

Market Segmentation: a more effective approach to balance subsidies and private sector engagement



BACKGROUND Since the launch of the Millennium Development Goals in 2000, Bangladesh has made significant progress in reducing open defecation and increasing access to improved latrines. The government has been providing subsidized latrines for more than 30 years and formalized a strategy of pro-poor subsidies in 2005 that is the current policy. However, despite these subsidies, there is still a large sanitation problem in Bangladesh—almost 40 million rural Bangladeshis continue to defecate in the open, share toilets among several households, or use unsanitary facilities.

iDE estimates that 1.2 million subsidized latrines¹ are given away to rural households in Bangladesh each year by government programming and civil society actors at a cost of approximately 1000 BDT (\$12.50 USD) for each latrine. With an estimated 2.8 million ultra-poor² households in rural Bangladesh, subsidy programs should be able to reach all of the

households most in need within 3 years, far ahead of the 2030 Sustainable Development Goal deadline. However, these existing subsidy programs are not reaching these ultra-poor intended beneficiaries and are having unintended negative impacts on local businesses selling sanitation products and services.

Given the breadth and nature of sanitation challenges in Bangladesh, iDE believes that subsidies alone will never be able to fully meet the need for latrines. Based on our field experience, we suggest applying a more diverse and nuanced approach called market segmentation. By further segmenting the sanitation market into different types of consumers based on income and ability to pay, the government can more effectively target ultra-poor households with subsidies and the private sector can increase sales of sanitation products with persuasive messaging that creates demand.

Why aren't subsidies reaching the poorest households?

Broadly defined subsidy criteria reduce efficiency and cost-effectiveness. Latrine subsidies have historically been implemented with overly broad eligibility criteria, increasing costs while also lessening the likelihood of reaching the poorest households. A recent analysis of annual subsidy funding showed that up to 75 percent of rural households were deemed eligible to receive subsidies under existing government guidelines.³ This is more than double the number of rural households living below the national poverty line⁴ and includes many households who actually have the ability to pay for modestly priced sanitation solutions.

Poor households can be left out. In practice, current subsidy programs do not always target those who need help purchasing a latrine. Poverty is a relative concept to many Bangladeshis, who have a desire to bestow support to anyone who is relatively poorer than themselves.⁵ Instead of being used to help poor households, subsidies are often disbursed based on political and personal affiliations, perceptions of poverty, and, in some cases, bribery.⁶ Additionally, poverty is a highly dynamic indicator with families fluctuating above and below the poverty line during a single year and sometimes even a single month.

These factors complicate the process of determining who is most in need and make enforcement of standard criteria difficult. Without this enforcement, subsidies do not reach poor households, and sanitation remains unaffordable to them. By segmenting the market and identifying the poorest households, governments can allocate their limited funding to households most in need and encourage households with an ability to pay to purchase affordable, improved products.

Subsidies often fund replacements instead of new latrines. Subsidy funding is often spent on low-quality latrine pans that need to be replaced frequently. As a result, fewer households benefit from subsidies, and progress is slow, as funds go to the replacement of broken latrines instead of the distribution of new hygienic ones.

What are the unintended consequences of the current subsidy approach?

Households expect free latrines. According to iDE's market research, the majority of subsidized latrines (typically three concrete rings that are buried below ground as a very simple pit with a slab and pan placed on top) last between one and two years, necessitating a redistribution of subsidies

Households often wait for a free latrine provided by the local government or an NGO instead of replacing a broken latrine, even when they can afford to purchase a new one.



Photo: Jess MacArthur / iDE / 2016

³ Human Development Research Centre. (2011). Study on allocation, targeting and effectiveness of sanitation subsidy in Bangladesh. Retrieved from http://hdr-bd.com/admin_panel/images/notice/1390216970.final%20report%20wateraid%20sanitation%20subsidy%20in%20bangladesh.pdf

⁴ The rural poverty rate was 35.2 percent in 2010. World Bank. Rural poverty headcount ratio at national poverty lines. Retrieved from <http://data.worldbank.org/indicator/SI.POV.RUHC?end=2015&locations=BD&start=2015&view=map>

⁵ Maloney, C. (1988). Behavior and Poverty in Bangladesh. Bangladesh: The University Press Limited.

⁶ Human Development Research Centre. (2011). Study on allocation, targeting and effectiveness of sanitation subsidy in Bangladesh. Retrieved from http://hdr-bd.com/admin_panel/images/notice/1390216970.final%20report%20wateraid%20sanitation%20subsidy%20in%20bangladesh.pdf

every other year for toilet replacements. As a result, households' expectations to receive free latrines is consistently reinforced. These expectations extend beyond subsidy recipients themselves to neighbors and relatives who hear about the possibility of receiving a free latrine; thus growing the number of households that are disinclined to buy their own latrine in the hope that they will receive a free one. This is true even for households with the ability to pay to upgrade from an unhygienic (but free) toilet to an improved one.

The private sector does not see market opportunities in sanitation. The ripple effects of subsidy expectation has disincentivized local sanitation businesses from expanding their product offerings to include higher quality latrines or marketing improved solutions. Latrine producers do not see the point in offering anything beyond the most basic, unhygienic latrine products as there is little customer demand for sanitation and the majority of their orders come through NGOs and the local government. However, we have consistently seen that when latrine producers make efforts to increase demand for hygienic products through village demonstrations during markets and festivals, customers are willing to pay for improved latrine products, even when they cost more than unhygienic options.

What factors affect sanitation coverage?

Price is not the only factor for latrine uptake.

If price were the only constraint to households adopting hygienic latrines, the problem would be easily solved through subsidies. However, additional factors such as product quality, expectation of free latrines, scarcity of businesses selling hygienic latrines in remote areas, and lack of awareness of the consequences of poor sanitation also reduce purchases of improved latrines. Likewise, subsidized pricing is not the only driver of uptake. For example, a recent study noted that while subsidies can and do increase latrine coverage, other factors like social pressure can also be a significant motivation—as an increasing number of households adopt latrines, their neighbors feel compelled to do the same.⁷

iDE Bangladesh has conducted extensive market and consumer research to uncover the motivations of local government representatives, rural households, and private sector actors where sanitation is concerned.

Local governments lack technical knowledge of sanitation. As part of their mandate for rural development, local governments place bulk orders to provide subsidized latrines to poor households in their Union Parishad (local government administrative areas). Hoping to use their limited funds to reach more people, they usually purchase less expensive, low quality products that quickly break, leaving recipients with dysfunctional or unhygienic latrines. Many families cannot afford a replacement or mistakenly believe that using any kind of latrine (even a broken one) is hygienic because they are not defecating in

Latrine producer Al-Mamun used his knowledge of hygienic latrines and cost comparisons to convince the Laskorpur Union Parishad to change their order from 45 low quality latrines to 35 latrines with hygienic SaTo pans. The Union recognized that it was better to provide quality, improved products to fewer households, instead of providing unhygienic products to more people.



Photo: Jess MacArthur / iDE / 2015

⁷ Guiteras, R, Levinsohn, J., & Mobarak, A. M. (2015, May 22) Encouraging sanitation investment in the developing world: A cluster-randomized trial. Science Magazine, 348, 903-906.

the open. In most cases, government leaders are not aware of the detrimental effects of this cost-saving plan given their limited technical knowledge of sanitation. Latrine producers working with iDE receive training on what makes a latrine hygienic and how to produce high quality sanitation products. With this knowledge, they are able to advocate to Union Parishads and consumers alike the benefits of improved products.

Households have unique motivations and barriers to latrine purchase and use. Through Human-Centered Design research, iDE uncovers the diverse reasons households may be motivated to purchase and use a hygienic latrine, as well as reasons they prefer existing, unhygienic options. Low or insecure income is not the only reason households may not have a hygienic latrine. For example, iDE Bangladesh discovered that poor households who do not own land are not motivated to invest in long-lasting sanitation products like septic tanks, preferring more affordable products with a shorter lifespan. They aspire to hygienic products, but want ones that are easy to replace if their household moves to a new location. Unfortunately, the most affordable options are unhygienic, direct pit latrines with flimsy plastic latrine pans. On the other end of the spectrum, landowning households may be saving to build a bathroom with running water and plan to upgrade their toilet at the same time. Until they have enough

for the full bathroom, they may be disinclined to spend money on a better toilet.

Living in a disaster-prone area brings new considerations. Additionally, in areas with frequent cyclones, iDE's market research has uncovered some interesting perspectives around latrine ownership. Some households informed our team that they would rather pray for a cyclone than purchase a latrine, because they had seen free latrines given away after cyclones to households who didn't have one already. In other areas, households were unwilling to purchase latrines since having a latrine would disqualify them from housing aid after a cyclone.

How can subsidies be used more effectively?

Reserve subsidies for ultra-poor households.

Given the limited amount of funds available to subsidize sanitation, iDE believes that targeted subsidies with stricter eligibility requirements will more effectively help poor customers access sanitation. By reserving subsidies for households most in need, and encouraging local entrepreneurs to market and sell sanitation products to non-poor customers, it will be possible to more quickly and cost-effectively address the sanitation gap.



Human-Centered Design research provides insights into customer preferences for product features and appearance, as well as willingness to pay for sanitation.

Photo: Jess MacArthur / iDE / 2014

Photo: Anya Briggs / iDE / 2016

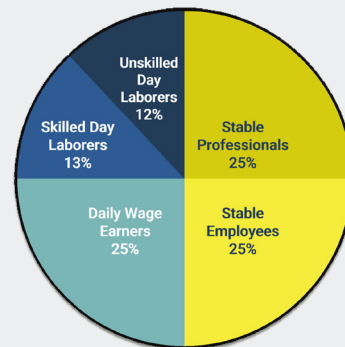


iDE's research has shown that there are niche markets even among poor households. While one family may prefer a lower-cost latrine with a shorter lifespan, another may appreciate the value for money of a more expensive, longer-lasting product.

iDE Bangladesh is advocating and testing this approach as part of its current sanitation project, SanMark SYSTEMS (SanMarkS).⁸ Under this project, the team uses the most recent government poverty thresholds⁹ and has determined that households under the lower poverty line (monthly household income below 5000 BDT) would be candidates for subsidy based on Bangladesh's Pro-Poor Water and Sanitation Strategy of 2005.¹⁰

Target unskilled daily laborers as subsidy candidates. As part of this project, iDE Bangladesh conducted extensive consumer research to segment customers into groups ranging from unskilled day laborers to salaried workers with stable professional jobs. Unskilled day laborers, making up approximately 12 percent of households in SanMarkS project areas, are ideal candidates for latrine subsidies due to their low earnings and unpredictable income stream. The remaining households have some ability to pay for sanitation through cash or financing mechanisms.

Consumer Employment



Research in iDE project areas revealed that the ability to pay for sanitation varies significantly across households. Many households have steady income and assets such as televisions, refrigerators, and agricultural land—in other words, many of them are good candidates for sales on credit rather than subsidy.

⁸ SanMarkS, funded by UNICEF and SDC, is being implemented from November 2015 to August 2019 in six districts across Bangladesh. Under this project, iDE will train 500 local sanitation providers to expand the sustainability of their businesses and sell 90,000 improved latrines to rural households.

⁹ Bangladesh Bureau of Statistics. (2010). Report of the Household Income and Expenditure Survey 2010. Retrieved from <http://catalog.ihns.org/index.php/catalog/2257>

¹⁰ Ministry of Local Government, Rural Development and Cooperatives. (2005). PRO POOR STRATEGY for Water and Sanitation Sector in Bangladesh. Retrieved from <http://www.dphe.gov.bd/pdf/Pro-poor-Strategy-for-Water-and-Sanitation.pdf>

Where does the private sector fit in?

Market segmentation can turn customer insights into effective marketing strategies. iDE estimates that 48 million USD is spent per year on latrines in rural Bangladesh. But these latrine purchasers are not a homogenous group. There is significant variance in ability to pay for sanitation as well as different reasons for purchasing a latrine, even among poor households. For example, some customer groups may be motivated to purchase at different times of year, be exposed to different forms of media (direct presentations, radio ads, and so on), and find some messages more compelling than others. By analyzing and segmenting the market based on household income, assets, lifestyle, and other characteristics, private sector actors will be able to develop products, messages, and marketing tactics that will reach specific types of consumers.

Latrine Purchasing Habits and Motivations

	Unskilled Day Laborers 12% SUBSIDY CANDIDATE	Skilled Day Laborers 13%	Daily Wage Earners 25%	Stable Employees 25%	Stable Professionals 25%
Who Decides	Head of the HH NGOs Gov't		Head of the HH NGOs Gov't	Head of the HH	Head of the HH
Who Pays	NGOs Government		NGOs Government	Micro-loans Formal loans Informal credit Savings	Micro-loans Formal loans Informal credit Savings
What	Shared latrines 1 year lifespan		2-3 year lifespan	5-7 year lifespan	10+ year lifespan
Where	Property edge Pond, river edge		Property edge Near water source	Property edge Near water source	Bathroom with running water
When	Dry season Sanitation month Before elections		Dry season After crop sales Before elections	After crop sales Remittance	Before visitors Festivals and holidays Remittance
Why	Behavior change communications Available subsidy		Micing Available subsidy Influence of educated children Prestige and family reputation	Radio ads Value for money Influence of educated children Prestige and family reputation	Television ads Value for money Influence of educated children Prestige and family reputation
How	Self-installed		Self-installed	Self-installed Self-repaired Mason, laborer and/or carpenter	Mason, laborer and/or carpenter install and repairs

iDE's customer research reveals different reasons households decide to purchase a latrine.

Businesses can target different products to different customers.

Until recently, rural Bangladeshis had two latrine choices—an inexpensive, unhygienic direct pit or a costly, brick-lined septic tank. Rich and poor customers alike had little choice in trying to find a hygienic latrine that would fit their budget, lifestyle, and aspirations. Even expensive latrines were not always durable or high quality, as latrine producers lacked training on construction techniques and sanitation standards. Today, rural customers are becoming more educated about sanitation and more aware of latrine options available outside of their areas. In addition, iDE estimates that 50 percent of the 40 million rural Bangladeshis without a hygienic latrine come from non-poor households. These potential customers have the ability to pay for improved sanitation products and present an opportunity to target these costlier, but longer-lasting, products to wealthier customers while still providing affordable products for the poor.

Outstanding questions

SUBSIDY TIMING. When is the best time to offer subsidies without distorting the local market—in parallel with market-priced sales or after customers who are willing and able to pay have purchased latrines?

IMPORTANT CUSTOMER CHARACTERISTICS.

What customer traits beyond income are most important in developing marketing messages to drive latrine purchases?

GOVERNMENT PURCHASES. What messages will persuade local governments to prioritize hygienic sanitation products over cheaper, unhygienic latrines, even if it means reaching fewer people at a time?

Expected results

The SanMarkS project is on track to reach 450,000 people with quality, hygienic sanitation facilities and services by 2019, resulting in better health conditions and well-being. Sixty percent of these target customers will be poor households, with many coming from disadvantaged households living in disaster-prone areas; social, cultural, and religious minorities; people living with disabilities; and homes led by women, children, or elderly individuals. To achieve these goals, iDE Bangladesh is working to change beliefs among the following sanitation stakeholders and will monitor progress through an annual survey to evaluate the number of poor and disadvantaged customers gaining access to improved sanitation.

Through iDE's advocacy and training:

Government will target sanitation subsidies at truly poor households and support the private sector in selling affordable improved sanitation solutions to households with the ability to pay.

Private sector actors will recognize that many households have the ability to pay for sanitation and become more engaged in creating a more robust market for improved sanitation products.

Latrine producers will understand how to reach customers, how to talk with households about the benefits of improved sanitation products, and what products are best for different consumers.

Sanitation suppliers will understand the value of hygienic latrines and conduct marketing activities focused on hygienic products.


Photo: Imran Nizami / iDE / 2016



Union Parishad — Union Parishads are the smallest local government division in Bangladesh. They are responsible for local governance and administration, public welfare, and economic and social development.

Market segmentation — Market segmentation identifies differences among groups of potential customers to understand their motivations and develop appropriate strategies to reach different types of consumers within the market.

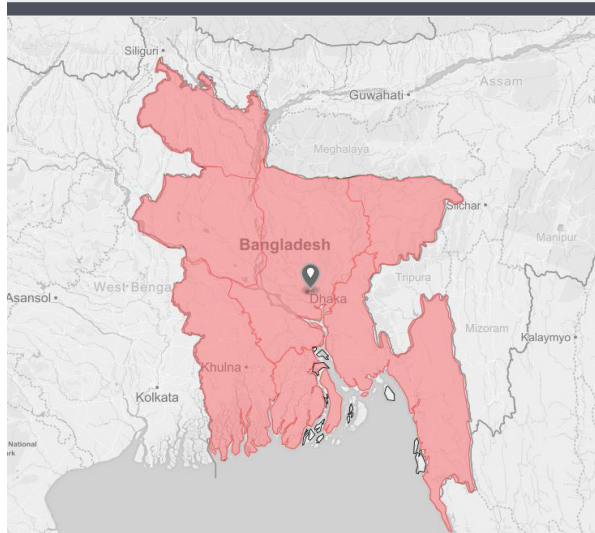
Improved latrines — The Government of Bangladesh defines improved latrines using three criteria: 1) confining of feces, 2) separating the pit from insects, and 3) venting gasses.

 Read More: **Learn about iDE Bangladesh's work engaging private sector actors to address the sanitation gap for rural customers:**

<https://www.ideglobal.org/country/bangladesh>



Photo: Imran Nizami / iDE / 2016



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