

## INDIA: Can microloans increase toilet ownership and use?

Access to safe sanitation prevents the spread of bacteria and viruses that cause illnesses such as diarrhea, a leading cause of child mortality and a contributor to stunting in children. Without access to a hygienic toilet, and the motivation to use one,

people usually defecate in the open, and fecal matter makes its way into homes, food, and drinking water sources. In places such as rural India where open defecation is very common, finding effective and affordable approaches to increase sanitation coverage is a major public health challenge.

Past efforts to eliminate open defecation have focused on offering subsidies to poor households for toilet construction

along with other forms of outreach designed to shift social norms. However, for various reasons, many families do not take advantage of public health subsidies and not everyone in need is eligible for subsidies. Subsidies also tend to come as reimbursements to incentivize toilet construction rather than to cover its upfront costs, implying that lack of access to finance likely remains a key barrier even for those eligible for subsidy. As a result, access to safe sanitation remained a problem for over hundreds of millions people in rural India as of 2014, the year that the Government of India launched its Swachh Bharat Mission, the largest rural sanitation program that has ever been implemented anywhere in the world.

To shed light on how to improve access to safe sanitation in India, the World Bank's Strategic Impact Evaluation Fund supported a randomized control trial (2014-2018) to estimate the extent to which microloans for toilet construction affected the construction and use of new toilets. The loans, which carried a lower interest rate than other available loans, such as

business loans, were earmarked for toilet construction only in name with limited monitoring and no enforcement regarding their use, making it easy for households to use the funds for other desired investments and expenditures. Despite this lack of enforcement, the evaluation found that the sanitation loans increased toilet ownership and reduced open defecation.

Since the study took place in the context of the Government of India's Swachh Bharat Mission, the microloans were offered to families who were and were not eligible for the program's subsidy scheme. The study suggests that the new sanitation financing especially benefitted families that were ineligible for the subsidy. However, families that were eligible for the subsidy also took the loans and to a large extent used them for toilet construction because they provided additional resources and/or provided bridge funding for toilet construction while families waited to get reimbursed by the government. For policymakers, these findings suggest microloans earmarked specifically for sanitation can play an important role in helping governments tackle the sanitation challenge, partly by using scarce resources more effectively to improve public health and partly by complementing subsidy provision. Programs that facilitate access to credit for sanitation can help families – both eligible and ineligible for government subsidies – to invest in toilet construction.

### Rural sanitation in India:

India has a long-standing history of programs addressing open defecation in rural areas. Despite previous sanitation campaigns, data from the WHO/UNICEF Joint Monitoring Programme reveals that in 2014, more than 400 million people in rural areas were estimated to be defecating in the open, accounting for around 60 percent of the world's population practicing open defecation. According to the WHO, over 300,000 diarrheal death can be avoided annually if India was to become Open Defecation Free.\*

\*V R Raman, Arundati Muralidharan, "Closing the loop in India's sanitation campaign for public health gains" *The Lancet*, vol. 393, issue 10177(2019), 1184-1186



## Context

Around 43 percent of households in rural India practiced open defecation in 2015, according to data from the World Health Organization and UNICEF. Lack of access to safe sanitation is even more pronounced in districts where this research took place, Latur and Nanded districts in the state of Maharashtra. Only around 27 percent of study households had a private household toilet before the roll-out of the sanitation loan program in 2014. Households in this context typically identify financial cost and affordability as the key reason for not having a toilet: 83 percent of families that didn't own a toilet said the reason was the cost.

In 2014, the Government of India launched an ambitious nationwide sanitation program called Swachh Bharat Mission, or 'Clean India' Mission. With an objective of making India

open defecation free by 2019, the program organizes education and communication activities on sanitation, meant to increase demand for private household toilets, and provides financial incentives to vulnerable groups to encourage the construction of private household toilets. The financial incentive is a 12,000 rupee (USD \$170) subsidy for every new latrine, which is much less than the average cost of toilets constructed among households in the study area (Rs. 25,000). To prevent misuse of funds, the subsidy follows a "remuneration-after-verification" model: households have to pay a large share of the cost of toilet construction upfront and will receive the full amount of the subsidy once local district authorities have verified the toilet has been constructed and is being used.

## Evaluation

Within this context, researchers designed a randomized evaluation to measure the impact of offering sanitation loans on toilet construction and use. The research team partnered with a large microfinance institution to offer sanitation loans of up to Rs. 15,000 (USD \$211). The average interest rate was 20% per year, which was a lower rate compared to most other loans offered by the microfinance institution, notably business loans, their most common loan product.

The study took place in 81 communities (administrative units called Gram Panchayats) in which the microfinance institution was already working. Forty communities were randomly selected to receive offers for the sanitation microloans, and the remaining 41 were assigned to the control group. In the control communities, the microfinance institution remained active, offering all types of loans other than the sanitation loan. The government subsidy and accompanying awareness creation was offered in both experimental groups throughout the evaluation period.

Researchers measured impacts on sanitation loan uptake, toilet construction, and actual toilet usage two and a half years after the offer of loans. The research team was also interested in understanding if alternative financing like the microloans could complement government subsidies to increase sanitation

coverage and therefore also studied impacts on subsidy uptake.

To measure these impacts, researchers used administrative data from the Swachh Bharat Mission, including toilet ownership and subsidy receipt on all households, and administrative data on loan take-up from the microfinance institution and the local credit bureau, as well as primary survey data collected from a sample of microfinance clients in the 81 study areas. The trial's baseline survey round was completed in January 2015, and the follow-up survey was conducted in August-September 2017, two and a half years after the microfinance institution began offering the sanitation loans to its clients. This survey data included detailed information on toilet ownership and functionality observed by survey enumerators and self-reported data from households, as well as toilet usage and open defecation practices. To assess the impact of offering sanitation loans on sanitation uptake and practices, researchers focused on a sample representative of all microfinance clients of the partnering institution. To understand the complementarity of the sanitation loan and the subsidy scheme, researchers focused on those households of particular interest to the subsidy scheme – that is, those without a toilet at baseline - that could be matched with the administrative data.

This policy note is based on "Labelled Loans, Credit Constraints and Sanitation Investments," World Bank Policy Research Working Paper (2019) and "Can Micro-Credit Support Public Health Subsidy Programs?" World Bank Policy Research Working Paper (2019).

## Findings

**The sanitation microloans enabled more families to build toilets in their homes, increasing access to safe sanitation—particularly for families that didn't own a toilet but weren't eligible for the government subsidy.**

Two and a half years after intervention rollout, about 1 in 5 of the MFI client households had taken out the sanitation loan. On average this led to a 9-percentage point (22 percent) increase in toilet ownership across the board.



When researchers compared the administrative data from the subsidy program to their survey data for households without a toilet at the time of the baseline survey, they find that many client households classified as ineligible for subsidies

were just as vulnerable as those who were classified as eligible for subsidies. Thus, there were many households that were ineligible for the subsidy but that did not have had sufficient funds to construct a toilet on their own. Indeed the results suggest that the sanitation loan was more effective for households that didn't qualify for the subsidy. Their toilet ownership increased by 20 percentage points (85 percent), compared to a statistically insignificant 8 percentage point increase for households eligible for the subsidy.

**Families offered sanitation loans were also more likely to use toilets and less likely to practice open defecation.**

Improved sanitation can positively affect health only if households also change their behavior. People need to use the toilets and no longer defecate in the open. The survey data suggest that the sanitation loans increased the likelihood of finding a functional toilet by close to 10 percentage points (26 percent) and decreased the likelihood that household members practiced open defecation by nearly 11 percentage points (18 percent). Again, estimated impacts

were higher among households who were not eligible for the subsidy.

**Not all sanitation loans taken by client households led to the construction of additional toilets.**

The study reveals that about half of the disbursed sanitation loans supported the construction of toilets that would otherwise not have been built. Those sanitation loans that did not trigger new sanitation investments were likely used for a variety of purposes, including sanitation investments that households may have made anyway.

**Households seemed to use the sanitation loan as an alternative source of credit.**

Because researchers had access to credit bureau data and administrative data from the microfinance institution, they could check how sanitation loans affected overall borrowing and overall investment. The data suggest that on average, households took out the sanitation loan instead of other loans, not in addition to them. While the researchers could not detect adverse impacts on household expenditures or business investments, future research will need to investigate whether this kind of substitution of credit improves overall welfare.



Conclusion

Although targeted subsidy programs are less costly than providing sanitation facilities to the entire population, ensuring they reach the people in need can be challenging. Governments reasonably want to prevent the misuse of subsidy funds, but requiring people to pay costs upfront and get reimbursed later could exclude families who lack access to funding or who cannot bridge the gap between investment and reimbursement.

This research suggests credit for sanitation, even if just labeled by name, can be an effective strategy to increase sanitation uptake and to reduce open defecation. It can also complement other financing mechanisms like subsidies for vulnerable households. The sanitation microloans

implemented in rural India had sizeable impacts on toilet ownership and use among households deemed ineligible for a government subsidy program and decreased the practice open defecation. It is important to note, however, that at the time of the end line survey, nearly 60 percent of client households still remained without access to proper sanitation and practiced open defecation, despite the sanitation loans and the government subsidy program. Whether and how financial products like sanitation loans and government subsidies can be modified (separately and in combination) to increase toilet coverage and use remains an important area for research.

The Strategic Impact Evaluation Fund, part of the World Bank Group, supports and disseminates research evaluating the impact of development projects to help alleviate poverty. **The goal is to collect and build empirical evidence that can help governments and development organizations design and implement the most appropriate and effective policies for better educational, health, and job opportunities for people in low and middle income countries.** For more information about who we are and what we do, go to: <http://www.worldbank.org/sief>.  
**The Evidence to Policy note series is produced by SIEF with generous support from the British government's Department for International Development and the London-based Children's Investment Fund Foundation (CIFF).**



THE WORLD BANK  
IBRD • IDA

THE WORLD BANK, STRATEGIC IMPACT EVALUATION FUND  
1818 H STREET, NW, WASHINGTON, DC 20433