



Financial Pathways out of Poverty in Bangladesh and Tanzania

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Professor C. Leigh Anderson, Principal Investigator
Assistant Professor Travis Reynolds, co-Principal Investigator

Pierre Biscaye, Brian Hutchinson,
Melissa LaFayette, Audrey Lawrence

C. Leigh Anderson & Travis Reynolds

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Key Findings:

- Lack of access to finance is widely believed to be a key constraint on poor households' escape from persistent poverty (Collins et al., 2009; Banerjee & Duflo, 2011), however the mechanisms by which improved financial access translates into poverty alleviation are complex and poorly understood.
- Major financial mechanisms targeting poverty alleviation in South Asia and sub-Saharan Africa include remittances, government subsidies, credit, cash transfers, and "combination programs" (bringing together multiple financial mechanisms in a single intervention).
- Through a review of peer-reviewed and grey literature we find 56 studies published since 2005 providing empirical evidence on the links between these financial mechanisms and measures of poverty in Bangladesh and Tanzania. We summarize the available evidence on each financial mechanisms' association with poverty outcomes including income, consumption, assets, health, and education, where possible describing established causal mechanisms linking financial interventions to poverty alleviation.
- The vast majority of empirical research examining the roles of financial access in poverty alleviation is focused on Bangladesh (40 out of 56 studies). Thirty-one studies look at interventions targeting poor or ultra-poor populations, and 27 examine efforts targeting rural populations.
- The majority of studies (42 out of 56) find a positive association between a financial intervention and at least one poverty alleviation outcome measure. While some studies report insignificant results of financial interventions on poverty, very few (3 out of 56) indicate access to a financial mechanism was associated with *worsened* poverty.
- **Remittances** (9 studies in Bangladesh, 1 study in Tanzania) are more prevalent in Bangladesh, but in both countries the evidence indicates generally positive associations between remittances and household income and consumption. We also find some limited evidence of broader effects of remittances on economic growth at the national level.
- **Government Subsidies** (2 in Bangladesh, 3 in Tanzania) identified through this review include vouchers for medical care in Bangladesh (which strongly incentivize pregnant mothers to utilize medical services) and vouchers for input subsidies in Tanzania encouraging farmers to purchase fertilizer and improved seed. For five out of the nine poverty outcomes reported by these studies there is a positive association between the subsidy and poverty alleviation.
- Studies of **credit** interventions (15 in Bangladesh, 6 in Tanzania) generally report positive associations with poverty alleviation in at least one outcome category (13 out of 21 studies). While many credit interventions target the poor, however, the empirical evidence of credit's impact on poverty is mixed: Islam (2008) and Khandker (2005) find poorer households benefit more from credit, while Rahman & Momen (2009) and Haque & Yamao (2008) report stronger associations between credit and poverty alleviation for the moderately poor compared to the extreme poor.
- **Conditional Cash Transfers** (5 in Bangladesh, 4 in Tanzania) and **Unconditional Cash Transfers** (1 in Bangladesh, 2 in Tanzania) are associated with mixed results on poverty outcomes. 16 out of 38 poverty outcomes reported in these studies are positively associated with cash transfers, meaning that the intervention improved beneficiaries' condition. However, across the remaining 22 outcome measures, the intervention had no measured effect on poverty.
- **Combination programs** (8 studies in Bangladesh, 0 in Tanzania) are the only mechanism for which every study found at least one positive impact on poverty alleviation. This is consistent with recent calls in the literature for multifaceted approaches to poverty alleviation simultaneously targeting expanded access to productive assets for long-term income generation and financial assistance to meet short-term consumption needs.
- Ultimately, the evidence-base for specific financial pathways out of poverty remains thin, with varied evidence quality, and the use of diverse poverty measurement indicators preventing easy comparisons of effects sizes across alternative financial interventions.

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Please direct comments or questions about this research to Principal Investigators Leigh Anderson and Travis Reynolds at epar.evans.uw@gmail.com.

Introduction

The vast literature on poverty in developing countries offers a variety of explanations for why poverty persists in some areas, while in others poor individuals and households are able to escape it. At the national or country level, factors including conflict, poor governance, unequally distributed natural resource endowments, trade and investment policies, and weak public infrastructure have all been associated with the creation of “poverty traps”, where one or more forces act in concert to prevent countries from exiting poverty (Collier, 2008; Christiaensen, Demery & Paternostro, 2003). Other scholars have highlighted the importance of institutions as drivers of poverty (e.g. through corruption (Gupta, Davoodi, & Alonso-Terme, 2002; Mauro, 1995)) or as leverage points for poverty alleviation (e.g., through supporting economic and political rights and processes (Deaton, 2013; Acemoglu & Robinson, 2012; Grindle, 2007)). At the individual or household level, researchers argue that the poor often lack access to information and markets that would allow them to make decisions supporting movements out of poverty (Banerjee & Duflo, 2011). Stiglitz (2002) contends that a combination of imperfect information and incomplete markets are key barriers to households’ exit from poverty, while more recent research suggests that exposure or aversion to risk (Dercon & Christiaensen, 2011), low time and labor productivity (Blackden & Wodon, 2006), violent conflict (Justino, 2007), and low access to financial services (Collins et al., 2009) are all important barriers keeping poor households from improving their livelihood conditions. Insecure property rights are another factor inhibiting the poor from accumulating wealth and gaining value from their assets (De Soto, 2000; Easterly & Easterly, 2006).

In a previous report on pathways out of poverty, EPAR (2015) finds evidence that higher levels of human capital, natural capital, built/financial assets, as well as social/political assets are all associated with reduced poverty.¹ The diversity of opinions in the published literature on “pathways out of poverty” are in part a reflection of the weak evidence available on any single pathway. On the other hand, many authors argue that a sustained exit from poverty is complex and that no single causal pathway from poverty to non-poverty exists (Collins et al., 2009; Collier, 2008). Another common argument favors addressing poverty through integrated development approaches, with interventions simultaneously addressing a spectrum of needs including health care, education, agriculture, and infrastructure (Sachs, 2005; De Janvry & Sadoulet, 2005; Nemes, 2005).

The challenges in identifying precise pathways out of poverty are compounded by a lack of consensus on the most appropriate empirical methods to measure poverty, and to determine causality in cross-country studies of the impacts of financial access on poverty outcomes. Even in studies within countries using survey or panel data, household level evidence on pathways out of poverty is difficult to generalize to different demographic groups or geographic areas that are outside of the specific area studied. In addition, comparing effect sizes across interventions targeting poverty (e.g., does a twenty percent increase in working days due to better health have greater implications for poverty reduction than two additional years of education?) can be complicated, making it difficult to identify any one pathway as more or less effective than others.

In this report, we set aside the broad and ongoing debate over what matters most to poverty reduction in order to focus on a single set of possible pathways out of poverty via improved and expanded access to financial services. In a previous examination of 75 theoretical and empirical studies on pathways out of poverty, EPAR (2015) finds that finance is one of the most commonly discussed mechanisms for reducing poverty—or preventing households from falling into it. In this report, we more closely examine the available theory and evidence on how finance can drive poverty alleviation in South Asia and sub-Saharan Africa. We focus on five

¹ **Human assets** include health, education, information/training, social networks, reduced risk, and time; **Natural assets** include land, soil, water, environment/resources, and climate; **Built/financial assets** include financial assets, machines/mechanization, infrastructure, and technology; **Social/political assets** include political institutions, economic institutions, and informal policies/norms

sources of finance: (i) remittances; (ii) government subsidies; (iii) credit programs; (iv) conditional and unconditional cash transfers, and (v) combination programs—to understand how each uniquely operates to place money or other financial resources into the hands of the poor. We conclude with a review of the empirical evidence for which interventions are most strongly associated with measures of poverty alleviation in two selected countries - Bangladesh and Tanzania - highlighting how variations in national context appear to support or undermine the effectiveness of financial services as pathways out of poverty.

The Roles of Finance in Poverty Reduction

The existing literature on poverty alleviation suggests that finance-based poverty reduction pathways exist at both the country and individual/household levels, with some argument to be made for integrative approaches that target poverty reduction at both levels.

Country-Level Financial Pathways out of Poverty

There is strong cross-country evidence that financial development can contribute to economic growth, and reduce income inequality and poverty (World Bank, 2008). Financial development is a term that covers the broad health of a country's financial system. The World Bank (2013) defines financial development in terms of five key functions:

1. producing and processing information about possible investments and allocating capital based on these assessments;
2. monitoring individuals and firms, and exerting corporate governance² after allocating capital;
3. facilitating the trading, diversification, and management of risk;
4. mobilizing and pooling savings; and
5. easing the exchange of goods, services, and financial instruments.

The theory behind why these five functions have implications for the poor begins with the idea that a perfectly functioning financial system acts as an equalizer, allocating capital efficiently and with respect to “individual talent and initiative, not on parental wealth” (Levine, 2008, p. 3). In theory, in developed financial systems banks will lend to firms and persons with the most promising potential and thereby leverage total savings within the system to finance high-return economic projects, with efficient oversight mechanisms to help ensure that these practices occur (Čihák et al., 2013),³ contributing to more efficient distribution of resources (Levine, 2008; Theil, 2001). As financial development occurs, market imperfections common within relatively undeveloped financial systems—including poor information to facilitate lending (Mian, 2006), and high transaction costs (Navajas et al., 2000)—begin to diminish (Claessens & Perotti, 2007). If, as is argued, the poor are the ones who commonly bear the brunt of such market imperfections (e.g., through their exclusion from access to formal finance mechanisms (Demirgüç-Kunt, 2015)), then as national and regional financial markets deepen the poor may be among the primary beneficiaries of the improvements (Huang & Singh, 2009).

Broadly, two possible macro-level channels of poverty reduction through financial access are emphasized in the literature:

1. as credit constraints loosen at the national level, incomes of the poor may grow as they utilize credit to increase productivity and weather shocks (Claessens & Perotti, 2007); and

² Corporate governance broadly refers to the actors, level of competition, and laws that influence the way a firm operates. See Caprio & Levine, 2002 for information on the role of corporate governance in creating well-functioning financial systems.

³ Though beyond the scope of this report, financial development also has implications for securities, equity, and bond markets (see Čihák et al., 2013).

2. over time, the increasingly efficient allocation of capital through developing and expanding financial markets may lead to further expanding economic growth and a virtuous cycle of economic and financial growth including, among others, the poor.⁴

Though the precise mechanisms by which macro-level financial development translate into improved poverty outcomes remain elusive, several researchers have documented a positive association between financial development and income growth and/or poverty reduction in recent years (Beck, Demirgüç-Kunt, & Levine, 2007; Jeanneney & Kpodar, 2011; Naceur & Zhang, 2016).

In an analysis of 81 developed and undeveloped countries, Beck, Demirgüç-Kunt, & Levine (2007) consider the impact of financial development (as measured by the ratio of credit to GDP) on the poorest quintile of each country's population. They find that financial development boosts the growth rate of the income share of the poorest quintile relative to the broader population, thus concluding that "finance helps the poor above and beyond the impact of financial development on aggregate growth" (p. 5). Though they cannot disentangle the explicit pathways by which expanding credit access and use translates into poverty reduction, they find a statistical relationship that suggests about 50% of the growth in income share among the poorest population quintile is a result of economy-wide economic growth, while the other 50% occurs due to reductions in income inequality (i.e., redistribution of existing wealth from wealthier to poorer population quintiles).

Jeanneney & Kpodar (2011) perform a similar analysis of the impacts of expanding financial access on aggregate poverty levels, looking at 65 developing countries. They use "M3/GDP", or the ratio of liquid assets within a financial system to GDP, as an indicator for financial development. This measure considers the overall level of bank-based savings within a financial system and is representative of the extent to which financial systems provide transaction services and savings opportunities. Even accounting for increases in financial instability that might hurt the poor, the authors find a 10% increase in M3/GDP is associated with a 4% increase in average income of poor households, and a 2.8% reduction in the poverty headcount. They do not find a significant impact of credit access on poverty (contrary to Beck, Demirgüç-Kunt, & Levine's (2007) findings), and posit that this may be because they have focused only on developing countries where access to credit is more constrained for the poor.

Finally, Naceur & Zhang's recent (2016) study of 143 developed and developing countries from 1961-2011 considers both indicators of financial development mentioned above, as well as a measure of financial access (bank accounts/1,000 people). They find that on average, an additional banking account opened per 1,000 people is associated with a 0.007 percentage point reduction in the poverty gap ratio.⁵ They also find evidence of the effect of credit on income inequality: "a 1 percentage point increase in private credit to GDP ratio tends to reduce the GINI coefficient by more than 0.041%; and reduce the poverty gap by a percentage point of 0.019" (p. 9).

These studies suggest that country-level financial development can potentially contribute to poverty reduction. The findings have implications for the present study because remittances, government subsidies, credit, cash transfers, and combination programs can contribute to broader financial development goals. For instance, a study of 99 developing countries reports that a one percentage point increase in the amount of worker remittances within a country is associated with both an increase in the ratio of the number of bank deposits to

⁴ For research on the positive relationship between economic growth and poverty reduction, see Dollar & Kraay, 2002; Bourguignon, 2002; de Janvry & Sadoulet, 2010; Balakrishnan, Steinberg, & Syed, 2013.

⁵ The poverty gap ratio measures the extent to which individuals fall below the poverty line and is calculated by dividing the shortfall between each person's income and the poverty line by the poverty line itself (Schaffner, 2014). The poverty gap can be interpreted as the amount of money required to bring those living in poverty to the poverty line.

GDP (0.4-0.5%) and the share of credit to GDP (0.3-0.4%) (Aggarwal, Demirgüç-Kunt, & Peria, 2006).⁶ It is possible that these increases may occur because portions of remittances flow through formal financial channels (Orozco & Fedewa, 2006). Recipients regularly interact with banks or other financial institutions in order to accept these transfers, and, over time, these relationships can lead to expanded access to and use of other formal services like savings accounts or credit (*Ibid.*). The microfinance revolution has exhibited similar qualities, bringing many individuals into formal banking relationships for the first time, primarily through lending but also through savings and insurance offerings (Vanroose & D’Espallier, 2012). Cash transfers also have the potential to contribute to financial development. For example, in India social transfer programs are linked with bank accounts, and in 2014 one in six subsidies for liquid petroleum gas in India were received via a direct electronic deposit into beneficiaries’ bank accounts (Chen, 2014). Consistent use of bank accounts may grow among beneficiaries of India’s various social safety net and subsidy programs as more programs are linked (Dahan & Gelb, 2015).

Beyond this section, we do not further examine how specific interventions contribute to country-level economic changes. However, these different financial interventions represent mechanisms for transferring money into the hands of poor individuals, and as such may facilitate the poor’s access to—and use of—formal financial services. Thus some of the microeconomic impacts reported—on savings, credit, and access and activity within financial institutions—may contribute to financial development, and thus to additional poverty reducing effects that result from it (e.g., longer-term economic growth).

Individual/Household-Level Financial Pathways out of Poverty

Capital accumulation theory has its origins in Adam Smith’s *The Wealth of Nations* (1776). Smith writes of two initial states of capital: insufficient and sufficient. In an insufficient state, a person lives out a life that might colloquially be termed “day-to-day.” The person possesses a small stock of basic goods and assets—e.g., food, savings—that allows them to minimally subsist for a few days or weeks. Constrained by the limits of the situation, all labor is devoted to replenishing the small stock as it is depleted. In this state, assets cannot grow over time. This, Smith writes, “is the state of the greater part of the labouring poor in all countries” (Book II.1.1).

In a sufficient state, where there is more than enough to subsist on, individuals invest the surplus. Through investments, they derive greater revenue and assets that can in turn lead to a positive cycle of accumulation—a pathway out of poverty. There are two different kinds of investments. The first Smith calls “circulating capital.” Here, the individual engages in raising, manufacturing or purchasing goods—through his or her own labor or by selling it to others. Profit is reaped from selling the goods. Done repeatedly, circulating capital can result in incremental gains that add up over time. The second process involves “fixed capital.” Here, surplus is invested in things such as machines, buildings, improvements of land, or human capital (trade skills or other training, formal education, health) which increase productivity or returns to labor. Circulating capital feeds the purchase of fixed capital. Both processes together can lead to a virtuous cycle of accumulation.

An anecdote from Banerjee & Duflo (2011) illustrates Smith’s theory of capital accumulation:

Xu Aihua decided that she had to do something, but her parents were too poor to help. So she borrowed a megaphone and went around the village offering to teach young women how to make garments for a fee of 15 yuan (\$13 USD PPP in 1983). She recruited 100 students, and with the money that she had just collected, she bought a secondhand sewing machine and some surplus fabric from the local state-owned factories, and started teaching. At the end of the course she kept her eight best students and launched a

⁶ These measures are used as indicators of financial development in the studies that are reviewed above in this section.

business. [...] By 1991, she had saved so much from the profits of her business that she could afford to buy sixty automatic sewing machines for 54,000 yuan (\$27,600 USD PPP). Her total fixed capital had grown more than a hundredfold in eight years. (p. 209)

Sufficient capital is the hinge on which Smith's entire theory operates. One option to attain sufficient capital is to borrow (Carter & Barrett, 2005). But borrowing from formal institutions is difficult without collateral, something that many low income individuals are without. Informal credit options such as moneylenders are available, but often charge high rates that may preclude individuals from getting ahead. If individuals do not have access to credit, then slowly saving—often by rationing consumption—is the only option that households have to catalyze upward movement out of poverty (*ibid.*). Savings, however, can also be difficult for low-income individuals and especially for women in developing countries who tend to have less control over income (Karlan, Ratan, & Zinman, 2014; Dupas & Robinson, 2013; Anderson & Baland, 2002). Spouses, relatives, and even neighbors may feel entitled to “borrow” any surplus, and keeping cash in an illiquid form, such as in an animal asset, is less efficient but less easily appropriated (Karlan, Ratan, & Zinman, 2014; Banerjee & Duflo, 2012; Wright, 1999).

Financial behaviors that are optimal in the long-run are also constrained by present bias (putting present satisfaction ahead of future consumption) or impatience (difficulty saving when the payoff is many years down the road) (World Bank, 2015b; Gugerty, 2007). In addition, behavioral science finds that poverty “imposes a high cognitive tax so that these resources are used up quickly” (World Bank, 2015b, p. 115). The same human shortcomings can lead to failure to invest well: people often invest in a television or a radio or purchase more desirable food items (e.g., buying rice instead of millets, or buying sugar and processed foods) rather than investing in businesses, education, health, or other things that may draw large returns over the long run (Banerjee & Duflo, 2012).

In addition to behavioral challenges, many other micro- and macroeconomic pressures can affect the process of capital accumulation. In a recent review of pathways out of poverty, EPAR finds evidence that human, natural, and built/financial assets, as well as economic and political institutions, all play a role in determining the extent to which the cycle of asset accumulation can play out for individuals (EPAR, 2015). Lack of these assets or reductions in the stock or productivity of assets (e.g., through health shocks, which take away the ability for one to labor and may involve large medical bills) can short-circuit pathways out of poverty at any time. For some, this means falling back into poverty that they had previously escaped. For others, it means chronic poverty—a lasting state from which they are unable to escape.

The focus of this report is to examine tools that are used to both jump-start and facilitate the process of capital accumulation and escape from poverty that Smith describes. We examine four ways that money is placed directly into the hands of the poor (remittances, government subsidies, credit, and cash transfers) and one set of interventions through which the poor receive a combination of money and productive assets. Underlying each of these mechanisms is the question of whether infusions of money can enable conditions for sufficient capital and investment, and a pathway out of poverty.

Methodology

We conducted a series of searches to identify relevant published literature on pathways out of poverty from Google Scholar, Scopus, Science Direct, the World Bank Library, and University of Washington Libraries, as well as the websites of prominent program evaluation groups, including J-Pal, IPA, and 3IE. We supplemented our searches with a scan of Google for any recent, unpublished literature on poverty alleviation. To retrieve background literature, we began by using general search strings with terms linking poverty reduction to our five intervention categories. We then narrowed our search to two specific focus countries: Bangladesh and

Tanzania. While reviewing literature for these two countries, we only considered search results if they met the following criteria:

1. *Poverty alleviation component*: The article discusses an intervention's impact on any outcome related to poverty.
2. *Empirical evidence*: The article presents empirical evidence for the association between the intervention and the poverty-related outcome.
3. *Full-text availability*: The document is available in full-text and in English.
4. *Country-specific*: The article studies financial interventions in either Bangladesh or Tanzania.
5. *Recent*: We only retrieved literature that was published in 2005 or later.

While our searches focused on empirical studies of financial interventions' impacts on poverty, our broad definition of poverty included a variety of outcome areas. In particular, we looked at studies measuring impacts on income or wealth, consumption or expenditure, and assets - but we did not eliminate studies examining a more holistic, multidimensional view of poverty - such as health, education, employment, and living standards. We also included intermediate-impact papers in our final review from our earlier report (EPAR, 2015) if the study also included direct measures of poverty, if they were particularly seminal, or if they were among the only papers providing evidence on the impacts of a specific intervention.

Fifty-six articles met our screening criteria. For each of these articles, we coded the data sources used and study methodology, intervention components, including service type, funders, and implementing party, target population and use, and outcomes measured and the direction of impact.

We use four categories to describe the association or causation as reported in study results:

1. *Positive association*: The study finds a statistically significant⁷ *positive* relationship between the intervention and the poverty outcome variable.
2. *Negative association*: The study finds a statistically significant *negative* relationship between the intervention and the poverty outcome variable.
3. *No association*: The results are not statistically significant, meaning there is no apparent relationship between the intervention and the poverty outcome variable.
4. *Mixed association*: The study reports significant results for some groups but not others (e.g. a positive association with poverty alleviation for women but not men), or for some poverty outcomes within the same outcome category but not others (e.g. a positive association with food expenditure but a negative or insignificant association with non-food expenditure).

The results coding framework that accompanies this paper contains additional information from the studies included in the review. A coding framework, by nature, simplifies what is a complex literature. To enable this simplification process, within this report and within the accompanying coding framework we have sometimes not included all nuances of what a given article reports, particularly findings that are less relevant to the poverty focus of this review. In addition, the broad measures of poverty reported on (income, consumption, assets, health, education, and "other") are made up of various indicators that may be inconsistently measured or reported across studies. Assets, for instance, may include measures of livestock, household appliances, land, jewelry, or pots and pans. While we make an effort to show in general terms how different forms of financial interventions appear to lead to improvements in these assorted measures of poverty, we do not attempt to sum these sub-measures across studies or to compare the relative sizes of effects on them.

⁷ Unless for a descriptive study

Body of Evidence on Finance and Poverty Alleviation in Bangladesh and Tanzania

This review considers five ways financial mechanisms are used to get money into the hands of the poor in Bangladesh and Tanzania, including through: (i) remittances sent by friends or family members; (ii) government subsidization of goods or services via vouchers or other means; (iii) providing credit by bank or non-bank actors; or (iv) conditional cash transfers or unconditional cash transfers from governments or non-governmental organizations. Finally, some interventions, categorized here as (v) combination programs, pool one or more financial interventions, or combine financial interventions with non-financial interventions such as training and in-kind goods or services. Most interventions target specific groups of people - whether to help the most vulnerable or isolated, mitigate gender inequalities, or address population-specific needs.

Table 1 summarizes the body of evidence available for each intervention type. Studies on remittances and credit interventions are much more prevalent in Bangladesh, while government subsidies are more commonly researched in Tanzania. Studies on cash transfer interventions are relatively equally distributed between the two countries. Appendix A lists results by methodology, outcome areas, and intervention type and Appendix D provides a summary of individual studies reviewed.

Table 1. Summary of Body of Evidence for Each Intervention Type

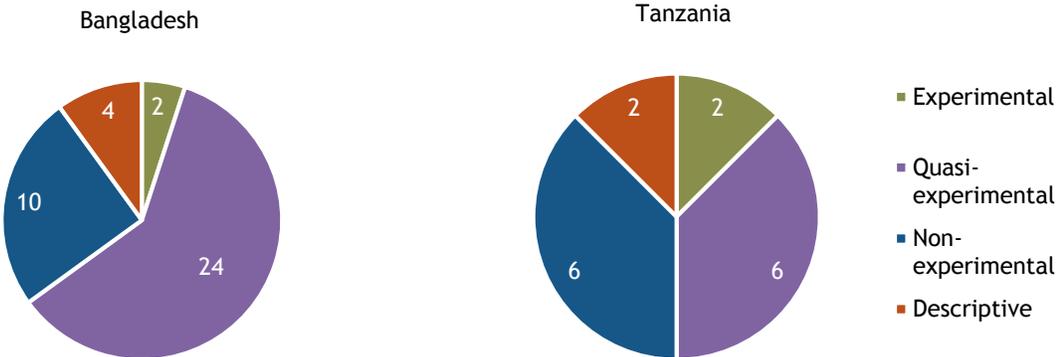
Intervention Type	# of Studies	Countries	Methodology	Funding Source ⁸	Target Population (urban vs. rural)	Target Population (gender)
Remittances	10	9 Bangladesh 1 Tanzania	4 quasi-experimental 5 non-experimental 1 descriptive	Individuals (10)	10 not specified	10 not specified
Government Subsidy	5	2 Bangladesh 3 Tanzania	1 experimental 3 quasi-experimental 1 non-experimental	Government (5) Multilateral (3) Non-profit (2)	3 rural	2 women 3 both
Credit	21	15 Bangladesh 6 Tanzania	11 quasi-experimental 8 non-experimental 2 descriptive	Government (8) Private (13) Non-profit (13) Individuals (2)	12 rural 1 urban 1 both 7 not specified	10 women 9 both 2 not specified
CCTs	9	5 Bangladesh, 4 Tanzania	2 experimental 4 quasi-experimental 2 non-experimental 1 descriptive	Government (8) Non-profit (1) Multilateral (3)	3 rural 4 both 2 not specified	1 women 7 both
UCTs	3	1 Bangladesh 2 Tanzania	2 quasi-experimental 1 descriptive	Government (2) Non-profit (2)	3 rural	2 women 1 both
Combination	8	8 Bangladesh 0 Tanzania	1 experimental 6 quasi-experimental 1 descriptive	Government (8) Non-profit (6)	6 rural 2 not specified	5 women 3 both

We categorize the wide variety of methods used by researchers into four types: (i) descriptive evidence, (ii) non-experimental evidence, (iii) quasi-experimental evidence, and (iv) experimental evidence. Figure 1 illustrates the number of studies using each methodology. “Descriptive evidence” indicates that studies use descriptive empirical evidence to point to an association between a given asset and a measure of poverty, but without formally testing the association (e.g., Kessy, 2014; Mahmuda, Baskaran, & Pancholi, 2014). This group of studies includes several that use focus groups, interviews, and observations to examine the effects of financial interventions. Studies coded as “non-experimental” do test for associations between assets and

⁸ Some studies looked at interventions with multiple funding sources.

measures of poverty, but do not test for causality (e.g., Pramanik, 2013; Madhav, Regmi, & Krishna, 2016). Many non-experimental studies (6 of 11) use various forms of regression analysis, from relatively simple linear models to more complex modeling techniques with multiple controls. Studies coded as “quasi-experimental” use a variety of techniques such as instrumental variables (Islam, 2008; Aloyce, Gabagambi, & Hella, 2014), propensity score matching (Chemin, 2008; Ahmed et al., 2009), panel data with fixed effects (Imai & Azam, 2012; Khandker & Samad, 2013a), or other forms of regression analyses (Hofmann et al., 2008; Talukder et al., 2014) to identify factors that are causing movements into and out of poverty. Finally, studies coded as “experimental” use randomly assigned treatment and control groups enabling identification of causal mechanisms of poverty alleviation (Das & Shams, 2011; Walque et al., 2012).

Figure 1. Number of Studies Using Different Methodological Approaches

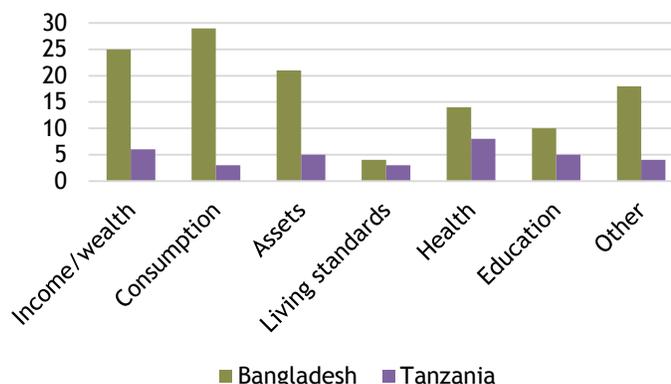


The 56 identified studies report on a wide-variety of poverty-related outcome measures. A previous EPAR report (2015) on outcomes associated with poverty alleviation identified four commonly used categories of poverty measures:

1. *Income/wealth*: Measures of income sources such as wages, remittances received, and money from selling crops or livestock products. Savings are also included as an accumulation of income (Evans, Hausladen, & Kosec, 2014) and studies that report a poverty headcount—a measure based on income relative to a poverty line (Khandker, 2005).
2. *Consumption*: Measures of the use of goods or services, often accounted for by tallying expenditures or counting purchases for food and non-food items. Other examples include whether a household can purchase essential goods like housing and clothing (Islam, 2011), or whether households can consume a minimum food basket (Khandker & Samad, 2013a).
3. *Assets*: Measures of holdings such as land, livestock, or productive tools (Nawaz, 2011).
4. *Multidimensional Poverty*: Studies that include other aspects of poverty including outcomes related to multidimensional poverty, such as education levels, health and nutrition, vulnerability, rates of unemployment, social exclusion, poor housing conditions and inequality (OPHI, 2016). We separately consider studies measuring impacts on living standards, health, and education, while those with less commonly referenced outcomes (e.g., stress levels, child labor, empowerment, and employment level) are in the “other” category.

Figure 2 shows the total number of results reported for each poverty outcome in our review of 56 studies in Bangladesh and Tanzania. Because many studies measure multiple outcomes, the total number exceeds 56. For all poverty-related outcomes, the body of evidence is larger in Bangladesh than in Tanzania. In our discussion of the impacts of financial interventions, we report findings for all outcome categories, as we observe differences in which outcomes are most common in Bangladesh and Tanzania. For example, consumption is the most common outcome category in Bangladesh, but the least common in Tanzania, where health and education are relatively more common.

Figure 2. Number of Studies Using Different Poverty Outcomes



Analysis of Results

For each financial mechanism reviewed in this section, we begin by discussing the mechanism within a global context, including the primary ways that the mechanism is supposed to affect poverty. We follow with presentation and analysis of empirical results from our literature review of studies in Tanzania and Bangladesh.

Remittances

Remittances are personal cash transfers sent by domestic or international migrants back to families or friends that reside in their place of origin (Kendall & Sonnenschein, 2012). Recent estimates of international remittance transfers to developing countries have been valued at \$441 billion (World Bank, 2016a). In many countries, the inflow of remittances is equal to a significant proportion of GDP. For instance, in 2013 international remittances added up to the equivalent of more than 10 percent of GDP in Haiti, Guyana, Honduras, El Salvador, Nicaragua, Jamaica, and Guatemala (Maldonado & Hayem, 2014). Domestic remittances can also contribute to household income - a 2012 survey of 11 Sub-Saharan African countries found that adults were five times more likely to receive domestic remittances than they were to receive international remittances (Kendall & Sonnenschein, 2012).

In theory, considerable cash flows through international remittances into some of the world’s poorest nations—as well as within-country remittances by domestic migrants—could have an impact on poverty and other development indicators. However, the pathway from remittances to poverty alleviation is complex. Remittances are direct private transfers, which means recipients—unless bound by informal social restrictions set by the sender—are generally free to spend remittances in whatever way they choose (in other words, remittances act as an unconditional cash transfer). A recent review of evidence from 50 econometric studies on remittances finds little consensus on the ways that individuals choose to spend remittances, with some studies showing poor households were likely to spend income from remittances on consumption goods while others were more likely to make investments like education or housing (Adams, 2011).

Targets of Remittances

Remittances are a form of private transfer between households; thus, there is no explicit targeting of “poor” households, as is commonly the case with government- or NGO-run financial interventions. Remittances flow based on individual motivations and migration opportunities. In a seminal paper, Lucas & Stark (1985) identify a variety of motivations driving individuals to remit, including pure altruism, a sense of obligation to repay a

family's investment in their human capital, or self-interested reasons such as a desire to invest in homes and assets which remitters may eventually inherit or to which they may eventually return. In addition, those who migrate (and are thus eligible to remit) may be able to do so because of human capital investments made by their family. Economic means may also play a role. Hagen-Zanker (2008) points to migration theories that argue that the poorest households have fewer members who migrate because of the expense that migration entails. In this case, the poorest households would thus have less access to remittances than wealthier households.

But remittances flow to many segments of populations, regardless of income (Itzigsohn, 1995; Fajnzylber & López, 2007). An early analysis of remittance recipients in the Dominican Republic, Guatemala, Haiti, and Jamaica by Itzigsohn (1995) found that in three out of the four countries families with higher education and/or income were more likely to have access to remittances. The exception was the Dominican Republic, where remittance access was evenly spread across economic and social strata. A larger and more recent study of remittance recipients in 11 Latin America and Caribbean countries also had mixed findings on whether remittances tend to flow to the poorest households (Fajnzylber & López, 2007). At the low end, in Peru, only 6% of the households that receive remittances are among the poorest 20% of the population. In Mexico, on the other hand, 60% of remittance-receiving households are in the poorest 20% of the population. The authors also note, however, that in places where many poor households receive remittances, this does not mean that the transfers constitute a large, transformative sum. Across the 11 Latin American countries in their study they estimate that the poorest 60% of the population receives only a quarter of the total value of remittances, while the richest 20% receive 54%.

Relationships Between Remittances and Poverty

Several studies suggest that remittances affect country-level poverty measures. Using 1988-2007 panel data from 20 Asian countries, Vargas-Silva, Jha, & Sugiyarto (2009) estimate that a 10% increase in remittances as a proportion of GDP is associated with a fall in the poverty gap ratio of 0.7-1.4%, indicating a reduction in the depth of poverty among the poor. Other studies of remittances in developing countries have found that the same proportionate increase in remittances is associated with a 1.28-3.5% decline in the poverty headcount ratio, or the number of people below the poverty line (Adams Jr. & Page, 2005; Anyanwu & Erhijakpor, 2008; Imai & Azam, 2012).

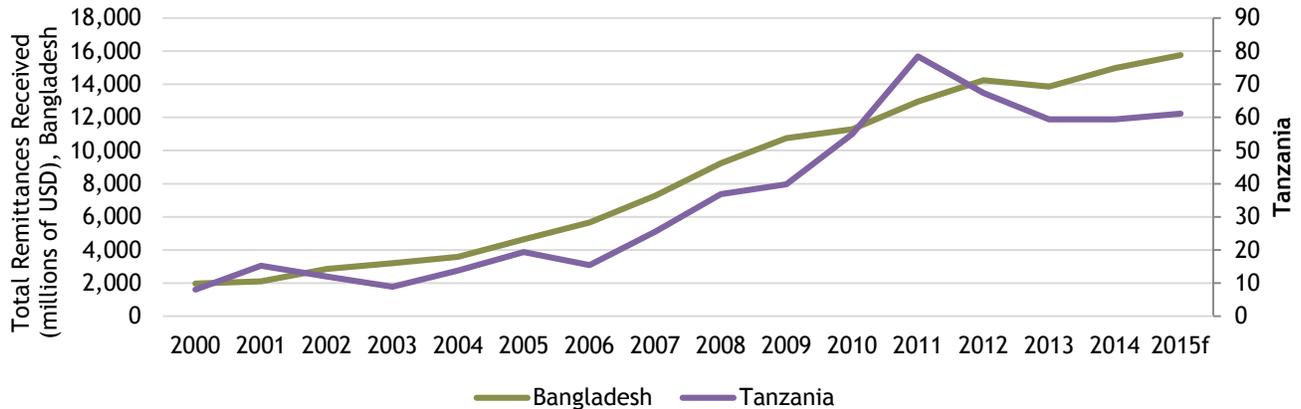
In a review of evidence from 50 studies using household surveys Adams (2011) concludes that there is consensus that remittances have a positive impact on poverty at the household level. In one of the reviewed papers, Yang (2008) demonstrates the causal impact of remittances on several poverty indicators in the Philippines by exploiting an exogenous natural event. When the 1997 Asian Financial Crisis devalued the Philippine peso, the value of remittances sent into the country from abroad immediately increased through the improved exchange rate. Using household surveys from before and after the event, and matching remittance-receiving households with non-remittance households to form comparison groups, Yang demonstrates the effect of "increased" cash transfers. He finds that remittance-receiving families have higher incomes and ownership of durable goods, spend more on education, keep children in school longer, and work more self-employment hours. He does not find that consumption increases.

Combes & Eke (2011) report that remittances also can play an important role in income stabilization. In a panel study of remittances' impact on consumption instability in 89 developing countries between 1975 and 2004, the authors find that by acting as a relatively stable source of income, remittances can "dampen the effect of various sources of consumption instability in developing countries (natural disasters, agricultural shocks, discretionary fiscal policy, systemic financial and banking crises and exchange rate instability)" (p. 1).

Evidence from Bangladesh and Tanzania

In 2014, remittance inflows in Bangladesh totaled \$15,760 million, putting it among the top ten remittance-receiving countries worldwide (World Bank, 2015a). In contrast, remittance inflows in Tanzania totaled just \$61 million and accounted for less than 0.1% of the GDP (compared to 8.6% in Bangladesh) (World Bank, 2015a). *Figure 3* shows remittance trends in the two countries between 2000 and 2014.

Figure 3. Remittance Trends in Bangladesh and Tanzania



Source: World Bank, 2015a

Our search for studies on the impacts of financial interventions on poverty identified ten studies on remittances, with nine in Bangladesh and only one in Tanzania. Six of the studies use household-level data comparing remittance-receiving households to non-receiving households and four use national-level data to examine the relationship between remittances and GDP or poverty rates. The evidence base is primarily quasi-experimental (4) and non-experimental (5) with one descriptive analyses but no experimental evidence. The one Tanzanian study is quasi-experimental, using an instrumental variable in their econometric analysis.

Figure 4. Remittance Association with Poverty Alleviation by Method of Study

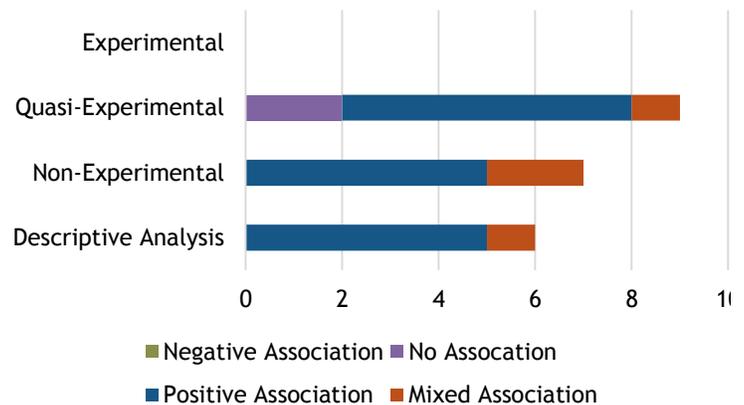


Figure 4 shows the number of results by direction of association, categorized by the study methodology. Across the ten studies, we find evidence of 16 positive associations between remittances and measures of poverty, two neutral or insignificant associations, and four mixed associations. *Table 2* displays the results for each outcome category.

Table 2. Summary of Remittances Results by Outcome Category⁹

Outcome Category	Outcome measures used (some studies consider multiple outcomes)	Negative Association	No Association	Positive Association	Mixed Association
Income/wealth	Savings (2), poverty headcount ratio (1)	-	-	3	-
Consumption	Per capita total consumption (3), per capita food expenditure (2), per capita non-food expenditure (2), household consumption expenditure (1), household non-consumption expenditure (1), food consumption score (1)	-	-	5	1
Assets	Per capita expenditure on multiple household items (pots and pans, jewelry, appliances, etc.) (1), investment in income-generating assets (1)	-	-	1	1
Living Standards	Investment in social security measures, physical living condition (1)	-	-	1	-
Health	Health expenditure (2), food security (1), nutritional intake (1)	-	1	3	-
Education	Education expenditure (1), investment in education (1)	-	1	1	-
Other	GDP (3), unemployment (1), inflation (1)	-	-	2	2
Total # of outcomes measured		0	2	16	4

Three studies look at relationships between measures of income or wealth and remittances, all finding positive associations in the Bangladesh context (Sharma, 2008; Raihan et al., 2009; Sharma et al., 2009). Raihan et al (2009) find that Bangladeshi households receiving international remittances are 5.9% less likely to be poor than households not receiving remittances. Sharma et al. (2008, 2009) survey 500 households in 20 communities categorizing households into migrant or non-migrant households based on whether or not a household member has immigrated domestically or internationally in the past 10 years. While not testing the direct effect of remittances themselves, the authors find that bank-based savings for households with migrants are significantly higher than the savings of households with similar characteristics but no migrants. The same study finds that households with migrants have higher levels of total consumption, food expenditure, and non-food expenditure, but not larger expenditures on other consumption items such as vehicles or jewelry. The authors conclude that households in Bangladesh tend to save a large portion of remittances received.

Of six studies examining the relationship between remittances and measures of consumption in Bangladesh, five find positive associations (Barai, 2012; Madhav et al., 2016; Sharma et al., 2008; Sharma et al., 2009; Hatemi-J, 2014) and one finds mixed associations (Raihan et al., 2009). Using cross-section regressions with various expenditure categories as dependent variables, Raihan et al. (2009) find that remittance levels are positively associated with food and housing-related expenditures. However, they also find that remittances are not associated with expenditures on education, health, or durable goods, which they conclude may limit the ability of remittances to support households' escape from poverty in the long-term. A final study using consumption-based poverty metrics studies uses annual time series data on poverty reduction and remittances from the World Bank from 1976 to 2010 for Bangladesh but finds mixed results. Hatemi-J et al. (2014) find a two-way causal relationship between private per capita consumption (used as a proxy for poverty reduction) and remittances, but they conclude that poverty reduction has a stronger causal impact on remittances than vice versa.

⁹ Many studies report on multiple outcome measures, so the total number of associations exceeds the total number of studies reviewed.

Three studies look at the relationship between remittances and economic growth (Cooray, 2012; Siddique et al., 2012; Uddin, et al., 2013). Siddique et al. (2012) find a positive one-way causal relationship between remittances and economic growth in Bangladesh, while finding two-way causality in Sri Lanka but no causal relationship in India, where remittances make up just a small portion of the country's GDP. Cooray (2012) finds that in South Asia overall, a 1% increase in migrant remittances is associated with a 0.15% increase in economic growth. Uddin et al. (2013) find that in the long run, inflows of remittances are correlated with increased GDP growth, but in the short run, decreases in income correlate with an increase in remittance flows as remittances act as a buffer to absorb income shocks.

Barai (2012) estimates that 66% of remittance income is used for consumption and 34% for investment, positing that enhanced income from remittances loosens recipients' financial constraints, allowing them to spend more on healthcare and education among other things. Two studies, one in Tanzania (Isoto, 2015) and one in Bangladesh (Madhav & Krishna, 2016) report positive associations between remittances and health, while one other Bangladesh study (Sharma et al., 2009) finds no significant association. Madhav (2016) finds a positive association between remittance amounts received and improved food security for households in Bangladesh, concluding that an additional annual remittance amount of 10,000 BDT is associated with a 0.1% increase in the probability of being in the "little to no hunger" category for households in the "severe hunger" category, and a 2.1% increase for households in the "moderate hunger" category. The authors argue for remittances' long-term potential to alleviate food insecurity through investments in education and improved agriculture technology.

The sole Tanzanian study on the impacts of remittances on poverty identified through this review considers the possible association between remittances and nutritional intake (Isoto, 2015). While the study finds no significant difference in total calories and carbohydrates consumed by remittance and non-remittance households, remittance households are found to consume more protein, vitamins, and calcium than households that did not receive remittances.

Government Subsidies

Government subsidies are defined as "assistance that (i) allows consumers to purchase goods and services at prices lower than those offered by a perfectly competitive private sector, or (ii) raises producers' incomes beyond those that would be earned without this intervention" (Schwartz & Clements, p. 120).

Subsidies alter demand patterns in order to induce optimal consumption levels of goods like food, education, fertilizer, energy, and health services (Alderman, 2002). As opposed to a direct cash transfer, subsidies are a targeted effort to shift consumption patterns toward a definite outcome (e.g., improved nutrition or increased schooling), while theoretically also freeing income for spending on other goods (*Ibid.*).

Schwartz & Clement (2007) list several subsidies which are relevant for purposes of providing direct social assistance to low-income populations, including price subsidies (provision of goods and services below-market prices), tax subsidies (e.g., exemptions, credits), and credit subsidies (e.g., low-interest government loans).

Targets of Government Subsidies

Three types of targeting mechanisms are commonly used to identify beneficiaries of subsidy programs: individual targeting, geographic or indicator targeting, and self-targeting (Subarro et al., 1995). *Individual targeting* occurs on the basis of distinct cut-off points. For instance, only individuals under a designated income level are eligible. *Geographic or indicator targeting* seeks to avoid the high costs of individual identification by designating entire neighborhoods, villages, or other areas as eligible for a subsidy program. Finally, *self-targeting* occurs when subsidies are used to lower the price of "inferior" goods, or market items that low-income individuals are more likely to purchase than well-off individuals (*Ibid.*).

Subsidy programs commonly rely on government- or privately-run distribution networks to deliver subsidy mechanisms (e.g., vouchers or coupons) or commodities (e.g., food) (Alderman, 2002). The supply chain for the Targeted Public Distribution System (TPDS) in India, for instance, is ordered as followed: 1) the central government sells grain purchased from farmers to the state government; 2) the state government employs government or private agents to disperse grain to government-licensed shops; 3) eligible program beneficiaries buy the grain at a subsidized price (Nagavarapu & Sekhri, 2011).

Distribution networks are constructed with the explicit goal of reaching underserved populations, hence it is often assumed that they have an advantage in reaching low-income target populations over other types of interventions or delivery mechanisms (Mane, 2006). In practice, India's Public Distribution System and many other programs have struggled to reach intended beneficiaries. Coady, Grosh, & Hoddinott (2004) examine 122 government anti-poverty interventions in 48 countries, creating a common performance indicator to measure the extent to which each reaches the poor. They calculate a "targeting performance" ratio of the proportion of benefits received by the bottom 40% of the income distribution to the proportion of benefits they would have received if they distributed evenly throughout the population. They explain, "if people or households in the bottom 40% of the income distribution receive 60% of the benefits, the indicator of performance is calculated as $60/40=1.5$, meaning that targeting has resulted in the target group (here, people in the bottom two quintiles) receiving 50% more than they would have received under a universal intervention" (p. 69-70).

Table 3 summarizes Coady, Grosh, & Hoddinott's (2004) findings on the targeting performance of government subsidy programs. As shown by the "targeting performance" column, about 40% of the 33 programs in the table perform no better than an equal allocation of benefits would (i.e., have a targeting performance ratio at or below 1). Many of the programs with low targeting performance ratios are universal subsidies, which have no targeting mechanism. Others, however, like India's TPDS subsidized wheat, are geographically targeted to poorer regions. In addition, many programs with targeting performance greater than 1 still transfer large proportions of the benefits to better-off households. The indicator for Sri Lanka's food stamp program is 1.25, for instance, meaning that 50% of the program's benefits go to the poorest 40% of the population, but the remaining 50% of the benefits go to the richest 60% of households.

Table 3. Targeting Performance of Government Subsidy Programs

Country	Program	Targeting Performance	Share of transfers going to	
			Poorest 20%	Poorest 40%
Indonesia	Health subsidy	1.68	33.6	.
India	Rural Andhra Pradesh TPDS rice	1.63	35.8	65.2
Mexico	LICONSA milk subsidy	1.6	.	64
India	PDS-subsidized Jowar	1.58	.	63
Colombia	Housing subsidy	1.5	35	60
Jamaica	Food stamps -MCH	1.45	29	58
Indonesia	JPS education subsidy	1.44	28.8	.
Zambia	Housing subsidy	1.38	28	54
India	PDS-subsidized rice	1.33	.	53
Indonesia	JPS-OPK rice subsidy	1.32	26.4	.
Jamaica	Food stamps program	1.3	31	52
India	TPDS-subsidized oil	1.25	.	50
Sri Lanka	Food Stamps	1.25	28	50
South Africa	Maize VAT exemption	1.23	.	.
India	TPDS-subsidized kerosene	1.2	.	48
Morocco	Food subsidies, flour	1.18	23	47
India	TPDS-subsidized sugar	1.13	.	45
India	Urban Andhra Pradesh PDS Rice	1.09	21.5	43.6
India	Urban Maharashtra State PDS	1.04	17.8	41.7
Tunisia	Universal food subsidies	1.03	21	41
Egypt	Universal flour subsidy	1	15	40
India	TPDS-subsidized wheat	1	.	40
Egypt	Universal bread subsidy	0.98	21	39
Egypt	Universal sugar & oil subsidies	0.95	18	38
Tunisia	Food subsidies	0.93	17	37
Morocco	Food subsidies, sugar	0.85	15	34
Colombia	SSB utility subsidies	0.82	15	33
South Africa	Beans VAT exemption	0.79	.	.
Algeria	Universal food subsidies	0.7	12	28
South Africa	Oil VAT exemption	0.68	.	.
Morocco	Food subsidies, oil	0.6	11	24
Yemen	Universal food subsidies	0.45	7	18
South Africa	Milk VAT exemption	0.28	.	.

Source: Adapted from Coady, Grosh, & Hoddinott (2004)

In a review of input subsidy programs (ISPs) in Africa, Jayne & Rashid (2013) find that considerations like promoting economic efficiency, ensuring the development of the private sector, and political favoritism often influence program design to the detriment of the poor. Results from four studies in their review indicate that the beneficiaries of ISPs in Kenya, Malawi, Tanzania, and Zambia were all generally more well-off than non-beneficiaries, suggesting that these subsidy programs often miss the low-income populations that they declare as their target beneficiaries.

Relationships Between Government Subsidies and Poverty

A seminal paper by Schwartz & Clements (1999) summarizes the household- and economy-wide effects of subsidy programs as follows: “On a domestic level, subsidies affect resource allocation decisions, income distribution, expenditure productivity, and, by reducing the flexibility of the economy, they may also affect structural and sectoral adjustment” (p. 119). A recent study of India’s Targeted Public Distribution System demonstrates how subsidies can affect allocation decisions (Kaushal & Muchomba, 2015). The authors examine a food subsidy that allows individuals to purchase grain or rice at a 30% discount, exploiting a natural experiment - where the government both raised the amount of the subsidy and expanded the program - to estimate the impacts of the subsidy program on household decision-making. They conclude that the increased

income from the subsidy increased the beneficiaries' consumption of the subsidized grains, but that beneficiaries also used the additional income to shift to consuming more expensive calories instead of consuming a higher quantity of calories. As a result, they conclude, the subsidy had no effect on total calorie, protein or fat intake in poor households. They also observed an increase in spending on other non-food goods, leading the authors to conclude that "the poor feel more acutely about the other deprivations resulting from poverty than low nutrition and that they try to reduce those deprivations with additional income from price subsidy program" (p.37).

Evidence from Bangladesh and Tanzania

Five studies in our review examine government subsidies. Two studies (Talukder et al., 2014; Nguyen et al., 2012) are based in Bangladesh and focus on the Demand-Side Financing Program, a voucher program to encourage maternal health services. The remaining three studies (Hepelwa, Selejio, & Mduma, 2013; Aloyce, Gabagambi, & Hella, 2014; Gine et al., 2015) are of Tanzania's National Agricultural Input Voucher Scheme.

Table 4 breaks down the findings in Bangladesh and Tanzania by types of poverty-related outcome measures. Across all outcome categories, we find five instances of evidence where government subsidies are associated with poverty reduction, two instances of neutral or insignificant effects, and one mixed.

Table 4. Summary of Government Subsidy Results by Outcome Category

Outcome Category	Outcome measure(s) used	Negative association	No association	Positive association	Mixed association
Income	Agricultural output sold at market	-	-	-	1
Consumption	Monthly household expenditures (on food, transportation, non-food household items, education and medical expenses), expenditure on fertilizer and labor	-	-	2	-
Assets		-	-	-	-
Living Standards		-	-	-	-
Health	Food security (nutrition): number of meals per day, dietary diversity, health visits (2)	-	1	3	-
Education	Proportion of children ages 7-18 enrolled in school	-	1	-	-
Other	Crop productivity (yield per acre, quantity sold)	-	-	2	1
Total # of outcomes measured		0	2	5	2

In Bangladesh the Demand-Side Financing Program provides vouchers to pregnant women that can be redeemed for free access to ante-natal and post-natal care check-ups, delivery (at home or at a health facility), emergency care for pregnancy complications, and a subsidy for emergency transportation. If the voucher recipient follows through with delivery at a health facility, she also receives 2,000 Taka (about US \$30) (Nguyen et al., 2012). The program seeks to ensure women stay healthy during pregnancy and delivery by accessing professional services, and also to reduce the amount of out-of-pocket expenditure required to access such care. Many researchers have identified large health expenditures due to illness or other medical issues as a major driver of falling into poverty (Krishna et al., 2004; Limwattananon, Tangcharoensathien, & Prakongsai, 2007; Wagstaff & Doorslaer, 2003).

Both studies of subsidies' associations with poverty alleviation in Bangladesh use quasi-experimental techniques to establish the impact of the program. Positive health impacts are reported in Table 4. Both studies find that, in general, the program increases uptake of health services in comparison to control groups. In addition, out-

of-pocket expenditures are reduced significantly through the voucher. For instance, Nguyen et al. (2011) find that payments of those who receive vouchers are 34 percent lower than control groups.

In the case of Tanzania's National Agricultural Input Voucher Scheme (NAIVS), vouchers enable receiving households to purchase agricultural inputs at 50 percent of cost. Tanzania's government launched a pilot version of NAIVS in 2008 in an effort to increase the productivity of smallholder maize and paddy farmers. The program was then scaled up, jointly funded by the government and the World Bank. By 2011, more than two million farm households were beneficiaries of the program (United Republic of Tanzania, 2012).

NAIVS targets farm households that cultivate less than one hectare of maize or rice, and that have the ability to pay for the 50 percent of the input subsidies not covered by the voucher. Among those who meet this initial criteria, female-headed households and farmers displaying low levels of input use over the previous five years are given preference (World Bank, 2014). Some critics point out that these criteria are inconsistent, noting that "some criteria focus on the most vulnerable smallholders (less than one [hectare] of land and female-headed), whereas others effectively exclude the poorest households (ability to cover co-financing)" (Baltzer & Hansen, 2012, p. 25).

Vouchers are distributed through committees that are established at the regional, district, and village levels, and the village committees select voucher recipients based on the above listed criteria for approval by a separate village assembly (*Ibid.*). Households receive three vouchers each year for three years. One voucher is for purchasing either 10 kilograms of a hybrid or improved maize variety or 15 kg of paddy seed. The remaining vouchers are for purchasing fertilizer: one for a "top dress" fertilizer, and one for purchasing one or two 50-kilogram bags of two other kinds of fertilizer. The vouchers are exchanged with trained agro-dealers, who can then redeem the value of vouchers at local banks (World Bank, 2014).

NAIVS' theory of change for poverty alleviation is that vouchers incentivize the use of agricultural inputs, which in turn increase crop productivity (cite). Farmers either consume part of these higher yields as food, translate them into increased income through sale at market, or do both. Higher income may lead to more expenditure on food, health, education, or other commodities and services, which may contribute to poverty alleviation.

Of the three empirical studies of NAIVS's effects on poverty, one (Hepelwa, Selejio, & Mduma, 2013) uses regression analysis to explore general correlations between recipients who receive the program and poverty outcomes. The two remaining studies provide stronger causal evidence of the subsidy program's impacts on poverty, one using a quasi-experimental instrumental variable technique (Aloyce, Gabagambi, & Hella, 2014) and the other a randomized controlled trial (Gine et al., 2015). All three studies provide at least some evidence that NAIVS fulfills the first part of theory of change by increasing yields. Hepelwa, Selejio & Mduma (2013) show that vouchers are associated with an increase in harvest size and Aloyce, Gabagami, & Hella (2014) report the same result. Gine et al. (2015) also show that productivity increases, but their findings are more nuanced.

The Gine et al. (2015) study shows that impacts of the voucher program may be biased by the village committees selecting beneficiaries, indicating that village community councils are potentially acting with political, social, or other motives in mind. Indeed, during the pilot version of the program, one study found a high level of 'elite capture', as members of the committee and village elites receive 61 percent of all distributed vouchers (Pan & Christiaensen, 2011).

Noting that the goal of their intervention is to understand the causal impact of the program on its *intended* beneficiaries (the poor, vulnerable populations, women), Gine et al. (2015) investigate the impact of several alternative targeting mechanisms that help ensure that vouchers are randomly allocated among eligible beneficiaries. In place of village community councils, the intervention either distributes vouchers

democratically by allowing villagers to ratify the final list in a public assembly, through a lottery, or by a combination of both methods used together in the same village. This approach creates four kinds of villages in the intervention: one receiving a public meeting and lottery); one receiving only a public meeting); one receiving a lottery; one with no intervention.

The authors find that the no intervention group, receiving vouchers through the normal channel (village community councils), has the highest yields. Of the three treatment groups, only the one receiving a public meeting shows higher yields than non-voucher beneficiaries. The authors further find that NAIVS increases output sold only for the villages receiving a public meeting and for the villages with no intervention. The authors find no overall impact of the subsidy program on education (school enrollment of children age 7-18). In addition, aligning with evidence of small productivity gains, they also do not find much evidence that NAIVS increases food security or dietary diversity, with no significant relationship between receipt of the voucher and a reduced probability of being food insecure for any groups.

Conducting separate calculations to better understand if there are gender differences, the authors find that, on average, women from villages that received one of the three interventions outsell women in the no-intervention group. The authors posit that this indicates that women may benefit from enhanced targeting of the subsidies.

Overall, findings show that the “normal” (no-intervention) group is associated with some gains, but it cannot be determined that the gains accrue to poor populations or women that the program intends to benefit. The authors conclude that they have identified a “tension between efficiency and equity” (p. 46). While one can target low-income households out of equity concerns and in an effort to reduce poverty, these households do not necessarily have the highest marginal returns to fertilizer use (Pan & Christiaensen, 2011).

Credit

People with low levels of assets and wealth earn low returns, and have little investible surplus from those returns to invest in future earning opportunities. Access to credit gives these households a lump sum of money that can theoretically be used to invest in higher-return assets, production technologies, or human capital that can help them to move to higher income earning trajectories (Carter & Barret, 2005). In addition, credit may help the poor maintain consumption during times of economic emergency (e.g., high medical bills to deal with health shocks) or diversify assets in order to minimize risk (Morduch, 1999).

Because the poor often lack the collateral needed to access loans from formal financial institutions, poor households often rely on family and friends, local savings groups, or moneylenders known for charging relatively high interest rates (Debnath, 2014; Banerjee & Duflo, 2007). Microfinance institutions (MFIs) attempts to fill the gap in financial services for the poor by offering small loans to poor people, often substituting material collateral for “social collateral” - meaning that customers must first form groups, and if any group member defaults, the entire group is denied future loans (Develtere & Huybrechts, 2005; Nawaz, 2010; Debnath, 2014). While MFIs primarily offer credit, other financial services offered include savings accounts, insurance, and other financial products. Some are led by NGOs, others by private banks, and some by government institutions (Zeller & Johannsen, 2006). Adams & Vogle (2012) compare the word “loan” to “fruit”, emphasizing that each is an umbrella term that encompasses a wide variety of more specific words that live underneath. Loans have different sizes, interest rates, repayment plans, strings (e.g., compulsory savings or mandated training), and types of lenders (e.g., formal and informal). *Table 5* highlights the diverse characteristics of selected microfinance credit programs as documented in an early study by Morduch (1999).

Table 5. Characteristics of Selected Microfinance Programs in 1999

	Grameen Bank, Bangladesh	Banco-Socl, Bolivia	Bank Rakyat Indonesia <i>Unit Desa</i>	Badan Kredit Desa, Indonesia	FINCA Village Banks, Global
Average loan balance	\$134	\$909	\$1007	\$71	\$191
Typical loan term	1 year	4-12 months	3-24 months	3 months	4 months
Collateral required	No	No	Yes	No	no
Voluntary savings emphasized	No	Yes	Yes	No	Yes
Regular repayment schedules	Weekly	Flexible	Flexible	Flexible	Weekly
Nominal interest rate on loans (per year)	20%	47.5-50.5%	32-43%	55%	36-48%

Source: Morduch, 1999, p. 1574

Targets of Credit

Credit institutions such as banks and MFIs may have specific target populations depending on mission or profit motives. Increasing the proportion of the poor within an institution’s client base increases costs of lending activities compared to allocating its resources efficiently across broader income strata (Hermes et al., 2011). Focusing solely on the poor may be untenable for private lenders given profit and financial sustainability motives. Even NGO- and government-supported MFIs with the goal of reaching the poor must consider a mix of clients that allows them to operate within bounds set by donor—or other—financial limitations (*Ibid.*).

Using data from nationally representative surveys, Zeller & Johannssen (2007) find that 51.7% of MFI clients in Peru and 35.1% in Bangladesh are below the national poverty line. They also report that 9.1% of clients live below the \$1.08 (PPP) international poverty line in Peru, compared to 27.8% in Bangladesh, highlighting the difference between national and international poverty lines, and supporting a common critique that microfinance typically does not reach the poorest households (Delvetere & Huybrechts, 2005; Hashemi, 2001; Nawaz, 2010; Raza, 2012).

Zeller & Johannssen (2007) also find that clients are from diverse places. Within the sample, rural households make up 78.4% of borrowers in Bangladesh compared to only 29% in Peru. Some loan products specifically target farmers by including features such as repayment schedules synchronized with farm cash flows that are dependent on seasonal harvests and other activities (*Ibid.*). For smallholder farmers, loans may also finance non-farm activities like trade or allow for the development of new agricultural enterprises (GIZ, 2011). To facilitate entrepreneurship, some microfinance programs include training components to foster business management skills. However, the structure of MFI loans typically have few—if any—restrictions on use. MFIs also sometimes require loan repayment weekly, which puts practical limits on the kind of investments that entrepreneurs can make for their business (Banerjee & Duflo, 2011).

A 2008 World Bank report emphasizes the importance of credit for poor women. The World Bank reports that 1) cultural and legal constraints mean women often have lower access to credit than men; 2) female borrowers are less risky as they make more conservative investments and have lower moral hazard risk; 3) women may be more likely to invest credit in children’s health and education planting seeds for credit to catalyze long-term gain; and 4) placing money in women’s hands may empower them socially and increase their intra-household

decision-making power. Among the five institutions that Morduch (1999) surveys, the percent of female clients ranges from 23% in Bank Rakya Indonesia’s program to 95% in Grameen Bank.

Relationships Between Credit and Poverty

Basic characteristics of credit make assessing its impact on poverty indicators a challenge (Adams & Vogel, 2007). Loans are fungible; unless they come with restrictions they can be used for any good, service, or investment imaginable, meaning that borrowers have a variety of choices and researchers have many possible pathways to track after a loan has been dispersed. In addition, loan benefits often accrue over time—especially if they are invested in business, human capital or other long-term reserves—and selection processes by lenders may self-select a certain type of borrower making impact challenging to establish without randomized control trials or complicated econometric techniques (*Ibid.*).

Despite these challenges, several household and community-level studies evaluate the association between credit and alleviating poverty. Chliova, Brinckmann & Rosenbusch (2015) conduct a meta-analysis of 97 studies on microcredit. They catalog the effect of credit reported by each study on business development, income, health, education, women’s empowerment, and social capital. Using statistical techniques to compensate for different methods of reporting and measurement across the studies, they find that the effects of microcredit are small but statistically significant across each of the aforementioned categories. The strongest association is with women’s empowerment, which encompasses women’s ability to negotiate gender barriers, control resources, and gain confidence. A separate meta-analysis of 25 studies by Vaessen et al. (2013), however, finds no consensus that microcredit improves women’s ability to control resources, which the authors conclude makes it “very unlikely that microcredit has a meaningful and substantial impact on empowerment processes in a broader sense” (p. 82).

Six recent randomized evaluations of six different microcredit programs (in Bosnia, Ethiopia, India, Mexico, Morocco, and Mongolia) provided comparable experimental evidence across impact indicators (Banerjee, Karlan & Zinman, 2015). The conclusions, detailed in *Appendix C*, show that microcredit has small, measurable effects across several poverty indicators.

Evidence from Bangladesh and Tanzania

Bangladesh is famous as the birthplace of the Grameen Bank, a microfinance organization established in 1976 by Muhammad Yunus (Debnath, 2014). Reports touting the program’s initial success spawned hundreds of similar organizations; by 2008, there were nearly 1,000 MFIs operating in over 40,000 villages (Haque & Yamao, 2008). Grameen Bank has the largest number of active borrowers, with over 6.7 million as of 2013, followed by Proshikha Association for Social Advancement (ASA), with around 5.4 million and the Bangladesh Rural Advancement Committee (BRAC) with around 4.6 million active borrowers in 2014 (MIX, 2016).

Many Tanzanian programs have adopted the Grameen model, which is characterized by 1) small loan sizes, typically between \$100 and \$200; 2) a group-based approach, using “social collateral” to ensure loan repayment; 3) intensive monitoring by loan providers; and 4) weekly attendance at group meetings (Debnath, 2014). In Tanzania, Savings and Credits Cooperatives (SACCOS) prevail in rural areas where access to credit through formal financial services is limited (Magali, 2013). In Tanzania, the largest MFIs in terms

Table 6: Credit Data from Bangladesh and Tanzania

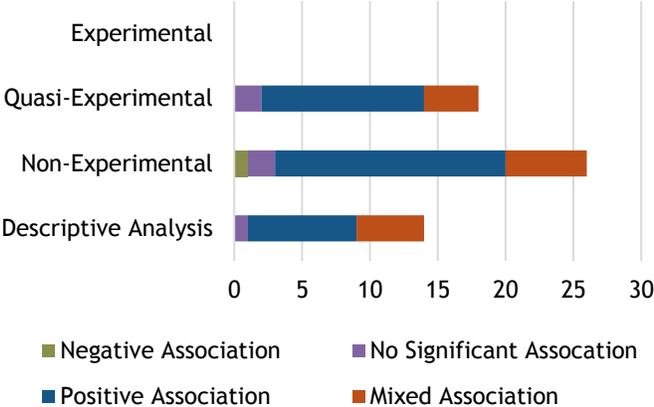
	Bangladesh	Tanzania
Total Deposits (USD)	\$3,340,431,739	\$1,989,530,637
Number of depositors	19,097,922	729,295
Number of active borrowers	16,085,706	317,713
Percent of borrowers that are female	94%	54%

Source: Microfinance Information Exchange, Inc. (MIX), 2016

of number of active borrowers are BRAC and PRIDE, with around 104,000 borrowers each in 2013 and 2012, respectively (MIX, 2016). *Table 6* displays aggregate deposit amounts and numbers of depositors and active borrowers from MFIs in Bangladesh and Tanzania.¹⁰ While women comprise 94% of MFI borrowers in Bangladesh, they make up just over half in Tanzania (MIX, 2016).

We reviewed 21 studies of credit interventions or microfinance programs through which credit is offered, 15 in Bangladesh and 6 in Tanzania. Our evidence base contains 11 quasi-experimental analyses (9 Bangladesh, 2 Tanzania), 8 non-experimental analyses (4 Bangladesh, 4 Tanzania), and 2 descriptive analyses (both in Bangladesh). Twelve studies examine the effects of multiple MFIs without looking at specific interventions. Seven of those studies use the same set of panel data collected by the Bangladesh Institute of Development Studies (Khandker, 2005; Islam, 2008; Islam, 2011; Imai & Azam, 2012; Khandker & Samad, 2013a; Khandker & Samad, 2013b; Khandker & Samad, 2014). *Figure 5* displays the number of findings and directions of association for each study method used.¹¹

Figure 5. Credit Program Association with Poverty Alleviation by Method of Study



We find differing associations and mixed results between specific outcomes, population groups, over time, and between loan types. This range is consistent with past global reviews of microfinance interventions (Chlivia, Brinckmann & Rosenbusch, 2015; Vaessen et al., 2013). The 39 findings of positive associations between credit interventions and poverty-related outcomes are split relatively evenly across outcome categories, with seven positive associations with income measures, eight with consumption measures, six with measures of assets, and 16 among living standards, health, education, and other poverty-related measures (*Table 7*). Nine studies¹² report a total of 21 positive associations between credit interventions and outcomes related to income/wealth, consumption, and assets. Eight studies¹³ report 12 mixed associations with measures related to income/wealth, consumption, or assets and four studies¹⁴ find no significant association with at least one measure of poverty.

¹⁰ To calculate total deposit amounts and number of depositors and active borrowers for Bangladesh and Tanzania, we aggregated data available for individual MFIs from the Microfinance Information Exchange (MIX). The dates for which most recent data are available range from 2011 to 2014 depending on the MFI. The list of MFIs included in the MIX data may not be comprehensive so these numbers should be considered approximate.

¹¹ As some studies use multiple methods and/or examine multiple outcome areas, the total number of studies exceeds 21.

¹² Khandker & Samad, 2013a; Khandker, 2005; Khandker & Samad, 2013b; Pramanik, 2013; Imai & Azam, 2012; Nawaz, 2011; Chemin, 2008; Rahman & Momen, 2009

¹³ Imai & Azam, 2012; Nawaz, 2011; Khandker & Samad, 2014; Khandker et al, 2010; Haque & Yamao, 2008; Islam, 2008; Salia, 2014; Islam, 2011. No significant impact:

¹⁴ Debnath & Mahmud, 2014; Mapesa, 2015; Ssendi & Anderson, 2009; Chemin, 2008

Table 7. Summary of Credit Results by Outcome Category¹⁵

Outcome Category	Outcome measures used	Negative association	No association	Positive association	Mixed association
Income/wealth	Household income (5), poverty headcount/rate (5), per capita income (2), per capita farm income (3), per capita non-farm income (1), self-employment income/profits (2), savings (1), business capital (1), log of per capita income (2), objective & subjective poverty line (1)	1	2	7	5
Consumption	Expenditure (3), food expenditure (3), non-food expenditure (3), per capita expenditure (1), log of per capita expenditure (1), log of household /per capita consumption expenditure (2), food consumption (1),	-	-	8	3
Assets	Non-land (4), house (3), productive assets (3), assets - any type (1), household net worth (1), livestock (1), land (1), purchasing assets (1), asset index (1), consumption assets (1)	-	2	6	4
Living Standards	Sanitation (1), responses to social well-being indicators (1)	-	-	1	1
Health	Starvation incidence (1), BMI of female member (1), diet/nutrition (1), ability to pay for health services (1), children's health (1)	-	1	3	1
Education	Enrollment (3), literacy (1), attendance (1), ability to pay for school (1)	-	-	6	-
Other	Employment (2), hours worked (1), labor supply (1), overall change in livelihoods (1), agricultural productivity (1), women's empowerment (1)	-	-	6	1
Total		1	5	39	15

Magali (2013), studying participants of Savings and Credit Cooperative Societies (SACCOs) in Tanzania, finds that participants are more likely to increase income, improve business capital, and buy more assets after receiving a loan. Pramanik (2013), performing an econometric analysis using primary data consisting of clients and non-clients of Rural Development Academy (RDA), a government-run credit program in Bangladesh, finds that RDA clients' incomes, on average, are 27% higher than non-clients'. Savings are also higher among clients, which the author proposes is due to mandatory saving requirements imposed by the program. The same study also measures significantly higher consumption levels and asset values for clients. The author does not test whether the RDA credit program caused the outcomes, so the positive associations could be due to some unobservable characteristics of clients, such as a greater proclivity to save or invest which might influence their use of credit.

To address the issue of attributing causality, Khandker (2005) uses a quasi-experimental design, examining panel data with fixed effects on villages with access to three MFIs (BRAC, Grameen Bank, and BRDB) and a random selection of villages with no MFIs. He finds that over seven years, poverty rates decline by over 20 percentage points in households that participated in credit programs - or about 3 percentage points per year. Taking into account pre-borrowing consumption levels of both participants and non-participants, the author determines that more than half of the 3-percentage point drop in poverty is due to their participation in microfinance programs.

¹⁵ Many studies use multiple outcome measures so the total number of associations exceeds the total number of studies reviewed.

Many studies reporting mixed results find differential associations between credit and outcome measures among different populations (*Box 1*), such as between poverty levels (Islam, 2008; Nawaz, 2011; Haque & Yamao, 2008) or genders (Khandker & Samad, 2014; Islam, 2008). Khandker & Samad (2014), for example, find that for Bangladeshi women, past loans are associated with increases in both per capita income and expenditure, but current loans are not. For men, only past per capita income is affected. The authors state, “The effect of past credit may be lingering, diminishing or nonexistent depending on the outcome” (p.20).

Box 1. Differential Effects of Credit by Gender and Poverty Levels

Microfinance programs in Bangladesh typically target poor, rural women (Khandker & Samad, 2013b) and those with less than a half-acre of land (Islam, 2011). Goetz & Gupta (1996) find, however, that women’s loans are often controlled by men. Of the 21 articles reviewed, nine examine differential effects of credit in Bangladesh: five compare differential gender effects and four compare different poverty levels, measured by income or land ownership.

Differential effects on women and men:

- Islam (2008) finds a higher impact on consumption for men than for women, but possibly because men tend to borrow larger amounts. He notes that the small sample size for men may bias results.
- According to Khandker & Samad (2014), past loans increase both per capita income and expenditure for women, but current loans have no impact. For men, past loans increased income but not expenditure.
- Khandker (2005) finds that female borrowing has a significant and positive effect on per capita consumption, while male borrowing has no significant effect.
- Khandker & Samad (2013a, 2013b) find that microcredit helps increase income, consumption, and assets for borrowers, slightly more for women than men. For example, it increases per-capita total income by 1.2% for male participants and 3.9% for female participants.

Differential effects on poverty levels:

- Islam (2008) finds a positive impact of credit on consumption for those owning less than two hectares of land. For women, the effects increase as the amount of land decreases, indicating stronger effects for more poor households.
- Qualitative results from Nawaz (2011) show that extremely impoverished households lack the human and capital resources needed to fully utilize their loan for income generating activities.
- Haque & Yamao (2008) interview 300 female MFI members and through descriptive analysis find that small portion of vulnerable non-poor members increase their income levels by engaging in income-generating activities financed by microloans, but overall, the increase is negligible. The authors report that the bottom 8% of extremely poor borrowers spent a major portion of borrowed money paying moneylenders for previous loans and on consumption.
- Rahman & Momen (2009) find positive and significant correlations between credit and income for high-income borrowers, positive, but slightly less significant for middle-income borrowers, and insignificant for low-income borrowers.
- Khandker (2005) finds that participation in microfinance credit programs has a higher impact on extreme poverty than on moderate poverty, reducing extreme poverty by 1.3 percentage points per year and moderate poverty by 1 percentage point per year.

Some authors find that the effects of credit vary over time (Khandker & Samad, 2014; Islam, 2011; Chowdhury et al., 2005) or that only certain types of loans are effective (Imai & Azam, 2012). In their study of 3,000 households in Bangladesh, Imai & Azam (2012), for example, find an overall positive association with household per capita income. Upon disaggregating their results, however, they find a positive association for productive loans but a negative association for non-productive (consumption) loans. Time variant effects can differ depending on the outcome measured. Islam (2011), for example, uses a quasi-experimental model with four

rounds of panel survey data spanning 1997 and 2005 tracking clients of 13 different Bangladeshi MFIs. He finds consistently positive impacts on self-employment income, measuring a long-term gain of 15.1% for self-employment income and 6.5% for other income, and smaller but still significant income increases in the short- and medium-term. For expenditure, on the other hand, he finds positive impacts on food and non-food consumption in the short and long term, but negative impacts in the medium-term.

Critics of microfinance point to potential negative effects of loans on borrowers. Ssendi & Anderson (2009), studying the SELF program in Tanzania which includes capacity building for loan recipients, find that entrepreneurs who received SELF loans made lower profits than those who did not, and that recipients maintained similar asset levels to non-recipients. Debnath & Mahmud's 2014 study of 1,000 Grameen Bank borrowers finds no significant association with increased household income. They contend that lack of rural infrastructure, unemployment, inadequate training facilities, and small amounts of funds for pursuing income generating activities are reasons for the failure of credit to increase household income for the poor.

Several studies measure multi-dimensional aspects of poverty. Six studies¹⁶ report positive associations between credit and measures of education outcomes, though two studies from Tanzania simply report increased spending on schooling but do not measure long-term outcomes (Magali, 2013; Salia, 2014). Khandker & Samad (2013a, 2013b) find that in Bangladesh, girls' school attendance increases by 6.6 percentage points due to women's participation in microcredit programs, and slightly less with men's participation. Pramanik's 2013 study finds that Bangladeshi RDA credit participants have higher literacy levels than non-participants.

Five studies examine health outcomes, mostly finding mixed results. Three report positive associations with credit, one reports mixed associations, and one reports no significant association.¹⁷ Two Tanzanian studies (Bagali, 2013 and Salia, 2014) report that borrowers use money to finance health services - which should result in improved health - but do not measure any long-term associations. Khandker, Khalily, & Samad (2010) study the effects of Program Initiatives for Monga Eradication (PRIME), a microcredit program in Bangladesh that provides production and consumption loans to individuals facing seasonal poverty during the pre-harvest season known as Monga. The loans, which have a flexible repayment schedule, lower interest rate, and none of the savings or weekly meeting attendance requirements demanded by many MFIs, also offer services to support income-generating activities and other training. While the authors do not find a significant impact on per capita income, they do find that the program reduces the incidence of year-round starvation by 3.4 percentage points. Similarly, Imai & Azam (2012), studying the effects of 13 MFIs in Bangladesh, find that non-productive loans show a positive and significant effect on women's BMI as a result of increased food consumption - but the aggregate results of all loans does not show a significant effect. Finally, Haque (2008), studying 500 members of MFIs, find that participants reported no change in households' diet since joining an MFI.

Cash Transfers - Conditional & Unconditional

Poverty reduction is the primary goal of cash transfer programs. The poor have low and variable incomes and cash transfers are intended to help them smooth consumption, sustain spending on daily necessities, and provide a buffer against shocks to avoid selling assets or taking on debt (DFID, 2011). Over time, transfer income is believed to help the poor build human capital, save to buy productive assets, improve their living standards, or access credit (*ibid.*).

Conditional Cash Transfer programs (CCTs) are social safety net programs that transfer cash directly to the poor contingent on certain behavioral requirements. CCT conditions most commonly relate to children's

¹⁶ Chemin, 2008, Khandker & Samad, 2013a, Khandker & Samad, 2013b, Pramanik, 2013, Salia, 2014

¹⁷ Positive association: Khandker et al., 2010; Magali, 2013; Salia, 2014. No association: Haque & Yamao, 2008. Mixed association: Imai & Azam, 2012.

educational or health outcomes with the goal of reducing consumption poverty (World Bank, 2009). Many countries established such programs in the late 1990s to aid in the redistribution of wealth to poor households (DFID, 2011; World Bank, 2009). In middle-income countries, human capital formation is also a goal. CCTs take a multidimensional approach to poverty and depend on coordinating support from different sectors and institutions of the state to be effective (Cecchini, 2009).

The condition rationale assumes that the poor do not have full information on the long-term benefits of health or education, and imposes requirements to ensure they act in beneficial ways (DFID, 2011). Primary CCT objectives include providing a minimum consumption floor for the poor to alleviate short-term poverty and promoting the accumulation of human capital to break the long-term cycle of poverty (World Bank, 2009). Cash can be allocated at the discretion of the recipient, but is “conditioned” for three main reasons (World Bank, 2009). First, agents do not always act in the ways we would expect fully informed, rational agents to act. A body of evidence also shows that people often suffer self-control problems in the immediate term that does not match their long-term attitude toward the future, also known as hyperbolic discounting. Finally, there may be conflicts of interest within the household on how to spend cash that may not result in the best use of resources for the children living there (World Bank, 2009).

The level of assistance from CCTs varies widely between countries. In Nicaragua, CCTs pay 29% of household expenditures, whereas in Bangladesh, they pay 1% (World Bank, 2009). The World Bank (2009) suggests that in setting transfer amounts for CCTs, funders consider the income-elasticity of the outcomes (health or educational) and whether larger transfers result in bigger behavioral changes by recipient households. Some countries also complement conditional cash transfers with supply-side interventions like school grants, teacher bonuses, or textbook provision like the combination or graduation programs discussed later (Saavedra & Garcia, 2012).

Households may choose not to receive CCTs for reasons like high transaction costs, particularly when families live far away from services offered, if there is sufficient social stigma associated with receiving the benefit, or if the benefit level is very low (World Bank, 2009). Nonetheless, small, consistent benefit levels often matter to the poor and help smooth their often irregular incomes (The Economist, 2010).

Unconditional Cash Transfers (UCTs) share similar redistributive and social safety net goals as CCTs, yet do not condition transfers on recipient behavior. UCT programs assume that the poor are rational actors that will access an individually appropriate mix of public services as their constraints ease (DFID, 2011). Pega et al. (2014) further suggest that UCTs may lead to greater behavioral change because they are more socially acceptable and less stigmatizing for recipients. Without the need to enforce conditions, they are usually cheaper to run (Pega et al., 2014). They are also potentially a useful mechanism in fragile or conflict-affected states (Blattman & Ralston, 2014) or during humanitarian disasters (Pega, et al., 2015).

UCTs are more feasible in places that lack strong political pressure (i.e. taxpayers insisting on proof that assistance is deployed in a particular way), and most productive if there is no evidence of imperfect information or incomplete altruism (i.e., parents discounting the future more aggressively than would their children) (World Bank, 2009). UCTs are newer than CCTs, and the growing interest is driven partially by the popularity and early success of Give Directly, a Silicon-Valley funded nonprofit active in Kenya and Uganda (The Economist, 2013).

Targeting of CCTs and UCTs

Cash transfer programs target the poor through a variety of mechanisms including categorical grants, geographic selection, geographic targeting, self-selection or proxy means testing, though geographic targeting and proxy means testing are most commonly used (DFID, 2011; World Bank, 2009). Proxy mean testing

associates indicators with household expenditure or consumption derived from household surveys to estimate household incomes (Australian Aid, 2011). Children are often the targeted beneficiaries (as in health or education programs), but the payee is usually the parent, often the mother (World Bank, 2009). To successfully target individuals, governments need a system to establish eligibility of clients and enroll them in the program, a mechanism to pay their benefit, and a monitoring and evaluation system to track compliance with conditions, in the case of CCTs (World Bank, 2009). Some countries rely more on door-to-door outreach or community meetings to identify that country's target population (World Bank, 2009).

Programs differ on what they pay recipients and when. For example, Mexico's Oportunidades program pays students depending on school grade and gender, whereas Brazil's Bolsa Familia program does not. Population coverage of CCTs ranges from 40% of the population (Ecuador) to around 20% (Brazil, Mexico) to 1% (Cambodia) (World Bank, 2009). The most recent household survey data from these countries show the per capita (per household 2005 PPP adjusted amounts, divided by average household size) CCT amounts for the poorest quintile and total population. According to Brazil 2012 survey data, average per capita CCT payments to the poorest quintile were \$23.31 compared to \$17.25 for the total population, whereas in Ecuador, average per capita CCT payments to the poorest quintile were \$63.55, compared to \$35.83 for the total population (World Bank, 2016). Over half of the 40 CCTs launched in 2000 and beyond feature electronic delivery of cash payments, to reduce costs after target populations have been identified (DFID, 2011).

Targeting is expensive, however, and requires significant administrative resources to ensure that cash flows to the intended groups (DFID, 2011). Inclusion errors (including those who are not actually eligible) and exclusion errors (excluding those who are eligible) are tradeoffs. The alternative is universal provision, which dramatically increases the population served and the costs of benefits, though may be more politically feasible than establishing cut-offs for beneficiaries (*Ibid.*). In addition, relaxing targeting goals may result in a large leakage of benefits to the non-poor and may endanger the prime objective of the program (Son, 2008).

Nonprofits leading UCT programs such as Give Directly use emerging technological approaches, including analysis of remote satellite data to identify individuals by visible poverty indicators, for example those without tin roofs in western Kenya (The Economist, 2013).

Relationships Between Cash Transfers and Poverty

CCTs have been broadly determined to positively impact household consumption and on poverty, as measured by the headcount index, the poverty gap, and the squared poverty gap (World Bank, 2009). Many studies focus on Latin America since CCT programs there have been in operation longest. A study of Nicaragua's Red de Protección Social reports positive impacts on beneficiary consumption rates (20-29% increase) and reduction in the poverty headcount (5-7%) over a three year period, potentially because its per capita transfer amounts were among the most generous (World Bank, 2009). The World Bank (2009) also finds that households that receive CCTs tend to spend more on food, and on higher-quality sources of nutrients than households of similar standing who do not receive CCTs. DFID (2011) reports that well-designed and implemented CCTs improve living standards at the bottom of the welfare distribution, and reduce poverty and inequality, though whether results can be seen in the national poverty gap, poverty headcount, and Gini coefficient of income inequality depends on the scale of transfers. As a shining example, DFID (2011) points to Brazil's combination of cash transfer programs that accounted for a 28% reduction of the Gini index in Brazil between 1995 and 2004.

The World Bank (2009) finds four non-Latin American CCT programs with credible evaluations (Bangladesh, Cambodia, Pakistan and Turkey), and reports that these show a mostly positive effect on school enrollment, ranging from -3% to 31%, though effects are found in some age groups and not others. Saavedra & Garcia's (2012) meta-analysis of CCT evaluations suggest that differences in transfer amounts, timing of payments or presence of a supply-side intervention explain heterogeneous patterns in educational outcomes. They find

statistically significant effects for enrollment, attendance and dropout rates, with larger secondary effects than primary school effects. Programs with more generous transfers had larger primary and secondary enrollment effects, and those that conditioned the benefit on student achievement saw larger enrollment and attendance effects (*Ibid*).

The World Bank (2009) reports mixed results of evaluations of the effect of cash transfers on health outcomes in Latin American countries and in Turkey. Some evaluations show that beneficiaries make more use of health services than the control groups (including many children's health measures like growth monitoring, or health care visits), though they find no statistically significant impacts on immunization rates (World Bank, 2009).

Son (2008) praises the gender focus of CCTs. Since payments are often directed to the female head of recipient households, the author argues that they have helped raise the status of women in households. The World Bank (2009) finds that there have been no real reductions in the labor force participation of adults, though child labor has decreased substantially in countries like Brazil, Cambodia, Ecuador, Mexico and Nicaragua.

The recent growth of UCT programs means that evidence is still limited, though Pega, et al. (2015) find that transfer programs reduce the depth or severity of income poverty in children and adults in low-and-middle income countries. The authors further report that the following four effects from UCTs may link to causal improvements in health: the income or consumption effect; direct status effect (improving a recipient's social status, reducing stress, and improving physical and mental health outcomes); combined consumption and status effects; and employment effects. Blattman, Flala, & Martinez (2013) find that an unconditional grant program to youth groups in Uganda showed an increase in business assets by 57%, work hours by 17%, and earnings by 38%.

A World Bank-led study with randomized conditional and unconditional treatment arms in Malawi finds that conditionality added no greater value than the cash itself in achieving improved outcomes of girls' school enrollment of the very poor in Malawi (Baird, McIntish, & Ozler, 2010). However, the Economist (2013) argues that CCTs have a better chance of reducing future poverty since they require that the health and education of children be prioritized, supporting increased earnings throughout their lifetimes. The Economist (2013) cites another study that reviews 26 CCTs, five UCTs and four programs that ran UCT & CCT programs in parallel and reports that CCTs do more to raise educational outcomes than UCTs.

Evidence from Bangladesh and Tanzania

We reviewed 12 studies on cash transfers (six in Bangladesh and six in Tanzania). Two studies focus on UCTs in Tanzania, and one study looks at a UCT in Bangladesh. The remaining nine studies are of CCTs, including five from Bangladesh and four from Tanzania. The Tanzanian Social Action Fund (TASAF), established in 2002 as a central agency to address and implement programs to address the Government's 2005 National Poverty Reduction Strategy, funds four of the five cash transfer programs studied in Tanzania, with nonprofit partners and the World Bank leading the remaining two. In Bangladesh, most cash transfer programs are funded and implemented by the government with the two oldest programs providing food aid (Food for Education Programme) and cash assistance to poor families (Primary Education Stipends Programme) conditional on children's education outcomes.

Our evidence base includes two experimental analyses (1 Bangladesh, 1 Tanzania), six quasi-experimental analyses (4 Bangladesh, 2 Tanzania), two non-experimental analyses (1 Bangladesh, 1 Tanzania), and two descriptive analyses (both for Tanzania). *Figure 6* shows the number and direction of findings for each study type.¹⁸

Most cash transfer programs target certain populations, and we coded for rural/urban, gender, occupation, income level, age group, and other categories (*Figure 7*). These categories are not mutually exclusive, and several studies examine programs that target more than one of these population categories. For example, Baulch (2011) reviews a CCT in Bangladesh that targets rural populations of poor day laborers of both genders with children of primary school age, and owning less than half an acre of land; the only program we reviewed that specified a criterion for each target category.

Although Son (2008) claims that transfer programs often have a gender focus, only three of the studies we review focus on women specifically. However, all twelve studies describe women as a target population, even though men are not excluded. Kessy (2014) notes that “making cash transfers to women, as virtually all CCTs do, may also have increased the bargaining power of women.” Shamsuddin (2015) is one of the three analyses that studies the Female Secondary Education Stipend CCT in Bangladesh that is conditional on recipients’ 75% school attendance, remaining unmarried, and scoring at least 45% on school exams. Ahmed et al. (2009) also studies a CCT in Bangladesh that targets poor women who receive a food ration over a period of 24 months. Kessy (2014) reviews a CCT in Tanzania that grants women’s entrepreneurship groups with conditions that vary according to each arrangement.

Baulch (2011) examines a CCT in Bangladesh that is only one of two to specify eligibility by occupation and targeting day laborers, fishermen, potters, weavers, blacksmiths, and cobblers. Recipients could qualify by meeting that condition, or by satisfying any one of the following conditions: female-headed households, land ownership of one half acre or less, or deriving their income from sharecropping. Sivakul (2012) studies the Bangladesh Food for Education programme that includes day laborers and low-income occupations as eligibility criteria. Nine studies target individuals by income level, from relatively specific criteria such as “under the poverty line of TZS 13,998 per month” (Mtelevu & Kayunze, 2014) to the less specific “extremely poor”

Figure 6. CCT / UCT Association with Poverty Alleviation by Method of Study

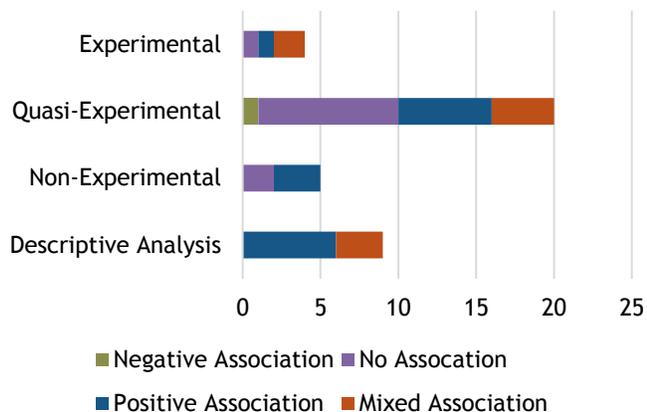
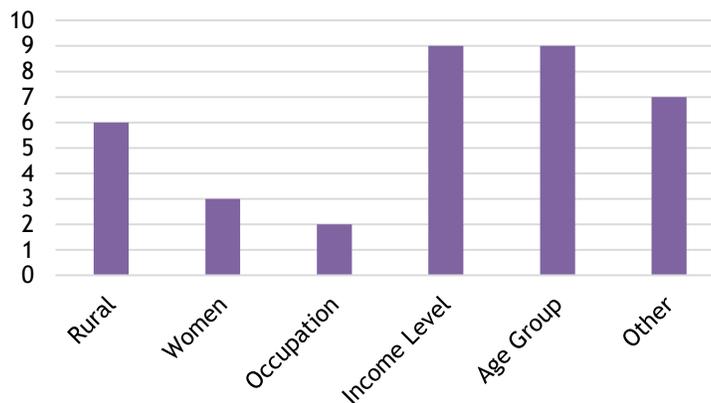


Figure 7. Cash Transfer Target Populations



¹⁸ As some studies use multiple methods and/or examine multiple outcome areas, the total number of studies exceeds 12.

(Masunzu, 2014). Nine studies report on cash transfer programs that targeted by age group, and six¹⁹ of those target children under 18 years old, three target the elderly over 60 years (Hofmann et al., 2008; Evans, Hausladen, & Kosec, 2014; Mtelevu & Kayunze, 2014), and one targets individuals age 18-30 years (Walque et al., 2012). Other targeting criteria described in the studies include households with specific unmet health and education needs (Masunzu, 2014) and vulnerable individuals including widows, orphans, HIV-affected people (Mtelevu & Kayunze, 2014).

Table 8 summarizes the findings of the studies on the associations between cash transfer programs and measures across six poverty-related outcome categories. In total, the authors report 16 positive associations, 12 non-significant associations, nine mixed associations, and one negative association.

Table 8. Summary of Cash Transfer Results by Outcome Category

Outcome Category	Outcome measures used	Negative association	No association	Positive association	Mixed association
Income/wealth	Income (2), savings (1)	1	1	1	2
Consumption	Food consumption (4), total household consumption (1), household expenditure (1), per capita expenditure (1), food expenditure (1),	-	4	4	-
Assets	Value of consumer durables (1), livestock (1), other productive assets (1)	-	-	2	2
Living Standards	Non-food living standards expenditure (1), Use of soap, bedsheets, and blankets (1)	-	-	2	-
Health	Incidence of wasting, stunting, underweight (2), weight and mid-upper arm circumference (1), health center visits (2), days sick (1), prevalence of sickness (1) prevalence of STIs (1)	-	3	2	5
Education	Attendance rates (2), grade progression/completion (2), years of education (1), literacy (1)	-	2	4	-
Other	Trust in community leaders (1), children's activities (1), Measures of well-being, including stress levels, self-esteem, difficulty sleeping (1)	-	2	1	-
Total		1	12	16	9

Five studies²⁰ look at measures of income or wealth, with mixed results. Evans, Hausladen, & Kosec (2014) report mixed associations for a CCT program in Tanzania that targets vulnerable children and the elderly conditional on school attendance for children and health visits for both children and the elderly. They find that the poorest half of treated household experience a fivefold, highly significant increase in nonbank savings over the control, though there are no significant effects on whether a household member has a bank account, nonbank savings, or has taken out a loan in the last year. Ahmed et al. (2009) report mixed associations as well. They find that a significant number of households (48-64% of households) remained in extreme poverty across a selection of four UCT programs in Bangladesh and postulate that small transfer amounts are the

¹⁹ Baulch, 2011; Sivakul, 2012; Evans, Hausladen, & Kosec, 2014; Ferré & Sharif, 2014; Masunzu, 2014; and Shamsuddin, 2015

²⁰ Ahmed et al., 2009; Evans, Hausladen, & Kosec, 2014; Kessy, 2014; Mtelevu & Kayunze, 2014; Shamsuddin, 2015

reason. They note strong incidence of saving rates, however, and postulate that this result is because the behavior was conditioned upon receiving the transfer. Mtelevu & Kayunze (2014) claim that the Tanzanian CCT that transfers cash to vulnerable groups to invest in joint business efforts raises income, but finds no statistically significant associations. Shamsuddin (2015) finds that women's wages are associated with a 17% decrease over a period of five years after participating in a CCT in Bangladesh that conditioned their stipend on education-related behaviors. He notes the difficulties in women finding employment, and highlights the importance of simultaneous economic growth to achieve some of the desired outcomes of these interventions. In her descriptive study of a UCT in Tanzania, Kessy (2014) reports that about 96% of group members were able to pay back loans within agreed timeframes, which is a sign of their profitability.

Eight studies consider consumption-related measures, four of which (two from Tanzania, two from Bangladesh) report no association between cash transfers and household expenditures or calorie and protein consumption, per capita food consumption, food consumption, and expenditure per capita respectively (Baulch, 2011; Sivakul, 2012; Evans, Hausladen, & Kosec, 2014; Mtelevu & Kayunze, 2014). Three of the four remaining studies are from Bangladesh and find positive associations with caloric intake, food expenditure, per capita consumption expenditure; total household consumption and food consumption; and food expenditure and consumption respectively (Ahmed et al., 2009; Ferré & Sharif, 2014; Mascie-Taylor et al., 2008). The other study from Tanzania focuses on a UCT and finds positive significant impacts on food consumption (Hofmann et al., 2008).

Only four studies (two from Tanzania and two from Bangladesh) review asset outcomes and report mixed results. Two are UCT programs. In Tanzania, Kessy (2014) reports positive associations with treated recipients acquiring assets like bicycles mobile phones and radios. In Bangladesh, Ahmed et al. (2009) report mixed results on asset outcomes across four programs, though all programs significantly increase the value of consumption-asset bases for participating households in Bangladesh. The two remaining are CCT programs. In Bangladesh, Baulch (2011) reports that when treated individuals receive cash in exchange for children's education outcomes, that their consumer durable assets show significant positive change in value. In Tanzania, Evans, Hausladen, & Kosec (2014) report that when treated households receive cash transfers conditional on school attendance and health clinic visits (from .38 to 1.62 more animals) the poorest treated households were five percentage points less likely to own a bicycle, whereas the less poor were 10 percentage points more likely to own a bicycle.

Many of the cash transfer programs examined in the studies are CCTs, which are argued to foster improved health and education outcomes. Seven studies report on associations with health measures (two no effect, one positive, and four mixed), and five report on associations with education measures (two no effect and three positive). Baulch (2011) finds no association with the percentage of stunted children in Bangladeshi households for a CCT program with educational conditions, and also no association with grade progression among recipient households, particularly among boys, who are ineligible to receive the same stipends. Ferré & Sharif (2014) review a Bangladeshi CCT that transfers cash on the condition that children attend primary school or nutritional classes. They report mixed results on health outcomes, finding a significant reduction of wasting among young children, and an improvement of mothers' knowledge of the importance of breastfeeding. They find no significant association with the incidence of stunting and underweight of beneficiary children or school attendance rates, hypothesizing that they would need a longer term study to see any changes in these measures. Where Ferré & Sharif (2014) argue that the short pilot study period is to blame for their lack of positive associations, Baulch (2011) points to issues with weak targeting mechanisms and the progressively smaller relative value of cash transfers due to inflation.

Evans, Hausladen, & Kosec (2014) report mostly positive impacts across measures in health and education for a CCT in Tanzania, finding significantly fewer sick days and reports of being sick across all treated populations

and 20% higher likelihood that all treated populations finance medical care with health insurance, though they also find significantly lower health center visits across most treated populations. In education, they report that children were 4% more likely to have attended school, and 15% more likely to complete Standard 7 or higher, and that girls in particular were 24% more likely to have completed standard 7 or higher. In Bangladesh, Shamsuddin (2015) finds a positive association with years of schooling for girls, but describes how this educational impact may be short-term, since girls do not seem to stay in school long enough to get their secondary education. Mascie-Taylor et al. (2008) finds that CCT-targeted individuals were significantly more likely to visit the health center for all age groups but the elderly.

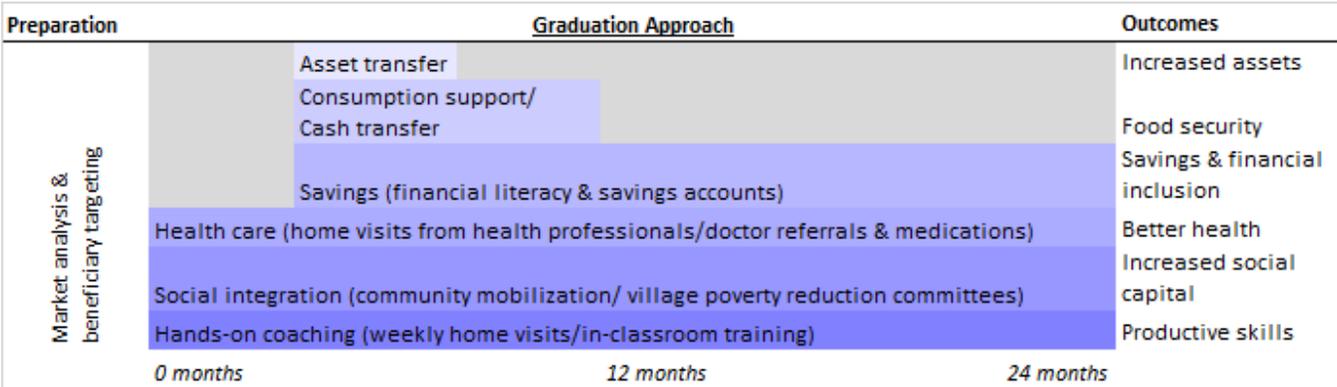
Combination Programs (“Graduation Programs”)

Combination programs are coordinated assistance programs that improve the lives and well-being of the very poor. First designed and implemented in 2002 by BRAC, a Bangladeshi NGO, combination or “graduation” programs include a holistic set of consumption, financial, and training services for the extremely poor (Banerjee et al., 2015b). BRAC developed this approach after 30 years of accumulated evidence showing that microfinance alone did not result in poverty reduction gains for the very poorest (Abed, 2015).

Extreme poverty is characterized by the degree of deprivation (depth), length of time, and breadth (larger numbers of dimensions like malnutrition, illiteracy, etc.); the combination of these factors is thought to mutually reinforce poverty traps (Emran et al., 2012). However, as Banerjee et al., (2015b) note, the literature on poverty traps is primarily theoretical in nature, and more work needs to be done to understand the mechanisms by which combination programs have been able to push households out of extreme poverty.

In BRAC’s “Targeting the Ultra Poor Program” (commonly known as Challenging the Frontiers of Poverty Reduction - CFPR), beneficiaries are offered small cash transfers in order to meet short-term consumption needs, while business, financial, and life skills are enhanced over the long term. *Figure 8.* visualizes the timeline over which BRAC services are offered. The ultimate goal is to durably increase the consumption of the extremely poor (Banerjee et al., 2015b). A household is considered to have “graduated” from the program once it meets set standards, such as a certain asset base, income level, and food security (Pritchard, et al., 2015).

Figure 8. BRAC’s Graduation Program Services and Timeline



Source: Abed, 2015

Typically, beneficiaries select a productive asset (often from a list of poultry or livestock). They receive training related to that asset along with general life skills training, short-term consumption support, access to bank savings accounts and health and education information (Banerjee et al., 2015b). The services are comprehensive and also relatively expensive; in Bangladesh the per-person cost is a little under \$500 per

person over two years in Bangladesh (MacMillan, 2015). Though available evidence currently derives predominantly from BRAC's programs in Bangladesh, a recent randomized control trial on combination programs across six countries (Ethiopia, Ghana, Honduras, India, Pakistan, and Peru) that covers over 10,000 households by Banerjee et al. (2015) has been cited as important new evidence that the program can work outside Bangladesh (Abed, 2015; Rosenberg, 2015; MacMillan, 2015).

Targeting Combination Programs

Combination programs are targeted at the ultra-poor. BRAC targets the poorest 18 percent of the population who live below the poverty line and identifies people through "Participatory Wealth Ranking" processes in a village meeting to identify its poorest members, followed by a verification visit by the organization's staff who check to see that they meet a standard set of criteria (BRAC, 2016; Banerjee, et al., 2015; MacMillan, 2015). Banerjee et al. (2015b) estimate that the majority of program costs may come from implementing staff (including verification visits), yet these may help ensure that the poorest are indeed the beneficiaries over the two-year program.

Targeting mechanisms in the Banerjee et al. (2015) study vary across the six countries. Three countries use the Participatory Wealth Ranking process (Ghana, Honduras, Peru), two use a "Participatory Rural Appraisal" (India & Pakistan), and Ethiopian participants are identified by the local community's food security task force. Two countries used targeting mechanisms but did not verify eligibility (Ethiopia & Ghana).

Relationships Between Combination Programs and Poverty

The compelling evidence from Bangladesh was part of what inspired broader experimentation with combination programs elsewhere. Until Banerjee et al. (2015) published their study on combination programs, evidence linking combination programs and poverty reduction was limited to the Bangladeshi context. BRAC reports that 95 percent of the 1.4 million clients who have participated in their programs have graduated from ultra-poverty since 2002 (Abed, 2015). Abed (2015) notes that social returns are high and extend well beyond the intervention period, and that these broad benefits should be weighed against the high program costs that are financially unsustainable without grants. The Chars Livelihoods Programme, another Bangladeshi combination program supported primarily by Australian Aid & UKaid, reports much lower graduation rates at 60 percent (CLP, 2013). These graduation rates are almost a fifth lower due to UKaid policy that requires household access to a tubewell meeting specific standards. That the program suffered a significant hit to its success rate due to a nuance in its measurement highlights the sensitivity of program outcomes to indicator selection.

In one of the first experimental studies outside Bangladesh, Banerjee et al. (2015) report that all treatment households across six countries witness significant improvements across a range of indicators (per capita consumption, food security index, asset index, financial inclusion index, total time spent working, incomes and revenues index, physical health index, mental health index, political involvement index, women's empowerment index) both immediately after and two years following the study period. In an early presentation, study leader Dean Karlan called the intervention one of the six most impressive outcomes has seen among the hundreds of antipoverty program studies that he has overseen (Rosenberg, 2015).

Evidence from Bangladesh

If Bangladesh is famous as the birthplace of microfinance, it is also known as the instigator of combination programs. Since NGO BRAC launched its program in 2002, it has been the primary designer and implementer of such programs. Recently, other organizations modeled their own comprehensive programs in the hopes of achieving the same success.

We reviewed eight studies on combination programs, all of which were from Bangladesh. Nonprofit BRAC was the primary implementing agency for six of the studies on its CFPR program, the Bangladesh government implemented the Vulnerable Group Development programme that was funded by the World Food Programme, and a consortium of nonprofits implemented the Chars Livelihood Programme.

Our evidence base includes one experimental analysis, six quasi-experimental analyses, and one descriptive analysis. *Figure 9* shows the number of findings and directions of association for each study method used.

Almost all combination programs target the very poor, but may also target other specific population types as well. We coded for rural/urban, gender, occupation, income level, age group and other categories (*Figure 10*). These categories are not mutually exclusive, so even though all eight studies target by income, they could have also targeted by gender and landholding status. BRAC programs targeted the very poor according to a lower (extreme) poverty line established by the World Bank. One study (Das, & Shams, 2011) further clarifies that the BRAC asset transfer program targets the bottom 10 percent of the poor. Only the Vulnerable Group Development programme targets by age group (18-49 years old) to identify women who are physically capable of enhancing their livelihoods. Other targeting categories include owning less than a certain amount of land (Asadullah & Ara, 2016; Raza, Das & Misha, 2012 Mahmuda, Baskaran, Pancholi, 2014), or those living in certain districts (Smith, Emran, & Robano 2012; Raza & Ara, 2012). The variation of targeting details, especially for the same BRAC program reflect the complexity of these programs and also perhaps the orientation and focus of the study authors.

We find differing associations and mixed results between specific outcomes, though positive associations (24) were most commonly reported, followed by eight non-significant associations, six mixed associations, and one negative association (*Table 9*).

Figure 9. Combination Program Association with Poverty Alleviation by Method of Study

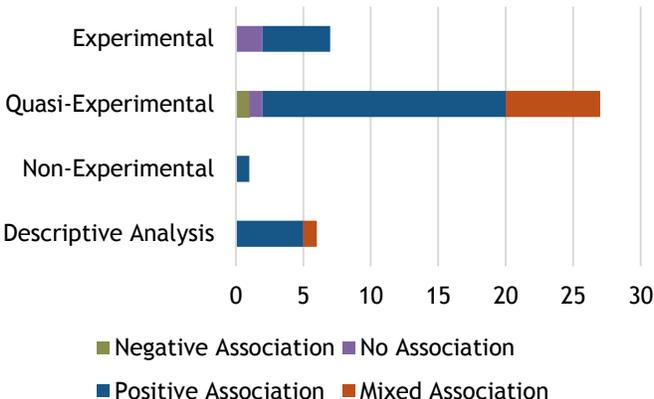


Figure 10. Combination Program Target Populations

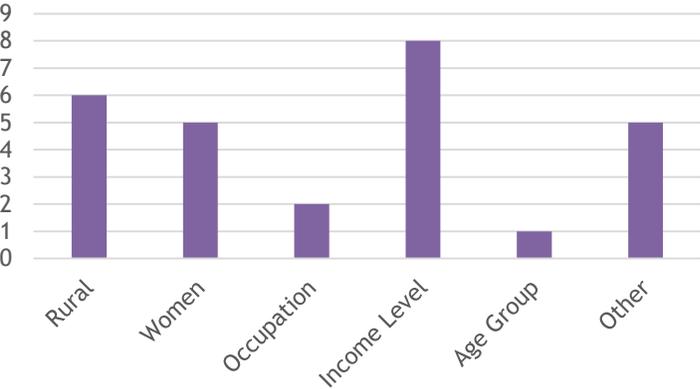


Table 9. Summary of Combination Program Results by Outcome Category

Impact Category	Outcome measures used (some studies consider multiple outcomes)	Negative association	No association	Positive association	Mixed association
Income/wealth	Income (5), per capita income (3), savings (2)	1	-	6	1
Consumption	food expenditure (2), number meals per day (2), dietary diversity (2), per capita food expenditure (1), food consumption (1), per capita calorie intake (1)	-		5	2
Assets	Livestock (7), land (4), productive assets (3), household assets (2), luxury items (1), non-productive (1)	-	-	7	1
Living Standards	Housing condition (4), household durables (1), toilet facility (1)	-	1	3	-
Health	Food security (2), self-reported health status & improvements from prior year (1)	-	-	2	1
Education	Enrollment (1)	-	1	-	-
Other	Employment sector (2), social relations (2), participation in financial markets (1), awareness (2), livelihood diversification (1), engage in lending, savings, credit (1), female empowerment (1), child labor (1), self-perception on poverty (1)	-	1	4	3
Total		1	8	24	6

All eight studies²¹ looked at measures of income or wealth, with mixed results. For BRAC’s program, Smith, Emran, & Robano (2012) report mixed results on income. The general treatment group (which includes some people who were technically ineligible for the program) shows insignificant impacts on per capita income, whereas the “poorest of the poor” see a significant increase in per-capita income. Siddiki et al. (2014) report negative income impacts from the Chars Livelihood Programme, finding significantly lower per capita annual income (approximately \$30) compared to the control group. The authors suggest two explanations: the potential bias of unobservable characteristics not captured by their propensity score matching technique; and that income impacts from training and assets may take longer than the study period (2 years) to manifest. Of the remaining six studies that found positive income associations,²² five were robust enough to be determine intervention impacts, and four covered the BRAC CFPR program. Significant BRAC findings include a significant positive impact on cash savings and lending (Asadullah & Ara, 2016); significant increase in per capita monthly or annual income (Das & Shams, 2011; Raza & Ara, 2012; Siddiki et al., 2014); and significant evidence of

²¹ Das & Shams (2011); Raza, Das, & Misha (2012); Raza & Ara (2012); Smith, Emran & Robano (2012); Mahmuda, Baskaran, & Pancholi (2014); Siddiki et al. (2014); and Asadullah & Ara (2016)

²² Das & Shams (2011); Raza, Das, & Misha (2012); Raza & Ara (2012); Mahmuda, Baskaran, & Pancholi (2014); and Asadullah & Ara (2016)

accelerating per-capita income growth, evidence that beneficiaries were effectively using training and assets (Raza, Das, & Misha, 2012).

Seven studies consider measures of consumption, reporting mixed results. Five²³ of the seven studies were on BRAC's CFPR program and found positive impacts on consumption, including increased per capita food expenditures (Asadullah & Ara, 2016; Das & Shams, 2011; Siddiki et al., 2014) and increased energy consumption for at least two years (Raza, Das & Misha, 2012). A descriptive study showed an association between the BRAC combination CFPR program and increased food consumption and decreased food deficiency (Mahmuda, Baskaran, Pancholi, 2014). Siddiki et al. (2014) report mixed results from the Vulnerable Group Development programme, and determine that treated households show improvement in diet (13% more likely to eat meat a couple of times a year) but only minimal impact on a household's number of meals eaten per day (the treated group eat less than a tenth of a meal more than the control group). Siddiki et al. (2014) also review the Chars Livelihoods Programme and find that treated households are 16% more likely to have enough to eat, though are 10% less likely than control households to have meat several times per year.

All eight studies showed positive associations between interventions and assets, including land, livestock, and household assets, natural assets (like land holding), and non-business assets (like mosquito nets). Smith, Emran, & Robano (2012) is the only study to have found mixed impacts in this category, finding that the BRAC CFPR program has positive effects on productive assets like cows, bulls, goats and sheep, but no effects on other household assets. They also find that the effect of providing rickshaw vans, bicycles and fishing nets is not significant for the poorest group, though it is significant across the general treatment group.

Four BRAC CFPR studies considered living standards, three considered health outcomes, and one considered education. Raza & Ara (2012) report that treated recipients' house value increased Tk. 11,953 which indicates they had spent their money to improve it, and Smith, Emran, & Robano (2012) report positive impacts like improved housing options (like tin roofs) and household durables. In their descriptive study, Mahmuda, Baskaran, & Pancholi (2014) report that all BRAC beneficiaries who formerly had to share rooms were able to build their own rooms with a separate kitchen over three years. Das & Shams (2011) report no significant impact on housing quality. As one of the oldest studies in this section that reviewed only a two-year time period (as opposed to other BRAC studies that review three to eight year time periods), it is possible that the living standard improvements had not yet emerged, as they had in later studies.

Conclusions

This review summarizes the available evidence on the poverty implications of five finance-based interventions that, to varying degrees, seek to place money into the hands of the poor. All of the interventions we consider in this review – remittances, government subsidies, credit, cash transfers, and combination programs – are financial mechanisms that theory suggests may offer a possible pathway out of poverty. At the national level, a more effectively functioning financial system can act as an “equalizer” allocating capital more efficiently across those who can use it, and thereby shifting the burden of market imperfections away from the poorest (Demirgüç-Kunt, 2015; Huang & Singh, 2009; Levine, 2008). At the individual and household level, theories of how access to additional financial resources translates into an escape from poverty are nuanced, but are rooted in the theory that savings and credit are necessary prerequisites for the accumulation of enough capital to invest in inputs for businesses and productivity-enhancing assets – investments that can change income trajectories and lift people out of poverty over time (Banerjee & Duflo, 2011; Carter & Barrett, 2005).

²³ Das & Shams (2011); Raza, Das, & Misha (2012); Raza & Ara (2012); Mahmuda, Baskaran, & Pancholi (2014); and Asadullah & Ara (2016)

This review identified 56 studies in Bangladesh and Tanzania that offer empirical studies of the association between these five financial intervention types and six common poverty outcome measures (income, consumption, assets, health, education, and “other” types of outcomes). Across the 56 studies, we find a total of 103 positive reported associations between a financial intervention and an outcome measure related to poverty alleviation, and only three associations indicating that a financial mechanism was worsening a poverty-related measure. We do, however, find 24 instances of insignificant associations between financial mechanisms and measures of poverty, and 38 mixed associations across different poverty indicators including income, consumption, assets, health, education, and other outcomes. The fact that positive associations represent a high share (61%) of the total reported outcomes may in part reflect a general academic tendency to steer away from reporting null results (Rosenthal, 1979; Chavalarias et al., 2016). However, the bulk of the available evidence suggests that by placing money into the hands of the poor, financial interventions in Bangladesh and Tanzania might be able to play a role in reducing poverty.

In Bangladesh, studies most frequently report positive associations with traditional poverty measures like consumption and assets. In Tanzania, the most commonly reported positive associations tend to be with measures of health or education. Three out of five types of interventions Bangladesh (remittances, credit, and cash transfers) most frequently report positive impacts on consumption, and a fourth (combination programs) focuses most heavily on assets. Three out of four of the interventions for which we have information in Tanzania (remittances, credit, and cash transfers) reported the most positive associations in health or education outcomes.

One reason that consumption impacts may predominate in Bangladesh is that the majority of the Bangladesh studies in our review are on remittances and credit (24 out of 40), and the literature reviewed in our paper suggests that money from both sources, in the short-term, is used to smooth consumption. In Tanzania, the majority of the studies are on government subsidies or conditional or unconditional cash transfers (9 out of 16), which theory suggests might have relatively more human capital-related outcomes, particularly given that receiving cash is often conditional on health and education outcomes (World Bank, 2009).

Most financial sector interventions target those who are thought to be excluded from financial access. Across our 56 studies, we find that the most commonly targeted population was the poor or ultra-poor. Thirty-one studies target the poor (24 in Bangladesh and seven in Tanzania). Twenty-seven studies target rural populations (17 in Bangladesh and 10 in Tanzania), and 20 target women (15 in Bangladesh and five in Tanzania). Since rural populations and women are often disproportionately represented in poor populations, specifically targeting them may reinforce an intervention’s effort to reach those they intend to.

Across studies in both Bangladesh and Tanzania we find that targeting the poor does not necessarily mean reaching the poor. This is especially true regarding subsidies and cash transfers, which tend to be administered by top-down, government initiated programs. In one subsidy example in our study, Tanzania has attempted to make a subsidy program more participatory by empowering village councils to identify beneficiaries. Even still, leakage is widely reported, and money intended for the poor goes instead to those who are personally connected to the councils. Credit and remittance interventions tend to be more bottom-up, demand side programs that motivated individuals (not necessarily just the poor) seek out on their own. In Bangladesh, banks may be encouraged by funders or the government to lend to the poor, but in managing their risk portfolios, they often determine that it is not in their interest to lend to the riskiest customers (often, the poorest). Bangladesh has, however, succeeded in targeting women (94% of their clients are women) (Microfinance Information Exchange, Inc. (MIX), 2016).

The heterogeneity of study types and interventions makes a sweeping conclusion about the efficacy of one intervention over another difficult. Combination programs are the only intervention in which every study we

find reports at least one positive impact across common poverty outcome categories. Although combination programs are most commonly directly targeted to ultra-poor populations where in theory small additional financial gains can have large poverty reduction consequences, the microcredit studies in our review report no discernable trend in whether microcredit helps poor populations to a greater or lesser degree than ultra-poor populations. Whether the effects of financial interventions on poverty are long-term also remains in question. With the exception of studies on combination programs, which place an emphasis on empirically demonstrating a long-term, durable exit from poverty (Abed, 2015; Banerjee et al, 2015), few studies in our review measure long-term effect at the individual, household, or national level.

Please direct comments or questions about this research to Principal Investigators Leigh Anderson and Travis Reynolds at epar.evans.uw@gmail.com.

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Appendix A. Results by Methodology, Outcome Areas, and Intervention Type²⁴

Figure A.1. Results for Bangladesh

Outcome category:	Income/ Wealth	Consumption	Assets	Living Standards	Health	Education	Other	Total # of reported associations
Experimental								
Remittances	0	0	0	0	0	0	0	0
CCTs	0	1	0	0	1	1	0	3
UCTs	0	0	0	0	0	0	0	0
Credit	0	0	0	0	0	0	0	0
Govt. Subsidy	0	0	0	0	0	0	0	0
Combination	1	1	1	1	1	1	1	7
Total # of reported associations	1	2	1	1	2	2	1	10
Quasi-Experimental								
Remittances	2	3	1	0	1	1	0	8
CCTs	1	2	1	0	2	1	1	8
UCTs	0	1	0	0	1	0	0	2
Credit	3	5	3	0	1	2	2	16
Govt. Subsidy	0	0	0	0	1	0	0	1
Combination	6	5	6	2	2	0	5	26
Total # of reported associations	12	16	11	2	8	4	8	61
Non-Experimental Analysis								
Remittances	1	2	0	0	1	0	3	7
CCTs	0	1	0	0	1	1	0	3
UCTs	0	0	0	0	0	0	0	0
Credit	7	5	4	0	1	2	2	21
Govt. Subsidy	0	0	0	0	1	0	0	1
Combination	0	0	0	0	0	0	0	0
Total # of reported associations	8	8	4	0	4	3	5	32
Descriptive Analysis								
Remittances	0	1	1	1	1	1	1	6
CCTs	0	0	0	0	0	0	0	0
UCTs	1	0	1	0	0	0	0	2
Credit	2	1	2	1	1	0	1	8
Govt. Subsidy	0	0	0	0	0	0	0	0
Combination	1	1	1	1	0	0	2	6
Total # of reported associations	4	3	5	3	2	1	4	22

²⁴ Many studies report on multiple outcome areas, so the total number of studies is often greater than the sum of the number of studies reporting on each intervention.

Figure A.2. Results for Tanzania

Outcome category:	Income/ Wealth	Consumption	Assets	Living Standards	Health	Education	Other	Total # of reported associations
Experimental								
Remittances	0	0	0	0	0	0	0	0
CCTs	0	0	0	0	1	0	0	1
UCTs	0	0	0	0	0	0	0	0
Credit	0	0	0	0	0	0	0	0
Govt. Subsidy	1	1	0	0	1	1	1	5
Combination	0	0	0	0	0	0	0	0
Total # of reported associations	1	1	0	0	2	1	1	6
Quasi-Experimental								
Remittances	0	0	0	0	1	0	0	1
CCTs	1	1	1	0	1	1	1	6
UCTs	0	1	0	1	1	0	1	4
Credit	1	0	1	0	0	0	0	2
Govt. Subsidy	0	0	0	0	0	0	1	0
Combination	0	0	0	0	0	0	0	0
Total # of reported associations	2	2	2	1	3	1	3	14
Non-Experimental Analysis								
Remittances	0	0	0	0	0	0	0	0
CCTs	1	1	0	0	0	0	0	2
UCTs	0	0	0	0	0	0	0	0
Credit	2	0	2	0	0	0	1	5
Govt. Subsidy	0	1	0	0	1	0	1	3
Combination	0	0	0	0	0	0	0	0
Total # of reported associations	3	2	2	0	1	0	2	10
Descriptive Analysis								
Remittances	0	0	0	0	0	0	0	0
CCTs	0	0	0	1	1	1	0	3
UCTs	1	0	1	0	1	1	0	4
Credit	0	0	0	1	2	2	1	6
Govt. Subsidy	0	0	0	0	0	0	0	0
Combination	0	0	0	0	0	0	0	0
Total # of reported associations	1	0	1	2	4	4	1	13

Appendix B. Proportion of Studies Finding Positive Associations in Any Outcome Area²⁵

Table B.1. Number of Bangladesh Studies Finding Positive Associations in any Outcome Area, By Implementing Party

Intervention Type	Implementing Party											
	Government		Non-profit		Private		Microfinance Orgs (multiple)		Individuals		Not specified or multiple	
	# Studies with Positive Outcomes	Total # Studies	# Studies with Positive Outcomes	Total # Studies	# Studies with Positive Outcomes	Total # Studies	# Studies with Positive Outcomes	Total # Studies	# Studies with Positive Outcomes	Total # Studies	# Studies with Positive Outcomes	Total # Studies
Remittances	8	9	-	-	-	-	-	-	-	-	-	-
Credit	-	-	2	2	1	1	7	10	-	-	2 ²⁶	2
Govt. Subsidies	2	2	-	-	-	-	-	-	-	-	-	-
CCTs	2	2	2	2	-	-	-	-	-	-	-	-
UCTs	1	1	-	-	-	-	-	-	-	-	-	-
Combination	1	1	7	7	-	-	-	-	-	-	-	-

Table B.2. Number of Tanzania Studies Finding Positive Associations in any Outcome Area, By Implementing Party

Intervention Type	Implementing Party											
	Government		Non-profit		Private		Microfinance Orgs (multiple)		Individuals		Not specified	
	# Studies with Positive Outcomes	Total # Studies	# Studies with Positive Outcomes	Total # Studies	# Studies with Positive Outcomes	Total # Studies	# Studies with Positive Outcomes	Total # Studies	# Studies with Positive Outcomes	Total # Studies	# Studies with Positive Outcomes	Total # Studies
Remittances	1	1	-	-	-	-	-	-	-	-	-	-
Credit	-	-	-	-	1	2	0	3	-	-	1	1
Govt. Subsidies	3	3	-	-	-	-	-	-	-	-	-	-
CCTs	1	1	0	1	-	-	-	-	-	-	1	2
UCTs	-	-	2	2	-	-	-	-	-	-	-	-
Combination	-	-	-	-	-	-	-	-	-	-	-	-

²⁵ Includes positive associations found in income/wealth, consumption, assets, living standards, health, and education. Excludes associations in the “other” category as those are often only peripherally related to poverty. The exception is Bangladesh remittances, for which we include positive associations with GDP.

²⁶ Multiple implementing parties include government and non-profit organizations.

Table A.3. Number of Bangladesh Studies Finding Positive Associations in any Outcome Area, by Target Population

Intervention Type	Target Population									
	Rural		Urban		Both or not specified		Women		No gender target, or not specified	
	# Studies with Positive Outcomes	Total # Studies	# Studies with Positive Outcomes	Total # Studies	# Studies with Positive Outcomes	Total # Studies	# Studies with Positive Outcomes	Total # Studies	# Studies with Positive Outcomes	Total # Studies
Remittances	-	-	-	-	8	9	-	-	8	9
Govt. Subsidies	-	-	-	-	2	2	2	2	-	-
Credit	5	8	-	-	6	7	4	6	7	9
CCTs	2	2	-	-	2	3	1	1	3	4
UCTs	1	1	-	-	-	-	1	1	-	-
Combination	6	6	-	-	2	2	5	5	3	3

Table A.4. Number of Tanzania Studies Finding Positive Associations in any Outcome Area, by Target Population

Intervention Type	Target Population									
	Rural		Urban		Both or not specified		Women		No gender target, or not specified	
	# Studies with Positive Outcomes	Total # Studies	# Studies with Positive Outcomes	Total # Studies	# Studies with Positive Outcomes	Total # Studies	# Studies with Positive Outcomes	Total # Studies	# Studies with Positive Outcomes	Total # Studies
Remittances	-	-	-	-	1	1	-	-	1	1
Govt. Subsidies	3	3	-	-	-	-	-	-	3	3
Credit	1	4	1	1	0	1	2	4	0	2
CCTs	0	1	-	-	2	3	-	-	2	4
UCTs	2	2	-	-	-	-	1	1	1	1
Combination	-	-	-	-	-	-	-	-	-	-

Table A.5. Number of Bangladesh Studies Finding Positive Associations in any Outcome Area, by Target Use

Intervention Type	Target Use									
	Agriculture or Livestock		Income Generating Activity (ag or non-ag)		Consumption/general		Multiple		Not specified	
	# Studies with Positive Outcomes	Total # Studies	# Studies with Positive Outcomes	Total # Studies	# Studies with Positive Outcomes	Total # Studies	# Studies with Positive Outcomes	Total # Studies	# Studies with Positive Outcomes	Total # Studies
Remittances	-	-	-	-	8	9	-	-	-	-
Input Subsidies	-	-	-	-	2	2	-	-	-	-
Credit	-	-	5	7	1	2	2	3	3	3
CCTs	-	-	-	-	3	3	-	-	1 ²⁷	2
UCTs	-	-	-	-	-	-	-	-	1	1
Combination	1	1	1	1	1	1	5	5	-	-

Table A.6. Number of Tanzania Studies Finding Positive Associations in any Outcome Area, by Target Use

Intervention Type	Target Use									
	Agriculture or Livestock		Income Generating Activity (ag or non-ag)		Consumption/general		Multiple		Not specified	
	# Studies with Positive Outcomes	Total # Studies	# Studies with Positive Outcomes	Total # Studies	# Studies with Positive Outcomes	Total # Studies	# Studies with Positive Outcomes	Total # Studies	# Studies with Positive Outcomes	Total # Studies
Remittances	-	-	-	-	1	1	-	-	-	-
Input Subsidies	3	3	-	-	-	-	-	-	-	-
Credit	-	-	1	2	0	1	1	1	0	2
CCTs	-	-	0	1	2	3	-	-	-	-
UCTs	-	-	-	-	1	1	1	1	-	-
Combination	-	-	-	-	-	-	-	-	-	-

²⁷ One study of CCTs targeting use of funds for education finds a positive association with level of education (Shamsuddin, 2015).
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Appendix C. Summary of Impacts from Six Randomized Control Trials on the Impact of Microcredit

Indicator	Sub-indicator(s)	Bosnia	Ethiopia	India	Mexico	Morocco	Mongolia	Context (Banerjee, Karlan, & Zinman, 2015)
Business activity	Ownership, or start new business, or decrease in closures	↑	↔	↑	↔	↔	↑	“The effects on extensive margins (ownership, starts, closures) are modest, with three of the studies finding no effects, Bosnia finding an effect on ownership, Mongolia finding an effect on ownership from group borrowing only, and India finding an effect on starts at the first endline only that is quite small in level terms (although large in percentage terms)...The effects on measures of investment, business size, and profits, which combine the intensive and extensive margins, are more promising. Five of the studies have measures of business assets and/or investment, and eight of the ten point estimates on these measures are positive, with two of the positive ones (and none of the negatives) reaching statistical significance. All told, each study finds at least some evidence, on some margin, that expanded access to credit increases business activity” (p. 12).
	Business Assets or investments	↓	↑	↑	N/A	↑	↑,↓	
Consumption	Total household consumption	↓	N/A	↔	N/A	↔	↔	“The results from the four studies with a measure of total household consumption find no evidence of an increase. Three find fairly precise null effects, at least in intention-to-treat terms (India, Mongolia, and Morocco). Bosnia finds a significant reduction, although this may be due to the fact that most borrowers in the sample were still paying back their initial loans...Each study, including Ethiopia, has some measure of food consumption, and the results are mixed at best. Four studies find null effects...Mongolia finds evidence of a modest increase in the group lending treatment, and Ethiopia finds evidence of substantial decrease...The three studies that measure durable stock(s) find mixed results. In Mongolia, micro-credit access increases the stock of household durables (the effect is statistically significant in the individual lending treatment). In Bosnia and India, however, microcredit decreases the stock of durables, and the effect is statistically significant in Bosnia. One robust finding on consumption is a decrease in discretionary spending (temptation goods, recreation/entertainment/celebrations). Five of the studies estimate treatment effects on ten such measures, finding seven negative point estimates, three of which are statistically significant” (p. 13).
	Food consumption	↔	↓	↔	↔	↔	↑	
	Stock of Household Durables	↓	N/A	↓	N/A	N/A	↑	
	Discretionary spending (five)	↓	N/A	↓	↓	↓	↑	
Income (four)	Business income	↑	↑	↑	↑	↑	↑	“Of the four studies with measures of wage income and business income, two find evidence of increases in business income offsetting reductions in wage income. The two remaining studies find increases in both wage and business income. Out of eight point estimates of effects on income from remittances/transfers or government aid/benefits, five are negative. These results suggest that although microcredit may not be transformative in the sense of lifting people or communities out of poverty, it does afford people more freedom in their choices (e.g., of occupation) and the possibility of being more self-reliant” (p.12).
	Wage income	↓	↑	↑	↓	↓	↓	
	Remittances/transfers or government aid/benefits	↓	↓	N/A	↓	↑	↑	
Social Outcomes	Child schooling (attendance)	↓	↔	↔	↔	↔	↔	“Each of the six studies estimates treatment effects on schooling, and the effects are a mix of more and less precisely estimated nulls. The one exception is Bosnia, which finds a significant decline in school attendance among 16-19-year-olds. Four of the studies estimate effects on female decision power and/ or independence within the household, and three find no effect. India’s null is precisely estimated (in intent-to-treat terms at least), ruling out effects larger than +/-0.05 standard deviations. Mexico finds a small but significant increase in female decision power” (p.13).
	Female decision-making & independence (four)	↔	N/A	↔	↑	↔	N/A	
Table created from information contained in Angelucci et al., 2015; Karlan & Zinman, 2015; Augsburg et al., 2015; Banerjee et al., 2015a; Tarozzi, Desai, & Johnson, 2015; Crépon et al., 2015. The table does not report whether effects are significant. ↔ = null (no) effect								

Appendix D. Summary of Studies Reviewed

Authors	Title	Year	Country	Scale	Methodology	Main Intervention
Ahmed, A.U., et al.	Comparing Food and Cash Transfers to the Ultra Poor in Bangladesh	2009	Bangladesh	Sub-national	Quasi-experimental	UCT
Aloyce, Gabagambi, & Hella	National Agricultural Input Voucher Scheme Impact on Productivity and Food Security of Smallholder farmers in Tanzania	2014	Tanzania	National	Quasi-experimental	Govt. subsidy
Asadullah, M. & Ara, J.	Evaluating the long-run impact of an innovative anti-poverty programme: evidence using household panel data	2016	Bangladesh	National	Quasi-experimental	Combination
Barai, M. K.	Development Dynamics of Remittances in Bangladesh	2012	Bangladesh	National	Descriptive	Remittances
Baulch, B.	The medium-term impact of the primary education stipend in rural Bangladesh	2011	Bangladesh	National	Quasi-experimental	CCT
Chemin, M.	The Benefits and Costs of Microfinance: Evidence from Bangladesh	2008	Bangladesh	National	Quasi-experimental	Credit
Chowdhury, M. Jahangir Alam, Ghosh, Dipak, & Wright, R.	The impact of micro-credit on poverty: evidence from Bangladesh	2005	Bangladesh	National	Non-experimental	Credit
Cooray, A.	The Impact of Migrant Remittances on Economic Growth: Evidence from South Asia	2012	Bangladesh, India, Sri Lanka, Pakistan, Nepal, the Maldives	National	Non-experimental	Remittances
Das, N. C. & Shams, R.	Asset Transfer Programme for the Ultra Poor: A Randomized Control Trial Evaluation	2011	Bangladesh	Sub-national	Experimental	Combination
Debnath, S.C. and Mahmud, K.T.	The myth of microcredit in poverty alleviation: Perspective from the Grameen Bank in Bangladesh	2014	Bangladesh	National	Non-experimental	Credit
Evans, D. K., Hausladen, S., & Kosec, K.	Community-Based Conditional Cash Transfers in Tanzania : Results from a Randomized Trial	2014	Tanzania	Sub-national	Quasi-experimental	CCT
Ferré, C. & Sharif, I.	Can conditional cash transfers improve education and nutrition outcomes for poor children in Bangladesh?	2014	Bangladesh	Sub-national	Experimental	CCT
Gine, et al.	Enhancing Food Production and Food Security through Improved Inputs: An evaluation of Tanzania's National Agricultural Input Voucher Scheme with a Focus on Gender Impacts	2015	Tanzania	Sub-national	Experimental	Govt. subsidy
Girabi & Mwakaje	Impact of Microfinance on smallholder farm productivity in Tanzania: The case of Iramba District	2013	Tanzania	Sub-national	Non-experimental	Credit
Haque, M. S., & Yamao, M.	Can Microcredit Alleviate Rural Poverty? A Case Study of Bangladesh	2008	Bangladesh	Sub-national	Descriptive	Credit
Hatemi-J, Abdalnasser and Uddin, Gazi Salah	On the causal nexus of remittances and poverty reduction in Bangladesh.	2014	Bangladesh	National	Quasi-experimental	Remittances

Hepelwa, A., Selejio, O., & Mduma, J. K.	The Voucher System and the Agricultural Production in Tanzania: Is the model adopted effective? Evidence from the Panel Data Analysis	2013	Tanzania	Sub-national	Non-experimental	Govt. subsidy
Hofmann, S., Heslop, M., Clacherty, G., & Kessy, F.	Salt, soap and shoes for school: The impact of pensions on the lives of older people and grandchildren in the KwaWazee project in Tanzania's Kagera region	2008	Tanzania	Sub-national	Quasi-experimental	UCT
Imai, K. S. & Azam, S.	Does Microfinance Reduce Poverty in Bangladesh? New Evidence from Household Panel Data	2012	Bangladesh	National	Quasi-experimental	Credit
Islam, A.	Medium- and Long-term Participation in Microcredit: An Evaluation Using a New Panel Dataset from Bangladesh	2011	Bangladesh	National	Quasi-experimental	Credit
Islam, A.	Who Benefits From Microfinance? The Impact Evaluation of Large Scale Programs In Bangladesh	2008	Bangladesh	National	Quasi-experimental	Credit
Isoto, R.	Essays on Human Capital Investments and Microfinance in East African Agriculture	2015	Tanzania	Sub-national	Quasi-experimental	Remittances
Kato, M. & Kratzer, J.	Empowering Women through Microfinance: Evidence from Tanzania	2013	Tanzania	Sub-national	Non-experimental	Credit
Kessy, F.	Assessing the Potential of Development Grants as a Promotive Social Protection Measure	2014	Tanzania	Sub-national	Descriptive	UCT
Khandker, S. R.	Microfinance and Poverty: Evidence Using Panel Data from Bangladesh	2005	Bangladesh	National	Quasi-experimental	Credit
Khandker, S. R. & Samad, H. A.	Are Microcredit Participants in Bangladesh Trapped in Poverty and Debt?	2013	Bangladesh	National	Quasi-experimental	Credit
Khandker, S. R. & Samad, H. A.	Dynamic Effects of Microcredit in Bangladesh	2014	Bangladesh	National	Quasi-experimental	Credit
Khandker, S. R. & Samad, H. A.	Microfinance Growth and Poverty Reduction in Bangladesh: What Does the Longitudinal Data Say?	2013	Bangladesh	National	Quasi-experimental	Credit
Khandker, S. R., Baqui Khalily, M. A., & Hussain, S. A.	Seasonal and Extreme Poverty in Bangladesh	2010	Bangladesh	Sub-national	Quasi-experimental	Credit
Madhav, R. & Krishna, P.	Impact of remittance on food security in Bangladesh	2016	Bangladesh	National	Non-experimental	Remittances
Magali, J.	Impacts of Rural Savings and Credits Cooperative Societies (Saccos') Loans on Borrowers in Tanzania	2013	Tanzania	Sub-national	Non-experimental	Credit
Mahmuda, I., Baskaran, J., & Pancholi, K.	Financing Social Innovation for Poverty Reduction: A case study of microfinancing and microenterprise development in Bangladesh	2014	Bangladesh	Sub-national	Descriptive	Combination
Mapesa, H. J.	Microfinance institutions and rural farm households' incomes: Impacts and Challenges in Tanzania	2015	Tanzania	Sub-national	Quasi-experimental	Credit
Masunzu, D. S.	CCTs and Poverty Alleviation: A comparative study between Jamaica and Tanzania	2014	Tanzania, Jamaica	National	Descriptive	CCT
Mascie-Taylor, C. G. N., Marks, M. K., Goto, R., & Islam, R.	Impact of a short-term Cash-for-Work programme on nutritional status, food expenditure and consumption of poor rural Bangladeshi women and children in the hungry season	no date (post 2008)	Bangladesh	Sub-national	Non-experimental	CCT

Mtelevu & Kayunze	The Contribution of Vulnerable Groups' sub-projects under Tanzania Social Action Fund to Income Poverty Reduction in Bahi District, Tanzania	2014	Tanzania	Sub-national	Non-experimental	CCT
Nawaz, S.	Microfinance and Poverty Reduction: Evidence from a Village Study in Bangladesh	2011	Bangladesh	Sub-national	Descriptive	Credit
Nguyen, H., Hatt, L., Islam, M., et al.	Encouraging maternal health service utilization: An evaluation of the Bangladesh voucher program	2011	Bangladesh	Sub-national	Quasi-experimental	Govt. subsidy
Pramanik, M. & Qian, L.	Does RDA-credit improve livelihood of the clients in rural setting? An impact study of Bangladesh	2013	Bangladesh	Sub-national	Non-experimental	Credit
Rahman, S., Rafiq, R. B., & Momen, M. A.	Impact Of Microcredit Programs On Higher Income Borrowers: Evidence From Bangladesh	2009	Bangladesh	Sub-national	Non-experimental	Credit
Raihan, S., Sugiyarto, G., Bazlul, H., et al.	Remittances and Household Welfare: A Case Study of Bangladesh	2009	Bangladesh	National	Non-experimental	Remittances
Raza, Q. A., Das, N. C., & Misha, F. A.	Can ultra-poverty be sustainably improved? Evidence from BRAC in Bangladesh	2012	Bangladesh	Sub-national	Quasi-experimental	Combination
Raza, W. & Ara, J.	Grant Based Approach to Poverty Reduction: Evidence from Bangladesh	2012	Bangladesh	Sub-national	Quasi-experimental	Combination
Salia, P.	The Effect of Microcredit on Household Welfare (Empirical Evidences from Women Micro-entrepreneurs in Tanzania)	2014	Tanzania	Sub-national	Quasi-experimental	Credit
Shamsuddin, M.	Labour Market Effects of a Female Stipend Programme in Bangladesh	2015	Bangladesh	National	Quasi-experimental	CCT
Sharma, M. & Zaman, H.	Who Migrates Overseas and is it Worth Their While? An Assessment of Household Survey Data from Bangladesh	2009	Bangladesh	National	Quasi-experimental	Remittances
Sharma, M.	International Migration, Remittance, and Household Wellbeing: A study of twenty communities in Bangladesh	2008	Bangladesh	Sub-national	Quasi-experimental	Remittances
Siddiki, O.F., Holmes, R., Jahan, F., et al.	How do social safety nets contribute to social inclusion in Bangladesh	2014	Bangladesh	Sub-national	Quasi-experimental	Combination
Siddique, A., Selvanathan, E. A., & Selvanathan, S.	Remittances and Economic Growth: Empirical Evidence from Bangladesh, India and Sri Lanka	2012	Bangladesh, India, Sri Lanka	National	Non-experimental	Remittances
Sivakul, A.	Cash Versus In-Kind Transfers, The Case of Bangladesh	2012	Bangladesh	National	Quasi-experimental	CCT
Smith, S. C., Emran, M. S., & Robano, V.	Assessing the Frontiers of Ultra-Poverty Reduction: Evidence from the Targeting the Ultra-Poor (CFPR/TUP) Program in Bangladesh	2012	Bangladesh	National	Quasi-experimental	Combination
Ssendi, L. & Anderson, A.	Tanzanian Micro Enterprises and Micro Finance	2009	Tanzania	Sub-national	Non-experimental	Credit
Talukder, et al.	Evaluation of the impact of the voucher program for improving maternal health behavior and status in Bangladesh	2014	Bangladesh	National	Quasi-experimental	Govt. subsidy
Uddin, G. H. & Sjö, B.	Remittances, Financial Development and Economic Growth in Bangladesh	2013	Bangladesh	National	Non-experimental	Remittances
Walque, D., Dow, W., Nathan, R., et al.	Incentivising safe sex: a randomised trial of conditional cash transfers for HIV and sexually transmitted infection prevention in rural Tanzania	2012	Tanzania	Sub-national	Experimental	CCT