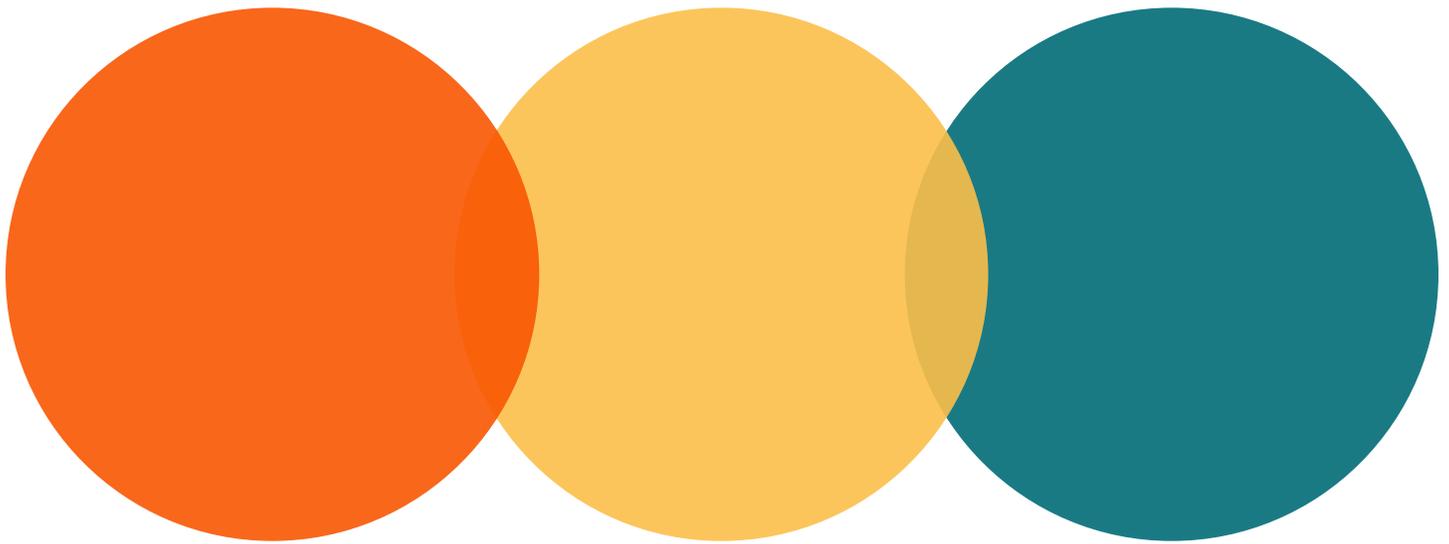


Revisiting What Works: Women, Economic Empowerment and Smart Design

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A Note on Methodology

Several evaluation studies used for this review, including some bundled in groups addressing the same intervention, reported outcomes for households rather than for individual women; however, women were the majority of those sampled. Because the studies are important and advance our knowledge of interventions significantly, we included them and assumed that the results reported for households could be extended to women in those households. This is a challenging assumption, particularly because substantial literature shows that household resources are not distributed equally within families and that girls and women lose out in this distribution, especially when households are poor and resources are scarce (World Bank 2012). The update explicitly indicates when this assumption is made and reports the percentage of women included in these studies. In such instances, the more women represented in the sample group, the more confidence we can have in the results. An additional complexity with some of these studies is the use of the term 'female head of household.' Most studies do not define this term when they use it. In some cases, the term seems loosely applied to the primary adult woman in the household, rather than the more widely accepted definition: a woman heading a household single-handedly, without a spouse or partner present. Appendix 1 contains additional details on the review's methods.

Introduction

Expanding women's economic opportunities benefits both women and society. Women's choices widen and societies gain from the contribution that women's income makes to economic growth and family wellbeing. These benefits are increasingly well-understood, but much less is known regarding the most effective interventions to empower women economically. The call to find out what works is long overdue.

Gender gaps in economic performance are pervasive and persistent — women earn less than men across countries and occupations, and gender gaps are especially salient in poor countries. A wide range of policies and programs — from long-term investments in health and education to short-term training programs and 'just-in-time' information on markets — can potentially help close these gender gaps and bolster women's economic advancement.

The Roadmap for Promoting Women's Economic Empowerment, published in 2013, was developed to help guide private sector actions and investments to empower women economically. The Roadmap used rigorous evidence from 136 empirical evaluations of policies and programs, as well as insights from commissioned papers, to review the effectiveness of actions that have direct, near-term impacts on women's economic outcomes. It asked what credibly works for women entrepreneurs, farmers, and wage and salaried workers in developing countries, and for whom — all women, very poor, poor, non-poor women and young women — and identified proven, promising and high-potential interventions to increase women's productivity and earnings in developing countries.

This update to the Roadmap revisits the accuracy of these ratings in light of new evidence published since 2013. Additionally, it identifies possible underlying mechanisms and summarizes those mechanisms in terms of a causal chain of measurable direct, intermediate and final outcomes (Box 1). Lastly, it identifies aspects of smart design that can increase the effectiveness of interventions aimed at economically empowering women by addressing the gender-specific constraints they face.

To ensure adequate coverage of the new evidence, we commissioned a systematic compilation of empirical evaluations starting in 2013. Ninety-six studies were identified that provide the subtext for this update and have been added to the Roadmap database (www.womeneconroadmap.org). We also commissioned three short papers on the topics of interventions that work to empower young women, the role of behavioral approaches and 'nudges,' and the role of networks and mentors to complement and enrich this update (Baird and Ozler 2016; Cassar and

Katz 2016; Berger 2016). These papers are also available on the Roadmap website.

There are several key similarities and one notable difference in study design between this update and the 2013 Roadmap. Consistent with the original Roadmap, the review includes only studies with rigorous designs that can unambiguously attribute a measured outcome to the intervention. It also favors actions that have direct, short-term impacts on women economically, while recognizing the importance of complementary investments in women's human capital (health and education) as well as inclusive policies and legal frameworks over time to both enable women to enter the workforce and thrive within it. Like the original Roadmap, this update does not cover educational interventions or educational outcomes, except when exploring the effects of cash transfers handed directly to young women for their education. However, while the Roadmap restricted the definition of economic empowerment to its objective dimensions measured broadly by increases in productivity and income, this paper expands the definition of economic empowerment to include subjective dimensions experienced by the individual woman, including increased agency and wellbeing, as outcomes that are both valued in themselves and instrumental in helping to achieve objective outcomes (Buvinic and Furst-Nichols 2015).

Ratings

As noted above, the 2013 Roadmap rated 27 interventions according to the strength of evidence available at the time. Nine fell into each of the categories of 'proven or being proven' and 'promising,' six into the category of 'high potential' and three into the category of 'unproven,' defined as follows:

Proven or being proven: Evidence for effectiveness or cost-effectiveness is robust or, in the absence of cost-effective data, simple and replicable in different settings, or weight of evidence is more than promising.

Promising: Credible evidence is positive, but not yet convincing in terms of breadth.

High potential: Intervention has been largely untested but is promising on conceptual grounds.

Unproven: Intervention has not been effective for the particular category of women in the specific settings where it has been evaluated.

This update revises or confirms ratings for 12 of the 27 interventions listed in the original Roadmap, as well as introduces one new intervention. We found no new evidence for the remaining interventions.

Ratings were revised for:

- Savings, from 'being proven' for all to 'proven' for non-poor and poor women
- Micro-credit, from 'unproven' to 'promising' for poor women
- High-quality business management training, from 'unproven' to 'promising' for poor women
- Networks and mentors, from 'high potential' to 'promising' for poor women¹

Ratings were confirmed for:

- Bundled services for entrepreneurs, as 'proven' for very poor women
- Demand-driven job services, as 'proven' for young women and 'unproven' for adult women
- Conditional cash transfers, as 'proven' for young women
- Unconditional cash transfers, as 'promising' for young women
- Subsidized, affordable childcare for wage and salaried workers, as 'proven' for all women
- Secure land rights for farmers, as 'proven' for all women
- Suite of integrated services for farming, as 'promising' for poor women
- Rural electrification, as 'proven' for poor women

New intervention:

- Standalone financial literacy training was added and given a rating of 'unproven' for poor and very poor women

Movement from high potential to promising requires that the intervention has undergone testing and that there is some evidence of positive results, but this evidence is not conclusive and lacks breadth (for instance, there is only one credible study that is able to attribute causality unambiguously). Movement from promising to proven or being proven usually requires more than one credible study with similar results replicated in different contexts or environments, giving some assurance that the result is generalizable (external validity). Movement from unproven to promising or proven will only happen if there is new evidence that counters the earlier finding that the intervention did not work for a particular category of women.

¹ 'Networks and mentors' discussed in this report encapsulates a number of different interventions from the original Roadmap: 'farmer associations and networks,' 'business associations and networks,' and 'mentors and role models.'

Just as the ratings we assign to interventions vary based on the breadth and depth of rigorous evidence available, the quality of evidence substantiating the causal chains of direct, intermediate and final outcomes for each intervention outlined below also vary. The theory of change is better documented for some interventions more than others: causal chains for savings, business management training, cash transfers, child care and land rights are supported by stronger evidence, whereas the evidence is still insufficient for micro-credit, networks and mentors, bundled services, demand-driven job services, suite of integrated services for farmers and rural electrification.

The remainder of this paper provides the rationale and summarizes the evidence for the new, revised and confirmed ratings as well as a concluding section that discusses the main implications of this update for the design of interventions and for advancing the evidence base on what works to empower women economically in developing countries.

Box 1: Measuring Economic Empowerment: Direct, Intermediate and Final Outcomes

Three types of economic empowerment-related outcomes can be identified: direct, intermediate and final. A direct outcome in women's economic empowerment programs is the knowledge, skill or asset acquired through a specific intervention. An intermediate outcome is the practice or behavior change that results from direct outcomes. The final outcome is the intended principal effect of the program. Final outcomes include, for example, increases in profits as a result of changes in business practices brought about by business training (Bandiera 2015).

Example: A program providing cash transfers (input) increases the available capital of a woman business owner (direct outcome), which she uses to invest in high-quality equipment and the hiring of additional workers (intermediate outcomes), which then increase the productivity and profits of her business (final outcomes).

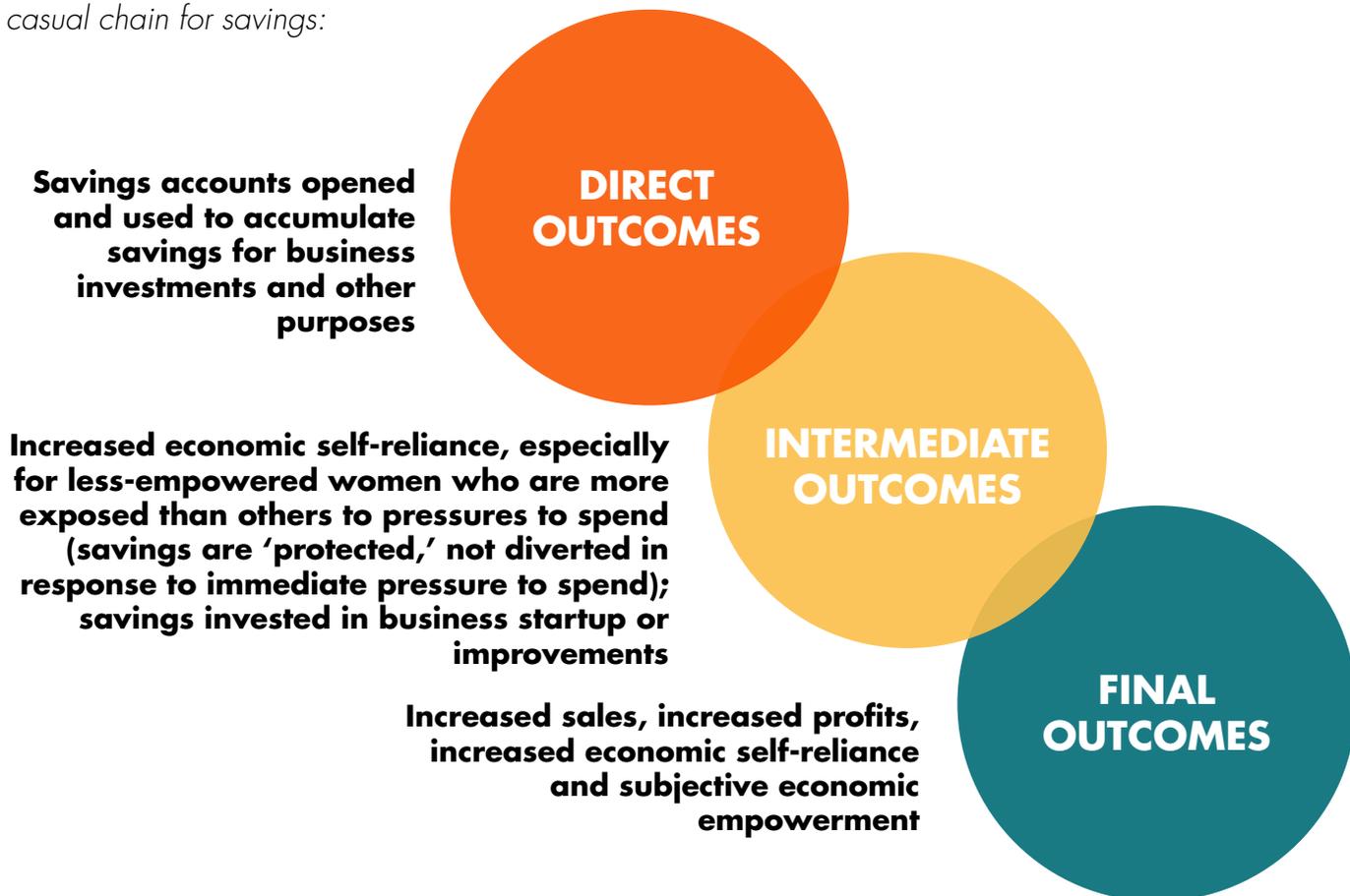
Revised Ratings

Savings

Description: Secure (private) individual savings accounts, including liquid accounts with no restrictions on withdrawals and accounts that restrict withdrawals and/or build in some form of commitment.

Revised rating: New evidence justifies upgrading individual savings accounts from 'being proven' for all women to 'proven' for all women with the exception of very poor women, for which savings need to be bundled with other interventions to be effective.

A casual chain for savings:



Evidence suggests that secure (private) individual savings accounts, including in the form of commitment accounts and liquid savings accounts, have positive economic outcomes for women across different countries and situations, partly by responding to women's demand for such accounts and by helping to label and protect money for specific business uses. This is especially the case for less-empowered women who particularly benefit from savings accounts that include some form of commitment, requiring them to keep and accumulate deposits for a particular goal. However, the positive impacts of savings may not extend to very poor women who might be too poor to save or live too far away from a savings institution

and may require savings to be part of a package of productive-oriented interventions.

The 2013 Roadmap rated savings accounts as ‘being proven’ to increase women’s earnings based on credible evidence from two randomized controlled trials (RCTs). The first RCT in the Philippines showed that savings accounts that froze deposits via a commitment feature were particularly attractive to less-empowered women and improved their decision-making authority in the family (Ashraf, Karlan and Yin 2006). The second RCT in Kenya demonstrated that access to individual savings accounts increased savings rates, business investments and incomes among women entrepreneurs (Dupas and Robinson 2013a).

The 2013 Roadmap did not rate savings as ‘proven’ because, with only two studies, there was not enough evidence to demonstrate the impact on women across different countries or settings. Moreover, the studies did not shed light on the mechanisms by which savings increased women’s earnings and decision-making abilities. New evidence from field experiments in Kenya, Chile and Nepal, along with a study in Malawi focused on men, provides justification for changing the Roadmap’s rating to ‘proven.’

In rural Kenya, labeling group savings for a specific purpose and a soft commitment device (such as a lockbox and key) generated significant increases in health savings for poor members of informal savings and credit groups (74 percent women members). This result suggests that mentally labeling the use of money makes it less available for other uses, including pressures to share monies with relatives, to which women are particularly susceptible. Uptake of these secure savings accounts was very high (66 to 97 percent), and there were lasting behavioral effects — as the usage of safe deposit boxes continued to be substantial three years after the initial study (Dupas and Robinson 2013b).

A second field experiment in Kenya further supports the idea that women want secure savings accounts that enable them to more easily resist pressures of funds transfers. ATM cards with reduced fees, but also reduced security (since husbands could use the cards), were not used by women and had no impact on female-owned individual accounts, showing that a technology meant to make financial services more accessible to the poor can have unintended effects when individuals (women) are subject to outside demands on their resources. These findings underline the importance of secure individual accounts for women (Schaner 2014). The preference for individual versus joint accounts, both for women and men, is documented in a study that provided free bank accounts to rural poor unbanked households in Western Kenya. As part of the study, only 5 percent of respondents opened joint accounts, and both men

and women significantly increased bank savings when they had an individual account (Dupas, Keats and Robinson 2016).

Findings from an experiment in Malawi indirectly suggest that the preference for commitment saving devices to guard against pressures from the individual or others is specific to women. In this case, smallholder tobacco farmers (94 percent men) preferred saving in ordinary rather than commitment accounts, with 89 percent of study subjects choosing ordinary savings accounts (Brune et al. 2013). We hypothesize this is because the men were not under significant pressure from themselves or others to spend, and did not need to use the protective crutch of a commitment account.

In contrast with the Philippines and Kenya examples above, in urban Chile there was particularly high uptake of free, liquid savings accounts among micro-entrepreneurs who were not head of household, were more exposed to family pressures than others and were 'socially taxed.' Women constituted 91 percent of the study sample. For program participants, liquid savings reduced reliance on short-term debt, improved their ability to weather economic shocks (indicating an advantage of liquid over commitment savings) and still protected resources from being shared with others (Kast and Pomeranz 2014). Liquid savings in the Chile case seem to have had similar mental labeling features to commitment savings in the cases mentioned earlier, perhaps because of the greater anonymity (and privacy) that occurs in urban settings and the more formal (secure) nature of banking in Chile.

In Nepal's urban slums, there was high demand from female-headed households for simple, liquid savings accounts offered through mobile bank branches, with no bank fees. When given the opportunity, the majority of eligible households (84 percent) opened an account, showing women's untapped demand for saving vehicles, including those that reduce transaction costs by making access more convenient. A year later, access to savings had increased monetary assets by more than 50 percent and total assets by 16 percent, without crowding out other assets, especially for households at the bottom of the income distribution (Prina 2013). The evidence is consistent in suggesting that gender inequalities are a significant factor affecting the impact of savings accounts on women's economic outcomes. Women's access to individual secure (private) savings accounts help foster economic self-reliance and overcome a lack of control over financial resources, especially for those who have less decision-making authority in the household or are less empowered. Mentally allocating or more strictly earmarking money to savings makes the money less fungible and helps women feel less obligated to share available money with others (Hoff and Stiglitz 2016). This 'empowerment' feature for women adds to the more widely accepted

Women's distinct preference for savings may also be because they tend to be more risk-averse than men in financial risk preferences and may prefer to keep savings in case of emergencies and use their own savings, rather than borrowed capital, when making business investments (Croson and Gneezy 2009).

benefits of savings for women and the poor more broadly, who need saving vehicles to smooth consumption and finance productive investments, but have restricted access to formal saving vehicles (Karlan, Ratan and Zinman 2014).

Women's distinct preference for savings may also be because they tend to be more risk-averse than men in financial risk preferences and may prefer to keep savings in case of emergencies and use their own savings, rather than borrowed capital, when making business investments (Croson and Gneezy 2009). A different but complementary explanation for women's greater risk aversion is that women face a wider set of risks — particularly health risks associated with fertility and childcare — that men do not, which may lead them to make more conservative choices, such as opening savings accounts rather than purchasing agricultural insurance, an outcome that was observed in a randomized field experiment with male and female farmers in Burkina Faso and Senegal (Delavallade et al. 2015).

The experimental evidence is mostly restricted to poor women, but the benefits of increasing access to savings accounts are believed to extend across income groups. The exception may be very poor women, and particularly very poor rural women, who may be too poor to save at all or live too far away from bank branches, as recent evidence from lack of uptake for bare-bones free bank accounts in rural Malawi and Uganda suggests. According to the study, 72 percent of those interviewed in poor, unbanked households in Malawi and 68 percent in Uganda were women and the authors speculate that both poverty and distance from banks were main reasons for the lack of interest in opening free savings accounts (Dupas et al. 2016). In contrast, the very poor women in the urban slums of Nepal who opened savings accounts had access to mobile bank branches that reduced travel costs (see above).

For savings to be impactful for very poor women, it needs to be part of a package of productive, oriented interventions, as discussed in the 'bundled services' section on page 18.

Micro-Credit

Description: Small and very small loans to micro-entrepreneurs who lack typical forms of collateral and/or an established credit history, with weekly or monthly repayments, varied interest rates and individual or group (joint) liability.

Revised rating: New evidence on micro-credit revises the 2013 Roadmap's rating from 'unproven' for the poor and very poor to 'promising' for poor women, with the caveat that the positive economic impact of standalone micro-credit is small and by no means transformative.

A causal chain for micro-credit:

Borrow and invest at least some of the credit to start a new business or improve a current business

**DIRECT
OUTCOMES**

Expanded business activity, some increase in sales, small or no increase in profits, increased financial choices, increased financial risk taking (over time)

**INTERMEDIATE
OUTCOMES**

More choice or financial freedom in dealing with economic shocks, coping with risk, making business investments, transitioning to wage employment, but no significant effects on household income or consumption; no effects on subjective economic empowerment. Increased financial risk-taking and improved business outcomes with repeat borrowing

**FINAL
OUTCOMES**

Credible evidence summarized in the 2013 Roadmap showed that capital alone, as a small loan or grant, was not enough to grow women-owned subsistence-level firms (Duvendack et al. 2012; Karlan and Appel 2011; Mehra et al. 2013). The binding constraints women micro-entrepreneurs face, compared to men, limit the impact of capital alone on profits and growth, and supported the rating of 'unproven' for micro-loans or grants as standalone interventions to empower poor and very poor women economically.



These gender-specific binding constraints include the lower-growth sectors wherein female-led businesses mostly operate; time and social constraints, including pressures from self or others to spend; and the fact that many women micro-loan clients are 'necessity' entrepreneurs and would be better off in wage employment if these jobs were available. In addition, risk aversion may lead women to prefer using savings rather than credit for investing in the business and borrow sub-optimally (Delavallade et al. 2015).

New evidence provides a more nuanced view of the effects of micro-lending for women and justifies moving the rating from 'unproven' to 'promising,' acknowledging that micro-lending in itself may not be transformative, but may contribute to expanding financial freedom and encourage risk-taking over time. The evidence comes from data that followed households in Bangladesh over two decades and comparable outcomes from six randomized evaluations of micro-credit. In addition to this evidence, a meta-analysis of 37 impact evaluation studies of different types of interventions for entrepreneurs found that, for women, micro-credit worked better than business training. This is likely because women are more credit-constrained than men and may need capital in order to be empowered to make business decisions (Cho and Honorati 2014).

Panel household survey data for Bangladesh covering a 20-year period shows the benefits of cumulative micro-credit borrowing on household income and poverty reduction. The study was careful in correcting for attrition (14.7 percent over the total number of years), which was correlated with household poverty (poorer households dropped out over time more so than less poor ones). Women in the household received more than two-thirds of the loans, generally from more than one micro-finance institution, and increased loan-taking over the years (there was 4 percent average annual growth in borrowing amounts over the 20 years). Benefits were measured by increase in per capita income, male and female labor supply, non-land assets, schooling and, importantly, reduction in extreme poverty. Benefits took years to materialize but were significant and greater for women than for men. The study found, for instance, that a 10 percent increase in female borrowing reduces extreme poverty by 5 percentage points (Khander and Samad 2014).

The authors of the study speculate that the practice of repeated borrowing over time leads to more financial risk-taking, which would be particularly relevant for the more risk-averse female versus male clients, improving their business performance and earnings. Similarly, a two-month grace period versus immediate repayment requirements for poor urban women borrowers in Kolkata, India, significantly raised long-run (three-year) business profits by encouraging more risk-taking (Field et al. 2014).

The results from six randomized evaluations of micro-credit projects, three of which lent only to women (India, Mexico and Mongolia) and three that lent to both women and men (Bosnia and Herzegovina, 40 percent female; Ethiopia, 13 percent female head of household; and Morocco, 6 percent female head of household), find modest uptake, heterogeneity across projects in the uses of credit and some evidence that expanded access to credit increased business investment, although the effect was not big enough to drive profits upward significantly and increase household income. Results were measured at different intervals across projects, from roughly one year to three years after the credit was first offered, and most measures were reported in aggregate for households. While credit did not have overall transformative effects, it seemed to expand freedom of choice in terms of occupation, business scale, consumption and risk management, and may have made people more economically self-reliant. Women reported increases in household decision-making in only one of the four studies that measured female empowerment (Mexico), but there was no evidence of harmful effects in any of the projects (Banerjee, Karlan and Zinman 2015).

A large proportion of women in developing countries are micro-entrepreneurs out of necessity only; they would rather work for wages but encounter many more obstacles than men finding a job.

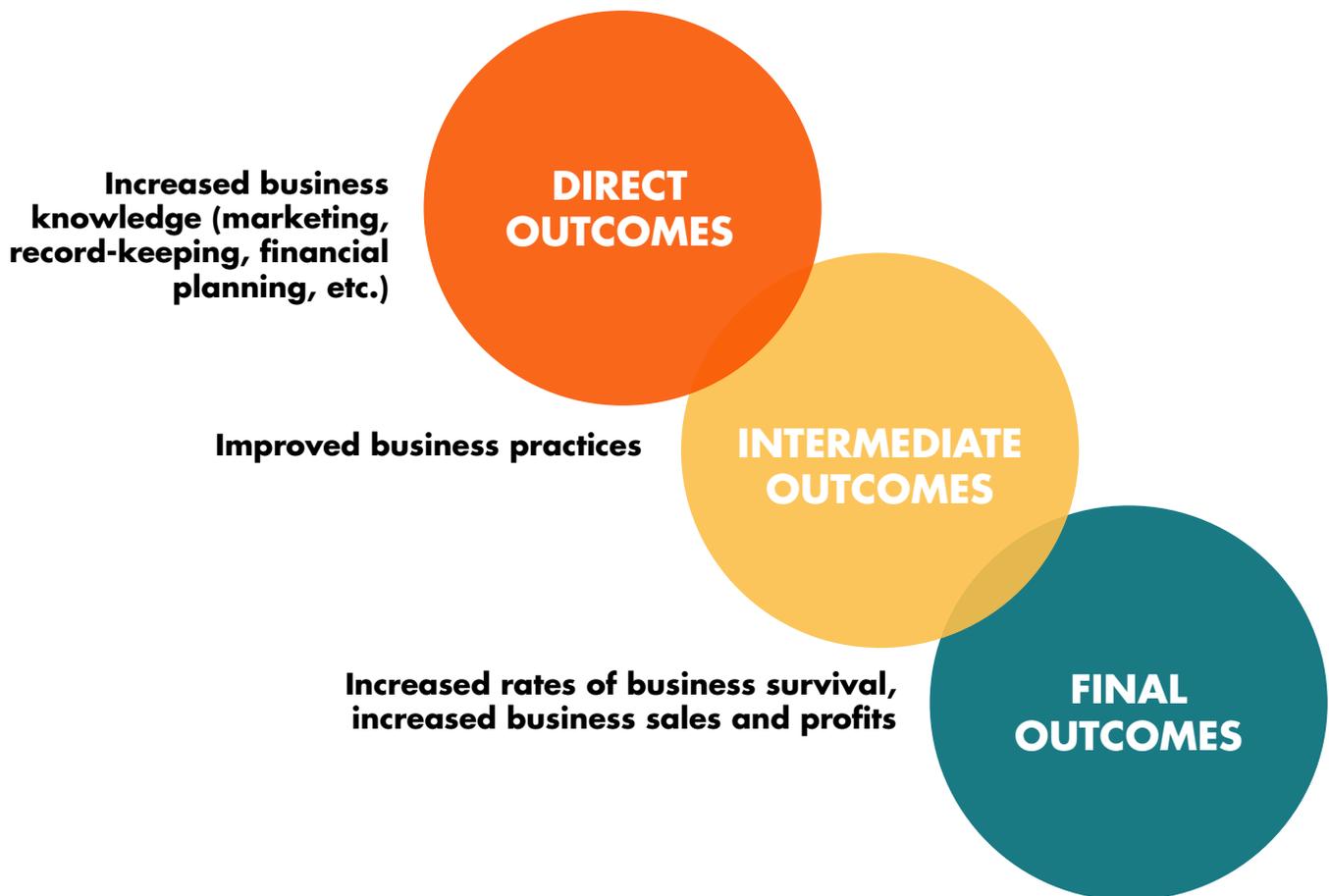
Measured over a longer timeframe, these projects could replicate the findings from Bangladesh, especially if the access to credit enables some women borrowers to broaden their occupational choices and find wage employment instead of continuing to work independently. A large proportion of women in developing countries are micro-entrepreneurs out of necessity only; they would rather work for wages but encounter many more obstacles than men finding a job. As such, 'culling' necessity entrepreneurs would increase the likelihood that those receiving credit would have the skills needed to maximize business performance and outcomes. In fact, research with a large sample of women micro-entrepreneurs (more than 10,000) in urban Mexico found significant differences in business performance and management practices, controlling for cognitive skills, between 'opportunity' and 'necessity' micro-entrepreneurs (those who report starting a business because they saw a market need versus those who said they needed to earn money), favoring the former and confirming that entrepreneurial abilities matter for shaping positive business outcomes (Calderon et al. 2016).

Business Management Training

Description: Training on record-keeping, marketing, financial planning and/or other aspects of operating and expanding a business, of varied content, quality of instruction and duration.

Revised rating: Updated evidence suggests that high-quality business management training of reasonable duration can have positive economic outcomes for poor women entrepreneurs, justifying rating it as 'promising' for them.

A causal chain for business training programs for poor women micro-entrepreneurs:



The 2013 Roadmap rated business management training delivered as a standalone intervention as 'unproven' for very poor women and 'being proven' for non-poor women based on a systematic analysis of 20 such programs across a wide spectrum of countries (from Bosnia and Herzegovina to Tanzania). It left the category of 'poor' unrated, due to a lack of more specific evidence on the incomes of women-owned subsistence-level firms. The analysis of the 20 programs did acknowledge, however, that the varying nature and quality of training programs, low uptake and small, heterogeneous

samples made it difficult to statistically detect anything but large effects in the evaluations reviewed (Woodruff and McKenzie 2013).

The updated evidence since 2013 provides a more robust explanation of the benefits of standalone business management training and suggests that high-quality training of reasonable duration can have positive economic outcomes for poor women entrepreneurs, justifying updating the rating to 'promising' for them. Findings from a six-week fully subsidized, high-quality, basic business education for poor female micro-entrepreneurs in rural Mexico showed increased earnings among program participants, largely through improved accounting practices (Calderon, Cunha and de Giorgi 2013). Similarly, a three-month intensive training (three hours, three times weekly) delivered by specialized professionals helped increase business sales of women micro-entrepreneurs in Lima, Peru. Although in the short term, only training plus customized technical assistance to the firm showed an effect on sales, women who received training without customized assistance were able to adopt improved business practices and make business adjustments, albeit at a slower pace than those who also received technical assistance, and show increased sales two years after the training was first offered (Valdivia 2015).

On the other hand, a five-day-long International Labor Organization (ILO) business training program for women micro-entrepreneurs in Kenya yielded a small yet significant improvement in business practices, but only modest impact on sales, no impact on business survival and no self-reported changes on empowerment. With such modest gains, the researchers calculated that the program was not cost-beneficial (McKenzie and Puerto 2015). It is likely that the five-day program was not intensive or long enough to increase business knowledge or change business practices significantly.

McKenzie and Woodruff (2015) analyzed business practices and business performance of mostly informal firms for seven different samples between 2008 and 2014, but do not report the findings disaggregated by the sex of the business owner. However, women-owned firms made up three of the seven samples (Kenya, Mexico and Sri Lanka), which gives confidence that the findings are relevant for women. McKenzie and Woodruff found that firms with better business practices also have better business performance, measured by higher rates of firm survival and sales growth. They conclude that good business practices are important to long-term business success and that the insignificant effect of business training programs stems from their inability to change business practices sufficiently. For instance, they documented that the average training program increases the use of good business practices only around 6 to 7 percentage points. A high-quality, intensive business program, like



Box 2: Designing with women's time and travel constraints in mind

Even when interventions are set up to target women, service provision may still be gender-blind if program designs fail to take into consideration women's greater time and travel constraints, when compared to men's:

- Only 42 percent of the roughly 2,000 women micro-entrepreneurs who started a three-month-long business training program in Peru (three sessions a week, three hours each) attended at least half of the training sessions. Travel time to attend classes and childbearing demands contributed to these low retention rates (Valdivia 2015).
- One-third of trainees dropped out of a three-month vocational training program for vulnerable youth in Malawi. Attrition rates were higher for young women, who dropped out more because of travel constraints and illness, while young men dropped out to take up unrelated job opportunities (Cho et al. 2013).

Programs that reduce travel costs and take women's household obligations into account succeed in reaching and benefitting them:

- The Empowerment of Adolescent Girls Project (EPAG) designed skills trainings around girls' needs and constraints; training sessions were held in local communities to cut down on travel time and associated attrition rates, and every training site offered free child care. The program was found to increase girls' employment by 47 percent and increase their weekly incomes by 80 percent, and effects were sustained more than a year after trainings ended.
- The Agricultural Rehabilitation and Recovery Support Project (PARRSA) in the Democratic Republic of the Congo seeks to improve agricultural productivity among smallholder farmers, in part by taking a gender-sensitive approach. In addition to reserving half of the program's demonstration plots for women and ensuring that a portion of local trainers are female, the program also delivers seeds directly to villages in order to overcome gender gaps in agricultural productivity caused by women's limited access to transport.

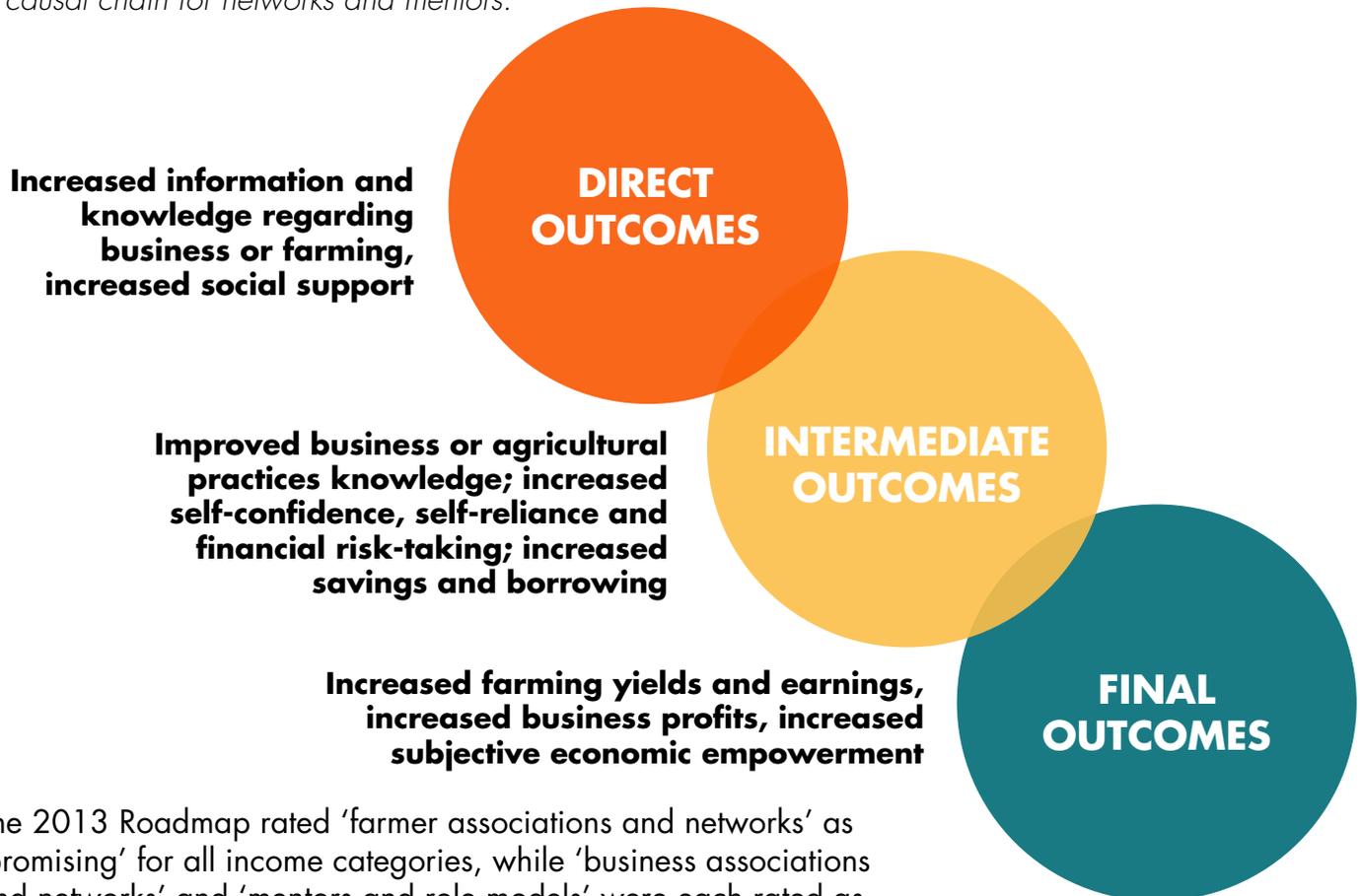
the one in Mexico or the one in Lima, Peru, can improve business practices sufficiently to improve business outcomes, if uptake is high and attrition rates are low. This means that training programs must be high-quality (in terms of training materials, trainers, and duration) and address the constraints (time and other costs) that women micro-entrepreneurs face to attend and complete the training.

Networks and Mentors

Description: Access to informal groups and more formally constituted associations as well as one-on-one interactions, including with those with more career expertise, in the same sector or line of work.

Revised rating: New evidence supports updating the rating 'associations and networks' and 'mentors and role models' from 'high potential' to 'promising,' to increase the impact of other interventions aimed at improving the economic outcomes of poor women farmers and entrepreneurs.

A causal chain for networks and mentors:



The 2013 Roadmap rated 'farmer associations and networks' as 'promising' for all income categories, while 'business associations and networks' and 'mentors and role models' were each rated as 'high potential.' New evidence from India, Nicaragua, Uganda and Ethiopia, as well as a systematic review, justifies upgrading the rating of networks and mentors for both women entrepreneurs and farmers given their role in complementing and reinforcing the effects of interventions such as business training, cash transfers and agricultural extension (Berger and Yudon 2016). The complementarity seems to work both through acquiring information and obtaining social support, although it has been difficult to isolate the independent effects of networks and mentors from the effects of the interventions they complement. In addition, we do not know if associations and networks as well as mentors and role models can be treated as equivalent or if there are distinct features to each.

An intriguing study of female micro-entrepreneurs in India with a savings account in a Self Employed Women's Association (SEWA) bank suggests that the social influence of a peer may increase the impact of a short-term business training program, especially among women subject to conservative social norms. Women trained alongside a friend reported increased business activity and income four months after they were trained, while there was no change in reported business behavior for women who were trained alone (Field et al. 2015). The presence of the friend seemed to have raised the aspirations of these women to work outside the home. These SEWA women, however, are a self-selected sample, so it is difficult to generalize the findings.

In rural Nicaragua, the combination of a conditional cash transfer (\$200 for investment in small, non-agricultural businesses) and access to promotoras (mentors put in place to enhance information-sharing and compliance with program requirements) increased women's incomes and had positive subjective effects — i.e., it increased women's optimism about the future and lowered indicators of depression (Macours and Vakis 2014). Additionally, women cotton farmers in a Ugandan agricultural extension program who opted to pair up with a peer to set goals and share information experienced greater cotton yields relative to the control group, for all but the highest performing farmers, who likely already had access to information on effective farming practices (Vasilaky and Leonard 2015). This suggests that social support may be particularly beneficial for subsistence-level women farmers, who otherwise may not have access to the information-sharing that occurs through networks.

Box 3: Upending an unequal playing field for women farmers in Africa

New evidence shows that ensuring equal access to agricultural extension and inputs (e.g., information, land, seeds, fertilizer and equipment) is not enough to close the gender gap in productivity between female and male farmers in Sub-Saharan Africa. Even when access was guaranteed, women farmers in Ethiopia and Uganda benefited less than men farmers from extension advice, suggesting that the delivery of these services is “better attuned to the needs of male farmers” (World Bank and ONE Campaign 2014). In Uganda, for example, there is a 29.5 percent gap in productivity between male- and female-managed plots, not attributable to disparities in agricultural inputs. Ali et al. (2015) conclude that most of the gap can be explained by differences in men's and women's childcare responsibilities and transport access, which extension service providers often fail to take into account when designing programs. These findings demonstrate that agricultural policy will have to explicitly acknowledge the existence of female farmers as separate from male farmers and design policy to address their different needs, including erasing gender-biased service provision and considering additional constraints restricting women farmers' productivity.

In rural Ethiopia, the personal aspirations of poor women (and men) increased after viewing documentaries featuring male and female role models from poor backgrounds who described how they improved their socio-economic position. The results persisted, though to a lesser extent, for six months after watching the documentary (Bernard et al. 2014). The intervention also had positive effects on participants' savings and borrowing behavior.

Finally, Brody et al. (2015) conducted a systematic review of economic self-help groups present across a wide variety of low- and middle-income countries and concluded that such groups have positive, statistically significant effects on women's economic (in addition to their social and political) empowerment. Through improved social networks, women experience solidarity with their peers, as well as independence in financial decision-making and increased respect within their households and communities (Brody et al. 2015).

It appears from the evidence that networks and mentors may be particularly important for poorer women and for less-empowered women, who may need the information and social support others can provide to gain the knowledge and confidence to make appropriate business choices and take greater financial risks (Katz and Cassar 2016). Future work needs to be done to clarify the mechanisms and independent contributions of these interventions for different categories of women.

Women trained alongside a friend reported increased business activity and income four months after they were trained, while there was no change in reported business behavior for women who were trained alone.

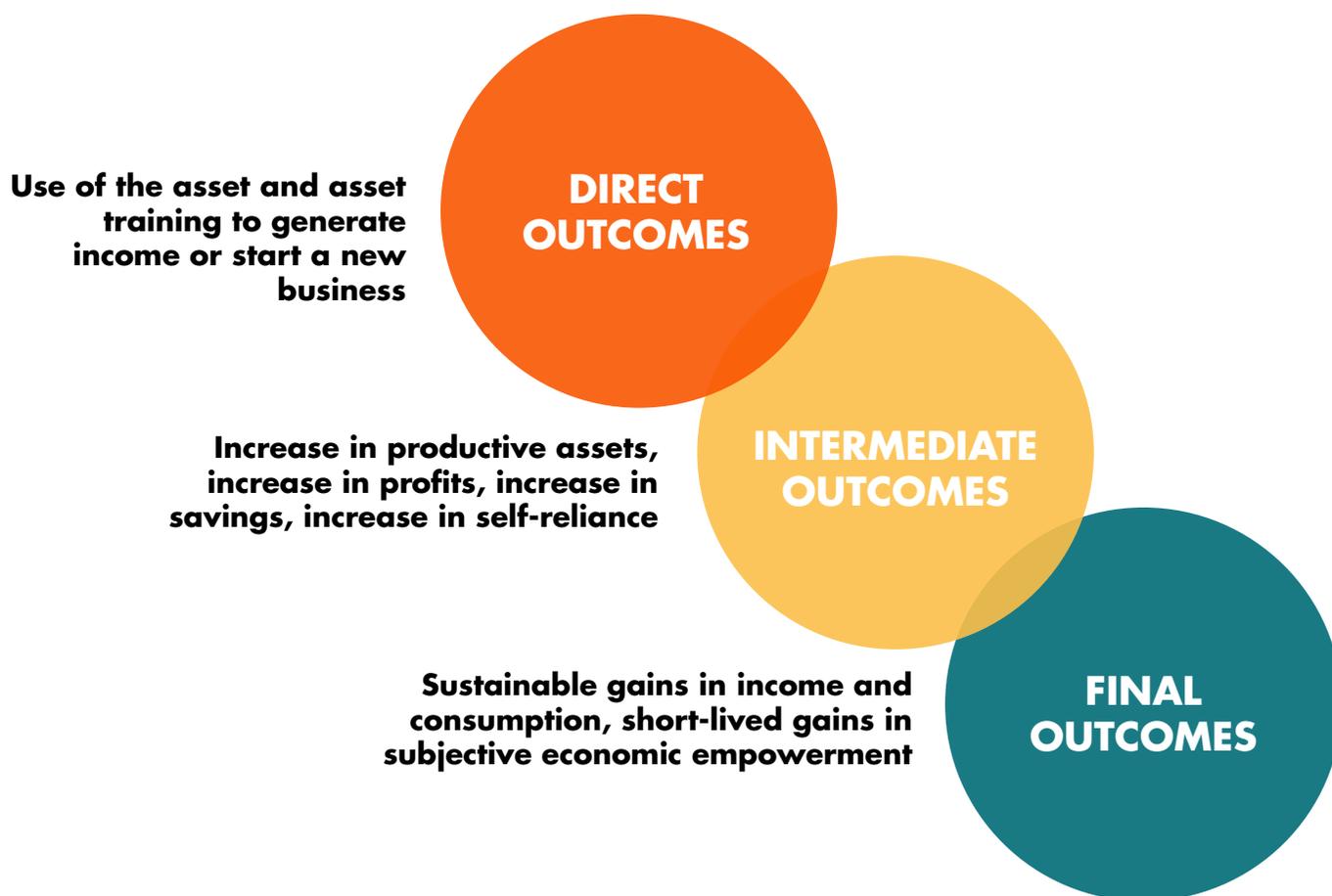
Confirmed Ratings

Bundled Services

Description: Combined ('bundled') provision of a large (often in-kind) capital transfer, asset-specific training and technical assistance, cash stipend and access to savings, and often health information and life skills coaching.

Confirmed rating: Persuasive new evidence makes the case that bundled services increase women's incomes and are sustainable and cost-effective, further endorsing the 2013 Roadmap's 'proven' rating for very poor women. Since less-costly interventions are available for the poor and the evidence is on the very poor, we restrict the 'proven' rating to the very poor.

A causal chain for bundled services for the very poor:



The 2013 Roadmap reviewed evaluations of Building Resources Across Communities (BRAC) ultra-poor programs in Bangladesh and India for very poor women that bundled the provision of a large productive asset transfer, such as a cow or goats, with intensive training and technical assistance to manage the asset, a cash stipend and access to savings, and found that these bundled interventions transformed women's occupational choices and, while more expensive up front, were still cost-effective over the long term. Based on these findings, the 2013 Roadmap concluded that for self-employed women in subsistence-level work, more is better, and rated bundled services as 'proven.'



New evidence that summarizes randomized impact evaluations of similar BRAC ultra-poor programs for the very poor in six countries finds that this 'big push' does help overcome poverty traps and has positive economic outcomes (on per-capita consumption, household assets and food security) that are maintained a year after the program ends (or 24 months after the start of the intervention). There are large increases in savings (that go beyond required savings during the first year) and, while the total program costs are comparatively high, benefits are significantly greater than costs in all but one of the cases (Banerjee et al. 2015).

The studies' samples are representative of the very poor and results are mostly reported for households rather than individuals; however, in four of the six countries, the programs targeted women in these very poor households: in India and Pakistan, households with able-bodied female members and no economically active males in the household are preferred; in Ghana households with no female members are excluded; and, in Honduras, female heads of household are targeted and required to open a savings account.² The studies tracked some individual measures, including those aimed at women's empowerment.

This new evidence is persuasive in making the case that bundled services for very poor women increase income and are sustainable and cost-effective, further endorsing the 'proven' rating in the 2013 Roadmap. Since the evidence in these experiments is restricted to the very poor and alternate interventions (simpler and less costly) are available for poor women, we restrict the 'proven' rating to the very poor. The mechanisms, however, that explain why this 'big push' from bundled services may work especially well for very poor women remain unclear. We think that the transfer of a large physical asset nudges very poor women (who tend to be under significant pressures to spend) to keep rather than consume the asset.

² The remaining two countries in the study are Ethiopia and Peru.

However, a recent study of very poor young women (aged 14 to 30) in conflict-affected regions in Uganda found sizeable increases in income with a comparatively large cash grant (US\$150), five-day business training and ongoing supervision, suggesting that a sizeable cash grant may work as well as a physical asset and would be cheaper and easier to deliver (Blattman et al. 2015).

An additional issue (similar to the evidence on micro-credit) is a reported short-lived effect of bundled services on women's empowerment. Banerjee and colleagues (2015) found that an increase in women's empowerment picked up in most programs dissipated within the year. A recent evaluation of a BRAC ultra-poor program in Bangladesh found that ownership and control over transferred livestock increased for women (who also reported 'intangible' benefits such as more social capital) but that the ownership of new agricultural investments mobilized by the project went to men, suggesting a reason for why empowerment effects may be short-lived (Roy et al. 2015).

One possible explanation for the lack of sustained empowerment is that women's increased income and control over the increased income is not sizeable enough to overcome traditional social norms. An evaluation of a broadly similar program in Burkina Faso showed that women's control over and ownership of assets improved and community perceptions about who can own and control certain assets also shifted, suggesting that changes in social norms can happen, perhaps in less-conservative environments (van de Bold et al. 2013). An alternative explanation is that economic empowerment effects are not well measured (particularly when measures are based on self-reports, which can be unreliable) or do not necessarily transfer to other domains of women's lives, and most studies do not report separate effects on economic empowerment versus overall empowerment.

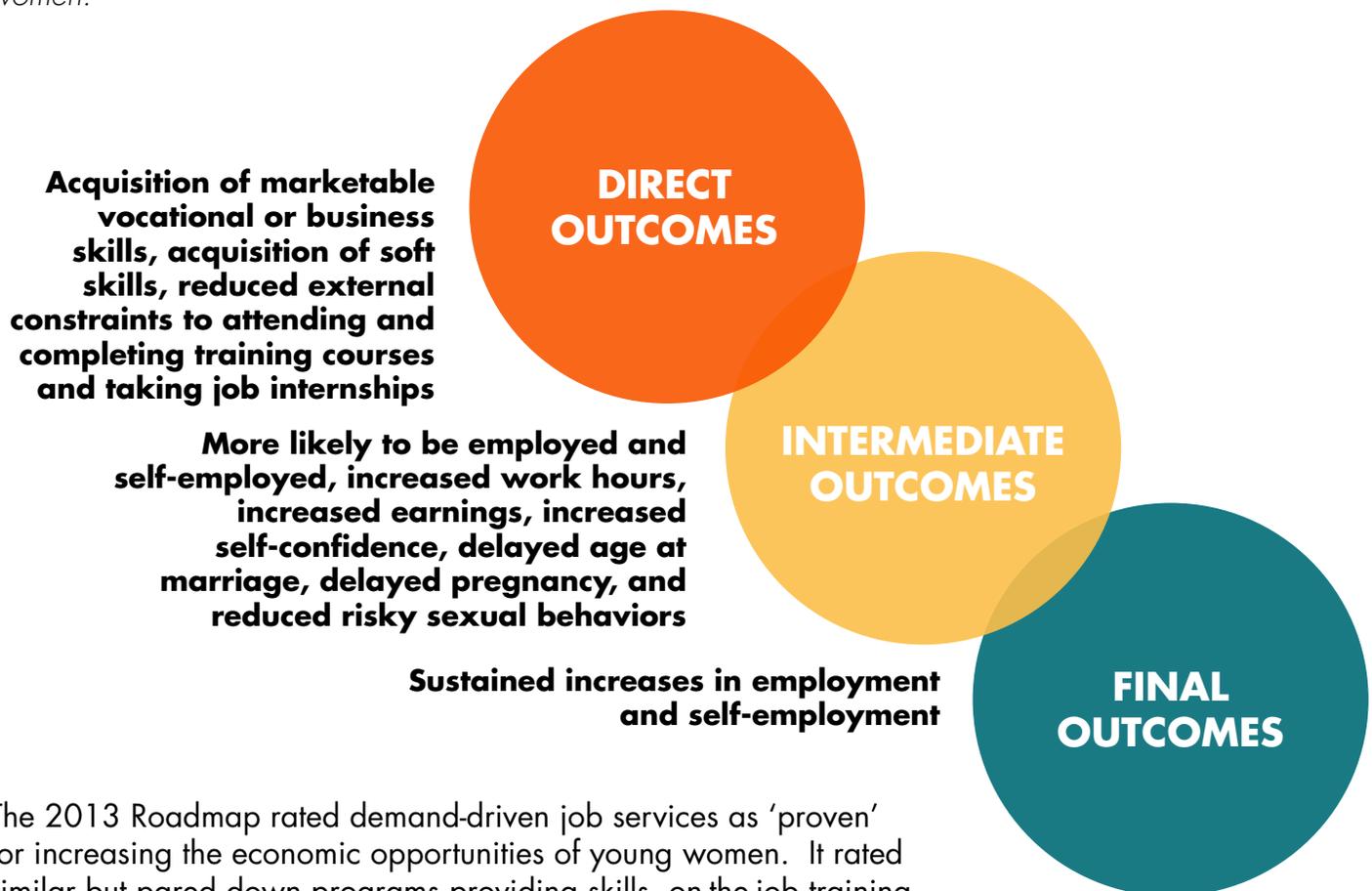


Demand-Driven Job Services

Description: Vocational skills or business development training that responds to market demand, plus often job internships, vouchers or subsidies to employers and stipends for transport and child care for the unemployed or to integrate young people into the labor market.

Confirmed rating: Updated evidence reinforces rating demand-driven job services as 'proven' for increasing the economic opportunities of young women, provided that the programs level the playing field for women in training and working environments; it similarly reinforces the finding that these interventions are 'unproven' to increase wage employment among adult women.

A causal chain for demand-driven job services programs for young women:



The 2013 Roadmap rated demand-driven job services as 'proven' for increasing the economic opportunities of young women. It rated similar but pared down programs providing skills, on-the-job training and/or wage subsidies, often implemented at scale by governments, as 'unproven' to increase wage employment among adult women.

The 2013 Roadmap evidence was based largely on a generation of youth labor training programs in Latin America and the success of exporting this basic model to the starkly different environment of post-conflict Liberia. The 2013 Roadmap found that for programs designed to integrate young people (male and female) into the labor market, key elements of success include explicit ties to private sector

In Uganda, vocational and life skills training, coupled with social clubs established so that adolescent girls could gather in a safe space, increased participant earnings and delayed marriage, reduced fertility and decreased risky health behaviors.

firms to identify and respond to market demands, vocational or business development training and 'soft skills' training (or training on personality traits and behaviors valued in the workplace), job internships and vouchers or stipends. The 2013 Roadmap noted, however, that social restrictions could erase or overturn these programs' short-term benefits (as was the case with the short-lived success of a training and voucher program in Jordan).

New evidence reinforces the rating and these conclusions, suggests some of the elements that may contribute to explaining these programs' effects when they are sustained and highlights external constraints that should be addressed in program design to level the playing field between young female and male trainees.

Specifically, recent evidence from Uganda, Nepal, Kenya and India replicates the positive outcomes of well-designed life skills training programs for young women that are sustained in follow-up measures a year or two later. The exception is a program in Tanzania. In Uganda, vocational and life skills training, coupled with social clubs established so that adolescent girls could gather in a safe space, increased participant earnings and delayed marriage, reduced fertility and decreased risky health behaviors. The authors attribute the successful outcomes evident two years after the program ended to the combined effect of health and economic empowerment interventions (Bandiera et al. 2014). In Tanzania, instead, a similar program (that also added micro-credit services) had no effects on girls' economic, health or social outcomes (Buehren et al. 2015). The absence of positive results was attributed to lack of program resources causing weaknesses in implementation, underscoring again (as in the case of business management training described above) that only good quality training will ensure learning the new skills.

In Nepal, technical and life skills training combined with job placement support services increased non-farm employment and earnings of young women and men, and had a positive impact on savings and self-confidence a year after the training ended. Employment gains were greater for young women, which replicates findings in Latin America, and is likely due both to the fact that young women have lower baseline employment levels and that young men have an easier time finding jobs, regardless of whether they participated in the training. The program had no impact on fertility (Chakravarty et al. 2016).

In another study, vulnerable urban youth in Kenya received technical and life skills training and participated in internships with private firms. Forty percent of the sample was female and more than 20 percent of the sample women had children. Fifteen months after the program ended, employment was significantly higher for males

and only marginally higher for females, partly because the ability to detect significant differences was hampered by the many young women who dropped out. However, wage earnings increased dramatically for young women (a 132 percent increase over earnings of females in the control group), more so than for young men, and this was especially the case for less-educated young women. Females particularly liked the life skills training, although it showed no impact on earnings or accumulated savings. The authors conclude that young women benefitted more from the program than young men and that less-educated young women benefitted most (Honorati 2015).

A subsidized six-month vocational training program in stitching and tailoring for young women residing in poor slums of New Delhi, India, increased employment, self-employment and earnings substantially over controls. Positive effects were sustained 18 months after the training ended and were attributed to an increase in skills rather than an increase in self-confidence or the positive effect of having a training certificate (Maitra and Mani 2014).

Analyses showed that program benefits exceeded costs in all the programs just mentioned. Many of the programs, however, had low uptake and high attrition, especially from females. In Tanzania, 42 percent of those interviewed at baseline dropped out. In Kenya, attrition rates for young women in the program were between 22 to 23 percent (and increased to 30 percent for women in the control group). In India, only 56 percent of the trainees completed the six-month-long program, partly because of child care and travel constraints. A 10-minute increase in time taken to walk to the training center was associated with a 14 percentage point reduction in the likelihood of project completion (Maitra and Mani op cit). Similarly, one-third of participants in a three-month-long apprenticeship program for poor vulnerable youth (orphans or school dropouts) aged 15 to 24 in Malawi dropped out. Female participants dropped out much more often because of external constraints, whereas their male counterparts did so to take advantage of unrelated job opportunities. The training was more costly for women, who had less access to financing, used more of their personal savings and were treated worse than men by the trainers, who favored boys over girls and provided them with more food, stipends and paid work during the apprenticeship (Cho et al. 2013).

It appears that the acquisition of vocational or technical skills is critical in determining positive employment outcomes for young women across programs while the acquisition of softer personality-related skills is less so. It is unclear under which conditions these programs positively influence young women's sexual and



What is clear is that to attract young women, these programs must work on leveling the playing field: assessing and reducing the gender-specific time and financial constraints, providing childcare subsidies or options and reducing biases against young women as trainees and workers from both trainers and potential employers.



reproductive behaviors and whether positive sexual and reproductive health outcomes are necessary to sustain economic empowerment effects over time. What is clear is that to attract young women, these programs must work on leveling the playing field: assessing and reducing the gender-specific time and financial constraints, providing childcare subsidies or options and reducing biases against young women as trainees and workers from both trainers and potential employers.

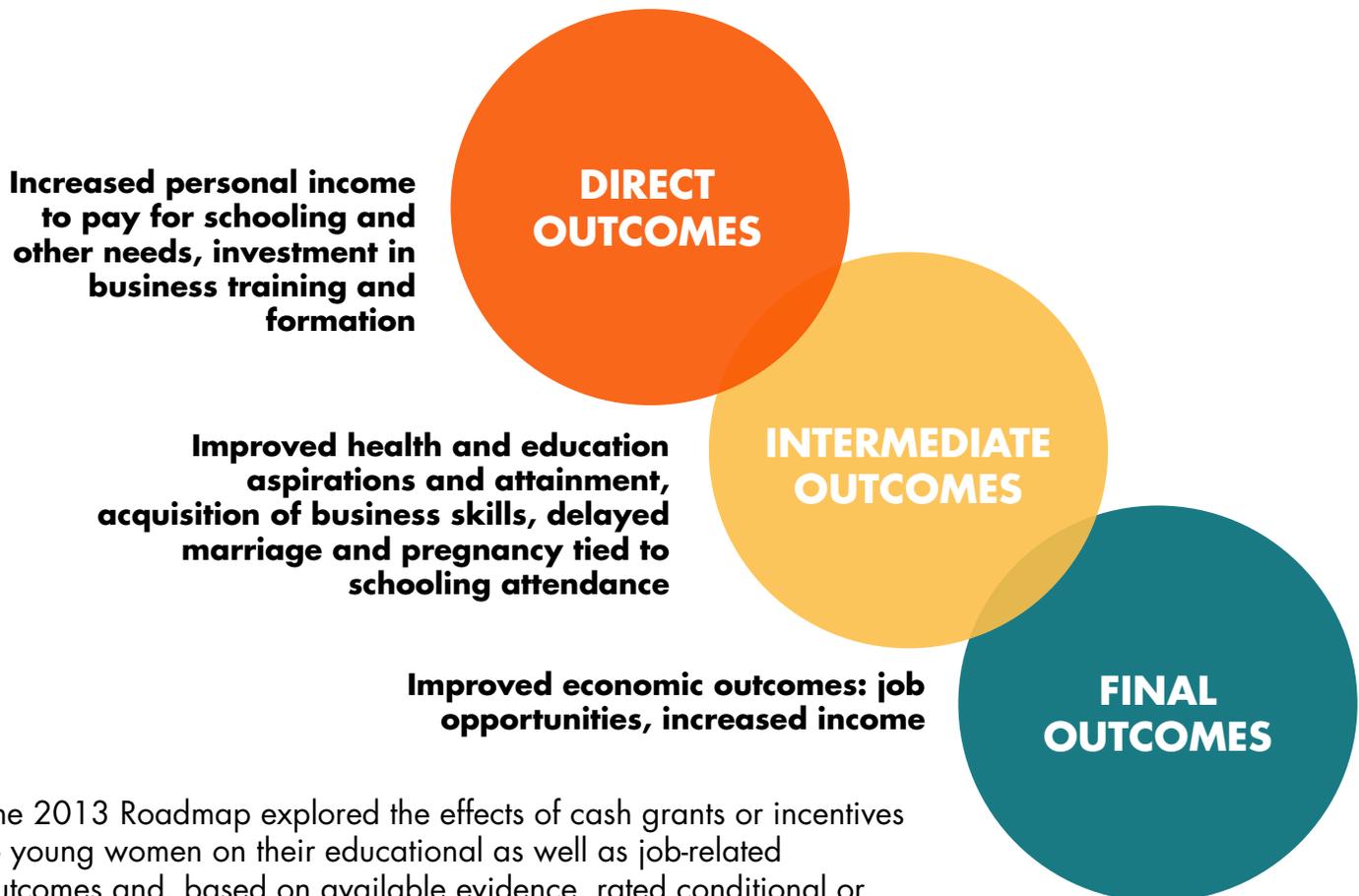
Regarding job service programs for adult women, we found only two new studies on the effects of similar but more pared-down programs on adult unemployed women and men, both in Turkey, which support maintaining the rating of 'unproven.' A vocational training program for unemployed youth and adults in Turkey (61 percent are women; 73 percent have completed high school) found only a short-term effect on formal employment (most significant for adult men) that dissipated after 3 years. As such, the researchers concluded that the program was not cost-effective (Hirshleifer et al. 2014). Using a nationally representative data set, an evaluation of a government subsidy to employer contributions given by the Turkish government to generate new employment for relatively disadvantaged groups (young men and women of all ages), found no aggregate increases in employment, except for an increase in employment probability for older women, especially those with less education and skills. The authors hypothesize that this effect may be short-lived and that, once the subsidy is removed, employers may go back to hiring men (Balkan et al. 2014).

Cash Transfers

Description: Cash payments provided to recipients who take certain actions or abide by particular terms (conditional) or without qualification/adherence to conditions (unconditional).

Confirmed rating: New evidence confirms the 'proven' rating for the effect of conditional cash transfers and the 'promising' rating for the effect of unconditional cash transfers on young women's educational and economic outcomes, but only if specific conditions are met.

A causal chain for cash transfers for young women:



The 2013 Roadmap explored the effects of cash grants or incentives to young women on their educational as well as job-related outcomes and, based on available evidence, rated conditional or tied cash transfers as 'proven' and unconditional cash transfers, where the money is granted without any restrictions in terms of use, as 'promising' for improving outcomes for young women. New evidence confirms both ratings by demonstrating the positive effects of conditional cash transfers on educational outcomes, with some limitations, and the mixed effects of unconditional cash transfers, particularly in the long term.

The 2013 Roadmap referenced an evaluation of a cash transfer program in Malawi, a unique intervention providing conditional and unconditional small monthly payments (of either US\$5 or US\$10) to adolescent girls and young women (aged 13 to 22) and their

families. The monies tied to schooling had immediate positive educational outcomes (Baird, McIntosh and Ozler 2011). A follow-up measure two years after the program resulted in increased school attainment; reduced incidence of marriage and pregnancy; an older age at first birth, fewer births and lower desired fertility continued long term, in part because payments motivated young women to return to school (Baird, McIntosh and Ozler 2016).

In Haryana, India, a government program transferred 500 Indian rupees (equivalent to US\$8 in 2015) to mothers within 15 days of delivering a daughter and 25,000 Indian rupees (about US\$380 in 2015) in savings to the girls themselves, which they could access if they remained unmarried by age 18. A recent evaluation finds that the program increased the probability that girls would complete eighth grade and improved their educational aspirations; however, the impacts were not sustained beyond this grade. The cash did not affect the probability that girls continued their education and completed twelfth grade, or the probability of being married, including marriage before the age of 18 (Nanda et al. 2016). The persistence of traditional social norms and lack of economic opportunities for young women likely combined to dampen the effects of the promised cash. Simultaneously, the lack of clear messaging regarding the purpose of the transfer led parents to believe the payment was intended to defray the costs of their daughters' marriages, rather than enable them to pursue higher education and delay marriage.

In contrast to studies that show the sustained effects of conditional transfers on schooling, Baird, McIntosh and Ozler (2016) demonstrated that the effects of unconditional transfers may dissipate in the long term and unintended consequences can emerge. In this example, adolescent girls who received unconditional monthly payments experience a surge in marriage and childbearing soon after the end of payments. Further, they report lower levels of empowerment and marry husbands with lower cognitive ability. These perverse effects likely occur because the girls failed to accumulate human capital during the program to compensate for their later age of marriage in the Malawian context. The study's findings suggest that short-term outcomes are not informative of long-term outcomes and that cash transfers, particularly if they are unconditional, need to be complemented by interventions aimed at improving girls' educational and job opportunities that are properly messaged.

That said, a program in conflict-affected northern Uganda that offered young adults (aged 16 to 35) working in groups sizeable cash grants (US\$382 per person) for training and business materials but did not monitor the use of the funds, found significant increases in employment and income for male and female grant recipients two

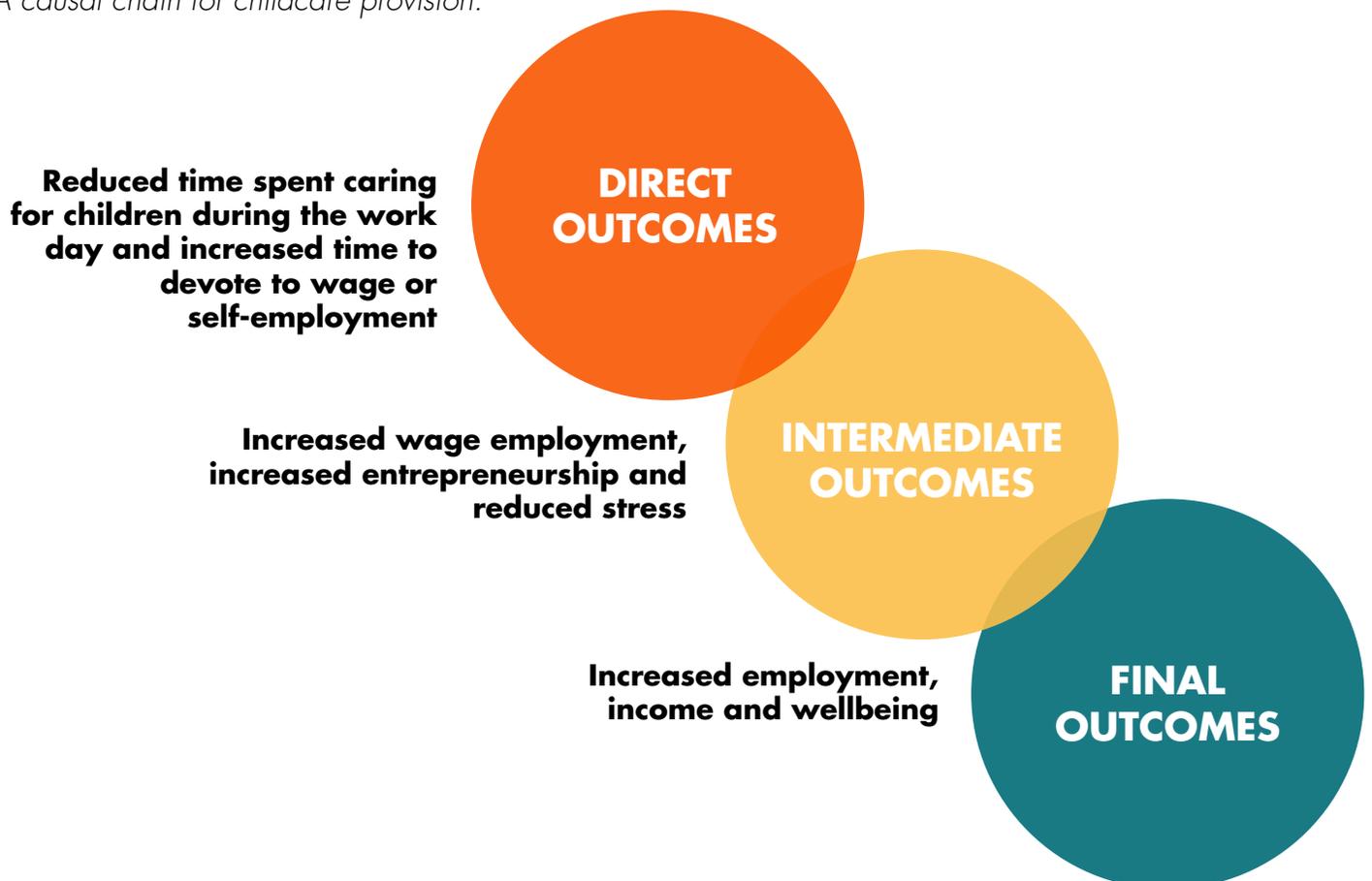
years after the grants were given (Blattman et al. 2011). A follow-up measure, four years after the grants were first disbursed, found sustained effects on business assets, work hours and earnings that are greater for young women (who started from lower incomes) than for young men (Blattman, Fiala and Martinez 2014). Both the mental labeling and the specific designation of the grant money for business purposes (see section on savings, page 5) as well as the associated peer support (see section on credit, page 9) may account for the greater effect on young women than men. Additionally, failing to label or mislabeling the purpose of the funds could account for the dissipating effect of the monthly stipend in Malawi and the weak effect of savings in Haryana.

Child Care

Description: Affordable, accessible child care in the workplace or the community, provided through employer- or state-funded programs (community preschools, lengthened school days or other mechanisms).

Confirmed rating: New evidence supports that child care is 'proven' to increase women's employment and earnings, but reinforces the importance of careful design to anticipate and guard against potential negative effects.

A causal chain for childcare provision:



The 2013 Roadmap rated access to child care as 'proven' to increase women's (including young women's) wage employment and earnings, but emphasized that childcare interventions must be designed to ensure quality, affordability and cost-effectiveness. New evidence from China and Mozambique supports the role of child care in helping women enter the workforce, while studies from Chile, Japan and South Korea add a cautionary note, reinforcing the importance of careful design that is context-specific and anticipates potential negative effects.

An evaluation of the first universal childcare program in China found that access to affordable child care significantly increased the number of female entrepreneurs, suggesting that the benefits of childcare programs may extend to cover entrepreneurship as well as wage employment (Wang 2015). Similarly, subsidizing child care through community preschools proved successful in Mozambique, a low-income country with a small formal workforce. Specifically, 37 percent more mothers reported working outside the home when their children had access to preschool instruction, and school enrollment rates increased for older siblings, many of them adolescent girls (Martinez et al. 2013).

However, in Japan, studies show that household structure mediates the effects of access to child care. Childcare availability increases women's employment only in nuclear families that do not have access to informal care provided by grandparents (Asai et al. 2015). In South Korea, a universal childcare subsidy increased employment among lower-income and less-educated mothers only, suggesting that other factors are at play inhibiting workforce participation among higher-income and better-educated women (Lee 2016).

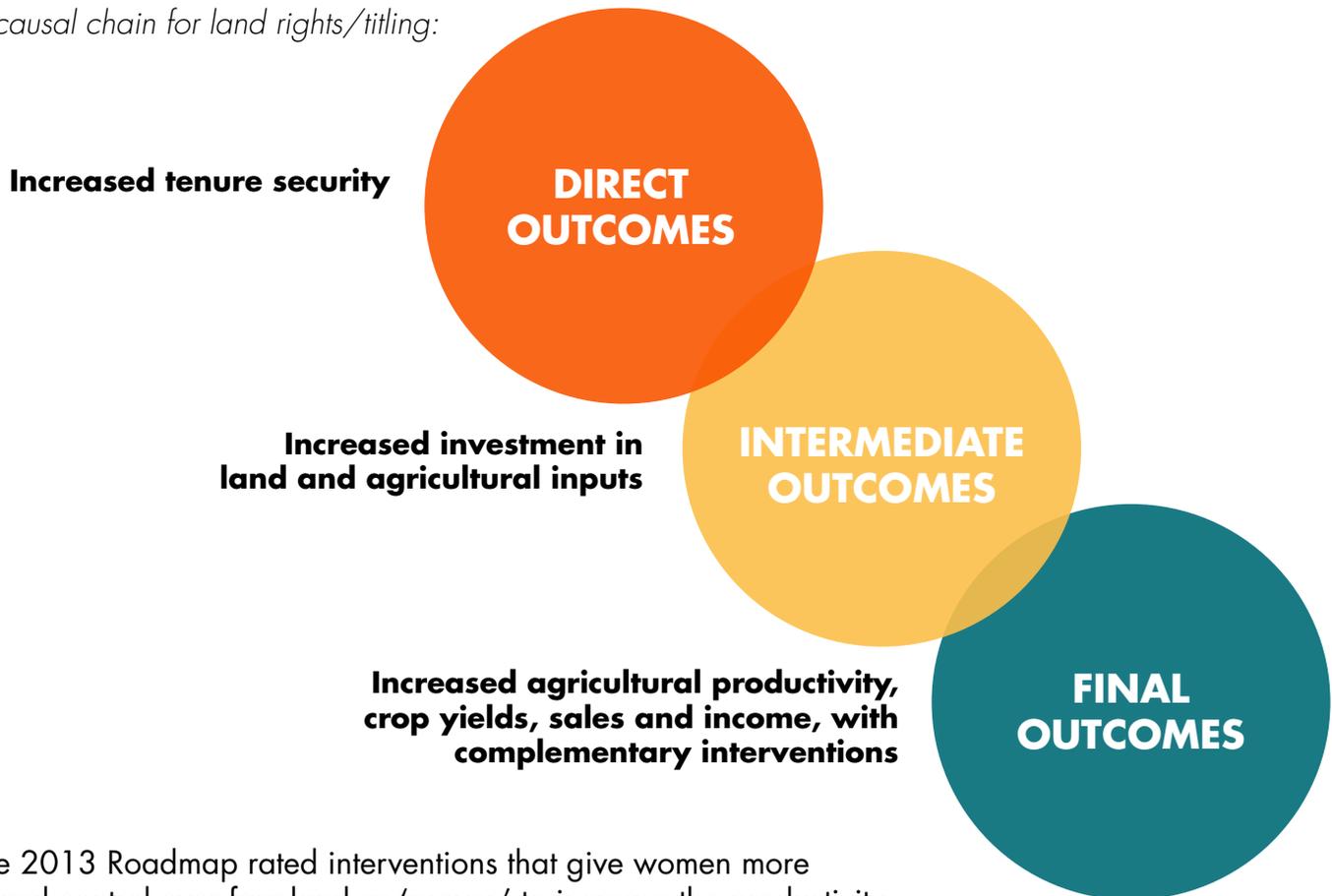
Lastly, in Chile, subsidizing child care by extending the school day for children proved effective, while mandating private sector employers to pay for child care seems to have backfired. A lengthened school day for older children increased the probability that women would participate in the workforce, and effects were particularly strong for single mothers and mothers with children under the age of five (Contreras and Sepulveda 2016; Martinez A. and Peticara 2014). In contrast, when large private sector firms were mandated by the State to provide childcare options for their employees, gender disparities in wages worsened. The study found that monthly starting wages of females in large firms that had 20 or more female workers, and were therefore mandated by the State to provide childcare benefits, were between 9 and 20 percent below those of female workers hired by the same firm when there were fewer than 20 female workers and the firm was not mandated to provide child care (Prada et al. 2015). This study underscores the important role of the State in subsidizing child care, so that private employers do not pass on childcare costs to female employees.

Land Rights

Description: Formal legal titles or documentation guaranteeing women secure land rights/ownership.

Confirmed rating: Interventions that give women secure land rights are retained as 'proven,' but adding the qualifier 'with complementary interventions addressing additional constraints defined by the context of women's work in agriculture.'

A causal chain for land rights/titling:



The 2013 Roadmap rated interventions that give women more formal control over farmland as 'proven' to increase the productivity and economic security of women farmers. However, it underscored that implementation methods must take into consideration the social and local contexts and, more generally, the sparseness of rigorous evidence on what works for women farmers.

The new evidence qualifies the positive outcomes of land rights for women farmers and suggests that, while secure access to land is necessary, land rights in isolation are unlikely to address the full gamut of constraints women face that prevent equal returns to farmland. As such, this update retains the rating of 'proven' to interventions that give women secure land rights but adds the qualifier 'with complementary interventions addressing additional constraints defined by the context of women's work in agriculture.'

Using a unique set of survey data with rich information on women's participation in agriculture, an insightful analysis of the effects of agricultural policies and programs in seven African countries undertaken by the World Bank and the ONE Campaign (2014) shows that equalizing the productivity gap between male and female farmers requires both land rights and complementary interventions, particularly aimed at increasing women's access to agricultural information and reducing their time constraints. The analysis suggests that even when productivity (and thus crop yields) improves, women may face additional difficulties in transforming increased yields into sales and profits.

Additional evaluations supporting this finding include studies in Benin and Malawi. In Benin, improved tenure security increased long-term land investment and perceived land rights for both male and female landholders. However, in the short term, the researchers observed that women's farm productivity was affected negatively because they had to reallocate farm work to plots outside treatment areas where the intervention was implemented to guard claims to less-secure land (Goldstein et al. 2015). In Malawi, land transfers resulted in increased assets for both male- and female-headed households, but farm yields and food security improvements were only experienced by men, reinforcing the notion that land rights in isolation may not be sufficient to overcome additional constraints faced by women farmers (Mendola and Sitomwe 2015).

Box 4: Incentivizing behavior change in Malawi

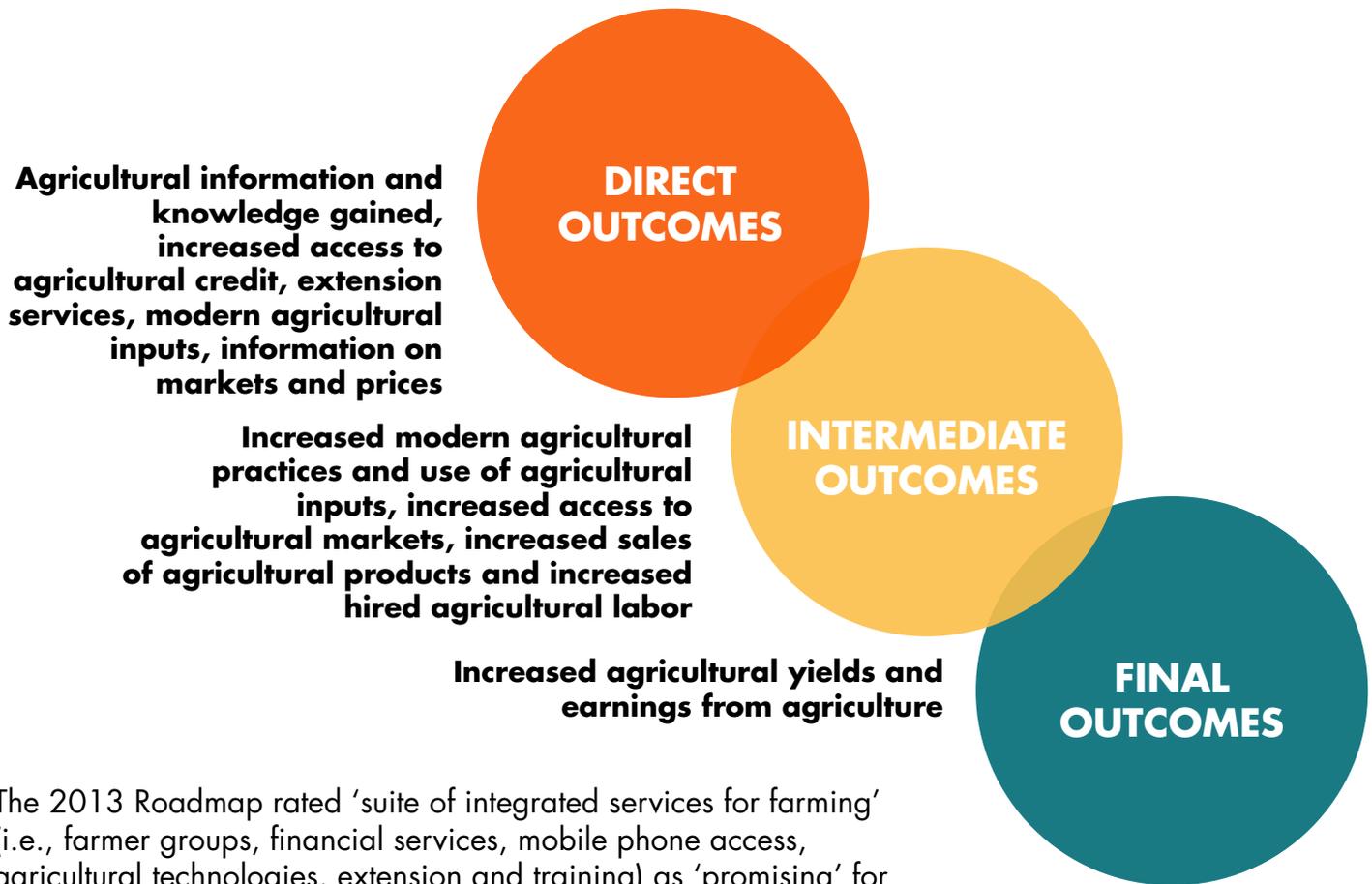
A field experiment conducted in Malawi demonstrates how small incentives can upend gender norms. In 142 Malawian villages, men and women farmers were both taught and asked thereafter to teach others about a new agricultural technology. Even though the women were proven to be better teachers (i.e., farmers that were taught by women experienced higher farm yields than those taught by men), women were still less able to convince farmers to learn about and adopt the agricultural technology, as both males and females were less receptive to messages when they were communicated by women. Performance-based small incentives awarded to the teachers appear to work toward mitigating this bias, in part through encouraging female teachers to increase their levels of interaction with farmers in their assigned villages. Without incentives, farmers taught by females score 4 percent lower in agricultural knowledge than those taught by males, but when female teachers receive incentives, farmers' knowledge improves by 5 percentage points, the gap in knowledge closes and adoption rates of the technology similarly increase (BenYishay et al. 2016).

Suite of Integrated Services for Farming

Description: Access to a bundled suite of farmer groups, financial services, mobile phones, extension and training on agricultural technologies and practices.

Confirmed rating: The new evidence on the limitations of standalone interventions (e.g., modern agricultural inputs, mobile phones) in increasing the incomes of subsistence-level women farmers reinforces the rating of 'promising' for 'suite of integrated services for farming.'

A causal chain for suite of integrated services for farming:



The 2013 Roadmap rated 'suite of integrated services for farming' (i.e., farmer groups, financial services, mobile phone access, agricultural technologies, extension and training) as 'promising' for poor women farmers. New evidence demonstrating the limitations of standalone interventions supports this rating. Changing this rating to 'proven and being proven' awaits additional evidence on positive economic outcomes from these bundled services along with their cost-effectiveness.

Several new studies confirm that inputs alone — such as seeds, fertilizer and tools — fail to increase income among subsistence-level women farmers. In Malawi, a government program provided half of all farmers with coupons enabling access to fertilizers and improved seeds at heavily subsidized prices. While the coupons improved access to agricultural inputs for both male and female farmers



by 17 percent, this access was not able to close gender gaps in productivity (Karamba and Winters 2014). Similarly, in southern Mali, female rice farmers who had access to fertilizer grants (along with a 30-minute explanation of how to use the fertilizer) used more fertilizer, as well as herbicides and hired labor, leading to a 31 percent increase in rice output. This increased rice output, however, did not translate into increased profits — a finding consistent with the limitations of input-oriented interventions in isolation for subsistence-level female farmers in Malawi (Beaman et al. 2013).

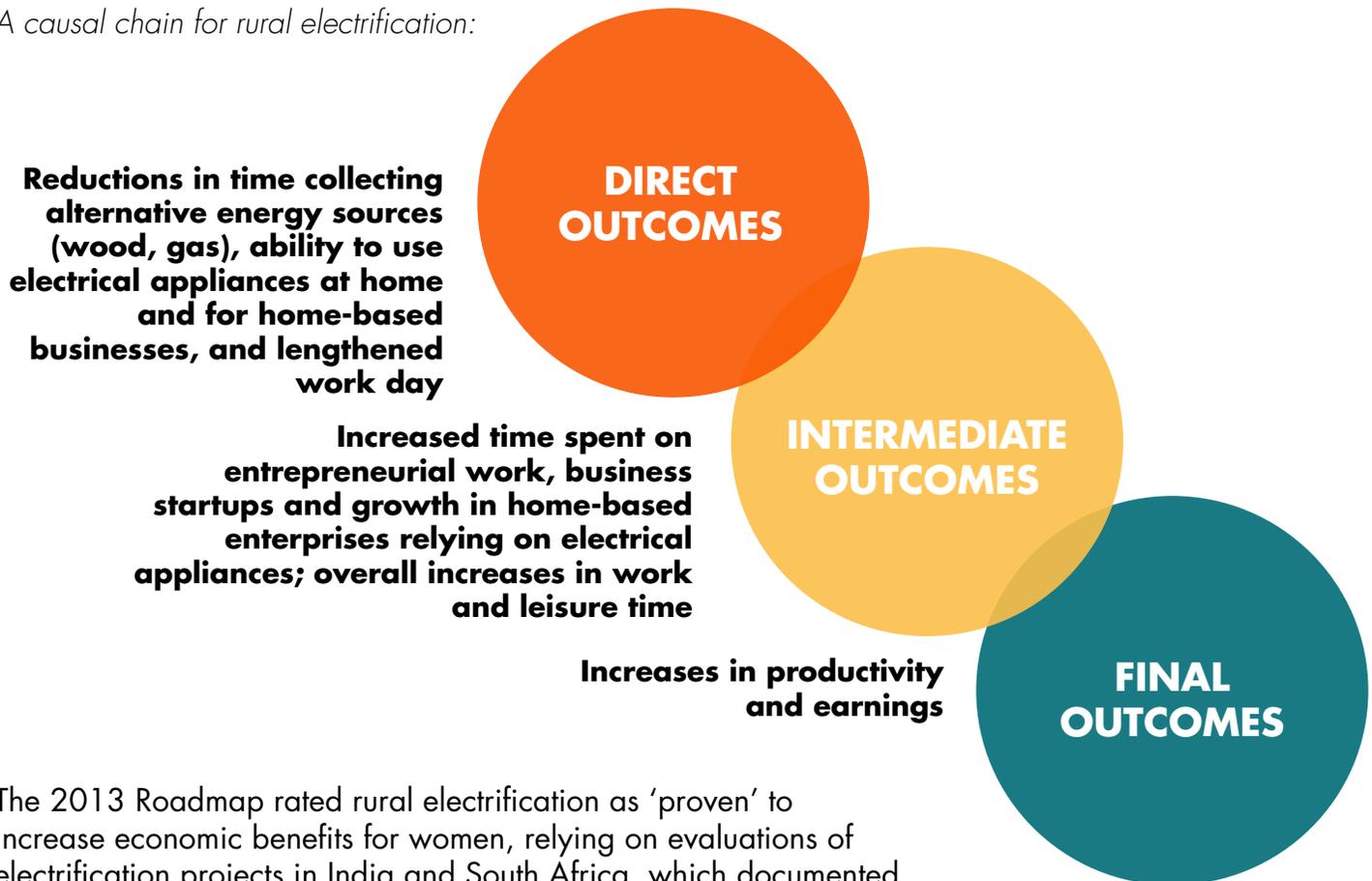
While mobile phone access (combined with basic literacy and numeracy education) for women farmers in rural Niger improved crop yields by providing real-time information on agricultural markets, increased yields did not translate into increased sales and profits, suggesting that female farmers continue to face additional constraints beyond access to inputs (Aker 2016). Similarly, in Uganda, while information on farm prices and other farming matters made available through mobile phones seems to increase farmers' risk-taking, with potential for increased profits, female-headed households sell a significantly lower share of maize on the market than male-headed households, suggesting that improved information is not enough and that a suite of services, rather than standalone interventions, is needed to increase the productivity and incomes of subsistence-level women farmers (Van Campenhout 2013).

Rural Electrification

Description: Provision of electrical power to households and/or businesses located in rural areas.

Confirmed rating: New evidence confirms that rural electrification is 'proven' to be beneficial in encouraging women's entrepreneurial activities, provided that gender inequalities in the family and local economy are kept at bay.

A causal chain for rural electrification:



The 2013 Roadmap rated rural electrification as 'proven' to increase economic benefits for women, relying on evaluations of electrification projects in India and South Africa, which documented electricity's ability to contribute to women's economic empowerment by increasing the length of the work day, reducing time required for housework and fuel collection, and providing new home-based business opportunities. New evidence from India, Nicaragua, Peru and Nigeria largely confirms the rating of 'proven' for this intervention and suggests that rural electrification encourages women's entrepreneurial activities, provided that gender inequalities in the family and local economy are kept at bay.

A study examining the long-term effects of electrification in rural India (from 1982 to 1999) finds positive effects on non-farm self-employment among women. Notably, however, wage work and labor earnings are only seen to increase for men without similar gains for women, suggesting that gender biases in rural economies can limit the positive effects of electrification (van de Walle et

al. 2013). In Nicaragua, electrification increases rural women's likelihood of working outside the home by 23 percent, with no impact on men's employment (Grogan and Sadanand 2013). In rural Peru, working time for men and women increases as a result of electrification, and women's earnings grow by about 30 percent (Dasso and Fernandez 2015). Because male earnings were unaffected, electrification should have helped reduce the gender wage gap. With access to electricity, men were less likely to take a second job, whereas women were more likely to participate in the labor force, primarily as entrepreneurs (and less as agricultural laborers).

As an exception, a study conducted in Nigeria suggests that family constraints are an important factor that can reduce the beneficial effects of electrification. A study of spouses' labor supply decisions after electricity became available finds that only husbands' working hours increase as women continue to shoulder child care and other domestic responsibilities. The paper suggests that future evaluations of electrification interventions must control for interdependence in decision-making to ensure that outcomes improve for both women and men (Salmon and Tanguy 2016).

New Rating

Financial Literacy Training

Description: Training on money management and investment (separate from business management training), of varied content, quality of instruction and duration.

New Rating: New evidence on standalone financial literacy training, separate from business management training, supports the rating of 'unproven' to improve the economic outcomes of poor and very poor women.

New evidence since the 2013 Roadmap more clearly isolates the effects of financial literacy training, separate from those of business management training. Unfortunately, the evidence presented is aggregated for households. Assuming that the effects found for households extend to individual women (who are half or more of those interviewed in the two studies cited below), this update can conclude that standalone financial literacy training is 'unproven' to improve the economic outcomes of poor and very poor women. For the training to make a difference, it appears that it needs to be reinforced by motivational interventions, such as monetary incentives or personalized counseling. As such, this update leaves these bundled interventions unrated because the evidence base is still limited.

A field experiment in Indonesia found that a high (versus low) financial incentive plus a two-hour financial literacy training led unbanked households to open savings accounts. A two-year follow-up concluded that, given proper financial incentives, households opened these accounts even without financial literacy training. The combination of training and incentives increased the number of households reporting that they had opened savings accounts, but this effect was not significant because of sample size restrictions. The researchers reported that half the households in the experiment were 'female-headed,' but this term was not clearly defined (Cole et al. 2011).

When financial education was paired or bundled with personalized counseling, effects were greater and households had more savings and more borrowing.

Video-based financial education (five consecutive weekly sessions of two to three hours each) for poor urban households in Ahmedabad, India, where nearly all participants (94 percent) had reported difficulties saving, led to better financial awareness 10 months later but did not improve behavioral outcomes on savings or borrowing. When financial education was paired or bundled with personalized counseling, effects were greater and households had more savings and more borrowing. Fifty-eight percent of the respondents were women (Carpena et al. 2015).

Supporting the findings from the above evaluations, a global meta-analysis of 201 studies found that interventions to improve financial literacy explain only 0.1 percent of the variance in financial behavior, with weaker effects on low-income samples and in studies with better designs. The researchers, who did not disaggregate results by sex, found that financial education effects decay over time and argue that the only type of financial literacy training that makes sense is 'just-in-time' financial education tied to specific behaviors (Fernandes, Lynch and Netemeyer 2013).

Discussion

The new evidence that has accumulated in a comparatively short three-year timeframe is rich and advances knowledge by providing more solid information on what works and, importantly, useful insights on the why — i.e., the mechanisms that explain the effect of interventions on women's economic empowerment outcomes. The theory of change needs to start by acknowledging that women, including poor and very poor women in developing countries, are economic actors — they were main protagonists in many of the programs reviewed here that were open to both men and women — but face additional constraints because of their gender that affect their economic performance. Understanding these constraints and how they operate is a first step towards overcoming them through smart design. The rest of this discussion is organized around the three main topics addressed in the update: the ratings, the

mechanisms and the emphasis of this report — that is, the role that smart design can play in overcoming gender-related constraints and ensuring the effectiveness of economic empowerment interventions. The discussion ends with suggestions for research.

The Ratings

1. The updated evidence confirmed eight ratings and revised four, from 'promising' to 'proven' or from 'unproven' or 'high potential' to 'promising' (Table 1 summarizes these ratings). This is good news; it means that the findings are generalizable beyond the particular setting where the initial projects and were evaluated. It thus addresses one of the main limitations of field experiments with randomized controls, which is their lack of external validity. The evidence gives confidence that these interventions can be scaled up and replicated in different locations, and is particularly compelling for savings for all women except for the very poor, for bundled services for very poor women, and for demand-driven jobs, programs and conditional cash transfers for young women.
2. This evidence further reinforces one of the 2013 Roadmap's main messages that very poor women need more than a single intervention to improve their incomes. Only a bundle or package of services will work to increase their productivity and earnings. Such strategies are expensive but can be transformative and cost-effective. There is no silver bullet for the very poor, but there are programs that, if well-designed, can transform their occupations.
3. A downside of the updated evidence is the growing number of qualifiers or things that can go wrong — for instance, that demand-driven training programs for young women work but only if trainers and employers are not biased against young women. Likewise, cash stipends to young women will not have lasting effects if they are not properly labeled for a specific educational or business purpose or if they take place in impoverished rural environments where there are no economic opportunities for young people. Business or skills training programs will only work if they are high-quality programs; employer childcare costs that are not subsidized by the State may end up being passed on to women employees in the form of lower earnings, perpetuating gender gaps in wages; and secure land rights or access to modern agricultural inputs to increase the productivity of women farmers, extension and other agricultural services need to be both accessible and unbiased, otherwise female farmers will continue to produce less and earn less than male farmers. Impact evaluations often pick up combined effects of design and implementation. Routine

monitoring data should be used more often going forward to separate the contribution of design from the competence with which designs are implemented.

4. Smart design must be evidence-based and account for the larger context where women's economic activities take place. This context includes the local environment and the broader demographic changes and jobs prospects that shape the nature and boundaries of women's economic participation. The 2013 Roadmap defined different country scenarios to help think through the contextual variables that influence and should be considered when designing economic programs for women.³ In addition, unanticipated consequences should be thought through and prevented.

The Mechanisms

5. Interventions that encourage economic self-reliance, self-confidence and greater risk-taking seem to work, suggesting that subjective economic empowerment is an important intermediate outcome. These subjective changes may be instrumental for achieving lasting economic gains and empowerment and should thus be promoted and measured.
6. Given the important role of subjective economic empowerment, it is concerning that at least some of the evidence suggests the fleeting nature or absence of a women's 'empowerment' effect, as was observed in a number of evaluations. Possible explanations include, first, that the increases in women's income are not large enough to counteract traditional gender norms and, second, that any economic 'empowerment' effect is very situation-specific and does not generalize across different domains of women's lives. A third possibility is that it takes a long time for 'empowerment' effects to unfold and for social norms to change. Alternatively, it is quite possible that economic empowerment effects are not being measured well (self-reports are often unreliable) and that researchers have not been careful in separating economic empowerment effects from more general empowerment effects.
7. The updated evidence reinforces the point made in the 2013 Roadmap that time can influence observed outcomes. Project impacts are not necessarily linear and evaluation timetables may not allow sufficient time for positive results to occur or to fully understand what may occur in the long term. Researchers

³ The four country scenarios are high-fertility, agrarian economies; declining-fertility, urbanizing economies; declining-fertility, formalizing economies; and aging societies.

Savings products that shield women from internal and external pressures by providing mental labels, commitment devices and privacy and security encourage their autonomous decision-making, and particularly help those who are less empowered.

are increasingly devoting efforts to measure results over time, showing that outcomes are often not stable or sustained. In some cases, positive income and empowerment effects are short-lived, in others, effects emerge with a delay. Gender norms seem to play a role in influencing outcomes over time. Social restrictions against women can override project gains; however, project gains can also help to change gender norms, showing a delayed effect.

The Emphasis

8. The evidence presented in this review suggests that smart design can help address related sets of gender constraints that negatively impact women's economic performance by addressing (1) cognitive and social determinants of economic behavior and (2) pervasive gender biases embedded in organizations and working environments. Some of these interventions are relatively simple to implement and go a long way towards reducing gender-specific obstacles and biases.
9. A first set of constraints is linked to women's subordinate position in the family, lower decision-making power and greater exposure to pressures from family, community and self to spend rather than invest scarce resources in economic activities. As such, interventions that encourage women's economic self-reliance can make a difference. Savings products that shield women from internal and external pressures by providing mental labels, commitment devices and privacy and security encourage their autonomous decision-making, and particularly help those who are less empowered.
10. Other constraints stem from women's traditional household and childcare responsibilities, which impose time and travel restrictions that may affect women's uptake of the interventions mentioned in this report. In addition, these traditional responsibilities may partly explain women's greater financial risk aversion when compared to men's or, perhaps more accurately, the greater set of risks women face from their double roles as mothers and economic actors that can lead them to make less-than-optimal business decisions affecting productivity and income. Smart design can address time and travel restrictions directly by adjusting service provision schedules, using mobile services and providing stipends for travel and child care, among others. Access to and practice with a suite of financial instruments, including savings, credit and insurance may increase women's financial risk-taking. Peer support may also help to increase financial risk-taking and confidence in business decisions, and smart design can incorporate these features.

11. Lastly, pervasive gender biases present in organizations and working environments also negatively impact women's economic outcomes. Interventions to empower women economically to date have largely focused on expanding women's capabilities to be productive and economically empowered. The gender and development literature has assumed that a main challenge is to increase women's demand for and access to supposedly gender-neutral services, such as financial services, information technologies and agricultural extension. But the provision of these services, especially in the productive sectors, where the main clientele has traditionally been masculine, cannot be expected to be gender neutral. Social and cultural stereotypes and biases about women, the most important being that women are not economic actors and are dependent on men, embed these services and help perpetuate an unequal playing field between men and women.
12. De-biasing service provision is critical, has been largely overlooked in development and may be simpler and cheaper to implement and bring to scale than many other, more typical interventions seeking to expand the capabilities of women clients. In addition, these interventions should place minimal demands on women clients. Emerging evidence, for instance, suggests that small incentives can change gender prejudices expressed by both male and female farmers. Small incentives may work equally well to encourage bank agents to target women clients and vocational trainers to treat young female and male trainees equally, and should be further explored and become part of smart design.

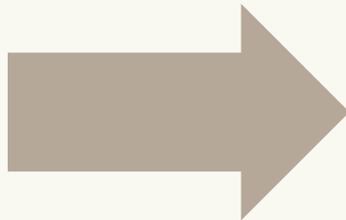
Social and cultural stereotypes and biases about women, the most important being that women are not economic actors and are dependent on men, embed these services and help perpetuate an unequal playing field between men and women.

Research Suggestions

13. The evidence base on what works to empower women economically could use significantly more project and research investments on the cognitive and social determinants of women's economic outcomes and on how gender biases in working environments affect women's economic performance. Additional research investments are also needed on how to better define and measure women's economic empowerment, capturing both its objective and subjective dimensions, simply and reliably, hopefully using measures that will be valid across different countries and situations.
14. There is increasingly high-quality and robust evaluation evidence, but unfortunately these results are reported at the level of households rather than individuals. Future research results should be disaggregated by sex as results at the household level do not necessarily trickle down to members of the household equally by sex (and age). Another limitation of

the evaluation data is the lack of information on the income level of program participants. Some studies explicitly focus and report on the very poor, but guessing the income level of participants in many other studies is just that – a guess. Results, however, differ by women’s income level, as the 2013 Roadmap and this update reveal, and it should be good practice to report participants’ incomes or income levels.

Table 1: Roadmap Ratings

Intervention	Original Rating	Category	New Rating	Category
<i>Revised</i>				
Savings	Being Proven	All	Proven	All
Micro-Credit	Unproven	Poor, Very Poor	Promising	Poor
Business Management Training	Unproven	Very Poor	Promising	Poor
Networks and Mentors	High Potential	Young Women	Promising	All
<i>Confirmed</i>				
Bundled Services			Proven	Very Poor
Demand-Driven Job Services			Proven	Young Women
Conditional Cash Transfers			Proven	Young Women
Unconditional Cash Transfers			Promising	Young Women
Child Care			Proven	All
Land Rights			Proven	All
Suite of Integrated Services for Farming			Promising	Poor
Rural Electrification			Proven	Poor, Very Poor
<i>New</i>				
Financial Literacy Training	Not Applicable		Unproven	Poor, Very Poor

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Appendix 1: Methods

Consistent with the original Roadmap’s criteria, this report only relies upon studies with rigorous designs (with natural or statistical controls) and where females were all or a portion of the study sample.

In order to comprehensively review the evidence generated since 2013, specific search terms and sources were identified. Nine databases (EconPapers, National Bureau of Economic Research, Social Science Research Network, Web of Science, World Institute for Development Economics, JSTOR, Science Direct, Centre for the Study of African Economies and Institute for the Study of Labor) were prioritized, and search terms relevant to entrepreneurship, farming, wage employment and young women’s employment as broad categories, as well as search terms specific to each intervention, were identified.

To triangulate the extent of the papers generated from this general review, authors of commissioned studies were also asked to conduct independent reviews of all academic papers meeting the above criteria related to their subtopics. All of the studies yielded have been added to the Roadmap database (www.womeneconroadmap.org).

Also, following the Roadmap, typical characteristics of each of the broad income groups of women, derived from studies that included this information, are given below:

Income Categories

Very Poor	Poor	Non-Poor
<ul style="list-style-type: none"> • Self-employed women, home-based or street vendors with no set stall or shop, with no paid employees and average monthly revenues of \$80 to \$100 at market exchange rates, and profits of approximately \$1 per day. • Subsistence-level unskilled laborers, often with irregular, seasonal income. • Women vulnerable to food insecurity and undernourishment, often illiterate, and lacking household productive assets. • Women who may be the primary household income-earner. 	<ul style="list-style-type: none"> • Micro-entrepreneurs who may be home-based or rent a market stall or shop, with revenues greater than \$100 per month and potentially one or two employees. • Subsistence farmers growing food primarily for family consumption in a family plot, female-owned plot or household garden. Female farmers generally do not own plots unless they are heads of a farm household. These women may sell some surplus to local markets, and may or may not control proceeds from farming. 	<ul style="list-style-type: none"> • Small and medium enterprise (SME) owners with between 5 and 50 employees and monthly revenues of \$5,000 or more, and more than \$100,000 in some cases. • Smallholder farmers growing food crops and/ or cash crops for sale in regional, national or cross-border markets. These women own or manage the farm and control its proceeds.

Appendix 2: Studies Cited

Authors	Title	Country/ Setting	Methodology/ Sample	Intervention Description	Findings
Savings					
Ashraf, Karlan, and Yin. (2006, 2010)	Household Decision Making and Savings Impacts: Further Evidence from a Commitment Savings Product in the Philippines (2006) & Female Empowerment: Impact of a Commitment Savings Product in the Philippines (2010)	Philippines • Peri-urban	RCT 3,125 (1,629 completed endline survey) 50%+ women	Commitment savings intervention, i.e., treatment group received a lock box for their savings that they were not allowed to open until they had met their savings goals	<ul style="list-style-type: none"> Household savings increased by 81% after one year (without crowding out other savings) The decision-making power also increased significantly in the treatment group (especially among married women with below-median decision-making power pre-intervention) After 32 months, administrative data indicate that the effect on household savings was no longer significant Present-biased women were 15.8 percentage points more likely to take commitment savings Less empowered women showed largest gain in decision making ability through savings
Dupas and Robinson (2013)	Savings Constraints and Microenterprise Development: Evidence from a Field Experiment in Kenya	Kenya • Rural	RCT 156 participants (13% attrition rate) 89% women	Individual commitment savings with interest-free account and high withdrawal fees	<ul style="list-style-type: none"> Market women in the treatment group used their bank accounts quite actively and increased their total savings on average suggesting that they face negative private returns on the money they save informally Market women in the treatment group substantially increased their investment in their business relative to the control group (an estimate of 38–56%) Market women in the treatment group had significantly higher expenditures (an estimate of 37%) Savings account has no major effect on the labor supply but has a large effect on the average amount daily invested in the business (10% increase) and this effect is concentrated among women Private expenditures and good expenditures also increased Market women do not save enough without formal savings devices as they may be tempted to spend any cash that they hold and face regular demands on their income from spouses, relatives, and neighbors
Dupas and Robinson (2013)	Why Don't the Poor Save More? Evidence from Health Savings Experiments	Kenya • Rural	RCT 113 ROSCAs (8% attrition) Majority women	Providing access to innovative savings devices specifically for health related investments and emergencies	<ul style="list-style-type: none"> Positive impact of savings on business investment among women (45% increase) Increase in women's private expenditures (37–40% higher) Some impact on making women less vulnerable to health shocks; women were less prone to sell businesses to address health emergencies No effect for men Positive effects of the savings sustained in a follow-up survey three years later Women made use of savings accounts far more than men did

Authors	Title	Country/ Setting	Methodology/ Sample	Intervention Description	Findings
Schaner (2014)	Do Opposites Detract? Intra-household Preference Heterogeneity and Inefficient Strategic Savings	Kenya • Rural	RCT 1,114 newly-opened bank accounts owned by 749 married couples (21–26% attrition rate)	Provision of ATM cards free of charge, when without ATM cards, bank accounts had \$.78 withdrawal fee	<ul style="list-style-type: none"> Provision of ATM cards significantly increased overall account use among men and married couples' joint accounts. Rates of long-run account use increased by 70% (4.7 percentage points) ATM cards had no impact on female-owned individual accounts but high impacts on male-owned individual accounts Both men and women with low levels of bargaining power responded negatively to ATM, whereas both men and women with high levels of bargaining power responded positively (controlled for time inconsistency and financial literacy) ATM cards significantly increased the share of individuals reporting that both spouses make joint spending and savings decisions
Dupas, Keats, Robinson (2016)	The Effect of Savings Accounts on Interpersonal Financial Relationships: Evidence from a Field Experiment in Rural Kenya	Kenya • Rural	RCT 885 households (11% attrition in final round)	Expanding access to formal savings accounts among the unbanked population in rural Kenya	<ul style="list-style-type: none"> 69% of households who were offered an account opened one but only 15% made at least 5 transactions over the following 28-month trial period Among the 15%, the mean amount that was deposited over 28 months was \$223 (about 5x more than the control group's) Many households had savings but preferred to keep them at home rather than in a savings account Respondents prefer to open individual accounts – only 5% opened an account jointly with their spouse Men consistently saved more than women and male headed households used the account more often than female headed households Interhousehold linkages strengthened as households sent and received transfers
Brune et al (2013)	Commitments to Save: A Field Experiment in Rural Malawi	Malawi • Rural	RCT 3,150 farmers in 299 clubs (10% attrition)	Provided either an ordinary savings account to rural smallholders with direct deposits of sales revenue from participating agri-businesses or both an ordinary savings account and a "commitment" savings account	<ul style="list-style-type: none"> The group receiving commitment saving accounts had significantly higher outcomes than the control group, including 9.8% more land under cultivation, use of 27.4% more agricultural inputs, 21.8% higher crop sales from the subsequent harvest, and 17.4% higher household expenditure during the post-harvest period No gender-specific effects are reported
Kast and Pomeranz (2014)	Saving More to Borrow Less: Experimental Evidence from Access to Formal Savings Accounts in Chile	Chile • Urban	RCT 3,572 low-income micro-finance institution clients (14.2% attrition rate) 91% women	Providing free and easy access to a formal savings account	<ul style="list-style-type: none"> Participants substitute short-term informal credit with formal savings Less overall debt; informal savings are costly Savings and credit are used as substitute inputs for consumption smoothing; reducing barriers to savings reduces reliance on debt When cost of savings was reduced, demand for short-term credit decreases and overall consumption smoothing increases Consumption cutbacks associated with a negative income shock reduced by 44% Substantial improvements in subjective well-being Take-up is high among participants who are not head of the household, who have conflicts with partners over money, and who are expected to loan to social network

Authors	Title	Country/ Setting	Methodology/ Sample	Intervention Description	Findings
Prina (2013)	Banking the Poor via Savings Accounts: Evidence from a Field Experiment	Nepal <ul style="list-style-type: none"> Urban Peri-urban Rural 	RCT 1,236 households with a 9% attrition rate (1,118 responded to follow-up survey)	Access to a fully liquid bank account with no opening, maintenance, or withdrawal fees	<ul style="list-style-type: none"> After one year, access to savings accounts increased monetary assets by more than 50% Total assets (monetary and non-monetary) increased by 16% Positive effect on monetary assets was strongest for poorer households and those not linked to formal banking institutions prior to the intervention Lower transaction costs due to proximity to the bank and lack of fees may have improved take-up and usage Saving in accounts rather than cash reduces temptation to spend immediately
Delavallade, Dizon, Hill, and Petraud (2015)	Managing Risk with Insurance and Savings: Experimental Evidence for Male and Female Farm Managers in the Sahel	Burkina Faso and Senegal <ul style="list-style-type: none"> Rural 	RCT 806 individuals (.25% attrition rate)	Comparing male and female farmers who are offered an index-based agricultural insurance with those who are offered a variety of savings instruments.	<ul style="list-style-type: none"> There is a much stronger demand for weather insurance among men than among women There is a much stronger demand for emergency savings among women because women are more concerned with health shocks than weather-related shocks Insurance was more effective at encouraging agricultural investment than savings – participants spent more on inputs and used more fertilizer Few differences in welfare outcomes but the insurance resulted in better ability to manage risk Welfare benefits may be observed in the long-run Savings devices with light commitment and more flexibility are useful in overcoming barriers to savings
Dupas, Karlan, Robinson, and Ubfal (2016)	Banking the Unbanked? Evidence from Three Countries	Uganda, Malawi, and Chile <ul style="list-style-type: none"> Rural 	RCT 2,160 households in Uganda, 2,107 households in Malawi, 1975 households in Chile (3% attrition rate) Majority women	Partnering with banks and microfinance organizations to offer basic savings accounts to previously unbanked households	<ul style="list-style-type: none"> 42% (Uganda), 41% (Malawi), 6% (Chile) of participants used the bank account at least once 17% (Uganda), 10% (Malawi), and 3% (Chile) of participants were active users and among active users, usage is quite high (deposits of \$22, \$24, and \$110 per month in comparison to \$4, \$3, and \$4 for the overall treatment group) Chile has the lowest savings rate A majority of households never use the accounts, but usage among active users is high Average treatment effect on total savings was at best very modest, and not clearly differentiable from 0 No clear effects on savings or downstream outcomes, suggesting that only providing access to bank accounts will not improve welfare
Micro-Credit					
Cho and Honorati (2014)	Entrepreneurship Programs in Developing Countries: A Meta Regression Analysis	25 countries <ul style="list-style-type: none"> Several settings 	Metaregression analysis 37 studies 5% of the beneficiaries across all studies were specifically women (4 studies tailored for women)	This analysis explored variation in programs to determine how they impact business practices and labor-market activity	<ul style="list-style-type: none"> Entrepreneurship programs are more likely to have a positive impact on youth, those in higher education, and the urban population Women benefit most from financing support, not as much from entrepreneurship programs Business training may improve business knowledge but not business performance Training programs have greater impact in the short term and financing programs have greater impact in the long term Vocational training is most likely to lead to program success and financial training offers the least benefits Cash and in-kind transfers have a greater impact than micro-credit

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Khandker and Samad (2014)	Dynamic Effects of Microcredit in Bangladesh	Bangladesh • Rural	RCT 2,599 households in 87 villages (14.7% attrition rate over total years) 2/3 women	20-year panel survey measuring impact of cumulative microcredit borrowing	<ul style="list-style-type: none"> • Participants are inclined to borrow from multiple sources to diversify income • Market saturation of microfinance may create diminishing returns – current initiatives may not be enough to boost income and productivity in the long run • Increased household non-land assets (by 0.25%) • Increased income and expenditure • Increased labor supply of men (by 0.33%) and women (by 0.46%) • Reduced extreme poverty, especially for female borrowers, by 5 percentage points
Field et al. (2014)	Does the Classic Microfinance Model Discourage Entrepreneurship Among the Poor? Experimental Evidence from India	India • Urban	RCT 845 clients	Groups were randomized into one of two repayment cycles (fixed installments starting two weeks after loan disbursement and fixed installments after two months of loan disbursement)	<ul style="list-style-type: none"> • Relative to regular clients, grace period clients invest 6% more of their loans in their businesses (rather than setting money aside for initial loan payments) • Grace period clients are more likely to report high profits (57.1% higher profits) • Three years out, grace period clients have larger and more profitable businesses • Suggests that liquidity constraints limit small entrepreneurs from exploiting high returns • MFIs tend to not offer a higher interest grace period contract because of moral hazard concerns • Early repayment discourages risky investment
Banerjee, Karlan, Zinman (2015)	Six Randomized Evaluations of Microcredit: Introduction and Further Steps	Bosnia, Ethiopia, India, Mexico, Morocco, and Mongolia • Several settings	RCT Varies; take up rates ranged from 17% to 31% among their target populations 3 studies focused specifically on women	Study on six randomized trials involving micro-credit to evaluate best approaches	<ul style="list-style-type: none"> • Some evidence of substitution effect (formal for informal credit) but no evidence that expanded MFI access leads borrowers to take on debt from other sources • Partial influence of MFI on micro-entrepreneurial activity but no effects on ownerships, startups, or closures • MFI effects on investment, business size, occupational choice, female decision-making, risk management and profits are more promising and statistically significant • Very little effect on amount household consumption but the composition of consumption changes to more durable stocks and “belt-tightening” • Each case finds that MFI in at least one aspect has expanded business activity
Business Management Training					
Calderon, Cunha, and de Giorgi (2013)	Business Literacy and Development: Evidence from a Randomized Trial in Rural Mexico	Mexico • Rural	RCT 875; Attrition rate: 17.3% 100% women	6 weeks of business literacy classes with two four-hour meetings per week; total of 48 hours	<ul style="list-style-type: none"> • 24% increase in profits and 20% increase in revenues, largely through improved accounting practices • 50% of non-attributing businesses had closed by the time of second follow-up survey 28 months after training

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Valdivia (2015)	Business Training Plus for Female Entrepreneurship? Short and Medium-term Experimental Evidence from Peru	Peru • Urban	RCT 722 women (18% attrition rate) 100% women	A business development services program for female entrepreneurs in Lima that included two treatment groups: one receiving only general training and the other receiving additional technical assistance	<ul style="list-style-type: none"> • Positive effects of both treatment groups, with only a marginal difference between the two (for example, women who received general training increased their sales by 16% per month, whereas women who received both the general training and technical assistance saw an increase of 19% in sales) • A slight increase in productivity in the short-run (4 to 7 months), but not in the long run • In the short run, women who received both treatments were also 4.4 percentage points more likely to keep a record of their sales and 7.5 percentage points more likely to participate in business networks • In the long-run, those with both treatments were more likely to pay themselves a fixed salary, indicating better business planning
McKenzie and Puerto (2015)	The Direct and Spillover Impacts of a Business Training Program for Female Entrepreneurs in Kenya	Kenya • Rural	RCT 3,537 female-owned businesses 100% women	ILO's Gender and Enterprise Together businesses training program to increase profitability, growth, and survival of female-owned businesses	<ul style="list-style-type: none"> • Training had no impact on business survival (11% of firms shut down during the process) • 10% increase in weekly sales and profits due to spillover effects • US \$1.30 to \$2.47 increase in profits per week • Effective in increasing business practices for women with low and high initial business skills
Cho et al. (2013)	Gender Differences in the Effects of Vocational Training Constraints on Women and Drop-Out Behavior	Malawi • Urban (training sites) • Rural (trainees resided)	RCT 1,122 youth (1029 responded to follow up survey) 1/3 women	Three-month vocational and entrepreneurship program	<ul style="list-style-type: none"> • Training outcomes were better for male trainees • Women faced greater obstacles in undertaking and taking advantage of the training • One-third of participants dropped out, whereas males dropped out to take advantage of unrelated job opportunities, females dropped out more due to external constraints • Training was costlier for women, who had less access to financing and used more personal savings and were treated worse than men during apprenticeship
Woodruff and McKenzie (2013)	What Are We Learning from Business Training and Entrepreneurship Evaluations around the Developing World?	16 different countries from 14 studies • 13 Urban settings • 2 Rural • 1 Rural and Urban	Metaanalysis of 16 different studies 4 of the studies were exclusively for women	A metaanalysis to determine the success of various business and entrepreneurship training interventions	<ul style="list-style-type: none"> • Many evaluations suffer from low statistical power, measure impacts only within a year of training, experience survey attrition, and poorly measure firm profits and revenues • Relatively modest impacts of training on survivorship, but better impacts for launching new firms • Training has some success in generating short-run impacts on business start-up • Does not increase employment and has little impact on reforming business practices • Studies need larger samples and a better measurement of outcomes • Studies must be context-specific and studied over longer periods of time

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Networks and Mentors					
Field et al. (2015)	Friends at Work: Can Peer Support Stimulate Female Entrepreneurship?	India • Urban	RCT 636 women age 18-50 who had actively saved or borrowed from SEWA Bank. Possibility of inviting friends to attend. 100% women	Two days of business counseling and assistance in identifying a medium-term financial goal, with a random subsample invited to attend training with a friend	<ul style="list-style-type: none"> • Women who attended training alone used loans for home repair, whereas those invited with a friend used loans for business purposes • After four months, those who came with a friend reported differences in business behavior (higher volume of business and more stated plans to increase revenues), whereas those who came alone experience no change • Those invited with a friend report significantly higher household income and expenditures and were less likely to be housewives • Impacts of peer training on business loans and labor supply are concentrated among women in social castes/religions with more restrictive social norms
Macours and Vakis (2014)	Changing Households' Investment Behaviour through Social Interactions with Local Leaders: Evidence from a Randomised Transfer Programme	Nicaragua • Rural	RCT 3,000 households 100% women	The intervention of interest is the exposure of CCT beneficiaries to female leaders who act as role models in the utilization of the productive investment package.	<ul style="list-style-type: none"> • A higher share of women leaders receiving the productive investment package is associated with increases in educational and nutritional outcomes, and with income from non-agricultural activities • These social interaction effects are concentrated on beneficiaries who themselves also were eligible for the productive investment package • Women in households eligible for the productive package are more likely to express positive attitudes when there are more leaders with the productive investment package in their proximity: they are more optimistic about the future, happier in life and have lower indicators of depression • The higher the share of leaders with the productive investment package, the less likely beneficiaries of the productive investment package answered they would not do anything to reduce the impact of future shocks • There is also a positive relationship between the post-intervention incomes and attitudes of leaders with the productive investment package and the attitudes of beneficiaries with the productive package • The program increased social interactions both among community members generally and between beneficiaries and leaders; this is particularly the case for leaders and beneficiaries of the productive investment package • Technical learning and economic spillovers cannot explain the social interaction effects of the program

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Vasilaky and Leonard (2015)	As Good as the Networks They Keep?: Improving Farmers' Social Networks via Randomized Information Exchange in Rural Uganda	Uganda • Rural	RCT 30 villages	A Social Network Intervention (SNI) which involved inviting women cotton farmers to a networking session in which they were taught new crop information, after which each was paired with another randomly selected female cotton farmer whom she did not already know. Each pair received a Polaroid photo of themselves and their partner, identified cultivation issues, chose a collaborative goal, and set potential times when they would meet to exchange information	<ul style="list-style-type: none"> • Difference in difference estimates of cotton yields show that cotton farmers in villages that received the SNI experienced large gains compared to the control group for all but the highest performing farmers compared to the cotton farmers in control villages • The intervention was successful in creating new links between female cotton growers who, prior to the SNI, did not know one another, but following the intervention, reported sharing cotton-growing information • While there is no significant impact on the total network size of women farmers after the SNI treatment, there is a change in the composition of these networks, with treated women reporting higher proportions of other women and "key" cotton growers • Knowledge about cotton farming improved among treated women, which accounts for about a quarter of the total gains in yields • For a small subsample of women in which yields are observed for both of the paired members at the baseline and endline, being paired with a higher-yielding farmer led to significant increases in yields, whereas being paired with a worse farmer had no impact on yields
Bernard et al. (2014)	The Future in Mind: Aspirations and Forward-Looking Behaviour in Rural Ethiopia	Ethiopia • Rural	RCT 2,063 individuals (2% attrition rate)	Research subjects were shown four 15-minute documentaries in which people from similar backgrounds to the audience tell stories about their lives. The individuals featured in the documentary films describe how they improved their socio-economic position from being poor or of average socio-economic position in their communities to being relatively successful	<ul style="list-style-type: none"> • Being invited to a documentary screening session has a positive and significant effect of 0.12 (aspirations) and 0.11 (expectations) straight after the screening, compared to being assigned to the control group – or about 20 percent of a standard deviation • These effects persist after six months, although they decrease in size: aspirations and expectations among treated group are significantly higher than among the control group by 5 percent of a standard deviation for expectations and 3 percent of the standard deviation for aspirations • Results show strong and positive direct effects on aspirations for children's education, and no such effects on income, wealth, or social status aspirations • The aspirations boost from the experiment after the screening is only for those with above median aspirations and those with above median wealth. There is significant depreciation of this effect, and the boost in aspirations after six months remains only for those with above median aspirations to start with. Those with lower initial aspirations to start with are not affected by the screenings • The intervention had positive and statistically significant effects on savings and borrowing behavior • The effects on aspirations are in part mediated through the number of peers also exposed to treatment, and presumably by the discussions one has had with these peers
Brody et al. (2015)	Economic Self-Help Group Programs for Improving Women's Empowerment: A Systematic Review	Several • Several settings	Metaregression analysis 23 quantitative and 11 qualitative studies 100% women	This review focuses on the impacts of self-help groups on women's economic, political, social, and psychological empowerment.	<ul style="list-style-type: none"> • SHGs have positive statistically significant effects on various dimensions of women's empowerment ranging from .06-.41 SD • There was no statistically significant effects of SHGs on psychological empowerment • There were no adverse effects of SHGs, including for domestic violence • There are financial and social barriers that prevent the poorest of the poor from participating in SHGs • Program designs should be tailored to the local settings and evolve over time - flexibility is required to adapt programs successfully

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Bundled Services					
Banerjee et al. (2015)	Targeting the Hard-Core Poor: An Impact Assessment	Bangladesh • Rural	RCT 978 households (812 responded to endline survey) Almost 100% women	Large asset transfer with intensive training on managing the asset	<ul style="list-style-type: none"> • After 18 months, average monthly per capita earnings of households who received the asset increased by 21% • 15% increase in household consumption • Positive impacts on household assets and emotional wellbeing
Blattman et al. (2015)	The Returns to Microenterprise Support Among the Ultra-Poor: A Field Experiment in Post-War Uganda	Uganda • Rural	RCT (the control group also received the treatment about 18 months later due to ethical considerations) 1,800 individuals (96.3% attrition) 3/4 women	There were two intervention groups, where the first group received a five-day business training, US \$150 in cash, and some supervision over six months after receiving the grant. Half of this group also received a group dynamics training where participants were encouraged to form self-help groups, organize savings and credit, and collaborate. The second group received a five-day business training and US \$150 cash, together with different levels of supervisory visits	<ul style="list-style-type: none"> • A five-day business training and a cash grant of US \$150 is found to double the earnings from microenterprise activities 16 months after the intervention; the increase is the equivalent of US \$1 per day (adjusted for PPP) • Follow-up supervision does not seem to have a sizeable effect • Encouraging group interactions among the villagers had a positive effect; this results suggest that participants suffered both from credit constraints and poor social capital
Roy et al. (2015)	"Flypaper effects" in Transfers Targeted to Women: Evidence from BRAC's "Targeting the Ultra Poor" Program in Bangladesh	Bangladesh • Rural	RCT 13 districts Households with either a female spouse or a female head	To provide livestock i.e. productive asset transfer in the form of cows or goats and training on the use of these productive assets to the adult women in ultra-rural households in Bangladesh.	<ul style="list-style-type: none"> • Tangible outcomes i.e. women's ownership and control over transferred livestock increased, but the ownership on new investments continued to be seen only for men • The results show a 9090 Taka increase in women's sole perceived ownership • In the case of consumer durables, agricultural productive assets, men saw a larger ownership than women (375 vs 173 taka) • The program restricted women's mobility • Intangible outcomes such as social capital and self-confidence improved
van den Bold et al. (2015)	Can Integrated Agriculture-Nutrition Programs Change Gender Norms on Land and Asset Ownership? Evidence from Burkina Faso	Burkina Faso • Rural	RCT, and qualitative results through semi-structured interviews 1,380 men and 1,380 women (data precontrolled for attrition) 50% women	Examines intra-household bargaining power of women by finding communal village model farms that women can use, encouraging women to garden in these farms and to continue gardening in their own homes; the program targets women and provides gardening inputs and tips	<ul style="list-style-type: none"> • Women in the treatment villages showed a higher increase in the ownership of agricultural assets compared to women in the control villages; this helped reduce the gender gap, which still remains high • Men held 15 times the value of agricultural assets women held, and after the intervention, this ratio dropped to 5.9 • The ratio of male to female ownership of small animals decreased from 4.0 to 2.8 in the treatment villages • Men remained largely in charge of high-value animals such as goats • During the interviews, changes in opinions about who can use and own land were changed; this paralleled the changes related to women's ability to use and to own land

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Demand Driven Job Services					
Bandiera et al. (2014)	Women's Empowerment in Action: Evidence from a Randomized Control Trial in Africa	Uganda <ul style="list-style-type: none"> Urban Peri-urban Rural 	RCT 5,966 adolescent girls in 100 treatment communities (baseline) with 4,888 responding to follow-up surveys (82% response rate) 100% women	Vocational and life skills training	<ul style="list-style-type: none"> Significant improvements in entrepreneurial skills 72% increase in likelihood of engaging in self-employment Gains in employment did not come at expense of school enrollment 26% lower fertility rates in treatment and 6.9 percentage points less likely to be married after two years
Buehren et al. (2015)	Evaluation of Layering Microfinance on an Adolescent Development Program for Girls in Tanzania	Tanzania <ul style="list-style-type: none"> Rural Urban 	RCT 5,454 adolescent girls (42% attrition) 100% women	A program to assist adolescent girls in achieving greater economic and social empowerment through life skill and livelihood training, and a safe space for sharing their experiences	<ul style="list-style-type: none"> Combined intervention of club and microfinance service increased the likelihood of adolescent girls having savings and a 2.8% increase in the likelihood of having savings at ROSCAs Significant positive impact on total amount saved No impact on borrowing No statistically significant impact on reproductive health, education, and empowerment outcomes
Chakravarty et al. (2016)	The Role of Training Programs for Youth Employment in Nepal: Impact Evaluation Report on the Employment Fund	Nepal <ul style="list-style-type: none"> Rural Urban 	Regression analysis using difference-in-differences (Diff-in-Diff) and propensity score matching (PSM) 4,677 youths (12% attrition)	<p>Employment training services offered by the Employment Fund, a Swiss NGO, providing youth training initiatives</p> <p>The courses range from four weeks (incense-stick making) to three months (technical courses)</p> <p>Women additionally receive a 40-hour life skills training course</p> <p>After completing the training, the Employment Fund offers job placement support services</p>	<ul style="list-style-type: none"> Participation in the program led to an increase in non-farm employment of 15-16 percentage points (from a base of 29.6 percent), and a gain in monthly earnings of approximately US \$12 The gain in monthly salary is pronounced, since the average monthly salary at the time of the baseline survey was approximately US \$17 An 18-19 percentage point increase in individuals who work in trade and are able to find employment in the same trade group The training also decreases the underemployment rate (by increasing work hours for those who want to work more) Employment effects (at the extensive margin) are greater for women than men, but there is no significant difference in wages, nor is there a difference between younger and older women (for example, a woman is more than twice as likely to participate in an income generating activity compared with men) Of those that are in non-farm activities, women are also more likely than men to be employed
Honorati (2015)	Impact of Private Sector Internship and Training on Urban Youth in Kenya	Kenya <ul style="list-style-type: none"> Urban 	RCT 1,650 applicants (2% attrition) 40% women	Trainings and internships for vulnerable youth in 3 areas of Kenya	<p>Employment:</p> <ul style="list-style-type: none"> The treatment increased the female's probability of being employed by 4.5% (6.5% for males) 6.7% (10.8 for males) increase in the probability of employment for females who did part of the training and internship. 8.7% (14.2 for males) increase for those who finished the program. <p>Wages:</p> <ul style="list-style-type: none"> Increased by 132% for females in treatment groups, i.e., 7,500 shillings (5,000 shillings for males) The study also shows an increase in probability of opening bank accounts and accumulating savings by females who participated in the training program

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Maitra and Mani (2014)	Learning and Earning: Evidence from a Randomized Evaluation in India	India <ul style="list-style-type: none"> • Peri-urban 	RCT 594 women (504 responded to follow-up survey) 100% women	Six-month vocational training program in stitching and training for young women	<ul style="list-style-type: none"> • Employment increased by six percentage points • Self-employment increased by four percentage points • Earnings increased by 150% monthly • Positive effects sustained 18 months after completion of training and were attributed to an increase in skills rather than in self-confidence or having a training certificate • More than 40% of trainees did not complete six-month course due to distance to training center and lack of available child care support • Cost-benefit analysis suggests that program is highly cost-effective • Using a second round of follow-up data 18 months after the program, all effects are sustained in medium term
Hirshleifer et al. (2014)	The Impact of Vocational Training for the Unemployed: Experimental Evidence from Turkey	Turkey <ul style="list-style-type: none"> • Urban 	RCT 5,902 individuals with 6% attrition	Vocational training programs for unemployed population	<ul style="list-style-type: none"> • Training has statistically insignificant effects on weekly hours worked and income • Training has statistically significant effects on being formally employed, income from formal jobs, and socioeconomic status of jobs • 42% of the control group is working full time (though only 2% can be attributed to training) • Training has no effect on mental health • Higher quality courses may have a better effect on employment • Skills training can be helpful if the programs teach technical skills necessary for current job market
Balkan et al. (2014)	Evaluating the Impact of the Post 2008 Employment Subsidy Program in Turkey	Turkey <ul style="list-style-type: none"> • Urban 	<ol style="list-style-type: none"> 1. Difference in difference to estimate impact of subsidy on women. 2. Regression discontinuity design to test for impact on men across different age groups. <p>2.1 million non-agricultural individuals between 18-55</p>	<p>The government introduced a policy whereby the contributions of the employer to the employee (if they are a part of the disadvantaged group i.e. all females or less than 30 year-old men) drops from 18.5% to 14% and the government pays 26.5% of the contributions.</p> <p>Through this the authors obtain their treatment:</p> <ol style="list-style-type: none"> 1. Based on age (younger than 30 years old) and control group (older than 30 years old). 2. Since the subsidy later benefited all age groups, a difference in difference was used to show the impact on gender. <p>The age criteria are only for men while all women are considered eligible for the subsidy.</p>	<ul style="list-style-type: none"> • On including controls (along with region and time fixed effect), the authors find a 2.2% increase in employment probability for women when they received the subsidy • When sub samples are observed, women above 30 years during the subsidy show a 4% increase in employment and women less than 30 years show only 2% increase; the males continue to show consistently no significant effects • When the authors narrow the age groups to 28-29 years and 30-31 years, the probability of employment increased by 3.8% and 4.1% respectively • Disaggregating the sample by education, older women with a lower level of education continued to experience a higher probability of being employed

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Cash Transfers					
Baird, Garfein, McIntosh and Özler (2011)	Effect of a Cash Transfer Programme for Schooling on Prevalence of HIV and Herpes Simplex Type 2 in Malawi: a Cluster Randomised Trial	Malawi <ul style="list-style-type: none"> Several settings 	RCT 1,777 individuals (4% attrition) 100% women	Cash transfers varied randomly (at level of enumerator area) between \$4, \$6, \$8, and \$10 per month to parents and between \$1, \$2, \$3, \$4, and \$5 to student beneficiaries. In addition, CCT recipients' secondary school fees were paid. For conditional treatment arms, payment was made if attendance the previous month was at least 80% of school days. Unconditional arm had identical offer except payment was not conditional on attending school, and payments were adjusted upward to match the amount of school fees plus cash transfer that CCT arm received.	<ul style="list-style-type: none"> Significant reduction in HIV and HSV-2 for baseline schoolgirls, no impact for baseline dropouts
Nanda et al. (2016)	Making Change with Cash? Impact of a Conditional Cash Transfer Program on Girls' Education and Age of Marriage in India Synthesis of Findings	India <ul style="list-style-type: none"> Rural 	A retrospective, quasi-experimental, mixed-methods study 5,694 girls of the older-age cohort and 4,444 girls of the younger-age cohort. The mothers of the girls surveyed were also interviewed. A second survey was conducted in 2014-2015, with 5,297 girls of the older-age cohort and their mothers. 100% women	The program offered cash transfers at two different points: 1) a small cash disbursement to mothers (500 Indian Rupees, equivalent to US \$8 in 2015) within 15 days of delivering a daughter; and 2) a savings bond in the name of the girl that was to be redeemable for an expected 25,000 Indian Rupees (about US \$380 in 2015) when the girl turned 18, provided she was unmarried.	<ul style="list-style-type: none"> Did not affect the probability of being ever-married or the probability of marriage before the age of 18 The probability of completing 8th grade increases by 12 percentage points for beneficiary girls Program does not have an effect on whether girls are currently studying or on their completion of 12th grade Program had a positive and significant impact on girls' aspirations to study Mothers' aspirations for their daughters' education, completion of 12th grade or currently studying, and gender-equitable attitudes among girls and mothers did not emerge as pathways of change
Blattman et al. (2011)	The Economic and Social Returns to Cash Transfers: Evidence from a Ugandan Aid Program	Uganda <ul style="list-style-type: none"> Rural 	RCT 535 groups with 12,000 individuals (84% response rate after four years)	Large, unconditional cash grant in groups (equivalent of US \$382/member)	<ul style="list-style-type: none"> After four years, business assets increased by 57%, work hours by 17%, and earnings by 34% compared to controls Young women's average incomes were 84% higher than controls compared with young men's, which were 31% higher, though women started poorer Women's work and earnings stagnated without the program

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Blattman, Fiala, and Martinez (2014)	Generating Skilled Self-Employment in Developing Countries: Experimental Evidence from Uganda	Uganda • Rural	RCT 535 groups with 12,000 individuals (82% response rate after four years) 5% of groups are all female, 83% are mixed	Large, unconditional cash grant in groups (equivalent of US \$382/member)	<ul style="list-style-type: none"> • After four years, business assets increased by 57%, work hours by 17%, and earnings by 38% compared to controls • Half practiced a skilled trade • Many formalized enterprises and hired labor • Young women's average incomes were 73% higher than controls compared with young men's, which were 29% higher, though women started poorer • Women's work and earnings stagnated without the program
Child Care					
Wang (2015)	Child Care, Work-Family Policy and Female Entrepreneurship	China • Urban	Regression analysis using difference-in-differences 852 women 100% women	The universal child care program in China aimed to improve access to child care by the construction of new facilities, tuition subsidies, and teacher education programs. The program was targeted particularly to less developed regions.	<ul style="list-style-type: none"> • Women in provinces with a large increase in child care accessibility are 11.8% more likely to become entrepreneurs than women in other provinces • Female entrepreneurship increased by 0.47 percentage points as a result of a 1 percentage point improvement in access to affordable child care • There is no effect on men • This policy seems to decrease the gender gap
Martinez et al. (2013)	The Promise of Preschool in Africa: A Randomized Impact Evaluation of Early Childhood Development in Rural Mozambique	Mozambique • Rural	RCT 76 communities (2.5% attrition of households per year) 93% of teachers are women; 81% of primary caregivers are women	The project created a community-driven preschool model in rural areas of Mozambique.	<ul style="list-style-type: none"> • Enrollment in treatment communities for preschool was 55.6% (as opposed to 11.7% in control) • Primary school enrollment increased by 24.2% over the controls • Children's cognitive development score increased by 87% • 5% of older siblings also enrolled in school in the control communities • The probability of a caregiver working in the past 30 days increased by 26%
Asai et al. (2015)	Childcare Availability, Household Structure and Maternal Employment	Japan • Urban • Rural	Fixed effects panel regression 734 women from 1993 cohort; 137 women from 1997 cohort 100% women	Prefecture fixed effects is used to estimate the impact of the availability of childcare facilities on maternal employment	<ul style="list-style-type: none"> • Without adding the controls like age, husband's age, unemployment rate, type of household, year and prefecture fixed effects, there is a positive relation between childcare and maternal employment • When controls are included, the effect is also positive • When the authors include prefecture fixed effects, the sign is negative (not significant). • When the sample is divided by family type (nuclear, 3 gen or joint family), the results are more clear: Childcare facilities increases maternal employment in nuclear families, controlling for prefecture fixed effects • In households with grandparents, childcare facilities are not correlated with increase in maternal employment • Mother's decision to work is independent of childcare since their children are already looked after by grandparents. • Improved childcare increases maternal employment up to 2% (30% overall maternal employment growth through the study period) • Once the household structure is considered, a 3 generation family sees no significant effect of better childcare on maternal employment.

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Lee (2016)	Effects of a Universal Childcare Subsidy on Mothers' Time Allocation	South Korea • Urban	Survey and Panel Data 4,062 mother-child combinations 100% women	A universal childcare subsidy, which provided a full childcare subsidy for children aged 0-2 and a partial subsidy for children 3-4	<ul style="list-style-type: none"> • There is a 12.3% increase of childcare for children age 0-2 than those 3-4 • Labor supply of mothers displays no significant increase in response to the policy change • For the low-income group, there is no change in subsidy benefits since the previous policy provided a full childcare subsidy for low-income households • Lower take up of care centers by higher income households is probably due to demands for childcare quality (highly educated mothers' willingness to pay is 31% higher)
Contreras and Sepulveda (2016)	Effect of Lengthening the School Day on Mother's Labor Supply	Chile • Rural • Urban	Survey and Panel Data 2,665 households across 336 municipalities 100% women	A national policy that extended the school day from half- to full-day school; this study examines the effects on maternal labor supply	<ul style="list-style-type: none"> • For single mothers, there is a 4% increase in labor participation, 6% increase in employment (5% overall) • No significant effects for married mothers nor for mothers with children younger than age 8 • A larger impact would require increasing the school day to be compatible with the working hours of mothers • There is a negative and significant impact in hours worked per week because women spend less on childcare so have more disposable income • Mothers are mostly constrained when they have younger children
Martinez and Peticara (2014)	Childcare Indivisibility and Maternal Employment	Chile • Unknown	RCT 2,110 individuals with 10.4% attrition 100% women	Afterschool care within educational establishments for boys and girls with working mothers	<ul style="list-style-type: none"> • 4.3% increase in the probability of labor force participation • When participation in the program is continuous probability of labor force participation increases to 7% • No significant impact on labor income but increased expenditure toward school supplies and women's clothing
Prada et al. (2015)	Effect of Mandated Child Care on Female Wages in Chile	Chile • Urban	Regression discontinuity design 1,912 firms 100% women	Effect of mandated child care benefits for workers in Chile	<ul style="list-style-type: none"> • Overall the results show women experience lower wages in firms where the policy is mandated (i.e., when the firm reaches 20 female employees): the range is US \$39 to US \$87 • This penalty is experienced by women working in large firms (> than 100 workers) • Women hired in large, new firms of 20 or more female workers with mandatory childcare services are penalized with lower starting wages compared to women hired in firms with no such requirements, i.e., large firms with less than 20 female workers • These effects are not significant for female workers in small firms (<100)
Land Rights					
Goldstein et al. (2015)	Formalizing Rural Land Rights in West Africa: Early Evidence from a Randomized Impact Evaluation in Benin	Benin • Rural	RCT 291 villages 20% female headed households	A land formalization process that consists of two key steps: first, each community identifies all parcels, with the mapping of customary ownership in the form of a full land survey, and the laying of cornerstones to explicitly mark parcel boundaries; second, customary land ownership is formally and legally documented in the form of certificates	<ul style="list-style-type: none"> • The program increases the likelihood of having borders by 27% • 10% improvement in tenure security • 25% decrease in rental market activity • Female-headed household yields are 22% lower • More women move to insecure land to reduce the risk of perceived expropriation

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Mendola and Simtowe (2015)	The Welfare Impact of Land Redistribution: Evidence from a Quasi-Experimental Initiative in Malawi	Malawi • Rural	Quasi-experimental study with panel and survey data 1,194 households 87.7% of households are matrilineal	The Community-Based Rural Land Development Project is a market-based model by which government and donor agencies provide finances and services to allow communities to buy and manage land themselves (i.e., community-driven). The approach has four components: land acquisition and on-farm development; land administration; capacity-building; project management, monitoring and evaluation.	<ul style="list-style-type: none"> • The land program significantly increased land holdings, agricultural output, and the crop-specific land productivity (especially in the short term) • Tobacco-growing beneficiary households increase their productivity over time • Negative or no impact on beneficiary households' expenditure composition, input use, and access to social services such as schools, health centers and water facilities, both in the short and medium term • The negative impact on women raises concerns about women's actual access to land and productive resources
Suite of Integrated Services					
Karamba, R. W., & Winters, P. C. (2015)	Gender and Agricultural Productivity: Implications of the Farm Input Subsidy Program in Malawi	Malawi • Rural	Regression analysis using OLS, and with robustness checks including OLS with PSM, and OLS with spatial geographic fixed effects 5,656 households and 10,210 plots of land Female and male headed households have similar participation rates: 64%	Poor farmers are given vouchers which can be exchanged for fertilizers and seeds at subsidized prices. The value of a vouchers in the 2009-2010 farming season was the equivalent of "...a 50-kg bag of basal fertilizer for maize... a 40-kg bag of top dressing fertilizer for maize (Urea), either a 5-kg bag of hybrid maize seed or a 10-kg bag of Open Pollinated Varieties maize seed at subsidized prices, and a free 1 kg bag of legume seeds". The program targets 50% of rural farmers. Both men and women can participate equally in the program.	<ul style="list-style-type: none"> • Farmers who own land and use fertilizers increase their productivity • No difference between men and women in terms of productivity gains (17%) in the context of Malawi, leading to the conclusion that mean differences in productivity are due instead to differences in education and input use • Because of the differences across gender, absolute gains for women are smaller
Beaman et al. (2013)	Profitability of Fertilizer: Experimental Evidence from Female Rice Farmers in Mali	Mali • Rural	RCT 383 women (378 responding to endline) 100% women	Providing fertilizer grants to women rice farmers in Mali	<ul style="list-style-type: none"> • The women in the treatment group used 70% of the fertilizer given to them • The increase in output is 17% in the half-treatment group and 31% in the full-treatment • No significant evidence that profits increased

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Aker (2016)	Can Mobile Phones Improve Agricultural Outcomes? Evidence from a Randomized Experiment in Niger	Niger • Rural	RCT 1,044 men and women (999 responded to endline survey)	Catholic Relief Services, a non-profit organization, administered basic educational training and added a component on teaching students how to use a mobile phone, and gave a phone to be shared amongst a group of 5 students (value of US \$5). While the education course was for eight months, students received the mobile phone course just three months into the training.	<ul style="list-style-type: none"> Households in the treatment villages cultivated .34 more crops than the control villages. No changes in the planting of staple crops but treatment villages increased their planting of okra No significant changes in crop volumes between the treatment and control villages. The impact of the treatment was found to be stronger in the Dosso region, where on average, .34 more crops were planted compared to the control group. Because Dosso is closer to the capital, farmers may be slightly more integrated to the market there, and have more incentive to use their mobile phones to learn about prices In terms of a female-specific impact, households where the training was given to a woman increased the variety of crops planted by .24 to .46 times The effect on men was insignificant
van Campenhout (2013)	Is There an App for That?: The Impact of Community Knowledge Workers in Uganda	Uganda • Rural	Difference in Difference 1,989 households	An intervention that uses information and communication technology devices to provide real-time agricultural information and extension services	<ul style="list-style-type: none"> The technology encourages farmers to diversify their crop portfolio toward more commercial crops Farmers sell 38% of the maize they harvest at higher prices (by 12-16%) There are substantial spillover effects as farmers share the information publically
BenYishay et al. (2016)	Are Gender Differences in Performance Innate or Socially Mediated?	Malawi • Rural	RCT Rotating samples of 3,685, 3,496 and 3,314 households of 'regular' (non-communicator) farmers with 6,006 and 4,693 at midline and endline, respectively	A few village residents are chosen as communicators to receive training on new technology, use this knowledge on her own farm, communicate to others about the new technology and convince them to acquire and use this knowledge.	<ul style="list-style-type: none"> No significant gender difference in training participation Incentive payments have a larger impact on men Female communicators under perform in convincing others to adopt Yields are 17% greater when women teach Farmers report that they are more likely to participate in trainings organized by male communicators Supply of trainings is comparable across men and women, but demand for training is not
Rural Electrification					
van de Walle et al. (2013)	Long-Term Impacts of Household Electrification in Rural India	India • Rural	Panel and longitudinal data 6,008 households	National efforts to bring electricity to rural households post-independence	<ul style="list-style-type: none"> 17.5% increase in consumption since electrification Regular wage work increases by 11 days for men Casual work decreases for men but increases for women (suggesting a link between men's wage labor and women's casual labor) 14% increase in girl's education Village connection to the grid increases consumption growth by 1% for households without electricity and has no impact on households with electricity
Grogan and Sadanand (2013)	Rural Electrification and Employment in Poor Countries: Evidence from Nicaragua	Nicaragua • Rural	Panel and survey data 6,882 households	Models the effect of household electrification on labor supply decisions in the household	<ul style="list-style-type: none"> There is a strong positive associate in rural areas between having electricity and working for a salary There is a strong negative association between electricity and time spent in agricultural activities (firewood collection) Women are 23% more likely to work outside of home (concentrated among women under 35) Households will likely become more monetized with electrification (women will be earning and buying rather than gathering and collecting)

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Dasso and Fernandez (2015)	Electrification and Educational Outcomes in Rural Peru	Peru • Rural	Panel and survey data 2,400 individuals	Studying the effects of The Rural Electrification Program on educational outcomes in Peru	<ul style="list-style-type: none"> Girls' enrollment increases by 3.5 percentage points and spending for girls' education increases by 20% but decreases for older girls by 35% (younger girls benefit the most from the program) Boys' math scores increase; girls' and boys' reading scores increase (long-run gains)
Salmon and Tanguy (2016)	Rural Electrification and Household Labor Supply: Evidence from Nigeria	Nigeria • Rural	Panel and survey data 1,819 husband-wife pairs 50% women	Testing electrification as a technical shock that may affect household time allocation	<ul style="list-style-type: none"> Electrification increases the time that spouses devote to work No impact on spouses' employment probabilities Household labor decisions are interdependent: electrification favors men's employment and as a result, women increase their non-market work Electricity is a complement to, rather than a replacement of, other fuels (there is very little reduction in domestic work time)
Financial Literacy					
Cole et al. (2011)	Prices or Knowledge? What Drives Demand for Financial Services in Emerging Markets?	Indonesia and India • Rural • Urban	RCT 564 households, 349 responded to endline survey 50% female-headed households	Customized training session on bank accounts for unbanked individuals	<ul style="list-style-type: none"> 62% of households continued to use their account Financial literacy increased from 1-7.6% No direct effect on savings from literacy program or subsidies (savings increased by only 2.2%) Only 12% reported saving for business investment
Carpena et al. (2015)	The ABCs of Financial Education: Experimental Evidence on Attitudes, Behavior, and Cognitive Biases	India • Urban	RCT 1,328 individuals with less than 6% attrition 50% women	2/3 of the sample received a five-week, video-based financial education program on budgeting, savings, credit, and insurance. 1/3 received health training, with a similar video-based format.	<ul style="list-style-type: none"> Financial education had no effect on financial numeracy but does create better overall financial awareness and improve attitudes towards financial products Individuals in the program were 22% more likely to understand the benefits of budgeting at 28% more likely to attempt budgeting Participants were 2.8% more likely to hold informal savings and 7.5% more likely to hold formal savings Borrowing decreased by 2.5% Participants were 5.4% more likely to purchase life insurance
Fernandes, Lynch and Netemeyer (2013)	Financial Literacy, Financial Education and Downstream Financial Behaviors	Several • Several settings	Metaregression analysis 201 studies	A metaregression analysis of 201 studies to examine the relationship between financial literacy/education and financial behavior	<ul style="list-style-type: none"> There are larger effects on financial behavior when financial literacy was measured rather than manipulated Financial literacy and education only accounted for .1% of variance in financial behavior Financial literacy was more beneficial for non-poor populations More rigorous designs lead to smaller effect sizes Interventions are more beneficial in the short run