



ANNUAL MEETINGS 2014

# Gender Programs that Work

Evidence from World Bank impact evaluation in Africa



**WORLD BANK GROUP**

The Office of the Chief Economist for the Africa Region



# 1 EVIDENCE

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Research on the role of contact farmers demonstrates how to increase the adoption of new agricultural practices. Recent evidence on land tenure reform shows it can encourage investments in land, especially benefiting women.

# 13 BASELINE IN ACTION

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How a baseline survey of 4,000 households in Ethiopia had immediate impact on policies to improve women's access to new agricultural technologies.

# 26 IMPACT

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Evidence is making a difference in Africa. See an example of how the South Africa Financial Literacy Project is already influencing policy that can change the lives of millions of women.



### Economic Empowerment of Female Adolescents: Evidence from Uganda

*The right combination of vocational and life skills training can dramatically improve adolescent girls' livelihoods*

#### THE ISSUE

Nearly  60%

of Uganda's population is below the age of 20, so youth employment and adolescent sexual/reproductive health have an important impact on the country's development.

#### THE PROJECT

The Empowerment and Livelihood for Adolescents (ELA) program, offered by the NGO BRAC, established "adolescent development clubs" for girls aged 14-20, located in communities in: (1) the urban or semi-urban regions of Kampala and Mukono; and (2) the mostly rural region around Iganga and Jinja. These clubs provided:

- A girls-only social space
- Life skills training (with a focus on sexual health)
- Vocational training (with a focus on self-employment)

#### THE RESULTS

A randomized control trial of the program showed major impacts. Participating girls:

- Were much more likely to be working and to be earning more
- Engaged in less risky forms of sex
- Had fewer children
- Were much less likely to have sex against their will

Cost-benefit analysis:

- Among those with employment, the per-girl cost of the program is more than off-set by the resulting increase in income. The benefits are likely to be even larger if we take into account other, less easily monetized impacts such as reduced risky sexual behavior.

## THE IMPLICATIONS

- Interventions targeting adolescent girls may be more effective at influencing both labor market outcomes and risky sexual behavior when they combine vocational and life-skills training. This conclusion is also supported by previous research which suggests that economic and health outcomes are interlinked.
- Vocational skills and/or life-skills are a binding constraint for adolescent girls' economic participation in Uganda.
- The implications of the research are especially significant for "youth bulge" countries which are striving to ensure meaningful opportunities for their young populations.

### Contact:

Markus Goldstein (World Bank, Africa Region Gender Practice),  
mgoldstein@worldbank.org, (202) 473-5274

### Link:

<http://documents.worldbank.org/curated/en/2012/12/17385460/empowering-adolescent-girls-evidence-randomized-control-trial-uganda>

## HOW IT WORKED

This section describes the design features which differentiate ELA from other similar programs. In summary:

**While the intervention teaches vocational skills, the focus is on using these for entrepreneurship. This makes sense given the context of limited formal employment opportunities.**

**The program combines life-skills with vocational skills, recognizing the relationship between sexual behavior and economic empowerment.**

**The intervention ensures that school drop-outs and those currently attending school can equally benefit, through the use of non-school locations and class times.**

While the classes on offer in the vocational training component could be applicable to both wage employment and entrepreneurship, there is a focus on the latter, and the modules are complemented by financial literacy courses. The assignment of girls into different vocational modules is driven by the girls' interests, skills, and education level, as well as by the local context and market demand.

### **The life skills training covers:**

- Reproductive/sexual health and behavior
- Negotiation/conflict resolution
- Leadership
- Legal aspects of women's issues.

Unlike other life skills training programs, ELA was delivered through dedicated adolescent girls clubs, located outside of schools, with classes scheduled outside of school hours. This meant that:

- The project was able to reach school drop-outs (who tend to be the most vulnerable) as well as girls currently enrolled in school.**
- The program did not cause currently enrolled school girls to drop out or reduce their time spent on studying.**

Club activities were led by female mentors, who are selected from within the community, are slightly older than the beneficiaries, and are provided with regular training. The clubs also serve as a safe socializing space for girls, hosting a variety of recreational activities. This may be critical, given research on the importance of social networks for girls’ sexual health and behavior (see Bruce and Kallman 2008).

Given the lack of formal employment opportunities in Uganda, ELA’s focus on entrepreneurship makes sense. Additionally, the average take-up rate in participating treatment communities was 21 percent among those who were aware of the intervention, indicating that there is significant demand for such interventions. However, an important question is whether a lack of business skills or a lack of access to finance/capital is the key constraint for aspiring young female entrepreneurs. In this context, it should be noted that the ELA program has recently been expanded to include a microfinance component, the impact of which will be analyzed in future research.

## What Else You Should Know About Skills Training

The following section highlights the results of recent intervention studies, which suggest the following implications for policy-makers and those looking to design future programs:

<b>Interventions need to take account of the social, time, financial, and security constraints and opportunity costs that may prevent women from participating effectively.</b>	<b>Girls’ greater vulnerability can be partially addressed with the provision of safe, female-only social spaces in dedicated program centers.</b>	<b>Interventions targeting self-employment may be more appropriate for much of Sub-Sahara Africa, where the formal wage-employment sector is often small.</b>
<b>Interventions will be more successful if they address all binding constraints for which market solutions are not available to targeted beneficiaries.</b>	<b>The impact of interventions can be affected by other simultaneously provided interventions, so coordination with government and other agencies is essential.</b>	<b>Increasing the use of cost-benefit analyses would contribute to a more relevant policy debate.</b>

There are very few rigorous impact evaluations of skills intervention programs in developing countries – especially for least developed countries in Africa and for the small number of interventions that have a focus on women or gender differences. However, a recent overview of studies (Betcherman et al 2007) presents the following general conclusions:

<p><b>Only 60 percent have positive labor market impacts.</b></p>	<p><b>Focusing on entrepreneurship brings better results than wage employment.</b></p>
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## KEY POLICY QUESTIONS

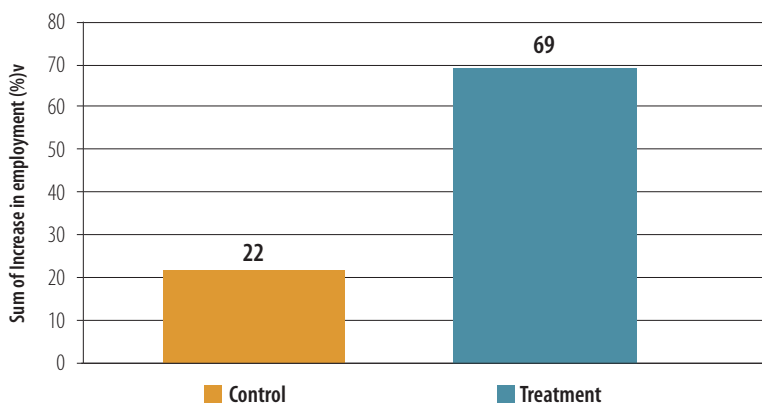
Below, we summarize key findings from recent interventions which did have rigorous impact evaluations. These provide us with insight into some key policy questions.

Preliminary results for the **Economic Empowerment of Adolescent Girls and Young Women (EPAG) project in Liberia** reveal that the intervention has led to a 70 percent increase in employment for the treatment group, compared to a 20 percent increase for the control group, with greater impacts for the business skills compared to job skills trainees (World Bank, 2012). Average weekly incomes rose by 80 percent. The results validate the importance of delivering business skills training in contexts where wage employment is limited. The intervention was able to reduce the negative impact of women’s often greater participation constraints by:

<p><b>Offering both morning and afternoon training sessions.</b></p>	<p><b>Locating training centers in girls’ communities.</b></p>
<p><b>Offering free childcare at every training venue.</b></p>	<p><b>Offering transport allowances that were conditional on attendance to boost retention.</b></p>

In their evaluation of the BRAC-implemented **Targeted Ultra-Poor (TUP) program in Bangladesh**, Bandiera et al (2013) find that sizable transfers of business assets, worth ten times the baseline livestock wealth, and two years of training in the participant’s selected business area enable the poorest women to shift out of agricultural labor - which is associated with greater poverty and less income stability - and into running small businesses.

**FIGURE 1: Percentage change in employment after training round 1 - EPAG**



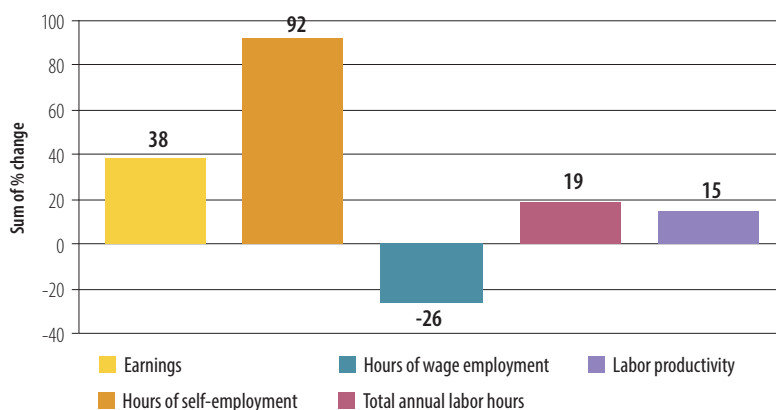
It is important to note that the assets and skills training were provided together in the knowledge that an equivalent solution was not currently available on the market and that both were necessary for poor women to transition from wage employment to entrepreneurship. This is consistent with the fact that microloans were already available prior to the intervention, but were not used by women who subsequently participated in the TUP program.

After four years, there is a 26 percent reduction in the number of hours per year that eligible women devote to wage employment and a



92 percent increase in the hours devoted to self-employment, with total annual labor hours increasing by 19 percent. This shift in occupational choice, which persists and strengthens after assistance is withdrawn, leads to a 38 percent increase in earnings, a 900 percent increase in household savings, and a 15 percent increase in labor productivity. After the program, participants are also 38 percent more likely to own land – suggesting the beginnings of a solid economic base for women’s long-term empowerment. These gains allow the eligible poor to overtake the near poor across a range of economic indicators and to close the gap to middle-class households by 40 percent.

**FIGURE 2: Impact of TUP (% increase/decrease)**



Cho et al (2012) evaluate a **vocational training intervention in Malawi**. The intervention is implemented by the Technical Education and Vocational Education and Training Authority (TEVETA) and provides apprenticeship training and mentorship to vulnerable youths aged between 15 and 24 years.

The training results in skills development and improved well-being, with participants’ profit calculation ability and the likelihood of knowing how to start a business increasing by 37 percent and 20 percent respectively. However, these positive effects are greater for men and there are no improvements in labor market outcomes. Additionally, while participants devote a significantly greater period of time to human capital development, even after the end of the training, this increase is entirely due to an increase for men. However, in terms of non-economic impacts, training recipients are 74 percent less likely to have had a baby over the previous 12 months.

The smaller benefits of the intervention for women reflect some gender-differential constraints:

<p><b>Women were much more likely to drop out or not join the program due to constraining factors, such as transport problems, illness, or family responsibilities. Men, on the other hand, drop out to take advantage of new opportunities. Overall, boys were significantly less likely to miss any days of training.</b></p>	<p><b>Boys are 20 percent more likely to receive food or money from master craftsmen and are 8 percent less likely to report that the stipend was insufficient. Additionally, boys are three times more likely to receive paid employment from the master craftsmen after the training period.</b></p>
<p><b>Women’s participation may be more greatly affected by a lack of access to credit, with their participation resulting in a significantly larger decline in personal savings; it may have proven particularly onerous for female participants that 30 percent of the hours used for training displaced hours that otherwise would have been spent working.</b></p>	<p><b>While both genders are burdened with a great deal of family responsibility at a young age, the fact that men’s responsibilities appear to be more financial in nature, and more likely to carry market returns, may imply that they have the chance to develop skills outside the home that allow them to make better use of the training.</b></p>

Contact: Yoonyoung Cho (World Bank, Human Development Network), [ycho@worldbank.org](mailto:ycho@worldbank.org) (202) 458-7493, and Victor Orozco (World Bank, Development Research Group), [vorozco@worldbank.org](mailto:vorozco@worldbank.org), (202) 473-7154.

## CCTs A tool for reducing the gender gap in school enrollment

*Conditionality can be a critical mechanism for maximizing the impact of cash transfers on girls and other vulnerable children*

### THE ISSUE

Across much of **Sub-Saharan Africa**, poor households tend to prioritize investments in the education of boys over girls, contributing to significant gender gaps in enrollment.



### THE PROJECT

The Nahouri Cash Transfers Pilot Project (NCTPP) included two types of cash transfers, one type conditional on school enrolment and high levels of attendance and the other type unconditional. These transfers targeted poor households in rural Burkina Faso which had children aged 7-15 years. The project used a random experimental design to evaluate the relative effectiveness of conditional cash transfers (CCTs) and unconditional cash transfers (UCTs).

### THE RESULTS

- CCTs are significantly more effective than UCTs at improving the enrollment of “marginal” children, such as girls, who are less favored by parents for investments in their human capital.
- CCTs and UCTs are equally effective at improving the enrolment of “non-marginal” children, such as boys.
- CCTs are more cost-effective than UCTs at improving enrollment, especially for marginal children.
- The comparative cost-effectiveness advantage of CCTs would be even greater if the pilot was extended and the project was able to take advantage of economies of scale.

## THE IMPLICATIONS

CCTs may be a more effective tool than UCTs for improving the school enrolment rates of the most vulnerable children, including girls. Therefore CCTs could be especially useful for reducing gender gaps in education and assisting progress towards MDG 3.

### Contact:

Damien de Walque (World Bank, Development Research Group), [ddewalque@worldbank.org](mailto:ddewalque@worldbank.org), (202) 473-2517

### Link:

[http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2208344](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2208344)

## HOW IT WORKED

The two-year Nahouri Cash Transfers Pilot Project (NCTPP) randomly distributed cash transfers that were either conditional or unconditional to poor rural households with children aged 7-15 years. The annual size of the transfers differed according to the age group of the children:



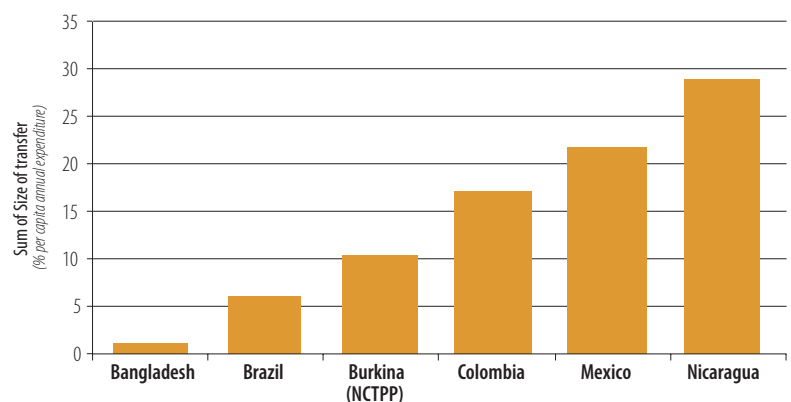
The condition for the transfer of the CCTs was school enrollment and at least 90 percent school attendance for each child. Conditionality was successfully enforced using the following methods:

**Each child was provided with a booklet in which school attendance was recorded by a teacher.**

**Independent audits were carried out on a random sample of 20 percent of these booklets, by cross-referencing them with official school records.**

The school enrolment and attendance context in Burkina Faso made it an ideal place to test the hypothesis that CCTs could be especially useful for boosting the enrolment of "marginal" children – those at the highest risk of not being in school – such as girls. Enrolment rates are very low, even by sub-Saharan Africa standards, thus the enrolment condition required households to change their behavior. Moreover, for those children who enroll, attendance is very high. These figures indicate an environment in which parents strategically chose which children to send to school and then make sure those children attend.

**FIGURE 3: Size of transfers as % of per capital annual expenditure**



Overall, transfers to eligible households were the equivalent of 10.4 percent of average per capita expenditure (across all kinds of expenses). This amount is relatively small compared to previous programs.

This section describes the design features which contributed to the success of NCTPP. In summary:

**Compliance with conditionality was ensured by cross-referencing school and beneficiary records.**

**The tendency in Burkina Faso for parents to strategically select which of their children to send to school, allowed the team to test the differential impacts on marginal and non-marginal children.**

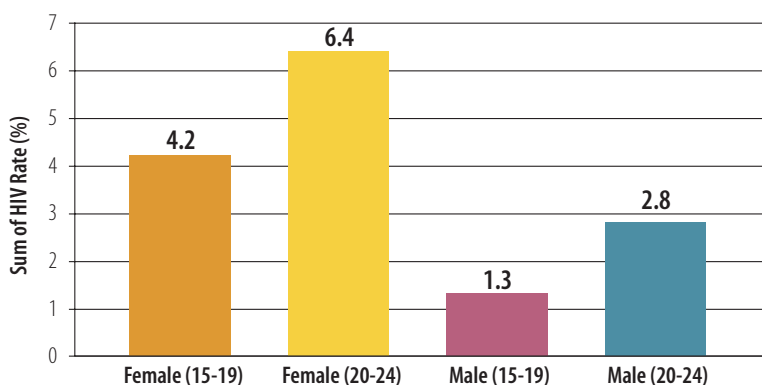
**The geographical separation of UCT and CCT beneficiaries, and the holding of UCT events away from schools, ensured clarity amongst beneficiaries on whether their transfers were or were not conditional.**

## WHAT ELSE YOU SHOULD KNOW ABOUT CASH TRANSFERS

The following section highlights the results of recent intervention studies. Along with other research, these studies suggest the following implications for policy-makers:

- Conditionality is particularly effective at targeting the most vulnerable (e.g., girls), but it also penalizes that group the most. People who do not comply with any conditions get left out of CCT programs - this undermines the social safety net aspect of these programs.
- Conditionality may not be necessary if poverty is the only binding constraint on beneficiaries.
- Conditionality may improve use of services, but may not be sufficient to improve final outcomes if the quality of those services is not adequate.
- Conditioning on outcomes (e.g., test scores) can be a more direct solution, but only makes sense if the quality of available services is adequate.
- The size of transfers may matter more for UCTs which work entirely via an income effect, than for CCTs which are driven by conditionality.
- The timing of CCTs may be important in maximizing impact at key points in children's education, such as the transition to secondary school.
- Community-based targeting can be a solution in a context of low administrative capacity.

**FIGURE 4: HIV youth prevalence (%)**



Source: ORC Macro, 2010

Prevention of HIV amongst adolescent girls is a key part of the overall battle against the HIV epidemic, given their significantly higher rates of infection

Baird et al (2012) evaluate a **cash transfer intervention in Malawi** aimed at improving school attendance and reducing sexually transmitted diseases amongst adolescent girls aged 13-22 (see figure 4).

The program included CCTs and UCTs and allowed the team to test theories about the impacts of schooling and poverty on risky sexual behavior. Parents and their children were randomly chosen to receive monthly payments of \$4-10 and \$1-5 respectively. The condition for the CCTs was 80 percent attendance by the girl during the previous month.

After 18 months of payments, there is a positive impact on HIV and HSV-2 infections with no statistically significant difference between the impact of CCTs and UCTs (see table 1). However, there was no statistically significant impact of the intervention for girls who had already dropped out of school prior to the intervention. In terms of impact on sexual behavior, baseline schoolgirls in the intervention group were significantly less likely than those in the control group to: (a) have sexual intercourse at least one time per week; (b) have a sexual partner aged 25 years or older. Finally, for those girls who had not already dropped out of school, schoolgirls in the treatment groups were more likely to remain enrolled than those in the control group.

The authors estimate that the average transfer cost plus the administrative costs of the pilot lead to a total cost of \$12,500 (2009 dollars) per averted primary HIV infection. However, as the transfer amount did not seem to matter, and as administration costs should decrease for a scaled up program, a realistically achievable cost is estimated at \$5,000 per averted primary HIV infection.

In terms of the impact of the intervention on increasing school attendance and English comprehension test scores, CCTs were significantly more effective than UCTs. The attendance rate in the CCT group was 8 percentage points higher than in the control group – this translates into an additional 10 school days over the 2009 school year. The impacts on attendance for the UCT group were mostly positive, but not statistically significant.

The key take-away from the intervention is that financially empowering adolescent girls and their families can significantly and positively impact their sexual behavior and health, and conditionality may not be necessary. The fact that there is no impact on girls who already dropped out of school may suggest that the financial empowerment alone is not sufficient for the most vulnerable girls or that there is some interaction between school attendance and financial empowerment. However, if the aim of an intervention is to increase school attendance or performance, then CCTs may be a more effective tool.

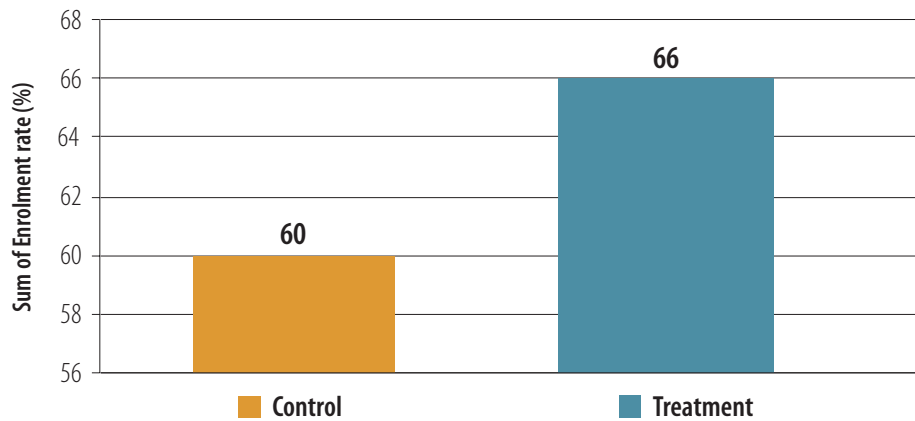
**TABLE 1: Impact of Zomba District Cash Transfer Intervention**

STD	Infection rate after 18 months			
	Control	Treatment (CCT+UCT)	CCT	UCT
HIV	3	1.2	1	2
HSV-2	3	0.7	1	<1

Habyarimana and Sabarwal (forthcoming) evaluate a *CCT program in Kanto state, Nigeria*, aimed at improving female school participation and promoting the transition of girls to secondary school. The program is being carried out in a context of low female school participation (30 percent) and low female autonomy, with an average age at first marriage of 15 years. The program targets recently dropped out and currently enrolled girls. Preliminary results suggest that just one transfer was enough to significantly improve school participation.

To overcome the issue of patchy administrative records, the project held broad-based community meetings to identify eligible girls. Letters sent to households with eligible girls were the most important channel for communicating information about the payment and enrolment events.

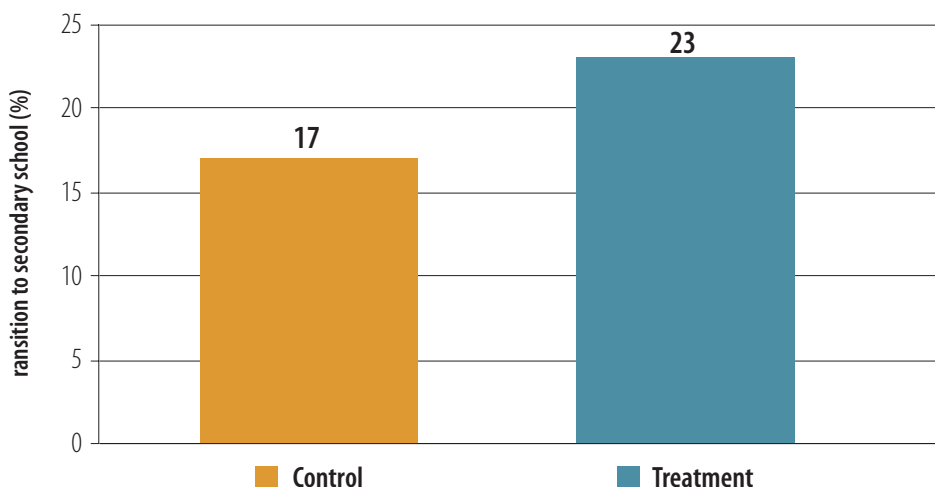
**FIGURE 5: Enrollment two months after first transfer**



for receipt of CCTs was 80 percent school attendance. The intervention used unannounced attendance checks to verify attendance at schools. The first unannounced visit revealed a significant 10 percent higher attendance for the transfer recipients compared to the control group (see figure 5). Additionally, the recipients of the larger transfer had a statistically significantly higher attendance rate than those who received the lower transfer (4 pp more). The transfers were more effective in schools with lower control group attendance, suggesting that they could be especially useful for increasing attendance amongst the most vulnerable girls.

After the first payment round, the program was suspended by the government due to a political transition and approval to restart the program did not come in time to enable the second payment round to take place as scheduled. This provided the team with an opportunity to test the impact of program uncertainty and the degree of persistence of impacts from the first payment: the statistically significant difference in attendance persists, but shrinks to a 5 percent advantage over the control group. Additionally, despite the discontinuation of the payments, the transition of girls to secondary school was still 35 percent higher for

**FIGURE 6: Transition to Secondary School**



those who received the transfers (see figure 6) – the transition impact is concentrated amongst girls from urban areas and those who came from Integrated Islammiyya primary schools (which combine secular and religious education).

Finally, preliminary evidence on test scores suggests that CCTs had a positive impact on learning outcomes, for both boys and girls, in the primary school exit examinations.

Finally, recent results from a major transfer program in Uganda, in which a year's income was transferred to youth age 16 to 35, had major impacts. The grants had no conditions except that youth had to submit a proposal for how they would use the funds to invest in a trade, and the youth had to apply in groups, although they could use the money either together or separately. After four years, the youth who benefitted from the program were 65% more likely to practice a skilled trade and had 41% higher real earnings. The impacts for women were twice as high, with 84% higher incomes for women in the program relative to women not in the program. Thus, in this context it seems the main constraint really is capital and that simple transfers – with no conditions once the money is disbursed – can have a major, sustained impact.





### Peer learning among farmers in Mozambique

*Strengthening the role of contact farmers, especially women, increases the adoption of new agricultural practices.*

#### THE ISSUE



**25 PERCENT**  
OF MOZAMBIQUE'S  
FARMERS KNOW  
THE MICRO-BASINS  
TECHNIQUE.

The low adoption of improved agricultural techniques is associated with low agricultural productivity in Sub-Saharan Africa. Lack of information contributes to this market failure.

#### THE PROJECT

The goal of Mozambique's Market-led Smallholders Development in the Zambezi Valley Project (MSDVP) was to increase the uptake of new agricultural practices by promoting peer learning among farmers. This was done by boosting the role of local contact farmers (CFs) who facilitated the transfer of information from extension agents to other farmers in the community.

Strengthening the role of CFs included:

- Specialized training,
- Demonstration plots on their farms, and
- Performance-based incentives.

#### THE RESULTS

##### For contact farmers:

- Male CFs reported learning significantly more techniques, especially mulching (although the increase wasn't reflected in exam results).
- Male CFs adopted the techniques that they self-reported as having learned on their demonstration plots. The increase in use of these techniques was greater in the group that included women CFs relative to the group with only male CFs (e.g., 44% versus 35% for micro-basin adoption).
- Male CFs adopted mulching and micro-basins on plots other than their main farming plot. This may be for purposes of risk reduction (i.e., adopting new techniques on less important plots).

##### For other farmers:

- Farmers seem to benefit more from CF visits than from going to see the CF's demonstration plot.
- Farmers' knowledge of mulching and micro-basins increased more for farmers who were served by both female and male CFs than for those who were only served by male CFs.
- There is a large and positive impact on adoption across the two treatment groups for one technique (micro-basins) but not for another (mulching). Contact farming can indeed be effective.

## THE IMPLICATIONS

- Training CFs can provide an effective way of addressing information supply as a market failure and increasing the adoption of new agricultural practices.
- Including women in CF training can bring more benefits and reach more farmers: this appears to result not only from a quantitative increase in training, but also from complementarities between male and female CFs.

### Contact:

Florence Kondylis (World Bank, Development Impact Evaluation Unit),  
fkondylis@worldbank.org, +1(202) 473-0965

### Link:

<http://tinyurl.com/np77fjs>

## HOW IT WORKED

The MSDVP was part of a larger national agricultural reform to rebuild the agricultural extension network in five districts of the Zambezi Valley.

### Objectives:

- Increase smallholder farmer incomes, and
- Decrease land degradation and improve the resilience of ecosystems to climate change.

While CFs are commonly used, their ability to supply information is limited by the lack of a clearly defined role or compensation. The absence of women as CFs could also impede peer learning by female farmers. This project was an innovative effort to improve adoption of improved agricultural techniques in the face of these challenges.

### The project included:

- **Specialized sustainable land management training to extension agents and CFs,**
- **Assignment of demonstration plots to CFs,**
- **Provision of performance-based incentives to CFs, and**
- **Specific inclusion of training for female CFs in one of the treatment groups.**

### More on the training :

- Training for extension agents consisted of a three-day course in sustainable land management techniques, evenly split between class lectures and practical plot demonstrations.
- Eight techniques were covered in training: Mulching, Crop Rotation, Intercropping, Reduced Tillage, Micro-basins, Contour Farming, Row Planting, and Improved Fallowing.
- The extension agents then taught the same course to the CFs.
- CFs received a toolkit that included a bicycle and tools to plow the land, and had the autonomy to disseminate the techniques they deemed most appropriate for their village.

## Lessons:

In practice, it was difficult to implement social and material performance-based incentives for CFs in the first year. The team learned that:

<b>There needed to be an effort to generate awareness of performance incentives among participants.</b>	<b>The lottery system may have been perceived as being unfair.</b>
<b>It can be tricky to set the targets at the right level, so that a suitable number of CFs could meet them.</b>	<b>Weak capacity and governance issues may have meant that few prizes were actually delivered.</b>

## Impact evaluation:

The impact evaluation of the MSDVP was a randomized controlled trial and was a joint effort between researchers at the International Food Policy Research Institute and the World Bank. The impact evaluation compared one control group and two treatment groups:




<b>The control communities all had a male CF who did not receive sustainable land management training or a demonstration plot.</b>	<b>The first group of treatment communities had a male CF who did receive training and a demonstration plot.</b>
<b>The second group of treatment communities had both a male and female CF who received training and a demonstration plot.</b>	<b>Social and material performance-based incentives were distributed to half the CFs in the treatment groups.</b>

## What Else You Need to Know about Agricultural Extension

The following section highlights the results of recent impact evaluations. Along with other research, these studies suggest the following implications for policy-makers:

- Lack of information is a critical barrier to the adoption of new agricultural techniques.
- Social networks of farmers who share similar characteristics can be more cost effective for disseminating information than formal extension services – especially once a core group of farmers have adopted the technology.
- Small, time-limited discounts on agricultural inputs may offer a more efficient solution to low input use than either heavy subsidies or doing nothing.
- Different farmers will benefit from different investments, depending on their constraints. In some cases, a road will be more helpful than improved seed varieties.
- Policies aimed at mitigating risks for poor farmers (e.g., insurance or drought resistant varieties) could help increase the use of expensive productive inputs, such as fertilizer.

Initial data for the *Agricultural Development Programme Support Project in Malawi* suggested that lack of information was the most important reason for non-adoption of new agricultural techniques. Yishay and Mobarak (2013) then used a randomized controlled trial to test how three different models of agricultural extension affect the transmission of information related to agricultural techniques.

FIRST MODEL	SECOND MODEL	THIRD MODEL
 <p>This model entails only using an <b>AGRICULTURAL EXTENSION OFFICER</b>.</p>	 <p>This model supports the <b>EXTENSION OFFICER</b> with a <b>LEAD FARMER</b>, a contact farmer selected by the extension officer together with community leaders, and who tends to be more educated than the average farmer.</p>	 <p>This model supports the <b>EXTENSION OFFICER</b> with <b>FIVE PEER FARMERS</b>, contact farmers selected by a community focus group, and who are more representative of the average farmer.</p>

The aim of the study is to test which of these three models is the most effective way to deliver information to farmers on agricultural techniques and to see whether leveraging the social networks provided by PFs and LFs is an effective model. The study also tests whether offering incentives improves the transmission of information to farmers.

The two techniques supported by the project were pit planting and a form of composting. In each of the three models, the extension officer received three days of training (including class-based and practical training). In the two models with contact farmers, the extension officer then provided training to the LF or PFs. Half of communicators (the extension officer, LF, or PF) in each of the three models were given incentives based on the knowledge scores and adoption rates of the farmers they were assigned to support.

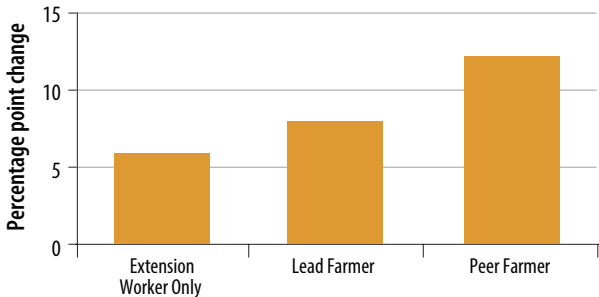
### Findings:

Without incentives, the extension officer-only model appears to be the most effective (at both increasing farmer knowledge and farmer adoption of new technologies). In that context, PFs do not even effectively learn about pit planting and composting, and so are not able to pass on information to other farmers. However, when provided with a small incentive (a bag of seeds), peer farmers represent the most effective model for passing on information and convincing other farmers to adopt these techniques. With incentives:

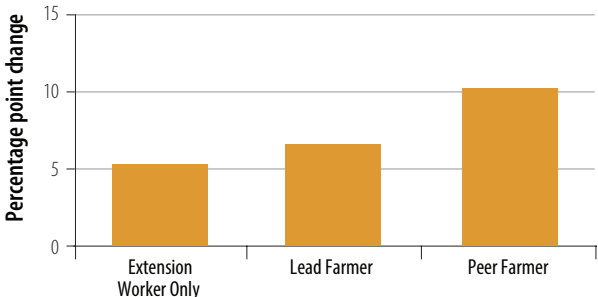
<p><b>PFs increase their knowledge by 19-20 percentage points. This compares to an increase of just 7 percentage points for LFs.</b></p>	<p><b>PFs are the communicators most likely to hold extension activities.</b></p>
<p><b>Recipient farmers increase their knowledge levels more in PF villages (12 percentage points) than in LF (8 percentage points) or extension worker-only (6 percentage points) villages.</b></p>	<p><b>Adoption of pit planting increases more in PF villages (10.2 percentage points compared to a mean of 1.7 percent), than in LF (6.3) or extension working-only (5.5) villages. The same pattern is observed for the on-farm monitoring of adoption: It is estimated that the PF model would increase yields by 113 percent.</b></p>

The results of the study suggest that peer farmers communicate more effectively with farmers that have farms of similar size and common input use. Social proximity and status are less important. The authors estimate a benefit/cost ratio for the PF model of 4.5:1. So, with a shortage of extension staff in Malawi and with only 18 percent of farmers reporting any kind of extension activity, leveraging the social networks of peer farmers could prove a cost-effective way of radically expanding extension coverage and effectiveness.

**Impact on recipient farmers' knowledge by village treatment type**



**Impact on the adoption of pit planting by village treatment type**

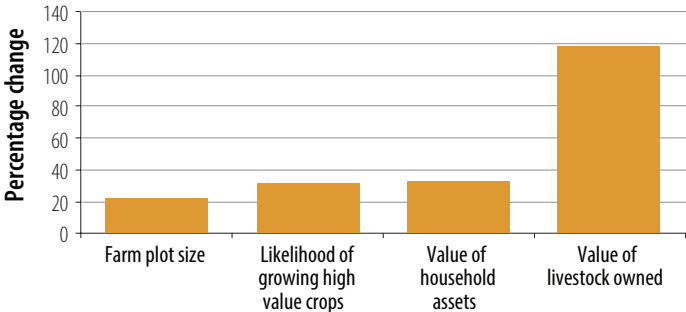


Contact: Ariel Ben Yishay (University of New South Wales, Australian School of Business), [a.benyishay@unsw.edu.au](mailto:a.benyishay@unsw.edu.au); Ahmed Mushfiq Mobarak (Yale University, School of Management), [ahmed.mobarak@yale.edu](mailto:ahmed.mobarak@yale.edu).

The Government of Ethiopia launched the **Rural Capacity Building Project (RCBP)** to strengthen extension services by making them more responsive to the needs of smallholder farmers, with a focus on economically viable and environmentally sustainable agricultural techniques. The RCBP included support to various activities related to extension training and equipment.

A World Bank impact evaluation of the project (Buehren et al. forthcoming) assessed the impact of the training of delivery agents and the upgrading of farmer training systems on productivity. The results showed that the program significantly expanded the scale of agricultural activities of beneficiary farmers and also increased the focus on higher value crops and cattle.

**Impacts of RCBP on farmers**



**Specific results included the following.**

**Impacts on types of crops grown:**

- An increase of 31 percent of the likelihood of growing high value crops
- An increase of 49 percent of the likelihood of selling high value crops
- An increase of 105 percent in the share of cultivated land under cultivation for high value crops

**Impacts on livestock:**

- A 119 percent increase in both the value of all livestock and the value of non-poultry livestock

**Impacts on farm size:**

- An increase of 23 percent in average total plot size
- An increase of 23 percent in the number of people contributing to household income
- An increase of 11 percent in the number of people who work on the household farm

**Impacts on assets:**

- An increase of 53 percent in the likelihood of having access to electricity
- An increase of 13 percent in the number of outbuildings
- An increase of 33 percent in the value of household assets

**The gender dimension of impacts:**

- With the exception of the impact on assets, the program showed equal impacts for male and female farmers.

Contact: Markus Goldstein (World Bank, Africa Region Gender Practice),  
mgoldstein@worldbank.org, +1(202) 473-5274

## Lessons from land tenure reform in Rwanda

*Land Tenure Reform can encourage greater investment in land, with especially large benefits for women.*

### THE ISSUE



**4** ON A **5**

POINT SCALE IS HOW  
**RWANDA'S**  
LAND OWNERS  
RATED THEIR  
PERCEIVED RISK OF  
**EXPROPRIATION**

Weak land tenure security dampens investment in land and ultimately leads to lower agricultural productivity, especially for women.

### THE PROJECT

Rwanda's Land Tenure Reform (LTR) pilot program aimed to clarify existing land rights as a first step to enabling their eventual formalization with title certificates. Parcel boundaries were identified and formally registered as eligible for a formal land certificate if no objections were raised within 2 weeks of the information being made publicly available. An impact evaluation tested LTR's short term impacts.

### THE RESULTS

- The project resulted in no significant decrease in the perceived risk of expropriation: This may be because knowledge of the policy is limited
- Households benefiting from the program are almost 10 percentage points more likely to make or maintain soil conservation investments, which is double the change in investment over time for non-beneficiary households.
- For female headed households, the program results in a 19 percentage point increase in the likelihood of soil conversion investments - twice the increase for male headed households
- For cohabiting women who are not legally married there was an 8 percentage point reduction in the probability of having documented land ownership, compared to a 17 percentage point increase for those who are legally married (which is about 70% of couples).
- Greater certainty on inheritance benefits children and gender equality: Children are 13 percentage points more likely to inherit the land, with both sexes benefiting equally.
- Contrary to concerns, LTR does not cause households who lack access to credit and insurance to panic-sell their land below its market

## THE IMPLICATIONS

- LTR can effectively increase investment in land, even before land titles are issued.
- Special attention should be paid to improving land rights for women who are not legally married.
- Ensuring that beneficiaries are knowledgeable about their rights is critical.

Contact: Markus Goldstein (World Bank, Africa Region Gender Practice), [mgoldstein@worldbank.org](mailto:mgoldstein@worldbank.org), +1(202) 473-5274

## HOW IT WORKED

### 1. SETTING THE PRECONDITIONS

- The legal preconditions for the LTR program were established by Rwanda's 1999 inheritance law and its 2005 organic land law which aimed to eliminate gender discrimination in land access and to establish a single statutory system of land tenure to replace the former dual customary/formal tenure system.

### 2. PILOTING THE APPROACH

- The government decided to start with a pilot due to the dearth of previous successful programs from which to learn lessons and the need to fine-tune the approach to the specific needs of different parts of the country.

### 3. IMPLEMENTING THE PROGRAM

- The program employed local para-surveyors to identify land parcel boundaries and to record these boundaries with aerial photos and claim-receipts signed by all adjoining neighbors. To ensure transparency, these activities were all carried out in the presence of the land owners and all adjoining neighbors.
- Parcel details were transferred to a public register (hard and digital copies).
- Parcels were formally registered as eligible for a formal land certificate if no objections were raised within 2 weeks of the information being made publicly available.

### 4. EVALUATING THE IMPACT

- Using an impact evaluation to generate rigorous evidence was critical given the lack of previous successful programs from which lessons could be drawn. These lessons were then used by the government as they rolled out the program nationally.
- The impact evaluation compared changes in administrative regions that received the program with changes in those that did not.

## What Else You Need to Know About Land Titling

The following section highlights the results of recent impact evaluations. Along with other research, these studies suggest the following implications for policy-makers:

- In mapping land claims, employ a transparent and participatory process – formalization programs can be exploited by the strong and politically connected.
- Land titling cannot be a complete solution in the absence of other policy features, such as a functioning credit market and an enabling regulatory framework for land registration.

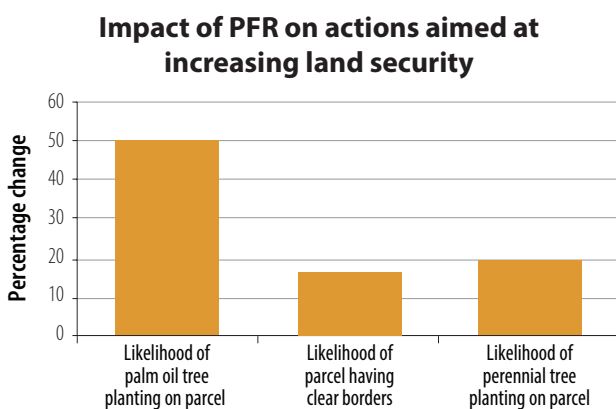


- Local context matters – formal titling is not always the key and it may sometimes be better and more cost-effective to work within the customary framework.
- Perceived and de facto tenure security may be more important than formal de jure security. However, some long-term investments (like letting land lie fallow) may require more formal security.
- Information technology can be used to reduce the costs of registering transactions (for owners) and accessing borrower information (for lenders).
- Rural land titling:
  - Land titling programs may cause an initial increase in perceived insecurity as claims to land parcels are publicly discussed and verified.
  - While increased rural tenure security may allow greater investment in land, the relationship may also run the other way, with farmers making certain investments in order to increase their claims to the land.
- Urban land titling:
  - Encourages investment in residential infrastructure.
  - Allows owners to engage in more work outside of (and further from) the home by transferring the responsibility for protecting their land to the state.
  - Can reduce poverty in the long term through increased human and physical capital investment.

**The Plan Foncier Rural (PFR) in Benin** enabled producers to formalize the security of rights obtained under customary arrangements in rural areas. The government-implemented program included: (1) awareness raising; (2) a socio-legal survey of land claims; (3) mapping of rights for each land parcel; (3) a public review which provided the opportunity for any claims to be contested; (4) final validation of claims upon no-objection; and (5) the delivery of final land use certificates.

The World Bank conducted an impact evaluation which tested the short-run impact of the program (i.e., prior to the final issuance of land use certificates). Key results from the evaluation include:

- A 4 percentage point increase in perceived tenure insecurity, which is perhaps to be expected in the short term with increased attention on potentially competing land claims
- A significant reduction in land conflicts for land controlled by female-headed households
- Increased land investments such as a 17 percent increase in the likelihood of a parcel having clear borders and a 20 percent increase in overall perennial tree planting, including a 50 percent increase in oil palm planting
- An increase in women's short-term investment in land, but mixed signs on empowerment:
  - A slight shift in male land managers' inheritance plans away from sons and towards daughters
  - An 18 percent increase in women having a say in household land decisions
  - A 47 percent increase in the use of fertilizer on female-managed plots
  - An 11 percent increase in women reporting no spousal conflict over the past 12 months
  - A reduction in the share of female household heads with a position of responsibility in village land management, despite an overall 150 percent increase across all households



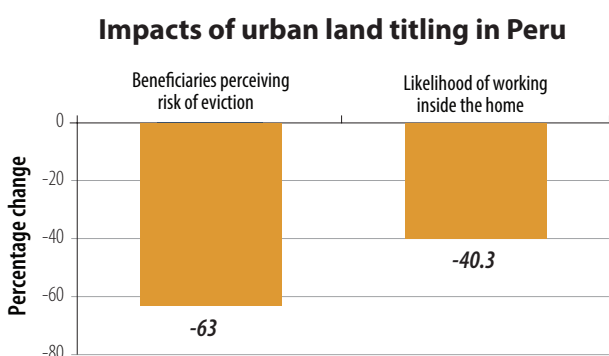
Overall, given that the program’s short-term impact included increased perceived land insecurity, the identification of long-term investments in land may suggest that owners’ invest in their land in order to increase tenure security – though this does not preclude the possibility that increased tenure security may also encourage certain types of long-term investment.

Contact: Michael O’Sullivan (World Bank, Africa Region Gender Practice),  
mosullivan@worldbank.org, +1(202) 473-0911

Between 1996 and 2003, ***an urban land titling program implemented by the Peruvian government*** radically reduced the length and cost of the land title acquisition process. Erica Field conducted an impact evaluation of the program, finding significant positive impacts on employment hours and employment outside of the home, and negative impacts on child labor. These impacts resulted from increased tenure security, which allowed households to shift the role of property protection from the household and community members to the state.

Specific highlights of the evaluation results include:

- Recent titling beneficiaries reported the same perceived risk of eviction as citizens who had titles before the program, which is one third of the risk reported by squatters yet to benefit from titling
- An increase of 12.2 hours of employment per week per household 2 years after receiving a formal title, increasing to 32 hours after 4 years
- The vast majority of additional employment hours are accounted for by men. The increase for women is insignificant.
- A 40.3 percent drop in the likelihood of working inside the home.
- A 4 percentage point increase in the proportion of households that include a worker who commutes more than 2 hours each way.
- A four-hour per week reduction in child labor for households with fewer than four working-age members.
- A cost-benefit analysis suggests that the increase in employment income would far exceed the relatively low cost of the intervention: \$66 per title (20% of which was recovered from user fees) and minimal additional costs to main the property registry.



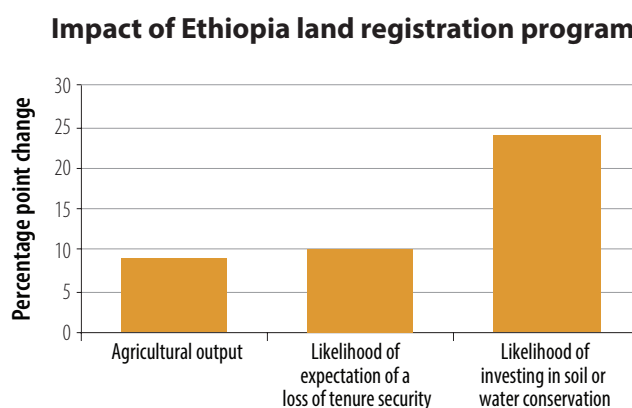
Overall, the results of the evaluation suggest that land titling can be a cost-effective policy in an urban setting, allowing households to devote more efforts to productive activities outside of the home.

Contact: Erica Field (Duke University, Department of Economics),  
emf23@duke.edu, +1(919) 660-1857

A **World Bank study in Ethiopia (Deininger, Ali, and Alemu, 2011)** found **significant short-term impacts of a government-implemented land registration program** on tenure security, land-related investment, and rental market participation. The Government of Ethiopia officially owns all land, so the program provided farmers with non-alienable use-right certificates, rather than full titles. The intervention started with an information campaign, to increase awareness of the program among targeted beneficiaries. The program then used a participatory community approach to identify land parcels and displayed mapping decisions in public, providing community members with an opportunity to contest any decisions before they were officially recorded. The program was innovative in that it provided for joint land ownership by spouses, thus addressing the issue of gender quality.

Some key results of the program include:

- A 10 percentage point decrease in fear of loss of land
- A 20-30 percentage point increase in propensity to invest in soil or water conservation
- An increase in agricultural output of 9 percentage points (\$5.80-\$9/hectare)
- A 9 percentage point increase in the propensity to rent out land
- Impacts do not appear to vary by wealth or gender



Significantly, the costs of implementing the program - \$1 per parcel - were not only low relative to the \$20 to \$60 per plot incurred by many previous titling projects, but were also lower than the increased output of \$5.80-\$9 per hectare. Significantly, over 80% of participating households indicated that they would be willing to cover these costs, suggesting that the program could be highly sustainable.

The analysis generates some interesting policy implications:

- Increased tenure security can lead to increased investments that are related to greater productivity
- Given the significant benefits, low implementation costs, and the willingness of participants to cover implementation costs, the program could inform a viable, sustainable approach for some African governments.

**Contact:** Klaus Deininger (World Bank, Development Economics Research Group), [kdeininger@worldbank.org](mailto:kdeininger@worldbank.org), +1(202) 473-0430; Daniel Ali (World Bank, Development Economics Research Group), [dali1@worldbank.org](mailto:dali1@worldbank.org), +1(202) 473-4813; Tekie Alemu (Addis Ababa University, School of Economics).

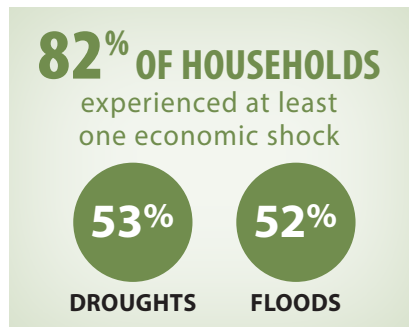
# BASELINE IN ACTION

## WHAT'S IN A BASELINE?

### Baseline surveys provide immediate insights for policy action

The Government of Ethiopia is currently implementing the World Bank-financed **Ethiopian Nile Irrigation and Drainage Project**. The project aims to support agricultural income growth and to mitigate the risks posed by climate variability through investments in expanded and improved irrigation.

A key element of the World Bank's impact evaluation of the project was a baseline survey of 4,000 households in the Ribb and the Megech project areas. The survey was not only critical from a purely statistical point of view; it was also important in its own right and was instrumental in convincing the government to pilot strategies for improving women's access to and take-up of new agricultural technologies.



First, the results of the survey confirmed the need for the project: 82% of households experienced at least one economic shock

in the previous year and the most common shocks were droughts (53%) and floods (52%).

Second, the survey influenced government policy right away by shining a light on some important gender disparities. Female-headed households were only half as likely as male-headed households to have access to extension services, with a consistent gender gap across all areas of advice. While 45% of all households accessed any extension services, only 29% of female members had accessed any services, and the figures for male and female-headed households were 49% and 25%. The survey also provided insight into why women have lower access to extension services: Female household members above age 12 allocated around 600% more time than men to cleaning and childcare!

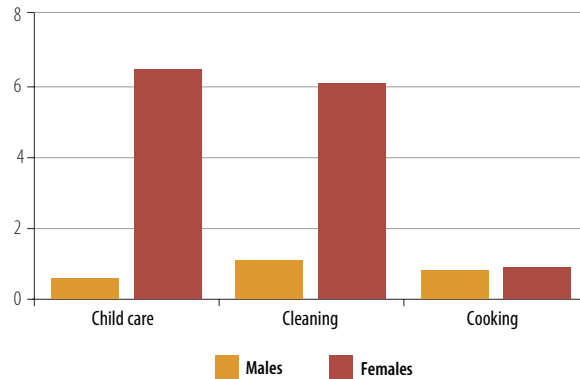
## WHY DO A BASELINE?

A baseline survey is a key component of a rigorous impact evaluation, as it allows the evaluation team to measure key indicators before the project is delivered. They can then verify that treatment and comparison groups are sufficiently similar, so the evaluation team can ensure that changes observed after the project can be attributed to project activities.

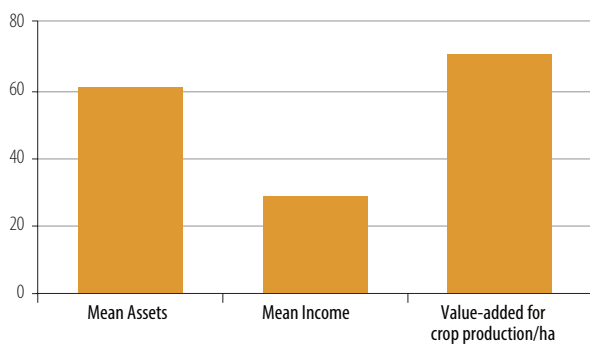
Conducting a baseline survey has a number of other advantages: The results of a baseline survey can be used to (1) ensure that the project is going to reach the intended beneficiaries; (2) test whether the project has differential impacts on sub-groups with different initial conditions (such rich versus poor); (3) increase the certainty of estimates if the treatment and control groups are small; (4) provide crucial data for policy decision making before the project even starts.

Not surprisingly, given their lower access to extension services and greater time poverty, the survey showed that female headed-households lag male headed-households with regard to technology adoption, agricultural yields, assets, and income. Despite growing broadly similar crops, the ratio of female-headed households to male-headed households for net value added in production per hectare, value of assets owned, and income are only 70%, 60%, and 30%.

**Mean hours per week (for household members aged 12 and above)**



**Ratios of values for female headed households vs. male headed households**



As a result of the analysis of the baseline data, the government agreed to pilot strategies for improving women’s access to and take-up of new agricultural technologies. These strategies include gender quotas for the selection of lead farmers (combined with social incentives for those selected), and the introduction of a farmer-based monitoring system for extension workers. These approaches will be piloted in 2014, with plans to scale up the most successful ones.

## POLICY IMPACT: SOUTH AFRICA FINANCIAL LITERACY PROJECT

The South Africa Financial Literacy Project used a popular South African soap opera - "Scandal!" - to deliver key financial literacy lessons to viewers. Leveraging the powerful emotional connections between the leading female character and Scandal's viewers proved to be an effective way to influence financial knowledge and behavior.

### THE INTERVIEW

For this issue of the Africa IE Update, Ms Magauta Mphahlele, CEO of the NDMA, kindly agreed to speak to us about the impact of the South Africa Financial Literacy Project.



Ms Magauta Mphahlele

### *How was NDMA involved in the realization of this study?*

One of the responsibilities of the NDMA is to contribute to combatting over-indebtedness. In South Africa, over-indebtedness is a matter which affects many people. A lot of organizations do what they call "consumer education" workshops, but they have not been properly evaluated and the aim of these workshops is more about providing high level information and creating awareness, rather than educating and empowering consumers to change their behavior. With other approaches, such as debt counseling, you go to someone who doesn't counsel you, but who just restructures your debt. We have seen that this approach does not work; the consumer needs to understand why they got into trouble and how they are going to get out of trouble.

Our emphasis is on changing consumer behavior. We wanted to rigorously evaluate whether using entertainment as a tool could actually change consumers' behavior. We were working quite closely with Soul City, an organization that had been using entertainment media to deal with HIV/AIDS in South Africa. A lot of the evaluations that Soul City had done suggested that education through entertainment media can actually change viewers' behavior. So, the NDMA decided to partner with the World Bank to test it out.

### *Why did you decide to work with the World Bank?*

The partnership between the World Bank and the NDMA was quite complementary: the World Bank brought their funding and their expertise on impact evaluations and research, while we were able to provide our expertise on the substantive issues to inform the storyline of Scandal.

The involvement of the World Bank and the use of a rigorous impact evaluation gave the program credibility. This allows us to show the results to a government department and say "this actually works". Such evidence also makes people more willing to invest in the idea, which is especially important as we do not have the funds to scale up the program.

### ***How did the NDMA contribute to the storyline for Scandal?***

We had to make sure that the advice given in Scandal was legally and factually correct. Also, because we work with consumers on a daily basis, we understand the issues they face and the ways they tend to react to certain situations, so we were able to advise the producers of Scandal to maximize the usefulness of the content for consumers. At the end of the program, we were also able to provide our helpline number, so that viewers could call and get advice on their real financial issues.

### ***Do you think the results of the evaluation will have any impact on the way you work in the future?***

Thanks to this project, the use of entertainment media for education has now taken off. Since the production of Scandal, we have worked on additional entertainment productions, including a movie on money and values, called “Nothing for Mahala” (nothing for free), and a reality series, called “In Debt”. The national broadcaster is also encouraging Soul City to make a daily soap opera. Given that the impact of Scandal on increasing call volume to the NDMA helpline was only present immediately following the NDMA episodes, having a daily soap opera might allow the impact to be sustained. This is critical because one of the main problems in South Africa is that people in financial difficulties do not do anything; we want people to take action and seek advice from the NDMA.

The results of the evaluation may also have an impact on government policy. The government has seen the NDMA’s work on Scandal and they loved it - they would like to include this type of project in their broader financial literacy strategy.

### ***Do you have any advice for organizations thinking of running similar projects in the future?***

Impact Evaluations involve quite a complex process. Like many NGOs, we do not have the capacity to implement such complex studies, so it would be really useful if the World Bank could provide some impact evaluation capacity building to agencies who are interested in carrying out such work. While I had a few meetings with the World Bank people, there was not enough time for me to go away with a full understanding of how to do an impact evaluation. In addition to capacity building, it is also essential that we build an evidence-based culture conducive to impact evaluations, as there is currently a tendency in South Africa to see impact evaluations as too time-consuming and costly. Finally, and related to this last point on the high cost of running impact evaluations, the other important issue for the future is funding. For us, funding would mean the ability to sustain our efforts.

*“Thanks to this project, the use of entertainment media for education has now taken off. Since the production of Scandal, we have worked on additional entertainment productions, including a movie on money and values, called “Nothing for Mahala” (nothing for free), and a reality series, called “In Debt”. The national broadcaster is also encouraging Soul City to make a daily soap opera.”*

*(Ms. Magauta Mphahlele, CEO of NDMA)*

## THE ISSUE

Household debt is a large and growing problem in South Africa, with the ratio of household debt to disposable income increasing from 50 percent to 76 percent between 2002 and 2012.

However, there are serious knowledge gaps on the most effective way to deliver financial literacy education.

## THE PROJECT

The project was a joint effort between the National Debt Mediation Association (NDMA), a television production company, and the World Bank:

- The NDMA wanted to use soap operas to deliver financial literacy education because:
  - Television is a widely accessed media in South Africa
  - Low and middle income South Africans tend to use television as a source of information on financial matters
  - Viewers develop potentially powerful emotional connections with soap opera characters
- The NDMA worked with Ochre Media, a television production company, to integrate a debt and financial management-related storyline into *Scandal*, a South African soap opera.
- Over a period of two months, the storyline featured the main character getting into debt through excessive borrowing and gambling.
- The World Bank designed and implemented an impact evaluation to test the impact of the storyline on the financial knowledge and behavior of low and middle income viewers.

## THE RESULTS

- Compared to viewers of an alternative soap, participants assigned to watch *Scandal*:
  - Had significantly greater knowledge on financial issues highlighted in the storyline
  - Were almost twice as likely to borrow from formal sources, less likely to engage in gambling, and less prone to enter hire purchase agreements.
- Impacts were greatest on those with the lowest initial levels of education and financial literacy
- There was no long-term impact of a storyline using a minor character to promote the NDMA's helpline. This suggests that emotional connections with long-term characters may be critical.
- Some interesting gender differences were observed in the quantitative and qualitative results:
  - The impact on borrowing from formal sources was driven entirely by men
  - Women were reluctant to borrow and saw it as a last resort
  - Compared to women, men were more likely to borrow, often for consumption goods



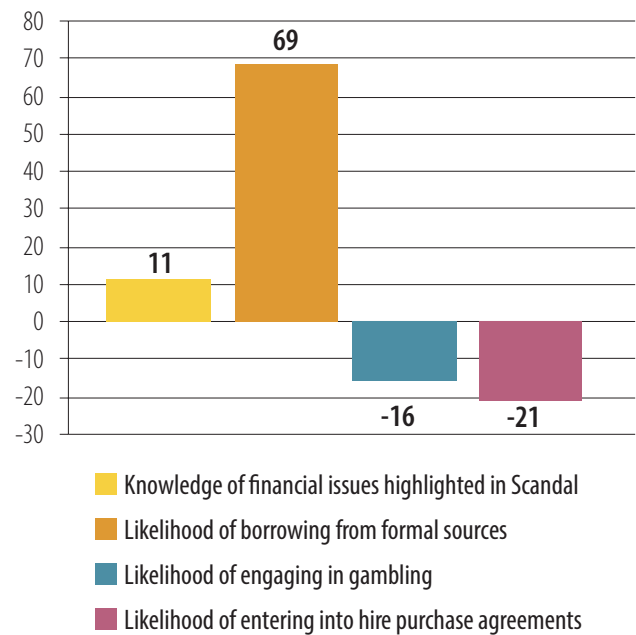
## THE IMPLICATIONS

- Entertainment media can be an effective tool for delivering financial literacy education and changing consumer's behavior
- Messages in soap operas are more likely to have a longer-term impact on behavior if they leverage emotional connections between viewers and well-established characters

## THE POLICY IMPACT

- The NDMA has expanded their program to include similar work with other television programs
- The government is interested in integrating the approach into their future financial literacy education strategy

**FIGURE 7: Impact of viewing Scandal (percentage difference in selected knowledge and behaviors)**



### Contacts:

Gunhild Berg (World Bank, Africa Finance and Private Sector Development), [gberg@worldbank.org](mailto:gberg@worldbank.org), (202) 473-1150;  
Bilal Zia (World Bank, Development Research Group), [bzia@worldbank.org](mailto:bzia@worldbank.org), (202) 458-1433

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