14) Positive 15) Positive 16) No impact 17) Positive 18) No impact 19) No impact 20) Positive 21) Positive 22) Positive 23) No impact 24) Positive 25) Positive 26) Positive 27) Positive 28) Positive

	intake(in terms of taka)(IGVGD) 10) difference between treatment and control on the basis of consumption intake(in terms of taka)(FSVGD) 11) difference between treatment and control(FFA) on the basis of consumption intake(in terms of taka 12) difference between treatment and control(RMP) on the basis of consumption intake(in terms of taka) 13) difference between treatment and control on the basis of productive asset (IGVGD) 14) difference between treatment and control on the basis of productive asset(FSVGD) 15) difference between treatment and control on the basis of productive asset(FFA) 16) difference between treatment and control on the basis of productive asset (RMP) 17) difference between treatment and control on the basis of livestock asset (IGVGD) 18) difference between treatment and control on the basis of livestock asset (FSVGD) 19) difference between treatment and control on the basis of livestock asset (FFA) 20) difference between treatment and control on the basis of livestock asset (RMP)	20) Asset 21) Asset 22) Asset 23) Asset 24) Asset 25) Savings 26) Savings 27) Savings 28) Savings	

	21) difference between treatment and control on the basis of poultry asset (IGVGD) 22) difference between treatment and control on the basis of poultry asset (FSVGD) 23) Difference between treatment and control on the basis of poultry asset (FFA) 24) Difference between treatment and control on the basis of poultry asset (RMP) 25) Difference between treatment and control on the basis of savings (IGVGD) 26) Difference between treatment and control on the basis of savings (FSVGD) 27) Difference between treatment and control on the basis of savings (FFA) 28) Difference between treatment and control on the basis of savings (RMP)		
Social outcomes	29) Impact of IGVGD program on calorie intake 30) Impact of FSVGD program on calorie intake 31) Impact of FFA program on calorie intake 32) Impact of RMP program on calorie intake 33) calorie intake children aged 1-5 years IGVGD 34) calorie intake women aged 16-49 years IGVGD 35) calorie intake Men aged aged 16-49 years IGVGD 36) calorie intake other family members(children aged 6-15 yrs and elderly aged 50 years and above IGVGD) 37) calorie intake children aged 1-5 years FSVGD 38) calorie intake women aged 16-49 years FSVGD	29) Food security 30) Food security 31) Food security 32) Food security 33) Food security 34) Food security 35) Food security 36) Food security 37) Food security 38) Food security 39) Food security 40) Food security 41) Food security 42) Food security 43) Food security 44) Food security 45) Food security 46) Food security 47) Food security 48) Food security 49) Food security 50) Food security	29) Positive 30) Positive 31) Positive 32) Positive 33) No impact 34) No impact 35) No impact 36) No impact 37) No impact 38) Positive 39) No impact 40) No impact 41) No impact 42) No impact 43) No impact 44) No impact 45) No impact 46) Positive 47) Positive 48) Positive 49) No impact 50) Positive

	39) calorie intake Men aged aged 16-49 years FSVGD 40) calorie intake other family members(children aged 6-15 yrs and elderly aged 50 years and above FSVGD) 41) calorie intake children aged 1-5 years FFA 42) calorie intake women aged 16-49 years FFA 43) calorie intake Men aged aged 16-49 years FFA 44) calorie intake other family members(children aged 6-15 yrs and elderly aged 50 years and above FFA) 45) calorie intake children aged 1-5 years RMP 46) calorie intake women aged 16-49 yearsRMP 47) calorie intake Men aged aged 16-49 years RMP 48) calorie intake BY other family members(children aged 6-15 yrs and elderly aged 50 years and above RMP) 49) difference between treatment and control on nutritional status(IGVGD) 50) difference between treatment and control on nutritional status(FSVGD) 51) difference between treatment and control on nutritional status(FFA) 52) difference between treatment and control on nutritional status (RMP) 53) difference between treatment and control on the basis of percentage of hh below poverty line(IGVGD) 54) difference between treatment and control on the basis of percentage of hh below poverty line(FSVGD)	51) Food security 52) Food security 53) Poverty reduction 54) Poverty reduction 55) Poverty reduction 56) Poverty reduction 57) Decision making 58) Decision making 59) Decision making 60) Decision making 61) Decision making 62) Decision making 63) Decision making 64) Decision making 65) Decision making 66) Decision making 67) Decision making 68) Decision making 69) Decision making 70) Decision making 71) Decision making 72) Decision making 73) Decision making 74) Decision making 75) Decision making 76) Decision making 77) Decision making 78) Decision making 79) Decision making 80) Decision making 81) Decision making 82) Decision making 83) Decision making 84) Decision making 85) Decision making 86) Decision making 87) Decision making 88) Decision making 89) Decision making 90) Decision making 91) Decision making 92) Decision making	51) No impact 52) No impact 53) Positive 54) Positive 55) Positive 56) Positive 57) No impact 58) No impact 59) Positive 60) Positive 61) No impact 62) No impact 63) No impact 64) No impact 65) No impact 66) No impact 67) No impact 68) No impact 69) Positive 70) No impact 71) Positive 72) No impact 73) No impact 74) No impact 75) No impact 76) No impact 77) No impact 78) Positive 79) Positive 80) Positive 81) No impact 82) positive 83) positive 84) No impact 85) No impact 86) No impact 87) No impact 88) Positive 89) No impact 90) No impact 91) No impact 92) No impact 93) No impact 94) No impact 95) No impact 96) No impact

	55) difference between treatment and control on the basis of percentage of hh below poverty line(FFA) 56) difference between treatment and control on the basis of percentage of hh below poverty line(RMP) 57) whether working now (IGVGD) 58) decision to work (woman alone)(IGVGD) 59) decision to work (woman and husband)(IGVGD) 60) decision to work (woman alone or woman and husband) (IGVGD) 61) decision to spend money earned(woman alone) (IGVGD) 62) decision to spend money earned (woman and husband) (IGVGD) 63) decision to spend money earned(woman alone or woman and husband)(IGVGD) 64) whether working now (FSVGD) 65) decision to work (woman alone)(FSVGD) 66) decision to work (woman and husband)(FSVGD) 67) decision to work (woman alone or woman and husband)(FSVGD) 68) decision to spend money earned(woman alone) (FSVGD) 69) decision to spend money earned (woman and husband) (FSVGD) 70) decision to spend money earned(woman alone or woman and husband)(FSVGD)	93) Decision making 94) Decision making 95) Decision making 96) Decision making 97) Decision making 98) Decision making 99) Decision making 100) Decision making 101) Decision making 102) Decision making 103) Decision making 104) Decision making 105) Decision making 106) Decision making 107) Decision making 108) Decision making 109) Decision making 110) Decision making 111) Decision making 112) Decision making 113) Decision making 114) Decision making 115) Decision making 116) Decision making 117) Decision making 118) Decision making	97) No impact 98) No impact 99) No impact 100) No impact 101) No impact 102) No impact 103) No impact 104) No impact 105) No impact 106) No impact 107) No impact 108) No impact 109) No impact 110) No impact 111) No impact 112) No impact 113) No impact 114) No impact 115) No impact 116) No impact 117) No impact 118) No impact 119) No impact 120) Positive 121) No impact 122) No impact 123) Positive 124) No impact 125) No impact 126) Positive 127) No impact 128) No impact 129) No impact 130) Positive 131) Positive 132) Positive 133) Positive 134) Positive 135) Positive 136) Positive 137) Positive 138) Positive 139) Positive 140) Positive 141) Positive 142) Positive

	71) whether working now(FFA) 72) decision to work (woman alone) (FFA) 73) decision to work (woman and husband) (FFA) 74) decision to work (woman alone or woman and husband) (FFA) 75) decision to spend money earned(woman alone) (FFA) 76) decision to spend money earned (woman and husband) (FFA) 77) decision to spend money earned(woman alone or woman and husband) (FFA) 78) whether working now (RMP) 79) decision to work (woman alone) (RMP) 80) decision to work (woman and husband) (FFA) 81) decision to work (woman alone or woman and husband) (RMP) 82) decision to spend money earned(woman alone) (RMP) 83) decision to spend money earned (woman and husband) (RMP) 84) decision to spend money earned(woman alone or woman and husband) (RMP) 85) participation on food expenditure decision(woman alone) (IGVGD) 86) participation on food expenditure decision(woman and husband) (IGVGD) 87) participation on food expenditure decision(woman alone or woman and husband)(IGVGD) 88) participation on housing expenditure decision(woman alone)(IGVGD)	119) Decision making 120) Decision making 121) Decision making 122) Decision making 123) Decision making 124) Decision making 125) Decision making 126) Decision making 127) Decision making 128) Decision making 129) Decision making 130) Decision making 131) Decision making 132) Decision making 133) Decision making 134) Decision making 135) Decision making 136) Decision making 137) Decision making 138) Decision making 139) Decision making 140) Decision making 141) Decision making	143) Positive 144) Positive 145)

	89) participation on housing expenditure decision(woman and husband)(IGVGD) 90) participation on housing expenditure decision(woman alone or woman and husband)(IGVGD) 91) participation on health care expenditure decision(woman alone)(IGVGD) 92) participation on health care expenditure decision(woman and husband)(IGVGD) 93) participation on health care expenditure decision(woman alone or woman and husband)(IGVGD) 94) participation on education expenditure decision(woman alone)(IGVGD) 95) participation on education expenditure decision(woman and husband)(IGVGD) 96) participation on education expenditure decision(woman alone or woman and husband)(IGVGD) 97) participation on clothing expenditure decision(woman alone)(IGVGD) 98) participation on clothing expenditure decision(woman and husband)(IGVGD) 99) participation on clothing expenditure decision(woman alone or woman and husband)(IGVGD) 100) participation on food expenditure decision(woman alone)(FSVGD) 101) participation on food expenditure decision(woman and husband)(FSVGD) 102) participation on food expenditure decision(woman	142) Decision making 143) Decision making 144) Decision making	

	alone or woman and husband)(FSVGD) 103) participation on housing expenditure decision(woman alone)(FSVGD) 104) participation on housing expenditure decision(woman and husband)(FSVGD) 105) participation on housing expenditure decision(woman alone or woman and husband)(FSVGD) 106) participation on health care expenditure decision(woman alone)(FSVGD) 107) participation on health care expenditure decision(woman and husband)(FSVGD) 108) participation on health care expenditure decision(woman alone or woman and husband) 109) participation on education expenditure decision(woman alone)(FSVGD) 110) participation on education expenditure decision(woman and husband)(FSVGD) 111) participation on education expenditure decision(woman alone or woman and husband)(FSVGD) 112) participation on clothing expenditure decision(woman alone)(FSVGD) 113) participation on clothing expenditure decision(woman and husband)(FSVGD) 114) participation on clothing expenditure decision(woman		

	alone or woman and husband)(FSVGD) 115) participation on food expenditure decision(woman alone)(FFA) 116) participation on food expenditure decision(woman and husband)(FFA) 117) participation on food expenditure decision(woman alone or woman and husband)(FFA) 118) participation on housing expenditure decision(woman alone)(FFA) 119) participation on housing expenditure decision(woman and husband)(FFA) 120) participation on housing expenditure decision(woman alone or woman and husband)(FFA) 121) participation on health care expenditure decision(woman alone)(FFA) 122) participation on health care expenditure decision(woman and husband)(FFA) 123) participation on health care expenditure decision(woman alone or woman and husband)(FFA) 124) participation on education expenditure decision(woman alone)(FFA) 125) participation on education expenditure decision(woman and husband)(FFA) 126) participation on education expenditure decision(woman alone or woman and husband)(FFA)		

	127) participation on clothing expenditure decision(woman and husband)(FFA) 128) participation on clothing expenditure decision(woman and husband)(FFA) 129) participation on clothing expenditure decision(woman alone or woman and husband)(FFA) 130) participation on food expenditure decision(woman alone)(RMP) 131) participation on food expenditure decision(woman and husband)(RMP) 132) participation on food expenditure decision(woman alone or woman and husband)(RMP) 133) participation on housing expenditure decision(woman alone)(RMP) 134) participation on housing expenditure decision(woman and husband)(RMP) 135) participation on housing expenditure decision(woman alone or woman and husband)(RMP) 136) participation on health care expenditure decision(woman alone)(RMP) 137) participation on health care expenditure decision(woman and husband)(RMP) 138) participation on health care expenditure decision(woman alone or woman and husband)(RMP) 139) participation on education expenditure decision(woman alone)(RMP)		

	140) participation on education expenditure decision(woman and husband)(RMP) 141) participation on education expenditure decision(woman alone or woman and husband)(RMP 142) participation on clothing expenditure decision(woman alone) (RMP) 143) Participation on clothing expenditure decision (woman and husband) (RMP) 144) Participation on clothing expenditure decision (woman alone or woman and husband) (RMP)		
Factor	145) household size(IGVGD Program) 146) proprtion of household member(age of members)(IGVGD Program) 147) number of males with primary education(IGVGD Program) 148) number of females with primary education(IGVGD Program) 149) years of education male(IGVGD Program) 150) years of education female(IGVGD Program) 151) hh head is illiterate(IGVGD Program) 152) female headed hh(IGVGD Program) 153) hh head was an agricultural day laborer before joining program(IGVGD Program) 154) amount of cultivable land owned before joining program(IGVGD Program)	145) Expenditure/consumption 146) Expenditure/consumption 147) Expenditure/consumption 148) Expenditure/consumption 149) Expenditure/consumption 150) Expenditure/consumption 151) Expenditure/consumption 152) Expenditure/consumption 153) Expenditure/consumption 154) Expenditure/consumption 155) Expenditure/consumption 156) Expenditure/consumption 157) Expenditure/consumption 158) Expenditure/consumption	145) Positive 146) No impact 147) No impact 148) No impact 149) No impact 150) No impact 151) Negative 152) Negative 153) Negative 154) Negative 155) No impact 156) Negative 157) No impact 158) No impact 159) No impact 160) No impact 161) Positive 162) positive 163) No impact 164) No impact 165) No impact 166) No impact 167) Negative 168) No impact 169) No impact 170) Positive

	155) number of goats and cows before joining program (IGVGD program) 156) numbe of chicken owned before joining program (IGVGD program) 157) hh had electricity before joining(IGVGD program) 158) cooking fuel Is firewood (IGVGD program) 159) cooking fuel Is dried dung (IGVGD program) 160) drinking water comes from own tubewell (IGVGD program) 161) household size(FSVGD program) 162) Female age 35-54 years(FSVGD program) 163) number of males with primary education (FSVGD program) 164) number of females with primary education (FSVGD program) 165) years of education male(FSVGD program) 166) years of education female(FSVGD program) 167) amount of cultivable land owned before joining program(FSVGD program) 168) number of goats and cows before joining program(FSVGD program) 169) hh had electricity before joining(FSVGD program) 170) cooking fuel Is firewood (FSVGD program) 171) cooking fuel Is dried dung (FSVGD program) 172) drinking water comes from own tubewell (FSVGD program) 173) household size (RMP)	159) Expenditure/consumption 160) Expenditure/consumption 161) Expenditure/consumption 162) Expenditure/consumption 163) Expenditure/consumption 164) Expenditure/consumption 165) Expenditure/consumption 166) Expenditure/consumption 167) Expenditure/consumption 168) Expenditure/consumption 169) Expenditure/consumption 170) Expenditure/consumption 171) Expenditure/consumption 172) Expenditure/consumption 173) Expenditure/consumption 174) Expenditure/consumption 175) Expenditure/consumption 176) Expenditure/consumption 177) Expenditure/consumption 178) Expenditure/consumption 179) Expenditure/consumption 180) Expenditure/consumption 181) Expenditure/consumption	171) No impact 172) Positive 173) No impact 174) Positive 175) Positive 176) Positive 177) Positive 178) Positive 179) Positive 180) Positive 181) Positive 182) Positive 183) No impact 184) Negative 185) No impact 186) No impact 187) Negative 188) Positive 189) Negative 190) No impact 191) No impact 192) Positive 193) No impact 194) No impact 195) No impact 196) Positive 197) Positive 198) Negative 199) Positive 200) No impact 201) No impact 202) Positive 203) No impact 204) Positive 205) No impact 206) No impact 207) No impact 208) No impact

	174) Boys age 5-14 years (RMP) 175) Girls age 5-14 years in family (RMP) 176) female age 15-34 year (RMP) 177) Female age 35-54 years (RMP) 178) females 55 years of age (RMP) 179) number of males with primary education(RMP) 180) number of females with primary education(RMP) 181) years of education male(RMP) 182) years of education female(RMP) 183) hh head is illiterate(RMP) 184) female headed hh(RMP) 185) hh head was an agricultural day laborer before joining program(RMP) 186) amount of cultivable land owned before joining program(RMP) 187) number of goats and cows before joining program(RMP) 188) number of chicken owned before joining program(RMP) 189) hh had electricity before joining(RMP) 190) cooking fuel Is firewood(RMP) 191) cooking fuel Is dried dung(RMP) 192) drinking water comes from own tubewell (RMP) 193) household size (FFA) 194) Boys age 0-4 years(FFA) 195) number of males with primary education(FFA)	182) Expenditure/consumption 183) Expenditure/consumption 184) Expenditure/consumption 185) Expenditure/consumption 186) Expenditure/consumption 187) Expenditure/consumption 188) Expenditure/consumption 189) Expenditure/consumption 190) Expenditure/consumption 191) Expenditure/consumption 192) Expenditure/consumption 193) Expenditure/consumption 194) Expenditure/consumption 195) Expenditure/consumption 196) Expenditure/consumption 197) Expenditure/consumption 198) Expenditure/consumption 199) Expenditure/consumption 200) Expenditure/consumption 201) Expenditure/consumption 202) Expenditure/consumption 203) Expenditure/consumption 204) Expenditure/consumption	

	196) number of females with primary education(FFA) 197) years of education male(FFA) 198) years of education female(FFA) 199) hh head is illiterate(FFA) 200) female headed hh(FFA 201) hh head was an agricultural day laborer before joining program(FFA) 202) amount of cultivable land owned before joining program(FFA) 203) number of goats and cows before joining program(FFA) 204) numbe of chicken owned before joining program(FFA) 205) hh had electricity before joining(FFA) 206) cooking fuel Is firewood(FFA) 207) cooking fuel Is dried dung(FFA) 208) drinking water comes from own tubewell (FFA)	205) Expenditure/consumption 206) Expenditure/consumption 207) Expenditure/consumption 208) Expenditure/consumption	

3) Title	Is there a commercially viable market for crop insurance in rural Bangladesh?
Study author	Akter et al. (2008)
Year	2008
Country	Bangladesh
Segment	Rural

Intervention 1	FS		
Intervention details	Commercially viable market for crop insurance in rural Bangladesh.		
Data type	Primary		
Study type 1	Mixed method		
Treatment group			
Control group			
Total	3,599 households		
Design	Cross-sectional		
Data analysis method	Contingent valuation (CV) method		
Analysis instrument	Double bonded contingent valuation method & descriptive statistics		
Detail	Descriptive statistics		
Study validity check	No		
Study type 2	Quantitative		
Outcome	Variable	Outcome	Strength
Economic outcome	1) Wealth and asset	1) Asset	1) Negative
Social outcome	NA	NA	NA
Factor	NA	NA	NA
4) Title	The influence of gender and product design on farmers' preferences for weather-indexed crop insurance.		
Study author	Akter et al. (2016)		

Year	2016
Country	Bangladesh
Segment	Rural
Intervention 1	FS
Intervention details	Weather-indexed crop insurance
Data type	Primary
Study type 1	Mixed method
Treatment group	
Control group	
Total	433 households
Design	Cross-sectional
Data analysis method	Latent class logit regression, descriptive statistics & random utility model
Analysis instrument	Logit regression
Detail	Latent class logit model
Study validity check	
Study type 2	Quantitative

Outcome	Variable	Outcome	Strength
Economic outcome	1) Wealth and asset 2) Earning 3) Protection of wealth and asset 4) Protection of wealth and asset 5) Protection of wealth and asset	1) Asset 2) Income 3) Asset 4) Asset 5) Asset 6) Asset	1) No impact 2) Negative 3) Positive 4) Negative 5) Negative 6) Negative

	6) Protection of wealth and asset		
Social outcome			7)
Factor	NA	NA	NA

5) Title	Alonso, E. B., & Swinnen, J. (2016). Who are the producers and consumers? Value chains and food policy effects in the wheat sector in Pakistan
Study author	Alonso & Swinnen. (2016)
Year	2016
Country	Sri Lanka
Segment	Rural
Intervention 1	RVC
Intervention details	Value chain and food policy impact
Data type	Secondary
Study type 1	Mixed method
Treatment group	
Control group	
Total	Secondary data
Design	Longitudinal
Data analysis method	Descriptive statistics & nominal rate of assistance
Analysis instrument	Descriptive statistics & nominal rate of assistance
Detail	Descriptive statistics & nominal rate of assistance

Study validity check	No		
Study type 2	Quantitative		
Outcome	Variable	Outcome	Strength
Economic outcome	NA	NA	NA
Social outcome	NA	NA	NA
Factor	NA	NA	NA

6) Title	Alvi, E., & Dendir, S. (2011). Weathering the storms: credit receipt and child labour in the aftermath of the great floods (1998) in Bangladesh
Study author	Alvi and Dendir. (2011)
Year	2011
Country	Bangladesh
Segment	Rural
Intervention 1	FS
Intervention details	Credit receipt
Data type	Secondary
Study type 1	Mixed method
Treatment group	
Control group	
Total	757 households
Design	Cross-sectional

Data analysis method	Tobit model and descriptive statistics		
Analysis instrument	Regression		
Detail	Fixed effect estimator along with tobit model		
Study validity check	Yes		
Study type 2	Quantitative		
Outcome	Variable	Outcome	strength
Economic outcome	NA	NA	NA
Social outcome	11) Decrease in child labour 12) Increased work per hour in case of no credit (male compared to female)	7) Child labour 8) Employment/occupational choices	1) Positive 2) Positive
Factor	3) Age	3)Employment/occupational choices	3) Positive

7) Title	Role of ecotourism in environmental conservation and socioeconomic development in Annapurna conservation area, Nepal
Study author	Anup et al. (2015)
Year	2015
Country	Nepal
Segment	Rural
Intervention 1	RVC
Intervention details	Role of ecotourism and socio economic development in Nepal

Data type	Primary
Study type 1	Quantitative
Treatment group	
Control group	
Total	242 households
Design	Cross-sectional
Data analysis method	OLS regression and descriptive statistics
Analysis instrument	Correlation coefficient and regression analysis
Detail	Regression
Study validity check	No
Study type 2	Quantitative

Outcome	Variable	Outcome	Strength
Economic outcome	NA	NA	NA
Social outcome	13) Tourism participation 14) Physical capital 15) Livestock	1) Expenditure/consumption 2) Expenditure/consumption 3) Expenditure/consumption	8) Positive 9) No impact 10) No impact
Factor	1) Per capita HH consumption 2) Productive human capital 3) Education ratio of HH 4) Landholding status of HH 5) Livestock number 6) Per capita income 7) Age in years 8) Gender	1) Tourism participation 2) Tourism participation 3) Tourism participation 4) Tourism participation	1) Positive 2) No impact 3) No impact 4) No impact 5) No impact 6) Positive 7) No impact 8) Positive 9) Positive

	9) Income 10) Productive human capital 11) Size of household 12) Education	5) Tourism participation 6) Tourism participation 7) Tourism participation 8) Tourism participation 9) Expenditure/Consumption 10) Expenditure/Consumption 11) Expenditure/Consumption 12) Expenditure/Consumption	10) Positive 11) Negative 12) Positive

8) Title	Can basic entrepreneurship transform the economic lives of the poor?
Study author	Bandiera et al. (2013)
Year	2013
Country	Bangladesh
Segment	Rural
Intervention 1	FS, CB
Intervention details	Targeted ultra poor programme in Bangladesh
Data type	Primary
Study type 1	Quantitative
Treatment group	4,045
Control group	2,687
Total	6,732 households
Design	RCT

Data analysis method	DID & OLS regression		
Analysis instrument	OLS regression		
Detail	OLS regression		
Study validity check	Yes		
Study type 2	Quantitative		
Outcome	Variable	Outcome	Strength
Economic outcome	1) share of activities held regularly after 2 year of program 2) share of activities with seasonal earnings after 2 year of program 3) total annual earnings after 2 year of program 4) earnings per hour after 2 year of program 5) share of activities held regularly after 4 year of program 6) share of activities with seasonal earnings after 4 year of program 7) total annual earnings after 4 year of program 8) earnings per hour after 4 year of program 9) Asset accumulation after 2 years of program (cows) 10) Asset accumulation after 2 years of program(poultry) 11) Asset accumulation after 2 years of program(goats)	1) Employment/occupational choices 2) Income 3) Income 4) Income 5) Income 6) Income 7) Income 8) Income 9) Asset 10) Asset 11) Asset 12) Asset 13) Asset 14) Asset 15) Asset 16) Asset 17) Asset 18) Asset 19) Asset 20) Asset 21) Savings 22) Savings 23) Expenditure/consumption 24) Expenditure/consumption	1) Positive 2) No impact 3) Positive 4) No impact 5) Positive 6) Negative 7) Positive 8) Positive 9) Positive 10) Positive 11) Positive 12) Positive 13) Positive 14) Positive 15) Positive 16) Positive 17) Positive 18) No impact 19) Positive 20) Positive 21) Positive 22) Positive 23) Positive 24) Positive

	12) Asset accumulation after 2 years of program(value of all livestock) 13) Asset accumulation after 4 years of program (cows) 14) Asset accumulation after 4 years of program (poultry) 15) Asset accumulation after 4 years of program((goats)) 16) Asset accumulation after 4 years of program(value of all livestock) 17) Asset accumulation after 2 years of program (rent land for cultivation) 18) Asset accumulation after 2 years of programme (owns land for cultivation) 19) Asset accumulation after four years of programme (rent land for cultivation) 20) Asset accumulation after four years of programme (own land for cultivation) 21) Household savings after two years of programme 22) Household savings after four years of programme 23) Personal consumption Expenditure (PCE) non-food after two years of programme 24) PCE food after two years of programme		
Social outcome	25) Food security 2 years of program 26) Personal Consumption Expenditure(PCE) Non Food after 4 years of program 27) PCE Food after 4 years of program	25) Food security 26) Expenditure/consumption 27) Expenditure/consumption 28) Food security 29) Well being	25) Positive 26) positive 27) positive 28) positive 29) No impact 30) No impact 31) Positive

	28) Food security after 4 years of program 29) satisfied after 2 year of program 30) experience anxiety after 2 years of program 31) satisfied 32) experience anxiety after 4 years of program 33) HH specialized in wage labor at baseline if primary female is the sole earner 34) HH specialized in wage labor at baseline if primary female is literate 35) HH specialized in wage labor at baseline if hh owns livestock 36) HH specialized in wage labor at baseline given value of livestock 37) HH specialized in wage labor at baseline given total per capita expenditure 38) HH specialized in self employment at baseline if primary female is the sole earner 39) HH specialized in self employment baseline if primary female is literate 40) HH specialized in self employment at baseline if hh owns livestock 41) HH specialized in self employment at baseline given value of livestock 42) HH specialized in self employment at baseline given total per capita expenditure 43) HH specialized in wage labor at baseline given hours devoted to wage employment	30) Well being 31) Well being 32) Well being 33) Employment/occupational choices 34) Employment/occupational choices 35) Employment/occupational choices 36) Employment/occupational choices 37) Employment/occupational choices 38) Employment/occupational choices 39) Employment/occupational choices 40) Employment/occupational choices 41) Employment/occupational choices 42) Employment/occupational choices 43) Employment/occupational choices 44) Employment/occupational choices 45) Employment/occupational choices 46) Employment/occupational choices 47) Employment/occupational choices 48) Employment/occupational choices 49) Employment/occupational choices 50) Employment/occupational choices 51) Employment/occupational choices 52) Employment/occupational choices 53) Employment/occupational choices	32) No impact 33) No impact 34) Positive 35) No impact 36) No impact 37) Positive 38) No impact 39) No impact 40) No impact 41) No impact 42) No impact 43) Negative 44) Negative 45) No impact 46) Positive 47) No impact 48) No impact 49) No impact 50) No impact 51) Negative 52) Positive 53) Positive 54) Negative 55) Positive 56) Negative 57) Positive 58) Positive 59) Negative 60) positive

	44) HH specialized in wage labor at baseline given share of income generating activities held regularly 45) HH specialized in wage labor at baseline given share of income generating activities with seasonal earnings 46) HH specialized in wage labor at baseline given earnings per hour 47) HH specialized in self employment at baseline given hours devoted to self employment 48) HH specialized in self employment at baseline given share of income generating activities held regularly 49) HH specialised in self employment at baseline given share of income generating activities with seasonal earnings 50) HH specialised in self-employment at baseline given earnings per hour 51) Specialised in wage employment 52) Specialised in self employment after two years of programme 53) Engaged in both occupations after two years of programme 54) Hours devoted to wage employment after two years of programme 55) Hours devoted to self-employment after two years of programme 56) Specialised in wage employment after four years of programme	54) Employment/occupational choices 55) Employment/occupational choices 56) Employment/occupational choices 57) Employment/occupational choices 58) Employment/occupational choices 59) Employment/occupational choices 60) Employment/occupational choices	

	57) Specialised in self-employment after four years of programme 58) Engaged in both occupations after four years of programme 59) Hours devoted to wage employment after four years of programme 60) Hours devoted to self-employment after four years of programme		
Factor	NA	NA	NA

9) **Title**	Targeting the hard-core poor: an impact assessment
Study author	Banerjee et al. (2011)
9) Year	2011
Country	India
Segment	Rural
Intervention 1	FS, CB
Intervention details	Targeting the hard core poor: an impact assessment
Data type	Primary
Study type 1	Quantitative
Treatment group	429
Control group	388

Total	817 households
Design	RCT
Data analysis method	OLS regression
Analysis instrument	Regression
Detail	Regression
Study validity check	Yes
Study type 2	Quantitative

Outcome	Variable	Outcome	Strength
Economic outcome	1) Income per capita in a typical month 2) Money earned from farming land owned or leased in by this household 3) Money earned from tending animals owned or leased in by this household 4) Money earned from work in business operated by household member 5) Money earned from agricultural labour 6) Money earned from daily labour non-agricultural 7) Money earned from salaried/formal employment 8) Per capita monthly avg. exp. 9) Per capita monthly food/fuel exp. 10) Per capita monthly non-food exp. 11) Per capita durable good exp. 12) Asset index (durables and livestock)	1) Income 2) Income 3) Income 4) Income 5) Income 6) Income 7) Income 8) Expenditure/consumption 9) Expenditure/consumption 10) Expenditure/consumption 11) Expenditure/consumption 12) Asset 13) Asset 14) Asset 15) Asset 16) Expenditure/consumption 17) Expenditure/consumption 18) Savings 19) Asset	1) Positive 2) No impact 3) Positive 4) Positive 5) No impact 6) No impact 7) No impact 8) Positive 9) Positive 10) Positive 11) No impact 12) Positive 13) No impact 14) Positive 15) Positive 16) Positive 17) Positive 18) Positive 19) Positive

	13) Assets index (durable) 14) Land owned in katthas 15) No. of fruit trees 16) Exp. on cereals, dairy, vegetables, fruits, meats, eggs 17) Exp. on pulses, edible oil 18) Rs. deposited in savings (30 days) 19) Has own financial assets		
Social outcome	20) Food security index, adult skipped meal and adult not eat entire day 21) Do all members of your householdh get enough food everyday 22) Index of women's autonomy 23) Operate small enterprise, investment in small enterprise	20)Food security 21) Food security 22) decision making power 23)Employment/occupational choice	20) Negative 21) Positive 22) Positive 23) No impact
Factor	NA	NA	NA

10) Title	Leveraging information and communication technology infrastructure of dairy cooperative network: an ex-ante analysis of potential institutional innovation
Study author	Bardhan et al. (2014)
Year	2014
Country	India
Segment	Rural
Intervention 1	IKS
Intervention details	ICT penetration

Data type	Primary		
Study type 1	Quantitative		
Treatment group			
Control group			
Total	80 households		
Design	Cross-sectional		
Data analysis method	Multinomial logit regression & ANOVA		
Analysis instrument	Regression		
Detail	Multinomial logit regression		
Study validity check	No		
Study type 2	Quantitative		
Outcome	Variable	Outcome	Strength
Economic outcome	NA	NA	NA
Social outcome	NA	NA	NA
Factor	1) Cooperative membership 2) Market distance 3) Age 4) Land size 5) Educational level 6) Non-farm income 7) Herd size 8) Credit access	1) Willingness to Pay(WTP) for ICT 2) Willingness to Pay(WTP) for ICT 3) Willingness to Pay(WTP) for ICT 4) Willingness to Pay(WTP) for ICT 5) Willingness to Pay(WTP) for ICT 6) Willingness to Pay(WTP) for ICT	1) Positive 2) Negative 3) Positive 4) Positive 5) No impact 6) No impact 7) No impact 8) No impact

		7) Willingness to Pay(WTP) for ICT 8) Willingness to Pay (WTP) for ICT	

11) **Title**	Failure vs. displacement: why an innovative anti-poverty programme showed no net impact in South India
Study author	Bauchet et al. (2015)
Year	2015
Country	India
Segment	Rural
Intervention 1	FS, CB
Intervention details	Impact of anti-poverty programme
Data type	Primary
Study type 1	Quantitative
Treatment group	575
Control group	488
Total	1,064 households
Design	RCT

Data analysis method	Regression		
Analysis instrument	Regression		
Detail	Regression		
Study validity check	Yes		
Study type 2	Quantitative		
Outcome	Variable	Outcome	strength
Economic outcome	1) Impact of the ultra poor program on own ownership of house 2) Impact of the ultra poor program on acres of land owned 3) Impact of the ultra poor program on Non agri. Assets index 4) Impact of the ultra poor program on Agri assets index 5) Impact of the ultra poor program on hh owns livestock 6) Impact of the ultra poor program on hh owns poultry 7) Impact of the ultra poor program on hh owns plow 8) household sold animal in last 12 month 9) monthly income from sales of animal 10) Total monthly income per capita 11) monthly agri labour income per capita 12) monthly livestock income per capita	1) Asset 2) Asset 3) Asset 4) Asset 5) Asset 6) Asset 7) Asset 8) Asset 9) Income 10) Income 11) Income 12) Asset 13) Income 14) Credit 15) Credit 16) Credit 17) Income 18) Income 19) Income 20) Income 21) Income 22) Income 23) Income 24) Income 25) Expenditure/Consumption 26) Expenditure/Consumption 27) Expenditure/Consumption 28) Saving	1) No impact 2) No impact 3) No impact 4) Positive 5) Positive 6) Positive 7) No impact 8) Positive 9) Positive 10) No impact 11) No impact 12) Positive 13) Positive 14) Positive 15) Positive 16) Positive 17) Negative 18) No impact 19) Negative 20) No impact 21) No impact 22) Positive 23) No impact 24) No impact 25) No impact 26) No impact 27) No impact 28) No impact 29) No impact

	13) hh had unexpected event in last year 14) loan outstanding 15) no of loans outstanding 16) amount of loans outstanding 17) Impact of the ultra poor program on total income 18) Impact of the ultra poor program agri self employment 19) Impact of the ultra poor program on agri labor 20) Impact of the ultra poor program on non agri labor 21) Impact of the ultra poor program on salaried employment 22) Impact of the ultra poor program on livestock 23) Impact of the ultra poor program non agri self employment 24) Impact of the ultra poor programme on income from other sources 25) Impact of ultra programme on total expenditure 26) Impact of ultra programme on food expenditure 27) Impact of ultra programme on non-food expenditure 28) Impact on loans and savings outcome, household saves variable 29) Impact on loans and savings outcome, total saving balance variable	29) saving	
Social outcome	30) Household size 31) number of adults(+14) 32) if anyone hh migrates for work 33) if own house 34) no of acres of land owned by hh 35) if hh owns livestock	30) participation in the program 31) participation in the program 32) participation in the program 33) participation in the program	30) Positive 31) Negative 32) Negative 33) No impact 34) No impact 35) Negative 36) No impact 37) No impact

	36) if hh owns poultry 37) if hh owns plow 38) Impact on loans and savings outcome, hh has outstanding loans variable 39) Impact on loans and savings outcome, number of loans outstanding variable 40) Impact on loans and savings outcome, value of loans outstanding 41) use of government safety nets outcome, work from EGS 42) use of government safety nets outcome, Pension variable 43) use of government safety nets outcome, govt housing variable 44) use of government safety nets outcome, govt. assets variable 45) Use of government safety nets outcome, government training variable 46) Use of government safety nets outcome, subsidised loans variable 47) Use of government safety nets outcome, received goods with PDS card variable 48) Use of government safety nets outcome, has BPL card variable	34) participation in the program 35) participation in the program 36) participation in the program 37) participation in the program 38) savings 39) saving 40) Saving 41) use of government safety nets 42) use of government safety nets 43) use of government safety nets 44) use of government safety nets 45) use of government safety nets 46) use of government safety nets 47) Use of government safety nets 48) Use of government safety nets	38) Positive 39) No impact 40) No impact 41) No impact 42) No impact 43) Positive 44) No impact 45) No impact 46) Positive 47) No impact 48) No impact
Factor			

12) **Title**	Upgrading mountain people in medicinal and aromatic plants value chains: Lessons for sustainable management and income generation from Uttarakhand

Study author	Choudhary et al. (2013)
Year	2012
Country	India
Segment	Rural
Intervention 1	CB, RVC
Intervention details	Generating income by upgrading mountain people in medicinal and aromatic plats value chain
Data type	Primary
Study type 1	Mixed
Treatment group	
Control group	
Total	139 households
Design	Before/after
Data analysis method	Descriptive statistics
Analysis instrument	Chi-square test, z-test and t-test
Detail	Chi-square test, z-test and t-test
Study validity check	Yes
Study type 2	Quantitative

Outcome	Variable	Outcome	Strength
Economic outcome	1) Share from the value chain of producer after intervention 2) Improved market access 3) Impact of high price on income 4) Impact of training program	1) Income 2) Market access 3) Income 4) Income 5) Income 6) Income 7) Income	1) Positive 2) Positive 3) Positive 4) Positive 5) Positive 6) No impact 7) No impact

	5) Impact of group formation 6) Impact of increased demand 7) Impact of reduced supply 8) Impact of availability of financial access 9) Impact of guarding 10) Impact of packaging 11) Impact of higher productivity 12) Impact of improved primary processing 13) Impact of improved market access 14) Impact of collective management 15) Impact of training 16) Impact of distance of local mandi (market)from the villages in km	8) Income 9) Income 10) Income 11) Income 12) Income 13) Income 14) Income 15) Income 16) Income	8) No impact 9) No impact 10) No impact 11) No impact 12) No impact 13) No impact 14) No impact 15) Positive 16) Negative
Social outcome	17) Training 18) Group formation 19) Codes of conduct 20) Better information 21) impact of training on knowledge of nursery management 22) Impact of training on harvesting 23) Impact of training on drying 24) Impact of training on knowledge of nursery management	1) sustainable environmental practices 2) sustainable environmental practices 3) Sustainable environmental practices 4) Sustainable environmental practices 5) Resource management 6) Resource management 7) Resource management 8) Resource management	1) Positive 2) Positive 3) Positive 4) No impact 5) Positive 6) Positive 7) Positive 8) Positive
Factor	NA	NA	NA
13) Title	Drivers of exploitation and inequity in non-timber forest products (NTFP) value chains: the case of Indian bay leaf in Nepal and India		
Study author	Choudhary et al. (2014)		

Year	2014		
Country	India and Nepal		
Segment	Rural		
Intervention 1	RVC		
Intervention details	Non-timber forest product value chain (bay leaf)		
Data type	Primary		
Study type 1	Mixed method		
Treatment group			
Control group			
Total	381 respondents, 261 farmers and collectors, 60 traders and private enterprises and 60 facilitators		
Design	Cross-sectional		
Data analysis method	Descriptive statistics		
Analysis instrument	ANOVA		
Detail	ANOVA		
Study validity check	No		
Study type 2	Quantitative		
Outcome	Variable	Outcome	strength
Economic outcome			
Social outcome			

Factor	1) Market information 2) Contracts with buyers 3) Quality control 4) NTFP Mandi 5) Contract with buyers	1) Improvement of Upstream actors(Farmers/Producers) in the value chain 2) Improvement of Upstream actors(Farmers/Producers) in the value chain 3) Improvement of Upstream actors(Farmers/Producers) in the value chain 4) Improvement of Upstream actors(Farmers/Producers) in the value chain 5) Improvement of downstream actors(Traders) in the value chain	1) Positive 2) Positive 3) Positive 4) Positive 5) No impact

14) Title	Access to a telephone and factor market participation of rural households in Bangladesh
Study author	Chowdhury. (2006)
Year	2006
Country	Bangladesh
Segment	Rural
Intervention 1	IKS
Intervention details	Access to telephone
Data type	Primary

Study type 1	Quantitative
Treatment group	
Control group	
Total	284 households
Design	Cross-sectional
Data analysis method	Bivariate probit model & two-stage probit model
Analysis instrument	Regression
Detail	Bivariate probit model
Study validity check	No
Study type 2	Quantitative

Outcome	Variable	Outcome	strength
Economic outcome	NA	NA	NA
Social outcome	NA	NA	NA
Factor	9) Gender 10) Age 11) Education 12) HH expenditure 13) Occupation 14) Farm size 15) Stock of labour	1) Telephone use status 2) Telephone use status 3) Telephone use status 4) Telephone use status 5) Telephone use status 6) Telephone use status 7) Telephone use status	1) No impact 2) Positive 3) No impact 4) No impact 5) Positive 6) Positive 7) Negative

15) Title	Can producer associations improve rural livelihoods? Evidence from farmer centres in India
Study author	Desai and Joshi. (2013)
Year	2013
Country	India
Segment	Rural
Intervention 1	RVC, CB, FS
Intervention details	Women producer organisations
Data type	Primary
Study type 1	Quantitative
Treatment group	449
Control group	663
Total	1,112 households
Design	Cross sectional
Data analysis method	Propensity score matching
Analysis instrument	OLS
Detail	Regression
Study validity check	Yes
Study type 2	Quantitative

Outcome	Variable	Outcome	strength
Economic outcome	1) log of total income outcome (Unconditional impact of sewa) 2) log of farm income outcome (Unconditional impact of sewa) 3) log of non farm income outcome (Unconditional impact of sewa) 4) aware of loan options outcome (Unconditional impact of sewa) 5) ever taken a loan outcome (Unconditional impact of sewa) 6) have a bank account outcome (Unconditional impact of sewa) 7) log of total income outcome (Unconditional impact of sewa) 8) log of farm income outcome (Unconditional impact of sewa) 9) log of non farm income outcome (Uncoditional impact of sewa) 10) aware of loan options outcome (Unconditional impact of sewa) 11) ever taken a loan outcome (Unconditional impact of sewa) 12) have a bank account outcome (Unconditional impact of sewa) 13) log of total income outcome (conditional impact of sewa) 14) log of farm income outcome (conditional impact of sewa) 15) aware of loan options outcome(conditional impact of sewa)	1) income 2) income 3) income 4) income 5) income 6) income 7) income 8) income 9) income 10) income 11) income 12) income 13) income 14) income 15) income 16) income 17) income 18) income 19) income 20) income 21) income 22) income 23) income 24) income 25) income 26) income 27) income 28) income 29) income 30) income 31) income 32) income 33) income 34) income 35) income 36) income 37) income 38) income 39) Financial Literacy 40) Financial Literacy 41) Financial Literacy 42) Financial Literacy 43) Financial Literacy 44) Financial Literacy	1) Positive 2) No impact 3) No impact 4) Positive 5) Positive 6) Positive 7) Positive 8) No impact 9) No impact 10) Positive 11) Positive 12) Positive 13) No impact 14) Positive 15) No impact 16) Positive 17) Positive 18) Positive 19) No impact 20) No impact 21) Positive 22) Positive 23) Positive 24) No impact 25) Positive 26) Negative 27) Positive 28) Positive 29) Positive 30) Positive 31) Negative 32) Positive 33) Positive

	16) ever taken a loan outcome (conditional impact of sewa) 17) have a bank account outcome (conditional impact of sewa 18) log of total income outcome (conditional impact of sewa) 19) log of farm income outcome (conditional impact of sewa) 20) log of non farm income outcome (conditional impact of sewa) 21) aware of loan options outcome (conditional impact of sewa) 22) ever taken a loan outcome (conditional impact of sewa) 23) have a bank account outcome (coditional impact of sewa) 24) sewa(>6 months)* kutcha home variable ,log of total income outcome 25) husband's age variable ,log of total income outcome 26) kutcha home variable ,log of total income outcome 27) landless variable ,log of total income 28) hh size variable ,log of total income outcome 29) sewa(>6 months)* landless variable ,log of farm income outcome 30) husband's age variable ,log of farm income outcome 31) women years of schooling variable ,log of farm income outcome 32) kutcha home variable ,log of farm income outcome 33) landless variable ,log of farm income outcome 34) sewa*kutcha home variable ,log of non-farm income outcome	45) Financial Literacy 46) Financial Literacy 47) Financial Literacy 48) Financial Literacy 49) Financial Literacy 50) Financial Literacy 51) Financial Literacy 52) Financial Literacy 53) Financial Literacy 54) Financial Literacy 55) Technical literacy 56) Technical literacy 57) Technical literacy 58) Technical literacy 59) Technical literacy 60) Technical literacy 61) Technical literacy 62) Technical literacy 63) Technical literacy 64) Technical literacy 65) Technical literacy 66) Technical literacy 67) Technical literacy 68) Technical literacy 69) Technical literacy 70) Technical literacy	34) Positive 35) Positive 36) Positive 37) Positive 38) Positive 39) Positive 40) Positive 41) Positive 42) Positive 43) Positive 44) Positive 45) Negative 46) Negative 47) Positive 48) Negative 49) Negative 50) Positive 51) Negative 52) Positive 53) Negative 54) Negative 55) Positive 56) Negative 57) Negative 58) Positive 59) Positive 60) Negative 61) Negative 62) Negative 63) Negative 64) Positive 65) Negative

	35) sewa*schooling variable ,log of nonfarm income outcome 36) female headed hh variable ,log of non-farm income outcome 37) total hh size variable ,log of non-farm income outcome 38) sewa(>6months) variable , aware of loan options outcome 39) SEWA variable , aware of loan options outcome 40) woman's age variable , aware of loan options outcome 41) woman's years of schooling variable , aware of loan options outcome 42) female headed hh variable , aware of loan options outcome 43) sewa(>6 months) variable , ever taken a loan outcome 44) SEWA variable , ever taken a loan outcome 45) sewa*kutcha home variable , ever taken a loan outcome 46) husband's age variable , ever taken a loan outcome 47) woman's age variable , ever taken a loan outcome 48) female headed hh variable , ever taken a loan outcome 49) landless variable , ever taken a loan outcome 50) sewa(>6 months) variable , have a bank account outcome 51) sewa(>6 months)*Landless variable , have a bank account outcome 52) female headed hh variable , have a bank account outcome 53) kutcha home variable , have a bank account outcome		66) Positive 67) Negative 68) Positive 69) Negative 70) Negative

	54) total hh variable , have a bank account outcome 55) SEWA*Kutcha home variable, log of total amount harvested 56) woman's age variable, log of total amount harvested 57) landless variable, log of total amount harvested 58) sewa(>6months)*kutcha home variable, Fraction of harvest sold outcome 59) SEWA*Kutcha home variable, Fraction of harvest sold outcome 60) female headed hh variable, Fraction of harvest sold outcome 61) landless variable, Fraction of harvest sold outcome 62) total hh size variable, Fraction of harvest sold outcome 63) sewa(>6months)*kutcha home variable, now output price prior to sale outcome 64) sewa(>6months)*Schooling variable, now output price prior to sale outcome 65) SEWA*Kutcha home variable, now output price prior to sale outcome 66) SEWA*schooling variable, now output price prior to sale outcome 67) Husband's age variable, now output price prior to sale outcome 68) Woman's age variable, now output price prior to sale outcome 69) Female headed household variable, now output price prior to sale outcome		

	70) Landless variable, now output price prior to sale outcome		
Social outcome	NA	NA	NA
Factor	NA	NA	NA

16) **Title**	Can producer associations improve rural livelihoods? Evidence from farmer centres in India		
Study author	Edmonds (2002)		
Year	2002		
Country	Nepal		
Segment	Rural		
Intervention 1	RVC		
Intervention details	Community resource management		
Data type	Primary		
Study type 1	Quantitative		
Treatment group			
Control group			
Total	1,200 households		
Design	Cross-sectional		
Data analysis method	Linear regression		
Analysis instrument	Linear regression		
Detail	Linear regression & descriptive statistics		
Study validity check	Yes		
Study type 2	Quantitative		
Outcome	Variable	Outcome	Strength
Economic outcome	NA	NA	NA

Social outcome	1) Bharis per year per household 2) Bharis for firewood 3) Firewood collected	9) Sustainable harvesting practices 10) Sustainable harvesting practices 11) Sustainable harvesting practices	9) Negative 10) Negative 11) Negative
Factor	NA	NA	NA

17) Title	Impact of SMS-based agricultural information on Indian farmers
Study author	Fafchamps and Minten (2012)
Year	2012
Country	India
Segment	Rural
Intervention 1	IKS
Intervention details	Impact of SMS based agricultural information on Indian farmers
Data type	Primary
Study type 1	Quantitative
Treatment group	247
Control group	686
Total	933 households
Design	Before/after
Data analysis method	OLS regression
Analysis instrument	Regression

Detail	Regression		
Study validity check	No		
Study type 2	Quantitative		
Outcome	Variable	Outcome	strength
Economic outcome	1) Impact of RML programme on knowledge of price before sale (at planting) 2) Impact of RML programme on share information farming 3) Impact of RML programme 4) Impact of RML programme on crop was graded/sorted (young head of household dummy) 5) Impact of RML programme change of crop variety since last year 6) Impact of RML programme on prices obtained on change in cultivation practices last year	24) Revenue/profit/sale 25) Technical Literacy 26) Revenue/profit/sale 27) Technical Literacy 28) Technical Literacy 29) Technical Literacy	20) Positive 21) Positive 22) No impact 23) Positive 24) No impact 25) No impact
Social outcome	NA	NA	NA
Factor	NA	NA	NA

18 Title	An inquiry into the financial literacy and cognitive ability of farmers: evidence from rural India
Study author	Sarthak and Singh (2012)
Year	2012
Country	India
Segment	Rural

Intervention 1	FS		
Intervention details	Financial literacy and cognitive ability of farmers		
Data type	Primary		
Study type 1	Quantitative		
Treatment group			
Control group			
Total	Primary survey of 597 farmers		
Design	Cross-sectional		
Data analysis method	Ordered logistic regression		
Analysis instrument	Ordered logistic regression, descriptive statistics, maximum likelihood estimator		
Detail	Regression		
Study validity check	No		
Study type 2	Quantitative		
Outcome	Variable	Outcome	Strength
Economic outcome	1) Cognitive ability 2) Correlation between mathematical ability and financial aptitude test 3) Correlation between mathematical ability and probability ability 4) Correlation between mathematical ability and debt literacy test 5) Correlation between probability test score and debt literacy	1) Financial literacy 2) Financial literacy 3) Financial literacy 4) Financial literacy 5) Financial literacy 6) Financial literacy 7) Financial literacy 8) Financial literacy 9) Financial literacy 10) Financial literacy 11) Financial literacy 12) Financial literacy 13) Financial literacy	1) Positive 2) Positive 3) Positive 4) Positive 5) No impact 6) Positive 7) No impact 8) Positive 9) No impact 10) Positive 11) Positive 12) Positive 13) No impact

	6) Mathematical ability 7) Mathematical ability 8) Mathematical ability 9) Difference in probability ability 10) Financial aptitude 11) Financial aptitude 12) Debt literacy 13) Debt literacy and financial aptitude 14) Debt literacy and financial aptitude 15) Debt literacy	14) Financial literacy 15) Financial literacy	14) Positive 15) Positive
Social outcome	NA	NA	NA
Factor	NA	NA	NA

19) Title	Money or ideas? A field experiment on constraints to entrepreneurship in rural Pakistan
Study author	Giné and Mansuri (2011)
Year	2011
Country	Pakistan
Segment	Rural
Intervention 1	CB, FS
Intervention details	Impact of business training in rural Pakistan
Data type	Primary
Study type 1	Quantitative
Treatment group	1,333
Control group	2,161
Total	3,494 households

Design	RCT		
Data analysis method	Regression (tobit model)		
Analysis instrument	OLS		
Detail	Regression		
Study validity check	Yes		
Study type 2	Quantitative		
Outcome	Variable	Outcome	strength
Economic outcome	1) training impact on business knowledge 2) training impact on business creation with or without access to larger loan 3) training Impact among business owner 4) training impact on business practices 5) business owners assigned as winners of the lottery variable, improvement in business operations outcome 6) Female CO members (lottery winners and with business training) variable, business knowledge outcome 7) CO member offered a business training variable, income variable 8) Business training assign to lottery winners variable, income variable 9) Result of treatment 10) Result of treatment	1) Technical Literacy 2) Technical Literacy 3) Technical Literacy 4) Technical Literacy 5) Technical Literacy 6) Technical Literacy 7) Income 8) Income 9) Decision-making power 10) Decision-making power 11) Employment 12) Employment 13) Asset	1) Positive 2) No impact 3) No impact 4) Positive 5) Positive 6) No impact 7) Positive 8) No impact 9) No impact 10) No impact 11) Positive 12) No impact 13) Positive

	11) Impact of treatment, self-employed households (outcome) 12) Impact of treatment, hh not self-employed (outcome) 13) Treatment on male CO members, impact on asset and income		
Social outcome	14) Treatment on female CO members, aggregate outlook on life	14) Wellbeing	14) Positive
Factor	NA	NA	NA

20) Title	Structural determinants of market integration: the case of rice markets in Bangladesh		
Study author	Goletti et al. (1995)		
Year	1995		
Country	Bangladesh		
Segment	Rural		
Intervention 1	RVC		
Intervention details	Determinants of market Integration in the case of rice market		
Data type	Secondary		
Study type 1	Quantitative		
Treatment group			
Control group			
Total	Weekly price of coarse rice of period 1989–1992		
Design	Longitudinal		
Data analysis method	Descriptive statistics and co-integration		
Analysis instrument	Descriptive statistics		
Detail	Descriptive statistics		
Study validity check	No		
Study type 2	Quantitative		
Outcome	Variable	Outcome	Strength

Economic outcome	NA	NA	NA
Social outcome	NA	NA	NA
Factor	1) correlation of price difference between two market (distance variable 2) correlation of price difference between two market 3) correlation of price difference between two market (paved road density variable) 4) correlation of price difference between two market(bank branch density variable) 5) correlation of price difference between two market(railway density variable) 6) correlation of price difference between two market(number of strikes variable) 7) correlation of price difference between two market(number of shocks variable) 8) correlation of price difference between two market(degree of dissimilarity in production variable) 9) correlation of price difference between two market(volatility of stock policy variable)	1) Market Integration 2) Market Integration 3) Market integration 4) Market integration 5) Market integration 6) Market integration 7) Market integration 8) Market integration 9) Market integration	1) Negative 2) Positive 3) No impact 4) Negative 5) No impact 6) No impact 7) Positive 8) No impact 9) Positive

21) Title	Triadic power relations in rural Nepal.
Study author	Hatlebakk (2011)

Year	2011		
Country	Nepal		
Segment	Rural		
Intervention 1	RVC		
Intervention details	Triadic power relation and market access		
Data type	Primary		
Study type 1	Quantitative		
Treatment group			
Control group			
Total	1,817 households		
Design	Cross-sectional		
Data analysis method	OLS regression & IV		
Analysis instrument	OLS regression		
Detail	Regression		
Study validity check	Yes		
Study type 2	Quantitative		
Outcome	Variable	Outcome	Strength
Economic outcome	1) Earning when household living one hour away than the household living next to shop(hill sample), hours to shop(after adding control variable) 2) Earning when household living one hour away than	1) income 2) income 3) income 4) income 5) income 6) income 7) income 8) income	1) No impact 2) No impact 3) No impact 4) No impact 5) No impact 6) Negative 7) Positive 8) Negative

	the household living next to shop (hill sample), hours to shop variable 3) Hours to shop with interaction terms (one landlord, two landlords), earning when household living one hour away than the household living next to shop (hill sample) 4) One landlord (hill sample) 5) Two landlord (hill sample) 6) Woman (hill sample) 7) Age (hill sample) 8) Age square (hill sample)		
Social outcome	NA	NA	NA
Factor	1) Earning when household living one hour away than the household living next to shop(terai sample), hours to shop(after adding control variable) 2) Earning when household living one hour away than the household living next to shop(terai sample),hours to shop variable 3) hours to shop with interaction terms(one landlord, two landlord),Earning when household living one hour away than the household living next to shop(terai sample) 4) one landlord (terai sample) 5) two landlord (terai sample) 6) woman (terai sample) 7) age(terai sample) 8) Age square (Terai sample)	1) income 2) income 3) income 4) income 5) income 6) income 7) income 8) income	1) positive 2) No impact 3) positive 4) No impact 5) No impact 6) Negative 7) Positive 8) Negative

22) Title	Women's empowerment and the creation of social capital in Indian villages

Study author	Janssens (2009)		
Year	2009		
Country	India		
Segment	Rural		
Intervention 1	CB		
Intervention details	Women's empowerment and the creation of social capital		
Data type	Primary		
Study type 1	Quantitative		
Treatment group	1,432		
Control group	559		
Total	2,000 households		
Design	Cross sectional		
Data analysis method	Regression		
Analysis instrument	OLS regression		
Detail	OLS regression		
Study validity check	Yes		
Study type 2	Quantitative		
Outcome	Variable	Outcome	Strength
Economic outcome	NA	NA	NA
Social outcome	1) total village effect variable(trust in community members outcome)	1) social capital 2) social capital 3) social capital	1) Positive 2) No impact 3) No impact

	2) interaction of age and program village(PV) i.e age*PV variable(trust in community members) 3) SC/ST*PV variable(trust in community members outcome) 4) OBC*PV(trust in community members outcome) 5) Muslim*PV(trust in community members outcome) 6) Land ownership* PV(trust in community members outcome) 7) HH Education*PV(trust in community members outcome) 8) Female Education*PV(trust in community members outcome) 9) Female HH head*PV(trust in community members outcome) 10) dependency ratio*PV(trust in community members outcome) 11) hh size*PV(trust in community members outcome) 12) village development*PV(trust in community members outcome) 13) no of primary schools*PV(trust in community members outcome) 14) village population total*PV(trust in community members outcome) 15) Flood*PV (trust in community members outcome) 16) paved roads*PV(trust in community members outcome)	4) social capital 5) social capital 6) social capital 7) social capital 8) social capital 9) social capital 10) social capital 11) social capital 12) social capital 13) social capital 14) social capital 15) social capital 16) social capital 17) social capital 18) social capital 19) social capital 20) social capital 21) social capital 22) social capital 23) social capital 24) social capital 25) social capital 26) social capital 27) social capital 28) social capital 29) social capital 30) social capital 31) social capital 32) social capital 33) social capital 34) social capital 35) social capital 36) social capital 37) social capital 38) social capital 39) social capital 40) social capital 41) social capital 42) social capital 43) social capital 44) social capital 45) social capital 46) social capital 47) social capital 48) social capital 49) social capital	4) No impact 5) No impact 6) Negative 7) No impact 8) Negative 9) No impact 10) No impact 11) No impact 12) Positive 13) Positive 14) No impact 15) No impact 16) No impact 17) Negative 18) Positive 19) No impact 20) Positive 21) Positive 22) Positive 23) No impact 24) Positive 25) No impact 26) No impact 27) No impact 28) No impact 29) Negative 30) Positive 31) No impact 32) No impact 33) Positive 34) No impact 35) No impact 36) No impact 37) No impact 38) Negative 39) No impact 40) No impact 41) Positive 42) No impact 43) Positive 44) Negative 45) No impact 46) No impact 47) No impact 48) No impact 49) No impact

	17) public transport*PV(trust in community members outcome) 18) distance to town * Village heterogeneity (trust in community members outcome) 19) village heterogeneity (trust in community members outcome) 20) Direct effect(PSM) (trust in community members outcome) 21) Spillover effect(PSM)(trust in community members outcome) 22) total village effect(trust in stranger outcome) 23) interaction of age and program village(PV) i.e. age*PV (trust in stranger outcome) 24) SC/ST*PV(trust in stranger outcome) 25) OBC*PV(trust in stranger outcome) 26) Muslim*PV(trust in stranger outcome) 27) Land ownership* PV (trust in stranger outcome) 28) HH Education*PV(trust in stranger outcome) 29) Female Education * PV(trust in stranger outcome) 30) Female HH (trust in stranger outcome) 31) dependency ratio*PV(trust in stranger outcome) 32) hh size*PV (trust in stranger outcome) 33) village development*PV(trust in stranger outcome) 34) no of primary schools*PV(trust in stranger outcome) 35) village population total*PV (trust in stranger outcome)	50) social capital 51) social capital 52) social capital 53) social capital 54) social capital 55) social capital 56) social capital 57) social capital 58) social capital 59) social capital 60) social capital 61) social capital 62) social capital 63) social capital 64) social capital 65) social capital 66) social capital 67) social capital 68) social capital 69) social capital 70) social capital 71) social capital 72) social capital 73) social capital 74) social capital 75) social capital 76) social capital 77) social capital 78) social capital 79) social capital 80) social capital 81) social capital 82) social capital 83) social capital 84) social capital	50) Negative 51) No impact 52) Positive 53) No impact 54) No impact 55) Positive 56) No impact 57) No impact 58) No impact 59) No impact 60) Positive 61) Negative 62) Positive 63) Positive 64) No impact 65) No impact 66) No impact 67) No impact 68) No impact 69) No impact 70) No impact 71) No impact 72) No impact 73) No impact 74) No impact 75) No impact 76) No impact 77) Positive 78) No impact 79) No impact 80) No impact 81) No impact 82) Positive 83) Positive 84) No impact

	36) Flood*PV (trust in stranger outcome) 37) paved roads*PV (trust in stranger outcome) 38) public transport * PV (trust in stranger outcome) 39) distance to town*Village heterogeneity (trust in stranger outcome) 40) village heterogeneity (trust in stranger outcome) 41) Direct effect(PSM) (trust in stranger outcome) 42) Spillover effect(PSM) (trust in stranger outcome) 43) total village effect variable (schools) 44) interaction of age and program village(PV)i.e age*PV variable (schools) 45) SC/ST*PV variable (schools) 46) OBC*PV variable (schools) 47) Muslim*PV variable (schools) 48) Land ownership* PV variable (schools) 49) HH Education*PV variable (schools) 50) Female Education*PV variable (schools) 51) Female HH head*PV variable (schools) 52) dependency ratio*PV variable (schools) 53) hh size*PV variable (schools) 54) village development*PV variable (schools) 55) no of primary schools*PV variable (schools) 56) village population total*PV variable (schools) 57) Flood*PV variable (schools) 58) paved roads*PV variable (schools) 59) public transport*PV variable (schools)		

	60) distance to town*Village heterogeneity variable (schools) 61) village heterogeneity variable (schools) 62) Direct effect(PSM) variable (schools) 63) Spillover effect(PSM) variable (schools) 64) total village effect variable (Assistance) 65) interaction of age and program village(PV)i.e age*PV variable (Assistance) 66) SC/ST*PV variable (Assistance) 67) OBC*PV variable (Assistance) 68) Muslim*PV variable (Assistance) 69) Land ownership* PV variable (Assistance) 70) HH Education*PVvariable (Assistance) 71) Female Education*PV variable (Assistance) 72) Female HH head*PVvariable (Assistance) 73) dependency ratio*PV variable (Assistance) 74) hh size*PV variable (Assistance) 75) village development*PV variable (schools) 76) no of primary schools*PV variable (Assistance) 77) village population total*PV variable (Assistance) 78) Flood*PV variable (Assistance) 79) paved roads*PV variable (schools) 80) public transport*PV variable (Assistance) 81) distance to town*Village heterogeneity variable (Assistance)		

	82) village heterogeneity variable (Assistance) 83) Direct effect (PSM) variable (schools) 84) Spillover effect (PSM) variable (assistance)		
Factor	NA	NA	NA

23) Title	Drought, distress, and a conditional cash transfer programme to mitigate the impact of drought in Bihar, India
Study author	Kishore et al. (2015)
Year	2015
Country	India
Segment	Rural
Intervention 1	FS
Intervention details	Conditional cash transfer
Data type	Primary
Study type 1	Quantitative
Treatment group	
Control group	
Total	243 households
Design	Cross-sectional
Data analysis method	Panel regression with random effects
Analysis instrument	Regression

Detail	Regression		
Study validity check	Yes		
Study type 2	Quantitative		
Outcome	Variable	Outcome	Strength
Economic outcome	16) Paddy yield 17) Paddy area	16) Yield 17) Yield	16) No impact 17) No impact
Social outcome	NA	NA	NA
Factor	18) Own diesel pump 19) Land owned	18) Subsidised diesel 19) Subsidized diesel	18) Positive 19) Positive

24) Title	Crop insurance and crop credit: impact of the comprehensive crop insurance scheme on cooperative credit in Gujarat
Study author	Mishra (1994)
Year	1994
Country	India
Segment	Rural
Intervention 1	FS
Intervention details	Crop insurance and crop credit market
Data type	Primary
Study type 1	Quantitative
Treatment group	
Control group	

Total	180 farmers		
Design	Before/after		
Data analysis method	MANOVA & OLS regression		
Analysis instrument	OLS regression		
Detail	Regression		
Study validity check	No		
Study type 2	Quantitative		
Outcome	Variable	Outcome	Strength
Economic outcome	1) Loan to farmer (significance of the effects of the CCIS on loan) 2) Repayment by a farmer (significance of the effects of the CCIS on loan) 3) Arrears by a farmer (significance of the effects of the CCIS on loan)	1) Asset 2) Asset 3) Asset	1) Positive 2) Positive 3) Positive
Social outcome	NA	NA	NA
Factor	NA	NA	NA

25) Title	Impact of contracts in high yielding varieties seed production on profits and yield
Study author	Mishra et al. (2016)
Year	2016
Country	Nepal
Segment	Rural

Intervention 1	RVC
Intervention details	Impact of contracts in high yielding varieties seed production of profits and yield
Data type	Primary
Study type 1	Quantitative
Treatment group	306
Control group	298
Total	604 households
Design	Cross-sectional
Data analysis method	Propensity score matching
Analysis instrument	Logit regression
Detail	Regression
Study validity check	Yes
Study type 2	Quantitative

Outcome	Variable	Outcome	Strength
Economic Outcome	1) farm size, phone ownership, education and wealth outcome, CF adoption in HYV paddy seed production variable 2) total revenue ,total profit and yield(both NNM & KBM) outcome, CF adoption in HYV paddy seed production variable 3) total cost (both NNM & KBM) outcome, CF adoption	1) Revenue/profit/ sale 2) Revenue/profit/ sale 3) Revenue/profit/ sale 4) Revenue/profit/ sale 5) Revenue/profit/ sale 6) Yield 7) Cost	1) Positive 2) Positive 3) Negative 4) Positive 5) Positive 6) Positive 7) Negative 8) Positive 9) Positive 10) Positive 11) No impact 12) Positive 13) Positive

	in HYV paddy seed production variable 4) total revenue outcome, CF adoption in HYV paddy seed production variable 5) total profit outcome, CF adoption in HYV paddy seed production variable 6) yield outcome, CF adoption in HYV paddy seed production variable 7) total cost (both NNM & KBM) outcome, CF adoption in HYV paddy seed production variable 8) total revenue outcome, CF adoption in HYV paddy seed production variable 9) total profit outcome, CF adoption in HYV paddy seed production variable 10) yield outcome, CF adoption in HYV paddy seed production variable 11) total cost (both NNM & KBM) outcome, CF adoption in HYV paddy seed production variable 12) total revenue outcome, CF adoption in HYV paddy seed production variable 13) total profit outcome, CF adoption in HYV paddy seed production variable 14) yield outcome, CF adoption in HYV paddy seed production variable 15) total cost (both NNM & KBM) outcome, CF adoption in HYV paddy seed production variable 16) CFIC(contract farming with input condition Vs Independent farmers) variable ,Total fixed cost(NNM &KBM) outcome	8) Revenue/profit/ sale 9) Revenue/profit/ sale 10) Yield 11) Cost 12) Revenue/profit/ sale 13) Revenue/profit/ sale 14) Yield 15) Cost 16) Cost 17) Cost 18) Revenue/profit/ sale 19) Revenue/profit/ sale 20) Yield 21) Cost 22) Cost 23) Revenue/profit/ sale 24) Revenue/profit/ sale 25) Yield 26) Yield 27) Cost 28) Cost 29) Revenue/profit/ sale 30) Revenue/profit/ sale 31) Yield 32) Cost 33) Revenue/profit/ sale 34) Yield 35) Cost 36) Revenue/profit/ sale 37) Yield	14) No impact 15) Negative 16) Negative 17) Negative 18) Positive 19) Positive 20) No impact 21) Positive 22) Positive 23) Positive 24) No impact 25) Positive 26) No impact 27) Positive 28) Positive 29) Positive 30) Positive 31) Positive 32) Negative 33) Positive 34) Positive 35) Negative 36) Positive 37) Positive

	17) CFIC(contract farming with input condition Vs Independent farmers variable ,Total cost(NNM &KBM)outcome 18) CFIC(contract farming with input condition Vs Independent farmers 19) CFIC(contract farming with input condition Vs Independent farmers 20) CFIC(contract farming with input condition Vs Independent farmers 21) CF with output conditions(CFOC) Vs Independent Farmers 22) CF with output conditions(CFOC) Vs Independent Farmers 23) CF with output conditions(CFOC) Vs Independent Farmers 24) CF with output conditions(CFOC) Vs Independent Farmers 25) CF with output conditions(CFOC) Vs Independent Farmers 26) CF with output conditions(CFOC) Vs Independent Farmers 27) CFIC & CFOC Vs Independent Farmers 28) CFIC & CFOC Vs Independent Farmers 29) CFIC & CFOC Vs Independent Farmers 30) CFIC & CFOC Vs Independent Farmers 31) CFIC & CFOC Vs Independent Farmers 32) Impact of CF(First Specification) 33) Impact of CF(First Specification)		

	34) Impact of CF(First Specification) 35) Impact of CF(First specification) 36) Impact of CF (first specification) 37) Impact of CF (first specification		
Social outcome	NA	NA	NA
Factor	NA	NA	NA

26) Title	Socioeconomic factors affecting adoption of modern information and communication technology by farmers in India: analysis using multivariate probit model
Study author	Mittal & Meher (2015)
Year	2015
Country	India
Segment	Rural
Intervention 1	IKS
Intervention details	Socioeconomic factors affection ICT adoption
Data type	Primary
Study type 1	Quantitative
Treatment group	
Control group	
Total	1,199 farmers
Design	Cross-sectional
Data analysis method	Multivariate probit model, regression and descriptive statistics
Analysis instrument	Regression
Detail	Regression
Study validity check	No
Study type 2	Quantitative

Outcome	Variable	Outcome	Strength

Economic outcome	NA	NA	NA
Social outcome	NA	NA	NA
Factor	1) correlation coefficient modern ICT and traditional media 2) correlation coefficient face to face and other farmer 3) correlation coefficient other farmer and traditional media 4) farm sizes 5) dummies(Bihar) 6) education 7) age 8) farm size 9) Farm size and education	1) adoption of ICT 2) adoption of ICT 3) adoption of ICT 4) adoption of ICT 5) adoption of ICT 6) adoption of ICT 7) adoption of ICT 8) adoption of ICT 9) adoption of ICT	1) Positive 2) Negative 3) Negative 4) Positive 5) Negative 6) Positive 7) Negative 8) Positive 9) Positive

27) Title	Evidence on community-driven development from an Indian village
Study author	Mukherjee (2013)
Year	2013
Country	India
Segment	Rural
Intervention 1	RVC
Intervention details	Community-driven development
Data type	Primary
Study type 1	Quantitative

Treatment group	41 households
Control group	127 households
Total	200 households
Design	Before/after
Data analysis method	Before/after
Analysis instrument	DID
Detail	OLS regression
Study validity check	Yes
Study type 2	Quantitative

Outcome	Variable	Outcome	strength
Economic outcome	1) impact of Village development committee intervention on crop income(rains) 2) impact of Village development committee intervention on log (crop income) (rains) 3) impact of Village development committee intervention on crop retained income(rains) 4) impact of Village development committee intervention on log (crop retained income) 5) impact of Village development committee	1) Income 2) Income 3) Income 4) Income 5) Income 6) Income 7) Technical Literacy 8) Credit 9) Collective management 10) Income 11) Income 12) Income 13) Income 14) Income 15) Income 16) Technical Literacy 17) Credit	1) No impact 2) No impact 3) No impact 4) No impact 5) No impact 6) No impact 7) Positive 8) Positive 9) No impact 10) Positive 11) No impact 12) No impact 13) No impact 14) No impact 15) No impact 16) Positive 17) No impact 18) Positive 19) No impact

	intervention on total income(rains) 6) impact of Village development committee intervention on log(total income) 7) impact of Village development committee intervention on share cropping 8) impact of Village development committee intervention on borrowed money(rains) 9) impact of Village development committee intervention on Collecting Non timber forest product (NTFP) 10) impact of Village development committee intervention on crop income(rains) 11) impact of Village development committee intervention on log (crop income) (rains) 12) impact of Village development committee intervention on crop retained income(rains) 13) Impact of Village development committee intervention on log (crop retained income)(rains). 14) impact of Village development committee intervention on total income(rains)	18) Resource management 19) Income 20) Income 21) Income 22) Income 23) Income 24) Income 25) Technical Literacy 26) Credit 27) Income 28) Income 29) Income 30) Income 31) Income 32) Income 33) Technical literacy 34) Credit	20) Positive 21) No impact 22) No impact 23) No impact 24) No impact 25) Positive 26) No impact 27) No impact 28) No impact 29) No impact 30) Positive 31) No impact 32) No impact 33) Positive 34) No impact

	15) impact of Village development committee intervention on log(total income)(rains) 16) impact of Village development committee intervention on share cropping 17) impact of Village development committee intervention on borrowed money(rains) 18) impact of Village development committee intervention on collected NTFP 19) impact of Village development committee intervention on crop income(post rains) 20) impact of Village development committee intervention on log (crop income) (post rains) 21) impact of Village development committee intervention on crop retained income(post rains) 22) impact of Village development committee intervention on log (crop retained income)(post rain) 23) impact of Village development committee intervention on total income(post rain) 24) impact of Village development committee intervention on log(total income(post rain)		

	25) impact of Village development committee intervention on share cropping(post-rains) 26) Impact of village development committee intervention on borrowed money (post rains) 27) Impact of village development committee intervention on crop income (post-rains) 28) Impact of village development committee intervention on log (crop income) (post-rains) 29) Impact of village development committee intervention on crop-retained income (post-rains) 30) Impact of village development committee intervention on log (crop-retained income) (post-rains) 31) Impact of village development committee intervention on total income (post-rains) 32) Impact of village development committee intervention on log (total income) (post-rains) 33) Impact of village development committee intervention on share cropping (post-rains) 34) Impact of village development committee intervention on borrowed money (post-rains)		

Social outcome	35) impact of Village development committee intervention on going hungry (rains) 36) Impact of village development committee intervention on migration 37) Impact of village development committee intervention on going hungry (rains) 38) Impact of village development committee intervention on migrated (rains) 39) Impact of village development committee intervention on going hungry (post-rains) 40) Impact of village development committee intervention on migration (post-rains) 41) Impact of village development committee intervention on collecting non-timber forest product (NTFP) (post-rains) 42) Impact of village development committee intervention on going hungry (post-rains) 43) Impact of village development committee intervention on migrated (post-rains) 44) Impact of village development committee intervention on collected NTFP (post-rains)	35) Food security 36) Migration 37) Food security 38) Migration 39) Food security 40) Migration 41) Resource management 42) Food security 43) Migration 44) Resource management	35) Positive 36) Positive 37) Positive 38) No impact 39) Positive 40) No impact 41) No impact 42) Positive 43) No impact 44) No impact

Factor	NA	NA	NA

28) Title	Heterogeneity and collective management: Evidence from common forests in Himachal Pradesh, India
Study author	Naidu (2008)
Year	2008
Country	India
Segment	Rural
Intervention 1	RVC
Intervention details	Collective management in common forest
Data type	Primary
Study type 1	Quantitative
Treatment group	
Control group	
Total	49 community
Design	Cross-sectional
Data analysis method	Tobit model and log likelihood statistics
Analysis instrument	Tobit analysis
Detail	Regression
Study validity check	No
Study type 2	Quantitative

Outcome	Variable	Outcome	strength
Economic outcome	NA	NA	NA
Social outcome	1) Social heterogeneity variable, collective management of common of forest outcome 2) Square of social heterogeneity variable, collective management of common of forest outcome 3) Wealth heterogeneity variable, collective management of common of forest outcome 4) Square of wealth heterogeneity variable, collective management of common of forest outcome 5) Benefit heterogeneity* wealth heterogeneity variable, collective management of common of forest outcome 6) Benefit heterogeneity variable, collective management of common of forest outcome 7) Use of forest and extent of use by household within the community variable, collective management of common of forest outcome	1) Resource management 2) Resource management 3) Resource management 4) Resource management 5) Resource management 6) Resource management 7) Resource management	1) Negative 2) Positive 3) Positive 4) Negative 5) Negative 6) No impact 7) Positive
Factor	NA	NA	NA

29) Title	Adaptive capacity contributing to improved agricultural productivity at the household level: empirical findings highlighting the importance of crop insurance
Study author	Panda et al. (2013)

Year	2013
Country	India
Segment	Rural
Intervention 1	FS
Intervention details	Adaptive capacity
Data type	Primary
Study type 1	Quantitative
Treatment group	
Control group	
Total	183 households
Design	Cross-sectional
Data analysis method	Descriptive statistics and logit regression model
Analysis instrument	Logit regression
Detail	Logit regression
Study validity check	No
Study type 2	Quantitative

Outcome	Variable	Outcome	Strength
Economic Outcome	1) Adaption strategy in additional water access 2) Adaption strategy in case of drought loss 3) Adaption strategy for land area under cultivation 4) Protection of assets and price 5) Total income	1) Technical Literacy 2) Technical Literacy 3) Technical Literacy 4) Asset 5) Income 6) Income	1) Positive 2) Positive 3) Positive 4) Positive 5) Positive 6) Positive

	6) Total income		
Social outcome	NA	NA	NA
Factor	7) family size 8) education 9) non- farm income 10) number of independents 11) Access to climate information 12) Members in SHG 13) Perception climate is changing 14) Perception that overall decline in rainfall	7) Adaption strategy 8) Adaption strategy 9) Adaption strategy 10) Adaption strategy 11) Adaption strategy 12) Adaption strategy 13) Adaption strategy 14) Adaption strategy	7) Positive 8) No impact 9) No impact 10) No impact 11) No impact 12) No impact 13) No impact 14) No impact

30) Title	Climate variability and the role of access to crop insurance as a social-protection measure: Insights from India
Study author	Panda (2013)
Year	2013
Country	India
Segment	Rural
Intervention 1	FS
Intervention details	Crop insurance
Data type	Primary
Study type 1	Quantitative
Treatment group	
Control group	
Total	183 households
Design	Cross-sectional

Data analysis method	Descriptive statistics and logit regression model		
Analysis instrument	Logit regression		
Detail	Logit regression		
Study validity check	No		
Study type 2	Quantitative		
Outcome	Variable	Outcome	Strength
Economic outcome			
Social outcome	NA	NA	NA
Factor	15) Average land holding 16) Lower education 17) Poverty ratio	15) Insurance 16) Insurance 17) Insurance	15) Positive 16) Negative 17) Negative

31) Title	Entrepreneurship Education and Training Needs of Family Businesses Operating in the Agricultural Sector of India
Study author	Sandhu et al. (2012)
Year	2012
Country	India
Segment	Rural
Intervention 1	CB
Intervention details	Entrepreneurship education and training needs
Data type	Primary
Study type 1	Mixed method

Treatment group	
Control group	
Total	122 agricultural family firms
Design	Cross-sectional
Data analysis method	Logistic regression and descriptive statistics
Analysis instrument	Regression
Detail	Regression
Study validity check	No
Study type 2	Quantitative

Outcome	Variable	Outcome	strength
Economic outcome	1) Apprenticeship done by family business owner/manager 2) University or college education 3) Impact of advice from financial consultant on business size 4) Impact of financial training on manger/owner business	30) Financial literacy 31) Financial literacy 32) Revenue/profit/sale 33) Revenue/profit/sale	26) Positive 27) Positive 28) No impact 29) Positive 30) No impact 31) No impact
Social outcome	NA	NA	NA
Factor	NA	NA	NA

32) Title	User-centric ICT model for supply chain of horticultural crops in India
Study author	Shalendra et al. (2013)
Year	2013
Country	India
Segment	Rural
Intervention 1	IKS
Intervention details	Adoption of ICT to access information
Data type	Primary
Study type 1	Quantitative
Treatment group	
Control group	
Total	110 farmers
Design	Cross-sectional
Data analysis method	Logistic regression and descriptive statistics
Analysis instrument	Logistic regression
Detail	Logistic regression
Study validity check	No
Study type 2	Quantitative

Outcome	Variable	Outcome	Strength
Economic outcome	NA	NA	NA

Social outcome	NA	NA	NA
Factor	16) Age 17) Education 18) Farmer operational holdings 19) Proportion of irrigated land 20) HH income 21) Distance to market 22) Proportion of gross land put to horticulture crops	1) Use of ICT mode for agricultural information 2) Use of ICT mode for agricultural information 3) Use of ICT mode for agricultural information 4) Use of ICT mode for agricultural information 5) Use of ICT mode for agricultural information 6) Use of ICT mode for agricultural information 7) Use of ICT mode for agricultural information	8) Negative 9) Positive 10) No impact 11) No impact 12) Positive 13) Negative 14) Positive

33) Title	Collateral-free lending with risk-contingent credit for agricultural development: indemnifying loans against pulse crop price risk in India
Study author	Shee and Turvey (2012)
Year	2012
Country	India
Segment	Rural
Intervention 1	FS
Intervention details	Collateral-free lending
Data type	Secondary
Study type 1	Quantitative

Treatment group			
Control group			
Total	Secondary data on pulses price		
Design	Cross-sectional		
Data analysis method	Descriptive statistics and risk contingent model		
Analysis instrument	Mean and standard deviation		
Detail			
Study validity check	No		
Study type 2	Quantitative		
Outcome	Variable	Outcome	Strength
Economic outcome	NA	NA	NA
Social outcome	NA	NA	NA
Factor	NA	NA	NA

34) Title	Social capital formation and credit access: evidence from Sri Lanka.
Study author	Shoji et al. (2012)
Year	2012
Country	Sri Lanka
Segment	Rural
Intervention 1	FS

Intervention details	Social capital and credit acess		
Data type	Primary		
Study type 1	Quantitative		
Treatment group			
Control group			
Total	187 households		
Design	Before/after		
Data analysis method	Linear probability model, bivariate probit model, regression and descriptive statistics		
Analysis instrument	Linear probability model		
Detail	Regression		
Study validity check	Yes		
Study type 2	Quantitative		
Outcome	Variable	Outcome	Strength
Economic outcome			
Social outcome	11) Effect of poor credit on trust	1) Social capital	1) Negative
Factor	2) Fewer liquid assets variable, binding credit constraint outcome 3) household living close to market variable, credit constraint outcome 4) credit constrained household variable, community ceremonies outcome	2) credit 3) credit 4) social capital 5) social capital 6) credit 7) credit	1) Negative 2) Negative 3) Negative 4) Negative 5) Negative 6) Positive 7) Positive

	5) credit constrained household variable, Irrigation Maintenance outcome 6) large landholdings 7) Agricultural asset		

35) Title	Education, skills and vocational training and access to rural non-farm employment
Study author	Singh (2008)
Year	2008
Country	India
Segment	Rural
Intervention 1	CB
Intervention details	Education, skills and vocational training and acess to rural non-farm employment
Data type	Secondary
Study type 1	Quantitative
Treatment group	
Control group	
Total	NSSO data on vocational training and distribution of rural non-farm workers (2004–05)
Design	Cross sectional
Data analysis method	Multinomial logistic regression and descriptive statistics
Analysis instrument	Regression
Detail	Regression

Study validity check	No		
Study type 2	Quantitative		
Outcome	Variable	Outcome	Strength
Economic outcome	1) Impact of education and vocational training on access to non-farm employment compared to agricultural employment 2) Impact of lower monthly per capita consumer expenditure on casual non farm work	1) Employment/ occupational choice 2) Employment/ occupational choice	1) Positive 2) Negative
Social outcome	3) Impact of training on male non-farm employment 4) Impact of training on female non-farm employment	3) Employment/ occupational choice 4) Employment/ occupational choice	3) Positive 4) No impact
Factor	NA	NA	NA

36) Title	What should we expect from farmer field schools? A Sri Lanka case study.		
Study author	Tripp et al. (2005)		
Year	2005		
Country	Sri Lanka		
Segment	Rural		
Intervention 1	CB		
Intervention details	Farmer field schools		
Data type	Primary		
Study type 1	Quantitative		
Treatment group			
Control group			
Total	70 FFS farmers		
Design	Cross-sectional		
Data analysis method	Descriptive statistics		
Analysis instrument	chi-square test		
Detail	Descriptive statistics		
Study validity check	No		
Study type 2	Quantitative		
Outcome	Variable	Outcome	Strength

Economic outcome	NA	NA	NA
Social outcome	1) Less insecticide application by FFS farmers as compared with neighbours 2) Total insecticide application in past three seasons by FFS farmers as compared with neighbours 3) Difference between FFS and neighbours in terms % work as farm labour or casual labour 4) Difference between FFS and neighbours in terms of insect control knowledge 5) Difference between FFS and neighbours in terms of report increased time in monitoring 6) Difference between FFS and neighbours in terms of decision rule for insecticide use	1) Technical literacy 2) Technical literacy 3) Employment/occupational choices 4) Technical literacy 5) Technical literacy 6) Technical literacy	1) Positive 2) Positive 3) Positive 4) Positive 5) Positive 6) Positive
Factor	NA	NA	NA

37) Title	Hot stuff: index insurance for Indian smallholder pepper growers
Study author	Zant (2008)
Year	2008
Country	India
Segment	Rural
Intervention 1	FS
Intervention details	Index insurance
Data type	Secondary

Study type 1	Quantitative		
Treatment group			
Control group			
Total	2500 farmers		
Design	Cross-sectional		
Data analysis method	Descriptive statistics		
Analysis instrument	Descriptive statistics		
Detail	Descriptive statistics		
Study validity check	No		
Study type 2	Quantitative		
Outcome	Variable	Outcome	Strength
Economic outcome	NA	NA	NA
Social outcome	NA	NA	NA
Factor	NA	NA	NA

APPENDIX 15: CALCULATION OF EFFECT SIZES

Study	Reported statistics	Formula
Shoji et al. (2012)	Treatment group (n) and control group (n) and its mean and SD	$Sp = \sqrt{(\frac{(n_t - 1) * SD_t^2 + (n_c - 1) * SD_c^2}{n_t + n_c - 2})}$
Ahmed et al. (2009) Banerjee et al. (2011) Bauchet et al. (2015) Desai et al. (2014) Fafchamps et al. (2011) Gine et al. (2011) Mishra et al. (2016)	Regression based studies	$Sp = \sqrt{\frac{((SDy^2 * n_t + n_c - 2)) - \frac{(\beta^2 * (nt + nc)}{(n_t + n_c)}}{n_t + n_c}}$

APPENDIX 16 :DETAILS OF FOREST PLOTS

TABLE 16.1: FINANCIAL SUPPORT

Panel A			
Study	**Outcome**	**ES**	**SE**
Shoji et al. (2012)	Social capital	-0.1424	0.0456
Shoji et al. (2012)	Social capital	0.0000	0.0456
Shoji et al. (2012)	Social capital	0.0463	0.0572
Giné et al. (2011)	Profit/revenue/sales	0.0406	0.0515
Giné et al. (2011)	Consumption/expenditure	0.0603	0.0419
Giné et al. (2011)	Decision making	0.0634	0.0419
Effect size (confidence interval) random effect model	**0.011 (-0.054, 0.0759)**		
Panel B			
Heterogeneity	Q = 15; df = 5; p = 0.0102		
I-squared	66.70%		
Tau-squared	0.00436.		

TABLE 16.2: FINANCIAL SUPPORT AND CAPACITY BUILDING

Panel A			
Study	**Outcome**	**ES**	**SE**
Ahmed et al. (2010)	Asset	0.0494	0.0298
Ahmed et al. (2010)	Asset	0.0469	0.0283
Ahmed et al. (2010)	Asset	0.0693	0.0327
Ahmed et al. (2010)	Asset	0.0112	0.0282
Ahmed et al. (2010)	Asset	0.0915	0.0394
Ahmed et al. (2010)	Asset	0.0169	0.0384
Ahmed et al. (2010)	Asset	0.0365	0.0297
Ahmed et al. (2010)	Asset	0.0893	0.0301
Banerjee et al. (2011)	Asset	0.0000	0.0702
Bauchet et al. (2015)	Asset	0.0375	0.0624
Bauchet et al. (2015)	Asset	0.1836	0.0619
Bauchet et al. (2015)	Credit	0.1132	0.0616
Ahmed et al. (2010)	Consumption/expenditure	0.1901	0.0692
Ahmed et al. (2010)	Consumption/expenditure	0.2217	0.0674

Panel A			
Study	**Outcome**	**ES**	**SE**
Ahmed et al. (2010)	Consumption/expenditure	0.2006	0.0698
Ahmed et al. (2010)	Consumption/expenditure	0.2727	0.0665
Banerjee et al. (2011)	Consumption/expenditure	0.0000	0.0701
Bauchet et al. (2015)	Consumption/expenditure	0.0722	0.0616
Bauchet et al. (2015)	Income	0.0441	0.0616
Banerjee et al. (2011)	Income	0.0896	0.0701
Banerjee et al. (2011)	Income	0.1762	0.0702
Banerjee et al. (2011)	Income	0.1659	0.0702
Banerjee et al. (2011)	Income	0.1058	0.0701
Banerjee et al. (2011)	Profit/revenue/sales	0.0000	0.1052
Bauchet et al. (2015)	Savings	0.1662	0.0617
Ahmed et al. (2010)	Savings	0.1702	0.0592
Ahmed et al. (2010)	Savings	0.2784	0.0602
Ahmed et al. (2010)	Savings	0.4404	0.0859
Ahmed et al. (2010)	Savings	0.6936	0.0457
Ahmed et al. (2010)	Food security	0.0745	0.0343
Ahmed et al. (2010)	Food security	0.0586	0.0324
Ahmed et al. (2010)	Food security	0.0671	0.0340
Ahmed et al. (2010)	Food security	0.1276	0.0335
Effect size (confidence interval) random effect model	**0.129 (0.0846, 0.173)**		
Panel B			
Heterogeneity	Q = 251; df = 32; p = 0		
I-squared	87.20%		

Panel A			
Study	Outcome	ES	SE
Tau-squared			0.0138

TABLE 16.3: SINGLE INTERVENTION

Panel A			
Study	Outcome	ES	SE
Giné et al. (2011)	Consumption/expenditure	0.0095	0.0310
Giné et al. (2011)	Consumption/expenditure	0.0603	0.0419
Fafchamps et al. (2012)	Financial/technical literacy	0.1891	0.0746
Fafchamps et al. (2012)	Financial/technical literacy	0.0780	0.0710
Fafchamps et al. (2012)	Financial/technical literacy	-0.0729	0.0663
Fafchamps et al. (2012)	Financial/technical literacy	-0.1078	0.0870
Fafchamps et al. (2012)	Profit/revenue/sales	-0.1040	0.0520
Fafchamps et al. (2012)	Profit/revenue/sales	0.6971	0.0677

Giné et al. (2011)	Profit/revenue/sales	0.1024	0.0398
Giné et al. (2011)	Profit/revenue/sales	0.0406	0.0515
Giné et al. (2011)	Decision making	0.0043	0.0310
Giné et al. (2011)	Decision making	0.0634	0.0419
Fafchamps et al. (2012)	Social capital	0.2663	0.0661
Shoji et al. (2012)	Social capital	-0.1424	0.0456
Shoji et al. (2012)	Social capital	0.0000	0.0456
Shoji et al. (2012)	Social capital	0.0463	0.0572
Effect size (confidence interval) random effect model	**0.0674 (-0.00742, 0.142)**		
Panel B			
Heterogeneity	Q = 146; df = 15; p = 0		
I-squared	89.70%		
Tau-squared	0.0203		

TABLE 16.4: MULTIPLE INTERVENTIONS

Panel A			
Study	**Outcome**	**ES**	**SE**
Desai et al. (2014)	Access to finance	0.0092	0.0611
Ahmed et al. (2010)	Asset	0.0494	0.0298
Ahmed et al. (2010)	Asset	0.0469	0.0283
Ahmed et al. (2010)	Asset	0.0693	0.0327
Ahmed et al. (2010)	Asset	0.0112	0.0282
Ahmed et al. (2010)	Asset	0.0915	0.0394

Panel A			
Study	**Outcome**	**ES**	**SE**
Ahmed et al. (2010)	Asset	0.0169	0.0384
Ahmed et al. (2010)	Asset	0.0365	0.0297
Ahmed et al. (2010)	Asset	0.0893	0.0301
Banerjee et al. (2011)	Asset	0.0000	0.0702
Bauchet et al. (2015)	Asset	0.0375	0.0624
Bauchet et al. (2015)	Asset	0.1836	0.0619
Mishra et al. (2016)	Cost	-0.3081	0.1032
Mishra et al. (2016)	Cost	0.3821	0.1422
Mishra et al. (2016)	Cost	0.2703	0.1135
Bauchet et al. (2015)	Credit	0.1132	0.0616
Desai et al. (2014)	Credit	0.0000	0.0611
Ahmed et al. (2010)	Consumption/expenditure	0.1901	0.0692
Ahmed et al. (2010)	Consumption/expenditure	0.2217	0.0674
Ahmed et al. (2010)	Consumption/expenditure	0.2006	0.0698
Ahmed et al. (2010)	Consumption/expenditure	0.2727	0.0665
Banerjee et al. (2011)	Consumption/expenditure	0.0000	0.0701
Bauchet et al. (2015)	Consumption/expenditure	0.0722	0.0616
Desai et al. (2014)	Technical/financial literacy	0.0000	0.0611
Desai et al. (2014)	Technical/financial literacy	0.0455	0.0611
Bauchet et al. (2015)	Income	0.0441	0.0616
Banerjee et al. (2011)	Income	0.0896	0.0701
Banerjee et al. (2011)	Income	0.1762	0.0702
Banerjee et al. (2011)	Income	0.1659	0.0702
Banerjee et al. (2011)	Income	0.1058	0.0701

Panel A			
Study	**Outcome**	**ES**	**SE**
Desai et al. (2014)	Income	0.0472	0.0611
Desai et al. (2014)	Income	0.0202	0.0611
Desai et al. (2014)	Income	0.1353	0.0612
Mishra et al. (2016)	Profit/revenue/sales	0.2640	0.1031
Mishra et al. (2016)	Profit/revenue/sales	0.3636	0.1035
Mishra et al. (2016)	Profit/revenue/sales	0.3354	0.1421
Mishra et al. (2016)	Profit/revenue/sales	0.0580	0.1415
Mishra et al. (2016)	Profit/revenue/sales	0.4671	0.1143
Mishra et al. (2016)	Profit/revenue/sales	0.3155	0.1136
Banerjee et al. (2011)	Profit/revenue/sales	0.0000	0.1052
Desai et al. (2014)	Profit/revenue/sales	0.0835	0.0611
Bauchet et al. (2015)	Savings	0.1662	0.0617
Ahmed et al. (2010)	Savings	0.1702	0.0592
Ahmed et al. (2010)	Savings	0.2784	0.0602
Ahmed et al. (2010)	Savings	0.4404	0.0859
Ahmed et al. (2010)	Savings	0.6936	0.0457
Mishra et al. (2016)	Yield	-0.0092	0.1027
Mishra et al. (2016)	Yield	0.3438	0.1421
Mishra et al. (2016)	Yield	0.4218	0.1141
Desai et al. (2014)	Yield	0.0620	0.0611
Ahmed et al. (2010)	Food security	0.0745	0.0343
Ahmed et al. (2010)	Food security	0.0586	0.0324
Ahmed et al. (2010)	Food security	0.0671	0.0340
Ahmed et al. (2010)	Food security	0.1276	0.0335

Panel A			
Study	**Outcome**	**ES**	**SE**
Effect size (confidence interval) random effect model	**0.13 (0.0931, 0.166)**		
Panel B			
Heterogeneity	Q = 322; df = 53; p = 0;		
I-squared	83.50%		
Tau-squared	0.014.		

TABLE 16.5: ECONOMIC OUTCOME (TOTAL)

Panel A			
Study	**Outcome**	**ES**	**SE**
Desai et al. (2014)	Access to finance	0.0092	0.0611
Ahmed et al. (2010)	Asset	0.0494	0.0298
Ahmed et al. (2010)	Asset	0.0469	0.0283
Ahmed et al. (2010)	Asset	0.0693	0.0327
Ahmed et al. (2010)	Asset	0.0112	0.0282
Ahmed et al. (2010)	Asset	0.0915	0.0394
Ahmed et al. (2010)	Asset	0.0169	0.0384
Ahmed et al. (2010)	Asset	0.0365	0.0297
Ahmed et al. (2010)	Asset	0.0893	0.0301
Banerjee et al. (2011)	Asset	0.0000	0.0702
Bauchet et al. (2015)	Asset	0.0375	0.0624
Bauchet et al. (2015)	Asset	0.1836	0.0619

Panel A			
Study	**Outcome**	**ES**	**SE**
Mishra et al. (2016)	Cost	-0.3081	0.1032
Mishra et al. (2016)	Cost	0.3821	0.1422
Mishra et al. (2016)	Cost	0.2703	0.1135
Bauchet et al. (2015)	Credit	0.1132	0.0616
Desai et al. (2014)	Credit	0.0000	0.0611
Ahmed et al. (2010)	Consumption/expenditure	0.1901	0.0692
Ahmed et al. (2010)	Consumption/expenditure	0.2217	0.0674
Ahmed et al. (2010)	Consumption/expenditure	0.2006	0.0698
Ahmed et al. (2010)	Consumption/expenditure	0.2727	0.0665
Banerjee et al. (2011)	Consumption/expenditure	0.0000	0.0701
Bauchet et al. (2015)	Consumption/expenditure	0.0722	0.0616
Giné et al. (2011)	Consumption/expenditure	0.0095	0.0310
Giné et al. (2011)	Consumption/expenditure	0.0603	0.0419
Desai et al. (2014)	Technical/financial literacy	0.0000	0.0611
Desai et al. (2014)	Technical/financial literacy	0.0455	0.0611
Fafchamps et al. (2012)	Technical/financial literacy	0.1891	0.0746
Fafchamps et al. (2012)	Technical/financial literacy	0.0780	0.0710
Fafchamps et al. (2012)	Technical/financial literacy	-0.0729	0.0663
Fafchamps et al. (2012)	Technical/financial literacy	-0.1078	0.0870
Bauchet et al. (2015)	Income	0.0441	0.0616
Banerjee et al. (2011)	Income	0.0896	0.0701
Banerjee et al. (2011)	Income	0.1762	0.0702
Banerjee et al. (2011)	Income	0.1659	0.0702
Banerjee et al. (2011)	Income	0.1058	0.0701

Panel A			
Study	**Outcome**	**ES**	**SE**
Desai et al. (2014)	Income	0.0472	0.0611
Desai et al. (2014)	Income	0.0202	0.0611
Desai et al. (2014)	Income	0.1353	0.0612
Fafchamps et al. (2012)	Profit/revenue/sales	-0.1040	0.0520
Fafchamps et al. (2012)	Profit/revenue/sales	0.6971	0.0677
Giné et al. (2011)	Profit/revenue/sales	0.1024	0.0398
Giné et al. (2011)	Profit/revenue/sales	0.0406	0.0515
Mishra et al. (2016)	Profit/revenue/sales	0.2640	0.1031
Mishra et al. (2016)	Profit/revenue/sales	0.3636	0.1035
Mishra et al. (2016)	Profit/revenue/sales	0.3354	0.1421
Mishra et al. (2016)	Profit/revenue/sales	0.0580	0.1415
Mishra et al. (2016)	Profit/revenue/sales	0.4671	0.1143
Mishra et al. (2016)	Profit/revenue/sales	0.3155	0.1136
Banerjee et al. (2011)	Profit/revenue/sales	0.0000	0.1052
Desai et al. (2014)	Profit/revenue/sales	0.0835	0.0611
Bauchet et al. (2015)	Savings	0.1662	0.0617
Ahmed et al. (2010)	Savings	0.1702	0.0592
Ahmed et al. (2010)	Savings	0.2784	0.0602
Ahmed et al. (2010)	Savings	0.4404	0.0859
Ahmed et al. (2010)	Savings	0.6936	0.0457
Mishra et al. (2016)	Yield	-0.0092	0.1027
Mishra et al. (2016)	Yield	0.3438	0.1421
Mishra et al. (2016)	Yield	0.4218	0.1141
Desai et al. (2014)	Yield	0.0620	0.0611

Panel A			
Study	**Outcome**	**ES**	**SE**
Effect size (confidence interval) random effect model	**0.128 (0.0885, 0.167)**		
Panel B			
Heterogeneity	Q = 436; df = 59; p = 0		
I-squared	86.50%		
Tau-squared	0.0192		

TABLE 16.6: SOCIAL OUTCOME (TOTAL)

Panel A			
Study	**Outcome**	**ES**	**SE**
Ahmed et al. (2010)	Food security	0.0745	0.0343
Ahmed et al. (2010)	Food security	0.0586	0.0324
Ahmed et al. (2010)	Food security	0.0671	0.0340
Ahmed et al. (2010)	Food security	0.1276	0.0335
Giné et al. (2011)	Decision making	0.0043	0.0310
Giné et al. (2011)	Decision making	0.0634	0.0419
Fafchamps et al. (2012)	Social capital	0.2663	0.0661
Shoji et al. (2012)	Social capital	-0.1424	0.0456
Shoji et al. (2012)	Social capital	0.0000	0.0456
Shoji et al. (2012)	Social capital	0.0463	0.0572
Effect size (confidence interval) random effect model	**0.0524 (0.00162, 0.103)**		
Panel B			
Heterogeneity	Q = 38.2; df = 9; p = 1.61E-05		
I-squared	76.40%		
Tau-squared	0.00496		

TABLE 16.7: SINGLE INTERVENTION VS. MUTIPLE INTERVENTION

Panel A			
Study	**Outcome**	**ES**	**SE**
Giné et al. (2011)	Consumption/expenditure	0.0095	0.0310
Giné et al. (2011)	Consumption/expenditure	0.0603	0.0419

Panel A			
Study	**Outcome**	**ES**	**SE**
Fafchamps et al. (2012)	Financial/technical literacy	0.1891	0.0746
Fafchamps et al. (2012)	Financial/technical literacy	0.0780	0.0710
Fafchamps et al. (2012)	Financial/technical literacy	-0.0729	0.0663
Fafchamps et al. (2012)	Financial/technical literacy	-0.1078	0.0870
Fafchamps et al. (2012)	Profit/revenue/sales	-0.1040	0.0520
Fafchamps et al. (2012)	Profit/revenue/sales	0.6971	0.0677
Giné et al. (2011)	Profit/revenue/sales	0.1024	0.0398
Giné et al. (2011)	Profit/revenue/sales	0.0406	0.0515
Giné et al. (2011)	Decision making	0.0043	0.0310
Giné et al. (2011)	Decision making	0.0634	0.0419
Fafchamps et al. (2012)	Social capital	0.2663	0.0661
Shoji et al. (2012)	Social capital	-0.1424	0.0456
Shoji et al. (2012)	Social capital	0.0000	0.0456
Shoji et al. (2012)	Social capital	0.0463	0.0572
Desai et al. (2014)	Access to finance	0.0092	0.0611
Ahmed et al. (2010)	Asset	0.0494	0.0298
Ahmed et al. (2010)	Asset	0.0469	0.0283
Ahmed et al. (2010)	Asset	0.0693	0.0327
Ahmed et al. (2010)	Asset	0.0112	0.0282
Ahmed et al. (2010)	Asset	0.0915	0.0394
Ahmed et al. (2010)	Asset	0.0169	0.0384
Ahmed et al. (2010)	Asset	0.0365	0.0297
Ahmed et al. (2010)	Asset	0.0893	0.0301
Banerjee et al. (2011)	Asset	0.0000	0.0702

Panel A			
Study	Outcome	ES	SE
Bauchet et al. (2015)	Asset	0.0375	0.0624
Bauchet et al. (2015)	Asset	0.1836	0.0619
Mishra et al. (2016)	Cost	-0.3081	0.1032
Mishra et al. (2016)	Cost	0.3821	0.1422
Mishra et al. (2016)	Cost	0.2703	0.1135
Bauchet et al. (2015)	Credit	0.1132	0.0616
Desai et al. (2014)	Credit	0.0000	0.0611
Ahmed et al. (2010)	Consumption/expenditure	0.1901	0.0692
Ahmed et al. (2010)	Consumption/expenditure	0.2217	0.0674
Ahmed et al. (2010)	Consumption/expenditure	0.2006	0.0698
Ahmed et al. (2010)	Consumption/expenditure	0.2727	0.0665
Banerjee et al. (2011)	Consumption/expenditure	0.0000	0.0701
Bauchet et al. (2015)	Consumption/expenditure	0.0722	0.0616
Desai et al. (2014)	Consumption/expenditure	0.0000	0.0611
Desai et al. (2014)	Consumption/expenditure	0.0455	0.0611
Bauchet et al. (2015)	Income	0.0441	0.0616
Banerjee et al. (2011)	Income	0.0896	0.0701
Banerjee et al. (2011)	Income	0.1762	0.0702
Banerjee et al. (2011)	Income	0.1659	0.0702
Banerjee et al. (2011)	Income	0.1058	0.0701
Desai et al. (2014)	Income	0.0472	0.0611
Desai et al. (2014)	Income	0.0202	0.0611
Desai et al. (2014)	Income	0.1353	0.0612
Mishra et al. (2016)	Profit/revenue/sales	0.2640	0.1031

Panel A			
Study	**Outcome**	**ES**	**SE**
Mishra et al. (2016)	Profit/revenue/sales	0.3636	0.1035
Mishra et al. (2016)	Profit/revenue/sales	0.3354	0.1421
Mishra et al. (2016)	Profit/revenue/sales	0.0580	0.1415
Mishra et al. (2016)	Profit/revenue/sales	0.4671	0.1143
Mishra et al. (2016)	Profit/revenue/sales	0.3155	0.1136
Banerjee et al. (2011)	Profit/revenue/sales	0.0000	0.1052
Desai et al. (2014)	Profit/revenue/sales	0.0835	0.0611
Bauchet et al. (2015)	Savings	0.1662	0.0617
Ahmed et al. (2010)	Savings	0.1702	0.0592
Ahmed et al. (2010)	Savings	0.2784	0.0602
Ahmed et al. (2010)	Savings	0.4404	0.0859
Ahmed et al. (2010)	Savings	0.6936	0.0457
Mishra et al. (2016)	Yield	-0.0092	0.1027
Mishra et al. (2016)	Yield	0.3438	0.1421
Mishra et al. (2016)	Yield	0.4218	0.1141
Desai et al. (2014)	Yield	0.0620	0.0611
Ahmed et al. (2010)	Food security	0.0745	0.0343
Ahmed et al. (2010)	Food security	0.0586	0.0324
Ahmed et al. (2010)	Food security	0.0671	0.0340
Ahmed et al. (2010)	Food security	0.1276	0.0335
Effect size (confidence interval) random effect model	**0.115 (0.0815, 0.148)**		
Panel B			
Heterogeneity	Heterogeneity Q (all studies) = 484; df = 69; p = 0;(Group 1 Q = 146; df = 15. Group 2 Q = 322; df = 53)		

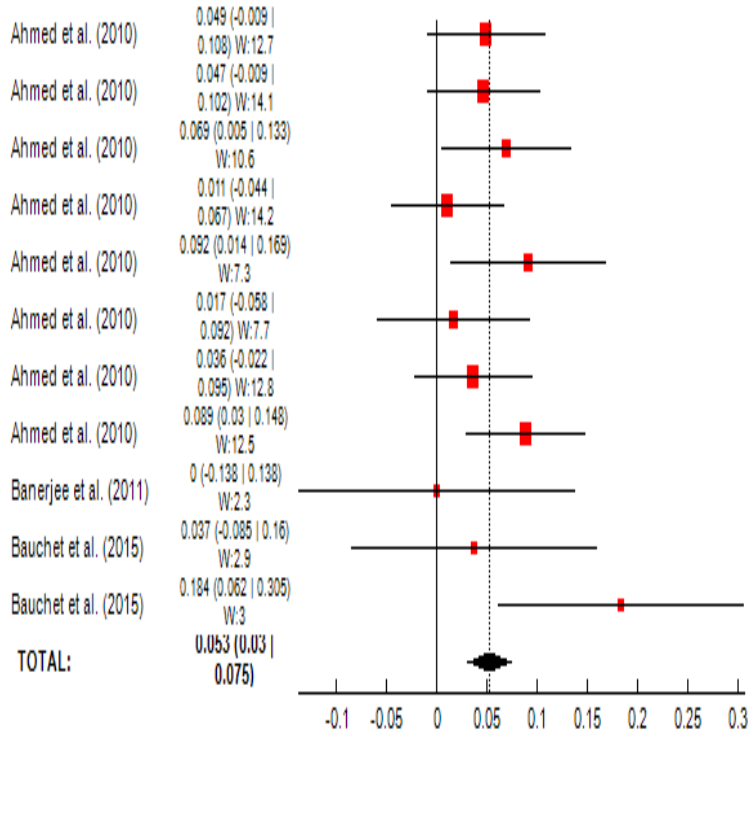
Panel A			
Study	**Outcome**	**ES**	**SE**
I-squared			85.70%
Tau-squared			

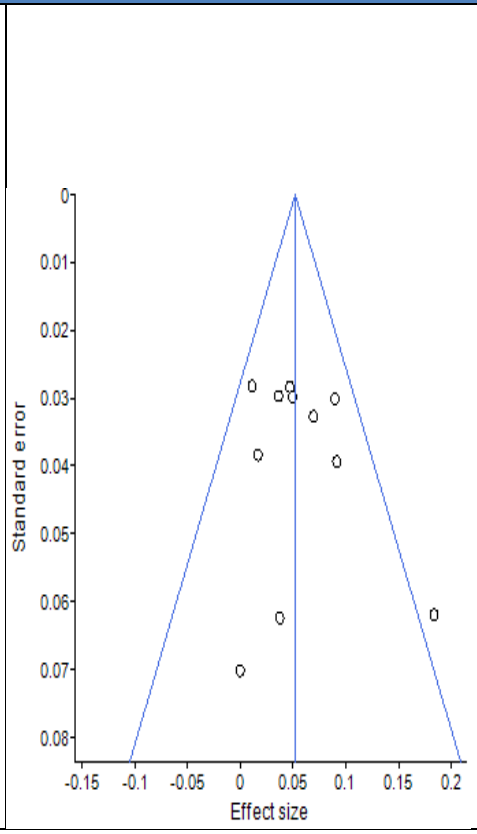
APPENDIX 17: FOREST PLOTS AND FUNNEL PLOTS OF OUTCOMES

META-ANALYSIS RESULTS: ASSET

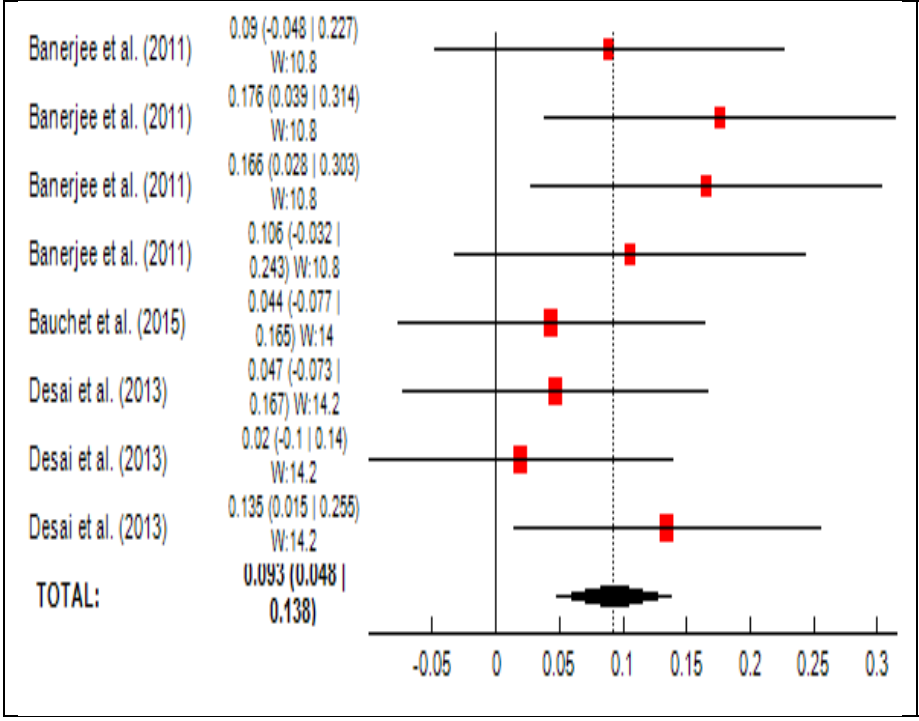
Random effects model: 0.0526 (0.0302, 0.0749)

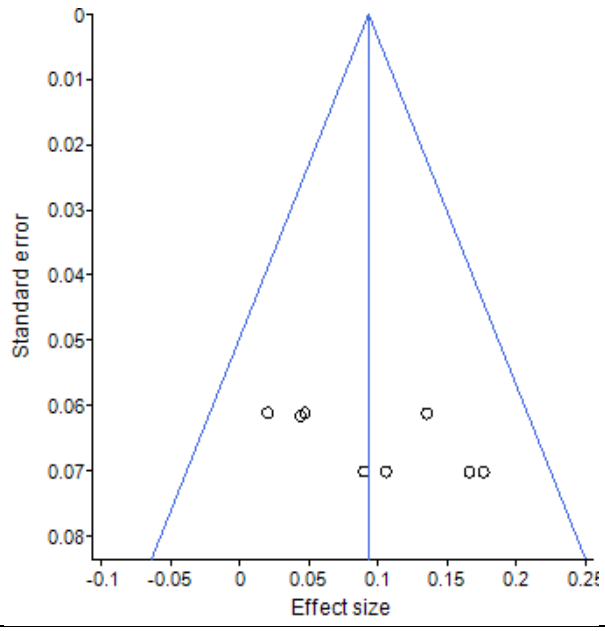
Heterogeneity: Q = 11.2; df = 10; p = 0.343; I-squared = 10.6%; tau-squared = 0.000152.



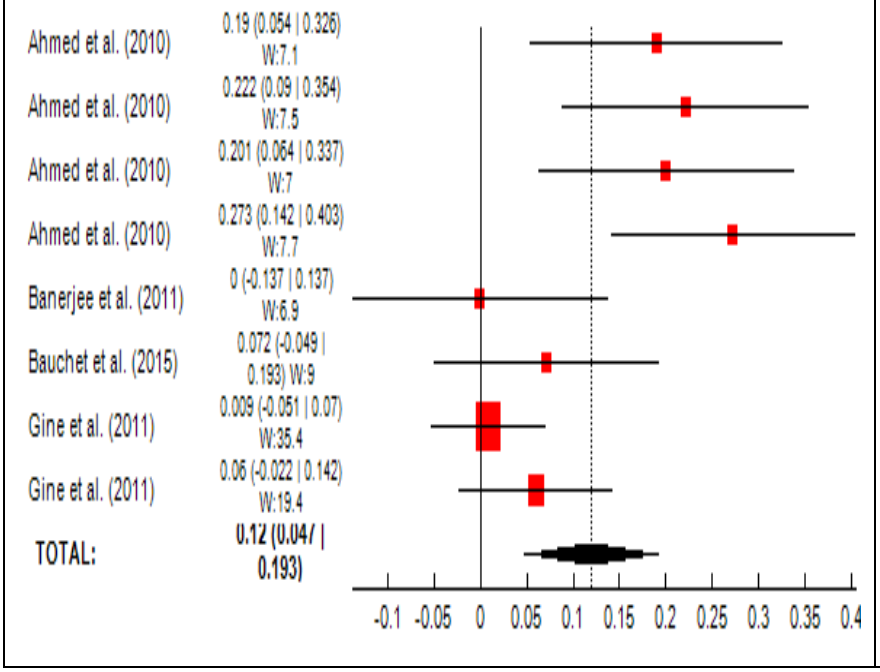


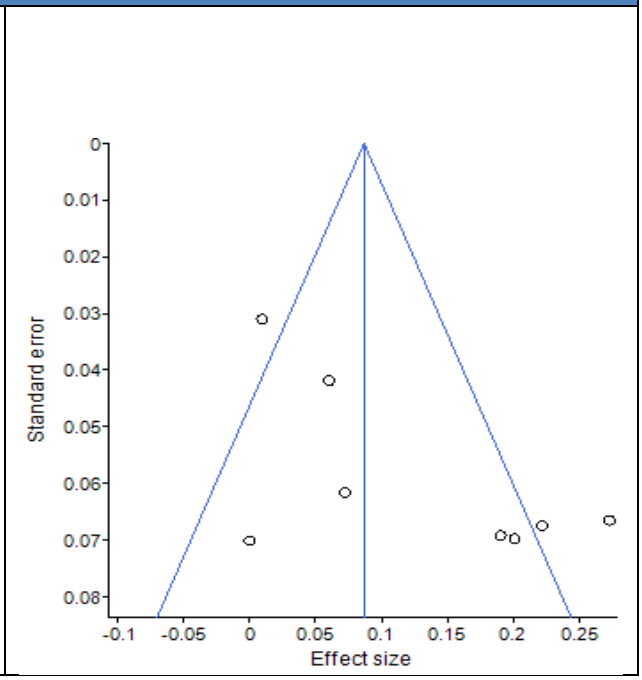
META ANALYSIS: INCOME
Random effects model: 0.0931 (0.0479, 0.138)
Heterogeneity: Q = 5.61; df = 7; p = 0.586; I-squared = 0%; tau-squared = 0.



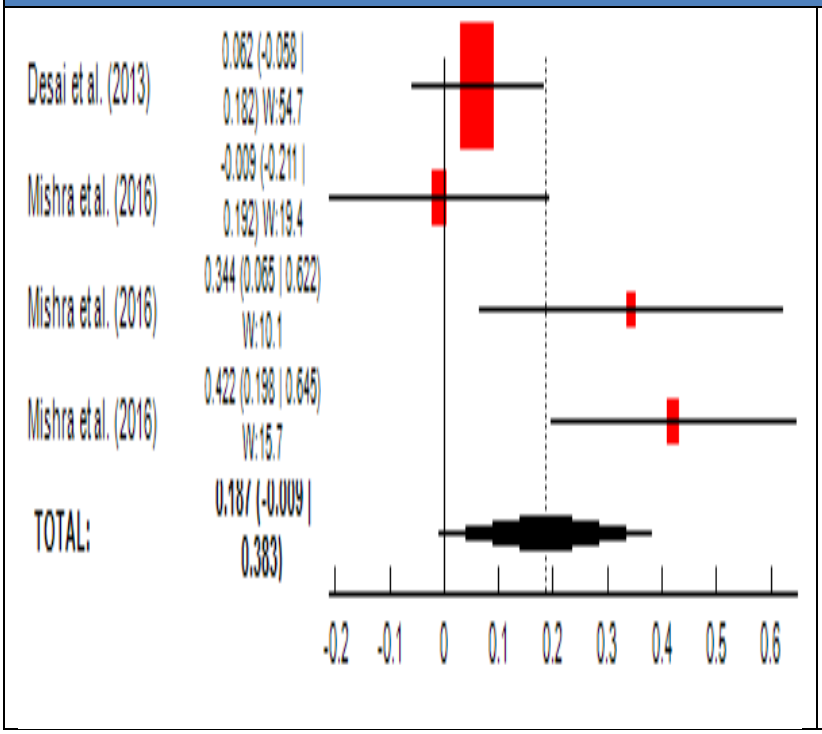


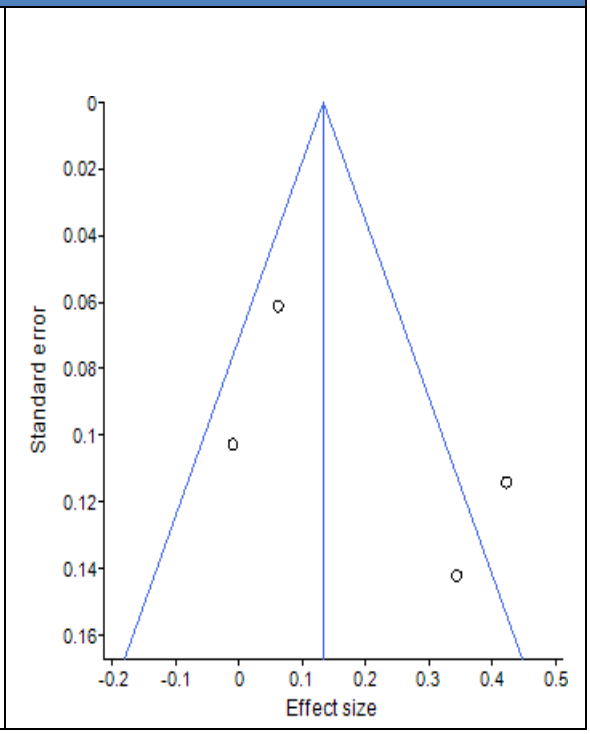
META ANALYSIS: COSUMPTION AND EXPENDITURE
Random effects model: 0.12 (0.047, 0.193)
Heterogeneity: Q = 24.9; df = 7; p = 0.000784; I-squared = 71.9%; tau-squared = 0.0076



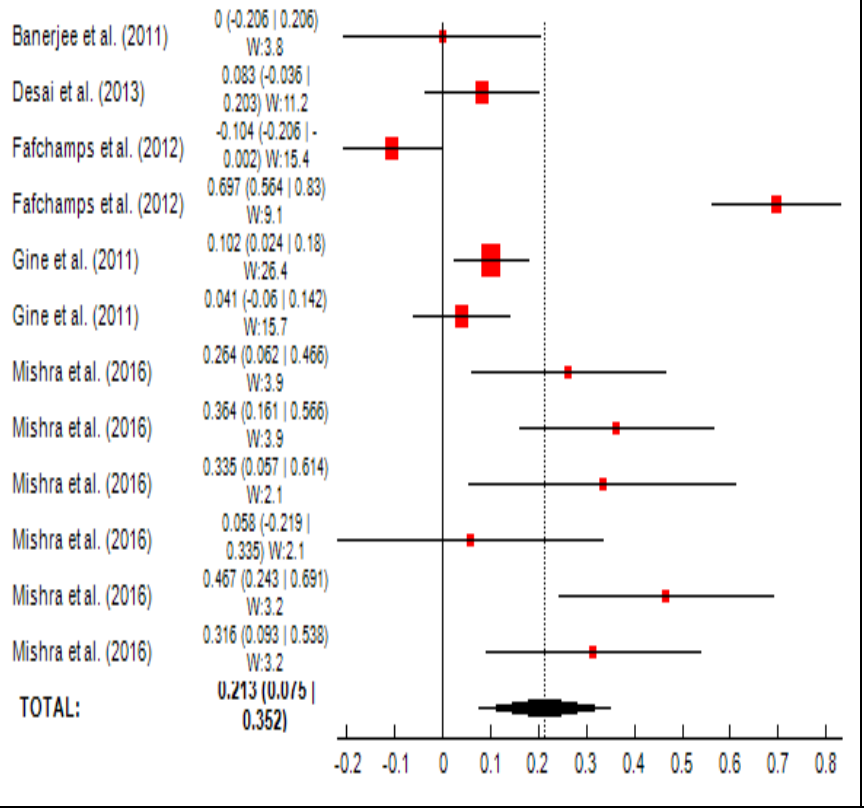


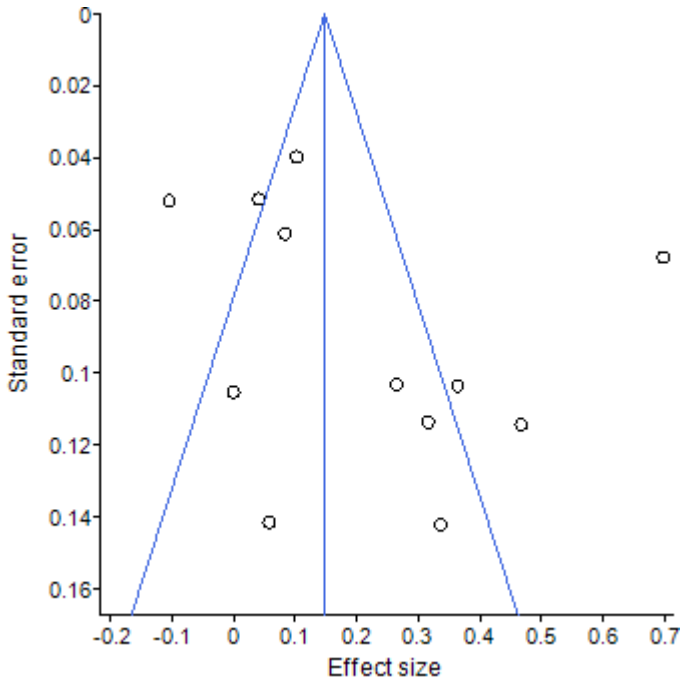
META ANALYSIS: YIELD
Random effects model: 0.187 (-0.00893, 0.383) Heterogeneity: Q = 11.9; df = 3; p = 0.00781; I-squared = 74.7%; tau-squared = 0.0289.





META ANALYSIS: PROFIT/REVENUE/SALES
Random effects model: 0.213 (0.0747, 0.352)
Heterogeneity: Q = 116; df = 11; p = 0; I-squared = 90.5%; tau-squared = 0.0512

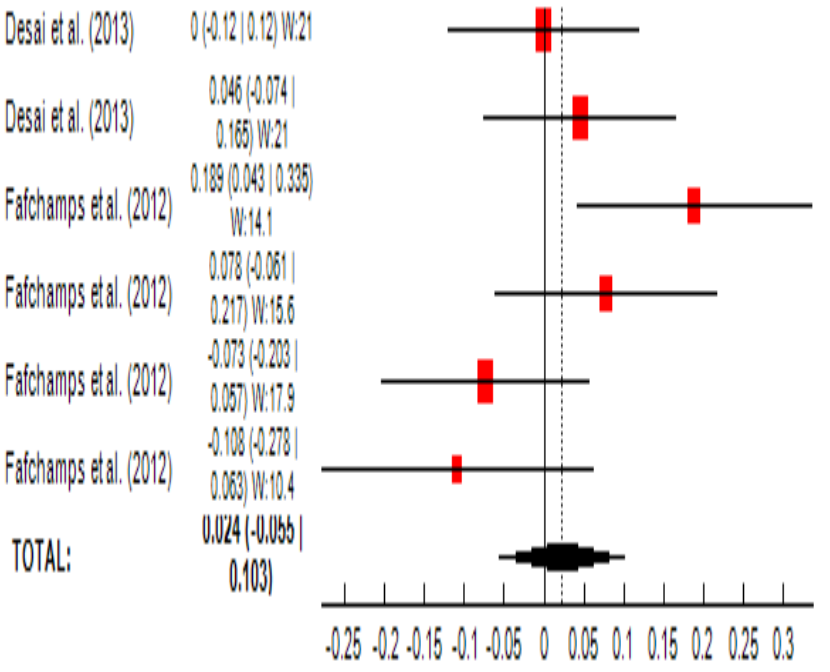


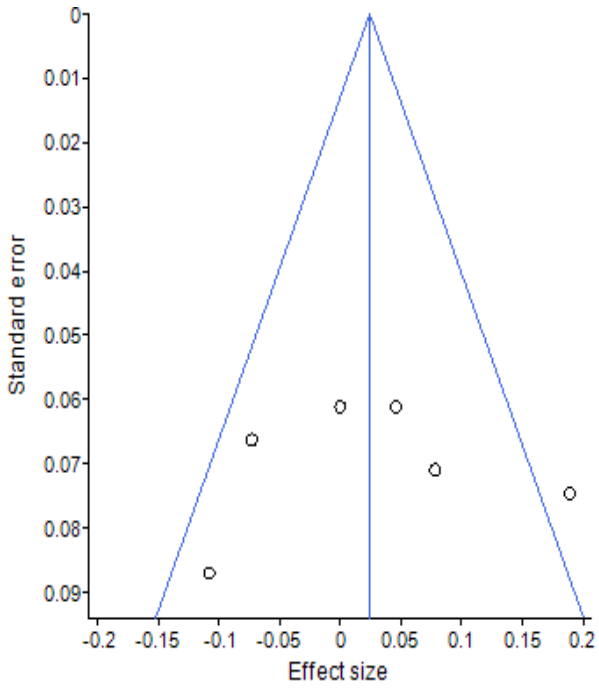


META ANALYSIS: FINANCIAL AND TECHNICAL LITERACY

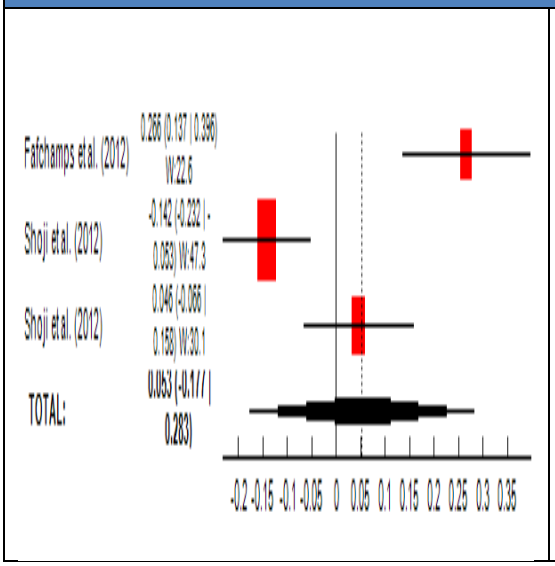
Random effects model: 0.0239 (-0.0553, 0.103)

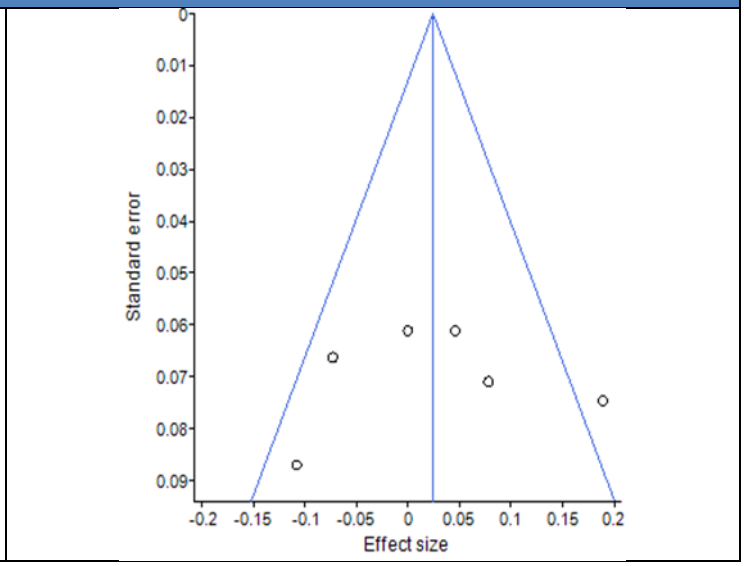
Heterogeneity: Q = 10.2; df = 5; p = 0.0702; I-squared = 50.9%; tau-squared = 0.00494.





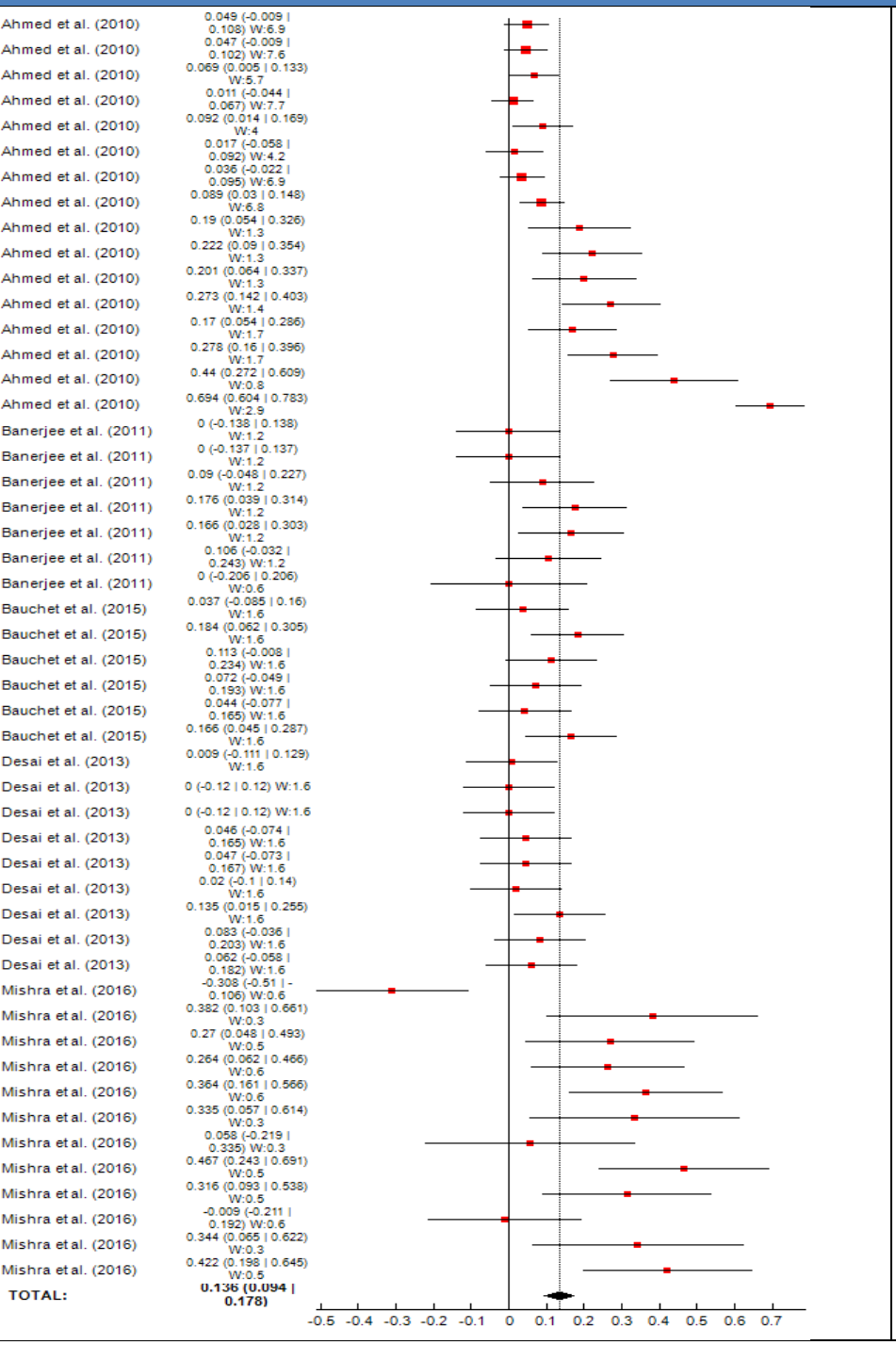
META ANALYSIS: SOCIAL CAPITAL
Random effects model: 0.053 (-0.177, 0.283) Heterogeneity: Q = 26.6; df = 2; p = 1.66E-06; I-squared = 92.5%; tau-squared = 0.0382.

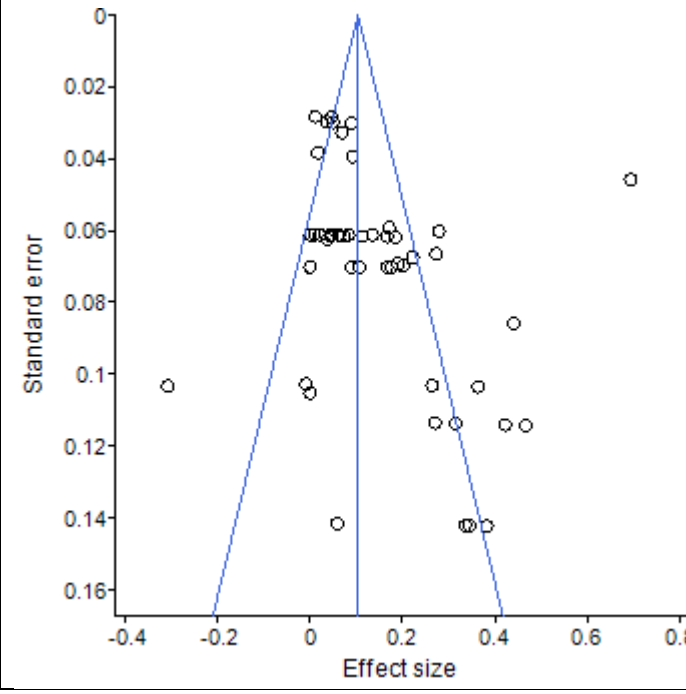




META ANALYSIS: ECONOMIC OUTCOMES OF MULTIPLE INTERVENTIONS

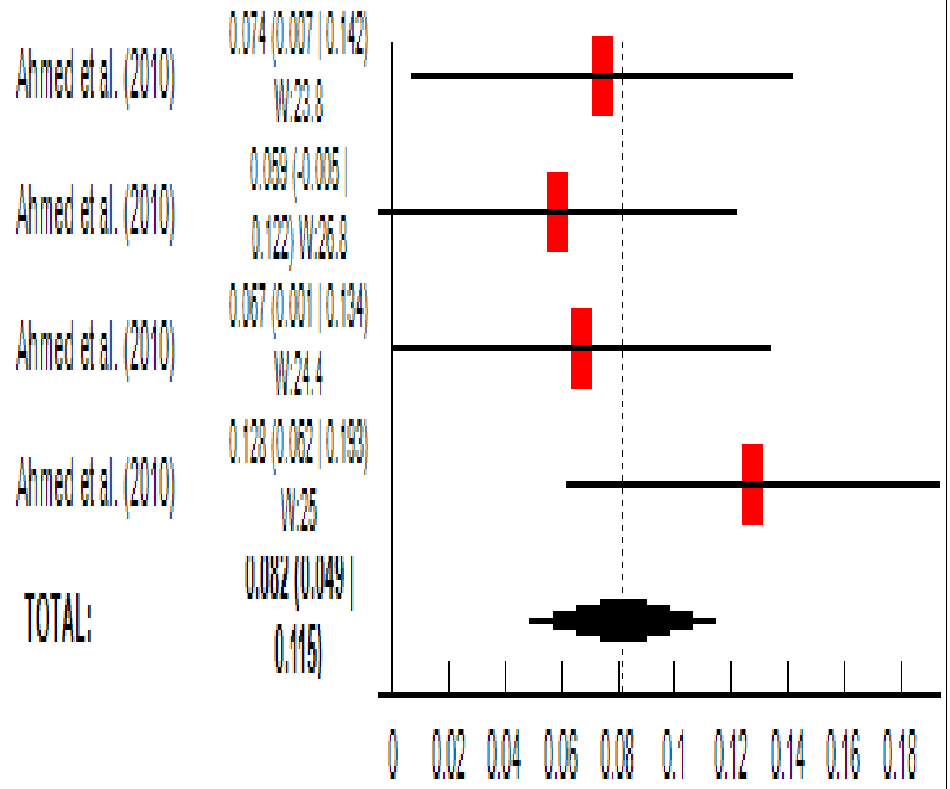
Random effects model: 0.136 (0.0944, 0.178) Heterogeneity: Q = 318; df = 49; p = 0; I-squared = 84.6%; tau-squared = 0.0172.

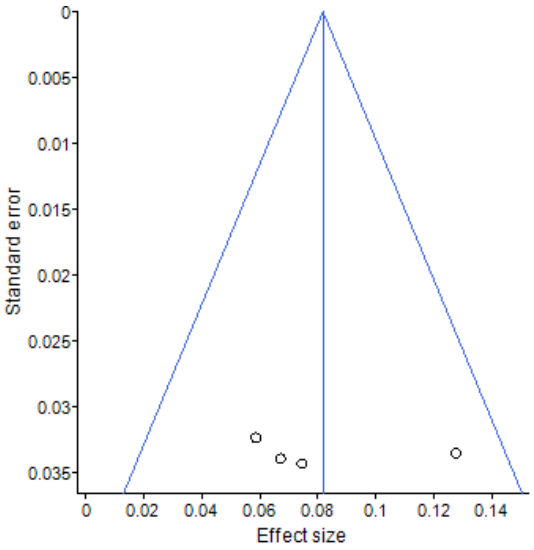




META ANALYSIS: SOCIAL OUTCOMES OF MULTIPLE INTERVENTIONS

Random effects model: 0.0817 (0.0489, 0.115) Heterogeneity: Q = 2.61; df = 3; p = 0.455; I-squared = 0%; tau-squared = 0.

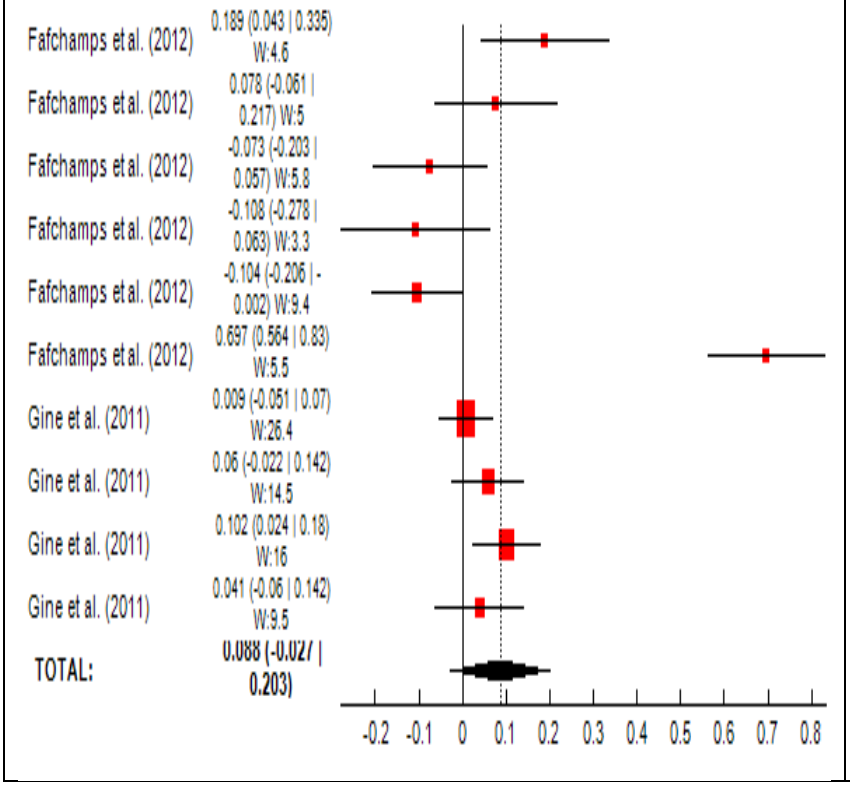


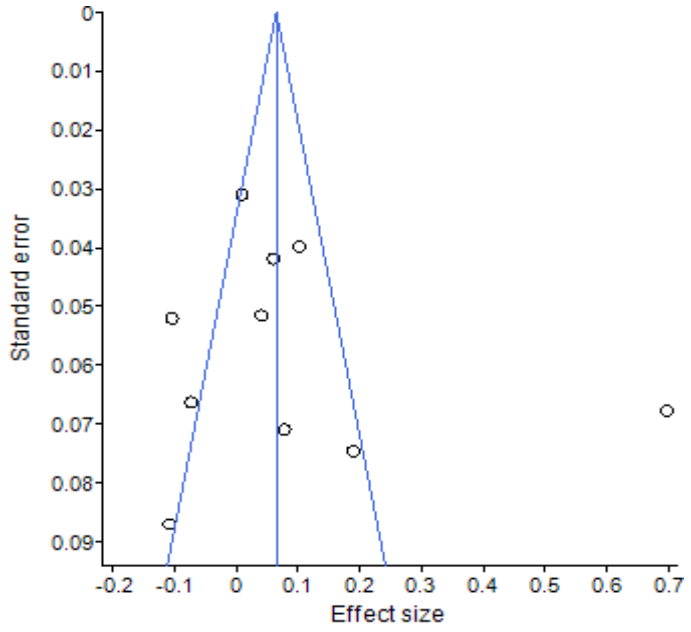


META ANALYSIS: ECONOMIC OUTCOMES OF SINGLE INTERVENTIONS

Random effects model: 0.088 (-0.027, 0.203)

Heterogeneity: Q = 113; df = 9; p = 0; I-squared = 92%; tau-squared = 0.0309.

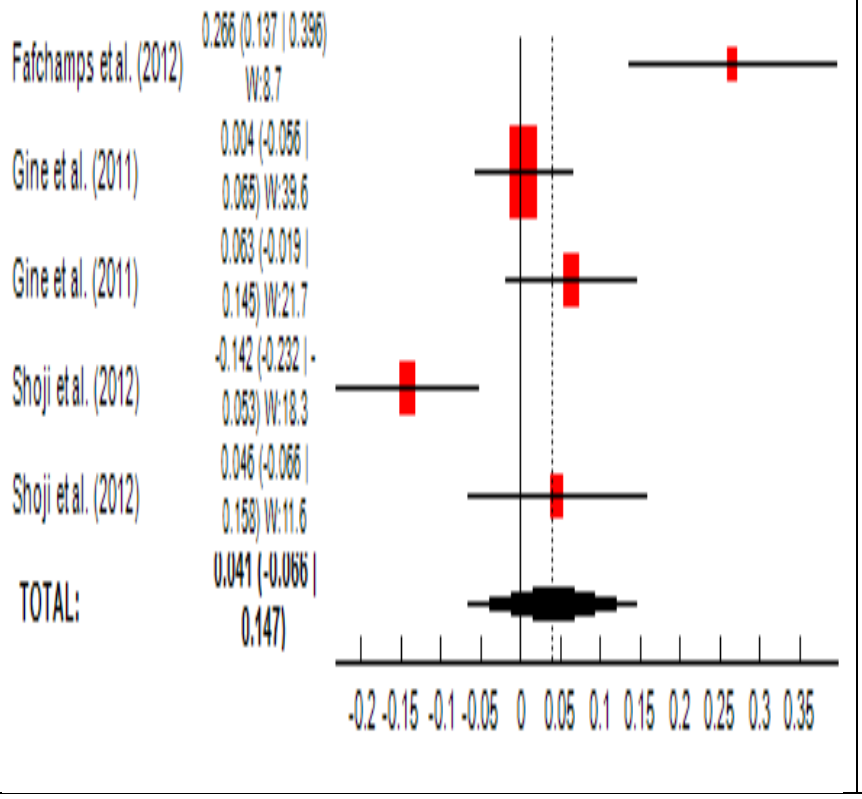


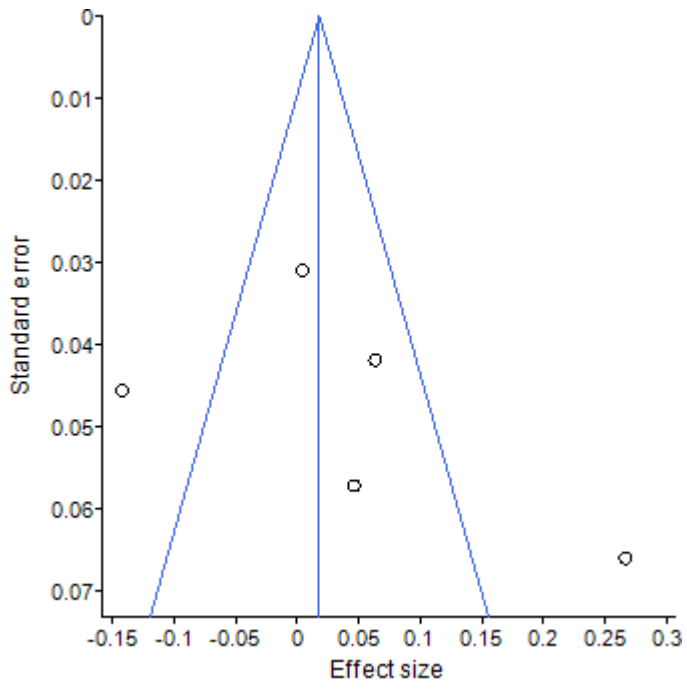


META ANALYSIS: SOCIAL OUTCOMES OF SINGLE INTERVENTIONS

Random effects model: 0.0409 (-0.0657, 0.147)

Heterogeneity: Q = 28.1; df = 4; p = 1.18E-05; I-squared = 85.8%; tau-squared = 0.0124.

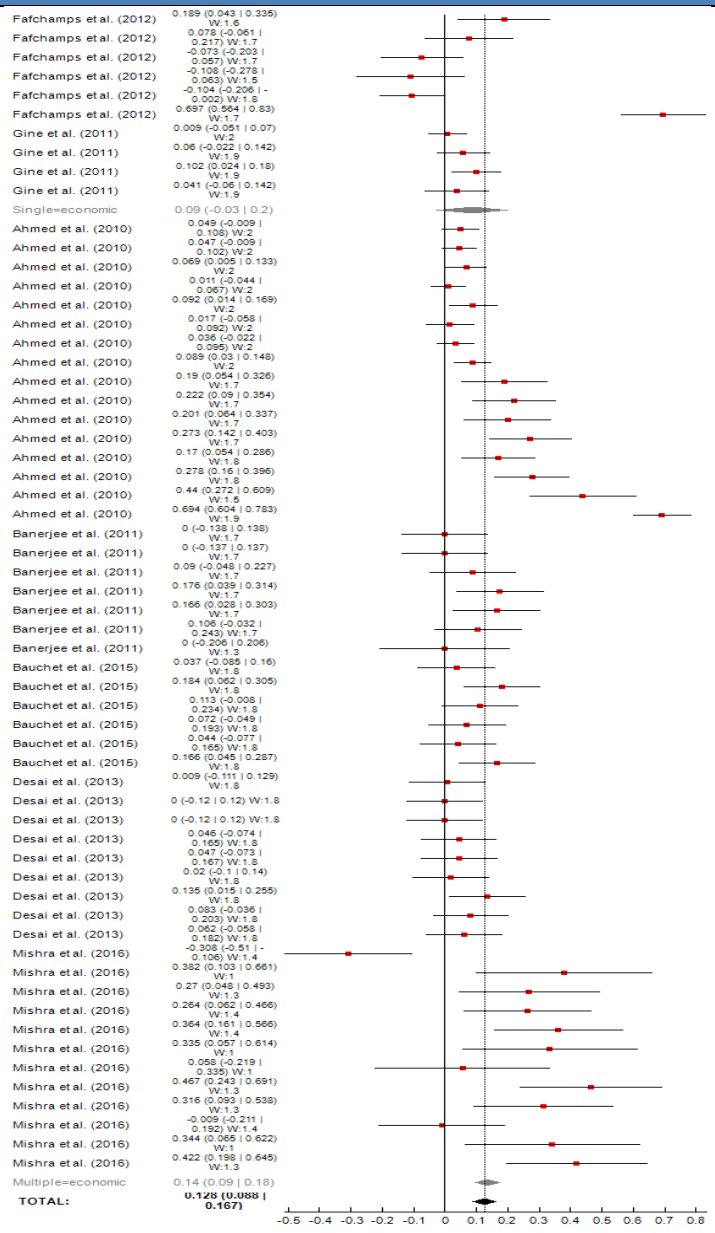




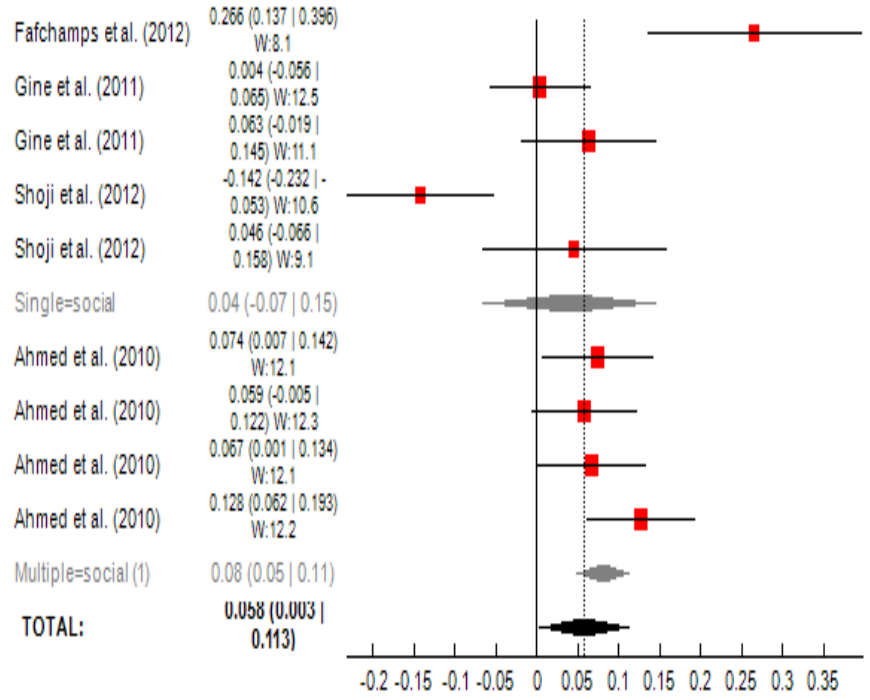
SUBGROUP ANALYSIS: ECONOMIC OUTCOMES OF SINGLE VS. MULTIPLE INTERVENTIONS

Random effects model overall effect: 0.128 (0.0885, 0.167)

Heterogeneity Q (all studies) = 436; df = 59; p = 0; I-squared = 86.5%. (Group 1 Q = 113; df = 9. Group 2 Q = 318; df = 49). Difference: 0.0479; SE difference: 0.0624; Z: 0.768; p = 0.443; Q* within: 70.3; Q* between: 0.589; (Group 1 Q*: 13.9; Group 2 Q*: 56.5); heterogeneity explained: 0%.



SUBGROUP ANALYSIS: SOCIAL OUTCOMES OF SINGLE VS. MULTIPLE INTERVENTIONS
Random effects model overall effect: 0.0581 (0.00311, 0.113) Heterogeneity Q (all studies) = 36.9; df = 8; p = 1.23E-05; I-squared = 78.3%. (Group 1 Q = 28.1; df = 4. Group 2 Q = 2.61; df = 3). Difference: 0.0409; SE difference: 0.0569; Z: 0.718; p = 0.473; Q* within: 8.11; Q* between: 0.516; (Group 1 Q*: 5.49; Group 2 Q*: 2.61); heterogeneity explained: 4%.



ABBREVIATIONS

AAS	Association for Asian Studies
ADB	Asian Development Bank
APAARI	Asia-Pacific Association of Agricultural Research Institutions
BASAS	British Association for South Asian Studies
BEAM	Building Effective and Accessible Markets
CB	Capacity Building
CGAP	Consultative Group to Assist the Poor
CRD	Centre for Reviews and Dissemination
CSO	Civil Society Organisations
CT	Cash Transfer
DFID	UK's Department for International Development
EGS	Employment Guarantee Scheme
EPPI Centre	The Evidence for Policy and Practice Information and Coordinating Centre
ESCAP	Economic and Social Commission for Asia and the Pacific
FAO	Food and Agriculture Organisation
FS	Financial Support
IADB	Inter-American Development Bank
ICT	Information and Communications Technology
IDRC	International Development Research Centre
IFAD	International Fund for Agricultural Development
IFC	International Finance Corporation
IFRI	International Food Policy Research Institute
IKS	Information and Knowledge Sharing
ILO	International Labour Organisation
IMF	International Monetary Fund
IMSEAR	Index Medicus for South-East Asia Region
JOLIS	Journal of Librarianship and Information Science

JPAL	Abdul Latif Jameel Poverty Action Lab
LIRNE Asia	Learning Initiatives on Reforms for Network Economies Asia
LMICs	Lower- and middle-income countries
MNREGS	Mahatma Gandhi National Rural Employment Guarantee Scheme
NCVER	National Centre for Vocational Education Research
NGO	Non-Governmental Organisation
NPC-GON	National Planning Commission – Government of Nepal
NTFP	Non-Timber Forest Products
OECD	Organisation for Economic Cooperation and Development
PICOC	Population (P), Intervention (I), Comparisons (C), Outcomes (O) and Context (C)
PwC	PricewaterhouseCoopers
RVCs	Rural Value Chains
SAALG	South Asia Archive and Library Group
SARH	South Asia Research Hub of DFID
SDC	Swiss Agency for Development and Cooperation
SDG	Sustainable Development Goal
SME	Small and Medium-Sized Enterprise
TUP	Targeting Ultra Poor
UNCED	United Nations Conference on Environment and Development
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNESDOC	United Nations Educational, Scientific and Cultural Organisation Documents
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Emergency Fund
UNIFEM	United Nations Development Fund for Women
USAID	United States Agency for International Development