

Smart Subsidies Help the Rural Poor Climb the Sanitation Ladder in Vietnam

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SUMMARY

The intervention studied is a comprehensive performance-based **pro-poor subsidy program** (including community mobilization and facilitation of consumer credit) to accelerate the delivery of rural sanitation in Vietnam. The program was executed between 2012 and 2016 by East Meets West (EMW), the Southeast Asia operation of Thrive Networks.

The main objective of the research presented here is to determine 1) to what degree observed increases in improved sanitation coverage in the targeted areas could be causally attributed to the program and 2) the impacts of different program interventions on increasing coverage (specifically, a **cash rebate** to individual low-income households for latrine installation as compared to a **conditional cash transfer** awarded to local governments upon achievement of community-wide sanitation targets.)

The research examined multiple intervention arms along with controls, and employed a linear probability fixed-effects regression model to determine changes in latrine coverage attributable to different elements of the program.

PROJECT NEED

Widespread access to improved sanitation remains elusive, despite advances in specific geographic areas. Rural sanitation coverage lags behind that of urban areas, and inequalities between rich and poor persist. The case of Vietnam is illustrative: between 1990 and 2015, open defecation nationwide declined by 39 percentage points and nearly eliminated (even in rural areas). At the same time nearly 30% of the rural population continues to lack improved sanitation, with lack of access far more pronounced among the lower-income quintiles.

PROJECT PROCESS

Community Hygiene Output-Based Aid, or CHOBA, is a rural sanitation program consisting of the following elements:

- ❖ a “CLTS-like” community mobilization effort along with traditional

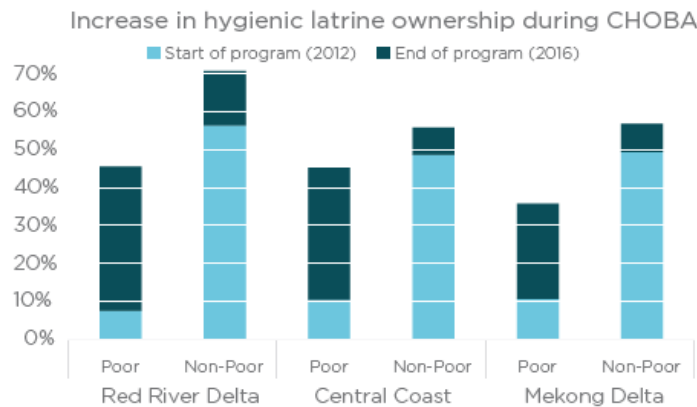
- information/education/communication (IEC) and behavior change communication (BCC) activities;
- ❖ direct financial incentives to individual poor households in the form of small consumer rebates for verified, properly constructed latrines, amounting to ~10% of full costs (with superstructure);
- ❖ direct financial incentives to local governments in the form of conditional cash transfers (CCT) for the achievement of community-wide increases in sanitation coverage;
- ❖ performance-based management payments to program implementers (including EMW, the Vietnam Women’s Union (VWU) and participating local government actors;
- ❖ facilitation of access to affordable credit (primarily from the Vietnam Bank for Social Policy); and

- ❖ supply chain improvement through training of local materials and labor suppliers.

In less than four years, more than 110,000 hygienic toilets were built by poor Vietnamese families under the CHOPA program, receiving cash rebates for having done so. Only families in the poorest 40% of the population were eligible for this rebate, consisting of those households in possession of a poverty certificate issued by the Provincial People’s Committee (PPC) and the provincial Department of Labor, Water Invalids, and Social Affairs (DOLISA) as well as those categorized as suffering from “economic hardship” with respect to additional income and asset ownership criteria, as determined by the Commune Peoples’ Committee (CPC) and the

community. In 508 participating communities among 10 provinces, the percentage of poor households with hygienic latrines has more than tripled, narrowing the “sanitation access gap” between rich and poor dramatically.

In addition to these poor households, another 32,000 non-poor households built latrines under CHOPA’s conditional cash transfer program. 60 communes achieved a 30 percentage point increase over the program period and another 5 communes achieved 95% overall hygienic latrine coverage. These latrines meet standards higher than those delineated by the WHO/UNICEF Joint Monitoring Programme’s criteria for improved sanitation.



RESEARCH DESIGN

EMW contracted the Mekong Development Research Institute (MDRI)* to conduct an independent evaluation of the CHOPA program. The core of this evaluation was a tracking survey of 2,100 households in two provinces, across 120 communes, comparing the changes in a number of sanitation-related variables at three different periods of time (baseline in July 2012, midline in December 2013, and endline in January/March 2015). The study tracked the same households, and to the extent possible, interviewed the same individuals over each of the three survey waves. An initial random assignment approach proved ultimately unworkable, so instead a fixed-effects model was designed to minimize bias.

Sampled communes were assigned to one of four groups: those receiving the “full CHOPA package” of consumer rebates and community-wide CCT payments; those receiving the household rebate only; those receiving the CCT only; and controls outside of the CHOPA program.

ECONOMETRIC METHOD

MDRI used the panel data to estimate the following equation using household fixed effects regression:

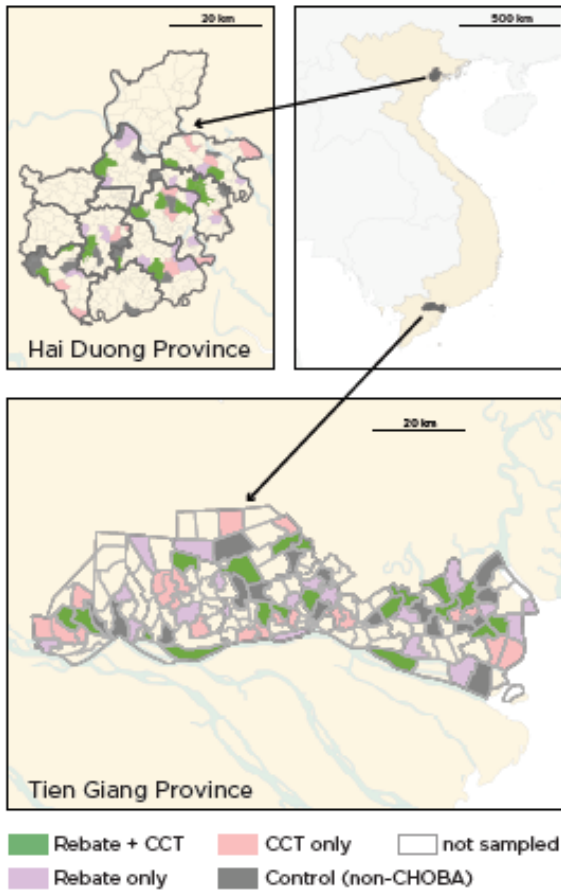
$$Y_{ict} = \beta_0 + \beta_1 \text{Rebate_CTT}_{ct} + \beta_2 \text{Rebate}_{ct} + \beta_3 \text{CCT}_{ct} + X_{ict}\beta_4 + T_t\beta_5 + u_{ic} + v_{ict}$$

Y_{ict} is the dummy variable indicating of the latrine status of household i in commune c in year t .

Rebate_CTT_{ct} , Rebate_{ct} and CCT_{ct} are dummy variables, indicating if commune c received intervention ‘both rebate and CCT’, ‘only rebate’ and ‘only CCT’, respectively.

X_{ict} is a vector of household characteristics.

T_t are year dummies of the mid-term and endline surveys. The unobserved variables are decomposed into time-invariant (u_{ic}) and time-variant components (v_{ict}).



FINDINGS

We present results of the model with “ownership of septic tanks” as the dependent variable. From baseline to midline, the full CHOBA package of individual household rebates plus community CCTs resulted in a 10 percentage point increase in septic tank ownership as compared to controls. Between midline and endline, it resulted in another 7.5 percentage point increase as compared to controls, for a total result of roughly 17 percentage point increase in septic tank ownership as compared to controls, significant at the 99% level. There is a clear additive effect from the



Original un-improved latrine

combination of household and community-level incentives.

Explanatory variable	Coefficient (standard error)
Rebate and CCT	0.0957*** (0.0361)
Rebate only	0.0435 (0.0385)
CCT only	0.0257 (0.0368)
Rebate and CCT × Year 2015	0.0750*** (0.0257)
Rebate only × Year 2015	0.0577* (0.0317)
CCT only × Year 2015	0.0280 (0.0174)

***significant at $p < 0.01$

LESSONS LEARNED

There is a significant combined effect of individual and household performance-based subsidies on improved sanitation adoption in Vietnam. The CHOBA program has definitively accelerated the delivery of properly designed latrines and septic tanks to the Vietnamese rural poor, and the OBA model should be expanded as a form of sanitation policy by developing world governments.

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The baseline survey was conducted by the Water & Sanitation Reference Centre (WSRC), Hanoi.



New toilet with septic system build with a CHOBA rebate