

The effect of OBA subsidies combined with sanitation marketing (SanMark) on latrine uptake among rural populations in Cambodia

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EAST MEETS WEST / THRIVE NETWORKS
WORLD BANK WATER AND SANITATION PROGRAM



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What is the proper role of subsidy in the delivery of improved sanitation to the poor?

Carefully designed subsidy programs demonstrably increase sanitation uptake among the poor in both experimental and scaled field programs

- Experiment: In Bangladesh, subsidies to the majority of the landless poor increased latrine ownership among subsidized households (+22.0 pp) and their unsubsidized neighbors (+8.5 pp). Guiteras *et al*, 2015. *Science* 348(6237): 903–906
- Implemented program: In Vietnam and Cambodia, Thrive / EMW's output-based aid (OBA) subsidy program delivered as many as 10,000 latrines/month to the poor, with impressive leverage ratios on the donor dollar

Bringing evidence to a debate on hypothesized market-distorting effects of sanitation subsidies

Do subsidies pose risks to demand for latrines in geographically close markets and among the better-off population segments for whom subsidies are not available?

In areas where a sanitation marketing (SanMark) approach is employed to foster local supply chains and demand for sanitation goods and services, does the introduction of time-limited, poor-targeted discounts and rebates dampen sales of latrines to other income groups?

This is a quasi-experimental, matched case-control research project in rural Cambodia

Why Cambodia?

- As of 2015, 60% of rural Cambodians practiced open defecation (OD)¹
- OD has been linked with child growth faltering in Cambodia² and elsewhere
- Multiple SanMark programs in place (iDE, WaterSHED)

1. UNICEF-WHO JMP. 2015. **Progress on Sanitation and Drinking Water – 2015 update and MDG assessment.**

2. Vyas et al. 2013. Scaling up rural sanitation: investing in the next generation –growing tall and smart with toilets. World Bank: UNDP-Water and Sanitation Program.

Research Objective – understand interactions btw subsidy and SanMark

Examine differences in latrine uptake across different income levels in villages exposed to an OBA subsidy, SanMark alone, or both combined

Background on the interventions

SANITATION MARKETING (SANMARK)

Nurturing of existing sanitation product and service supply chains

- Marketing support. Example: sanitation business owners are trained in the “4P mix”: product, price, place, and promotion
- Village-level sales agents are linked with local sanitation business owners on a commission basis
- Support on product design (affordable, aspirational, upgradeable – like the EZ latrine offset pit design from iDE)

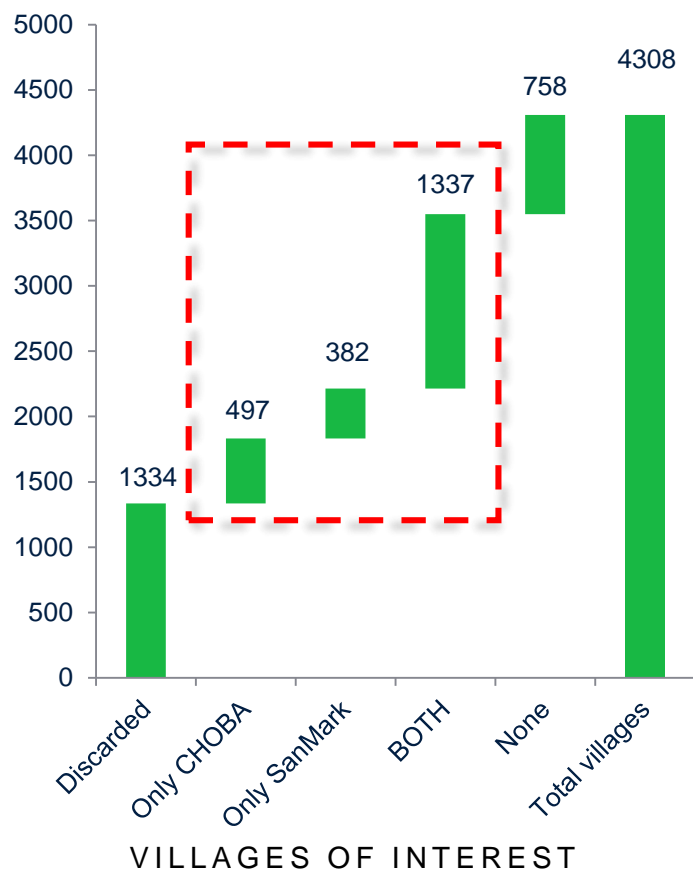
TARGETED OBA SUBSIDY (CHOBA)

Multi-level results-based incentives targeting poor HHs

- CLTS “light” for demand creation
- Local mobilizers earn performance-based payments after each verified installation by a low-income household
- Low-income households benefit from a small (\$18) subsidy (in Cambodia, this was a discount to HHs and a rebate to suppliers)
- Full OBA costs for the program, including rebate/discount, is ~\$41 per latrine built by the poor

Sampling and matching

In 6 provinces a total of 4308 villages exist, of which 2216 were suitable for sampling (villages with top-down, broad subsidy programs were discarded)



In order to employ randomization, groups must be similar across key variables. They weren't, so we had to minimize bias via propensity-score matching (on 40 variables).

ORIGINAL 2216 VILLAGES, AT BASELINE

Indicator	OBA subsidy	SanMark	Both
latrine coverage	34%	46%	32%
Poverty rate	22%	24%	28%

120 VILLAGES, POST-MATCHING, AT BASELINE

Indicator	OBA subsidy	SanMark	Both
latrine coverage	26%	26%	26%
Poverty rate	24%	24%	24%

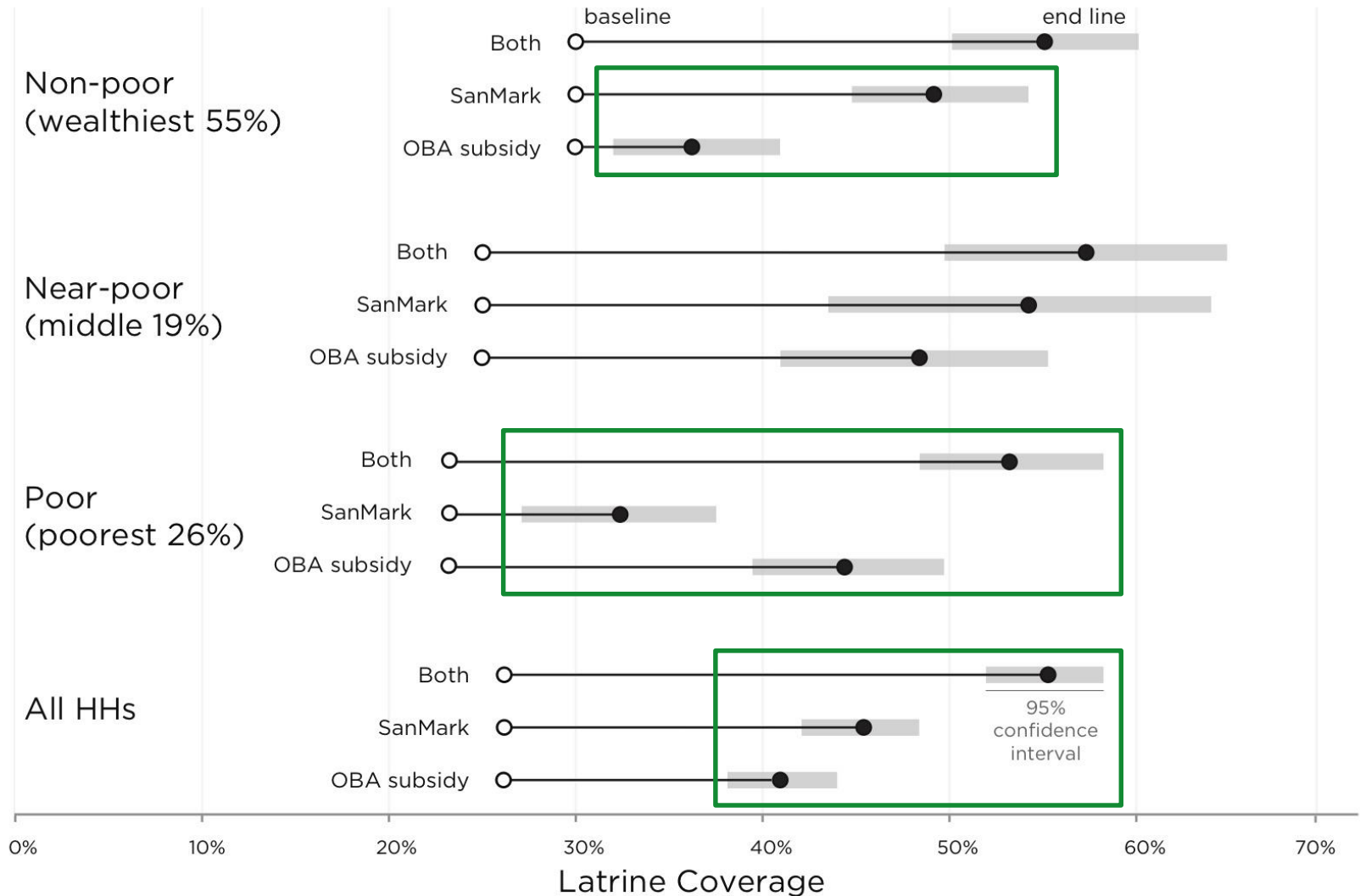
Income strata

POVERTY CATEGORIES

Income Group	Proportion of total
Poor (ID Poor 1 & 2)	26%
Near-poor (ID Poor 3)	19%
Non-poor	55%

In response to the World Bank objective of “shared prosperity,” EMW supplemented the official government poverty classification (ID Poor 1 and 2) with a third category in order to capture the poorest 40% of the population.

Main Results (n = 1,965 households)



Positive and negative spillover?

In the journal *Science*, Guiteras *et al* already observed positive spillover (the availability of subsidy to eligible households resulting in increased adoption among the non-eligible)

Our results show positive spillover among the full sampled population - the pro-poor OBA subsidy added to SanMark increased overall coverage

We found no negative spillover – the pro-poor OBA subsidy did not reduce demand among the non-poor in SanMark villages. Removing communes in close proximity to competing individual interventions (SanMark-only villages within communes participating in the OBA subsidy program, or vice-versa) did not affect the results

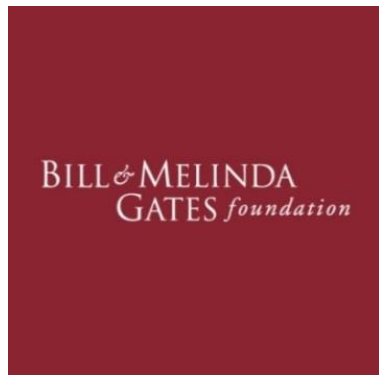
Conclusions

- There is no evidence that consumer rebates offered in villages where sanitation marketing is implemented create disincentives among the non-poor for the adoption of latrines.
- Villages that implemented OBA subsidies for the poor AND sanitation marketing interventions showed higher latrine coverage among all income groups when compared to villages that implemented only one program.
- OBA subsidies and sanitation marketing must be understood to be complementary interventions, as they target different income strata, and their additive effects among the overall population is dramatic.

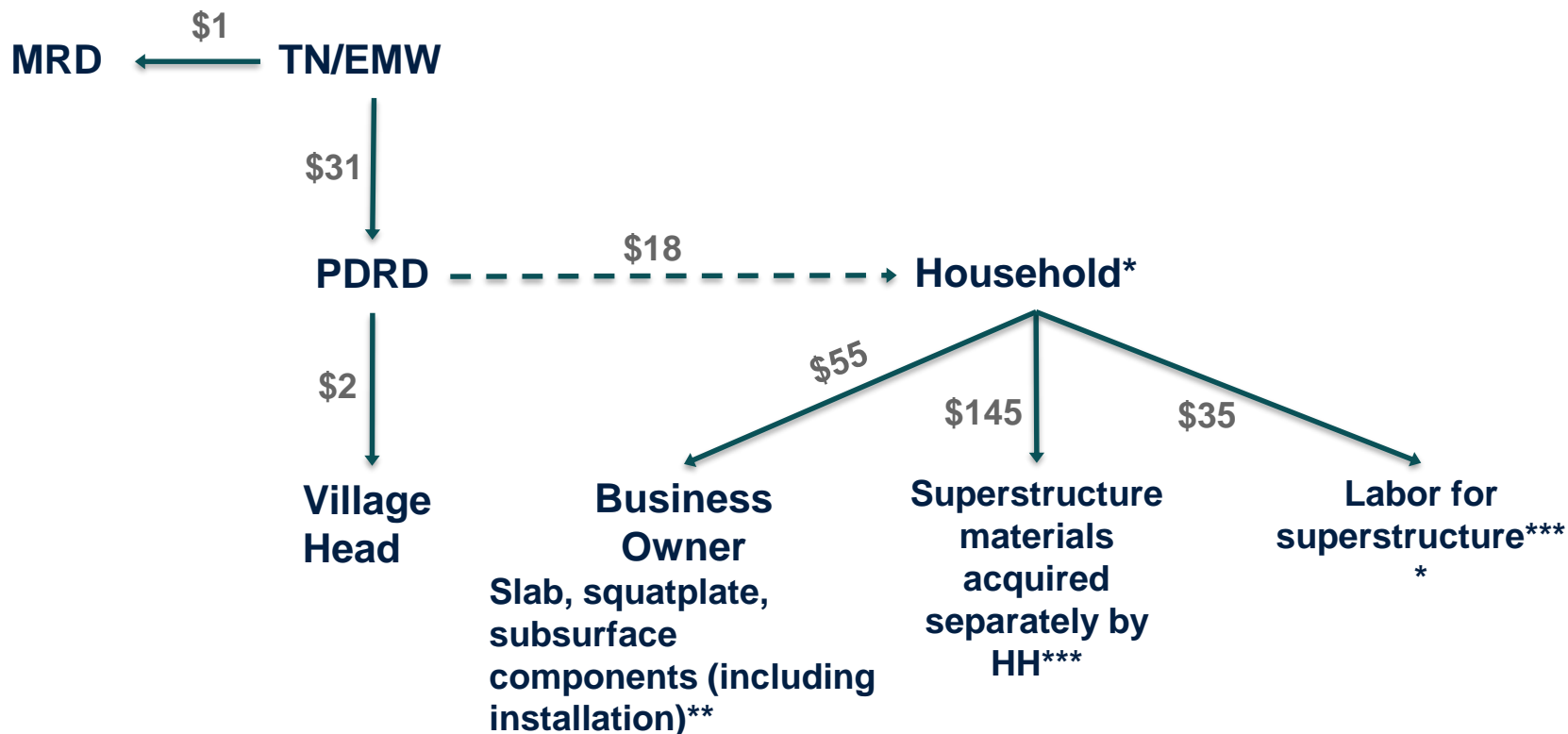
Acknowledgements

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FUND FLOWS, CHOBA 1 (rebate case)



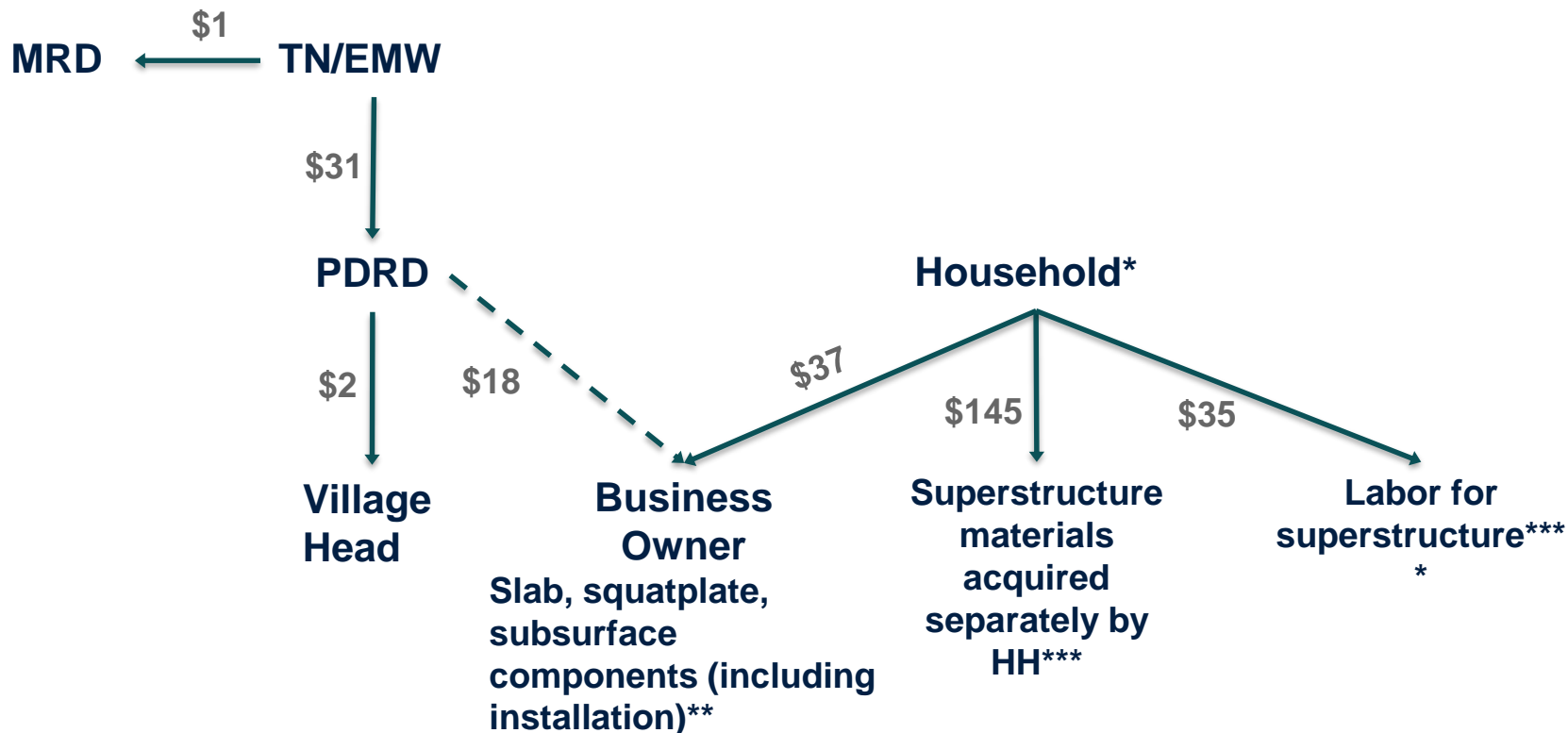
* Poor HHs only. <10% of households secure consumer credit for latrine purchase

** HHs receiving upfront discount pay \$37; HHs receiving rebate pay \$55; *this price does not include superstructure*, which is an additional

\$145. 50% of surveyed HHs paid for superstructure materials; remainder used local materials

**** ~33% of surveyed HHs paid for labor to install superstructure; 50% installed themselves

FUND FLOWS, CHOBA 1 (discount case)



* Poor HHs only. <10% of households secure consumer credit for latrine purchase

** HHs receiving upfront discount pay \$37; HHs receiving rebate pay \$55; *this price does not include superstructure*, which is an additional

\$145. 50% of surveyed HHs paid for superstructure materials; remainder used local materials

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Supplier vs household rebate, Cambodia

Province	Project	# of villages	# rebate to supplier	# rebate to HH	% villages with rebate to HHs
Kampot	CHOBA	289	289	0	0%
Prey Veng	CHOBA	1100	1100	0	0%
Pursat	CHOBA	267	267	0	0%
Kandal	CHOBA	461	461	0	0%
Kampong Cham	WASHOBA	619	459	160	26%
Kratie	WASHOBA	128	115	13	10%