



Tapping the Market: Opportunities for Domestic Investments in Water and Sanitation for the Poor

Background

In August of 2013, the World Bank Water and Sanitation Program published results of a study analyzing the private sector provision of on-site sanitation services in four different countries: Bangladesh, Indonesia, Tanzania and Peru. Extensive interviews were conducted both with consumers and sanitation enterprises. The study sought to answer two questions:

- Is lack of interest by the domestic private sector a rational response to weak market potential, or are lack of enterprise viability and the use of inappropriate business models preventing it from taking advantage of market opportunities?
- Are investment climate factors increasing the (actual or perceived) costs and risks associated with doing business?

Key Points

Several constraints prevent enterprises from serving the sanitation market:

- There's a weak demand for existing options
- Inappropriate business models and a reluctance to bundle or expand services
- Fragmented and uncoordinated supply chains
- Unsupportive investment climate by the government (most enterprises are not even aware of sanitation policies)
- When it comes to serving the poor, many enterprises are worried about the regularity of demand

The report makes several recommendations through to address constraints.

Is Market Potential Sufficient to Justify Private Investment?

Economic Drivers

- Real per capita incomes have been rising in all four countries, and the proportion of the population living below the poverty line has been falling.
 - The aggregate ability to pay for improved sanitation should be increasing.
- Urbanization will also affect the kinds of sanitation solutions the market will require. In Bangladesh, the absolute number of people living in rural areas is projected to start declining by around 2020. In Tanzania, the urban population is growing nearly 70% faster than the population as a whole.

Policy Drivers

- The impact of sector policies is limited and *has not* promoted increased participation from the private sector.
- Public policies tend to focus on infrastructure rather than setting a framework for market provision of services.
- Current policies have not promoted private sector participation - but they do not seem to have hindered it.

Rethinking Market Drivers

- Household income is not always a reliable predictor of demand for improved sanitation.
 - In Peru nearly 3/4s of nonpoor households living within the sewer network choose not to connect to it.
- Households look for qualities in their facilities without reference to what government or international standards may define as “improved sanitation”.
- The benefits of moving from open defecation to basic sanitation are much larger than the benefits of moving to the next stage of improved sanitation, and the incremental costs of moving up the ladder are relatively high. The gap between what households want in their sanitation solutions and what solutions are most cost-effective in delivering benefits has important implications for public programs seeking to adopt market based approaches.

What Affects Demand for On-Site Sanitation

Cost

- The fact that many poor households without sanitation own mobile phones suggest that the poor are willing to pay for value and that affordability is not the only factor, however.
- Current sanitation solutions are typically 3-4 percent of the annual income of households living below the poverty line.

Cash Constraints

- In Bangladesh, all of the poor households that participated and 34% of the extremely poor households that participated in the focus groups had at least one mobile phone. On average, households with a phone were spending US\$55 a year on the service. The prevalence of mobile phone ownership among poor households suggests that households can make significant outlays for a valued service if expenditure can be spread out over time.
- In all four countries, households strongly indicated that installment payment arrangements would enhance their willingness to spend on sanitation infrastructure.

Importance of Sanitation to Households

- Focus group discussions with poor people revealed that improved sanitation is not an explicit or revealed priority for most of them.
- In Peru, unimproved latrines are widely used even though they do not provide great advantages and cause problems. Improved latrines are used by only some members of the family, particularly children; they are considered provisional and difficult to relocate. For this reason, some respondents indicated that they prefer to relieve themselves outside, in order to keep their latrines from filling up.
- The word latrine has very negative associations (flies, odors, inconvenience); people view latrines as symbols of poverty and social exclusion.

Women's Role in Decision Making about Sanitation

- In all four countries, women prioritized sanitation much more than the men, partly out of concern for their children.
- Men did not seem to value household latrines or toilets because they are away from home most of the day and can use facilities outside their homes.
- The move toward improved sanitation was viewed as a joint decision, however, with the woman acting as the initiator and the man as the implementer.
- In contrast, women play a minor role in the sanitation supply business. The average share of women in full-time employment in the enterprises surveyed was 6 percent in Bangladesh, 9 percent in Indonesia, and 19 percent in Tanzania. The shares of women in part-time employment were 17,38,14 percent in Bangladesh, Indonesia, and Tanzania respectively.

How is On-Site Sanitation Supplied?

Enterprise Characteristics

- Enterprises selling on-site sanitation services to households are very small-scale operations. They are usually informal, have limited investment, do not keep financial records, do very little marketing, and rely on a fragmented and costly supply chain in which the major players do not view sanitation as an important part of their business.
- Scope and Scale of Activities: In Indonesia, 92% of enterprises' revenues came from sanitation. This figure was 56% in Bangladesh and 67 percent in Peru. In Tanzania, enterprises were either hardware stores selling a range of products or masons that took on a range of building tasks. For both, sanitation represented only a small share of their businesses.
- The vast majority of enterprises operated either at the subdistrict level or at the level of a district or town. Enterprises in Bangladesh constructed 8 to 11 toilets or pits a month, and enterprises in Peru handled about 7 installations a month. Hardware stores in Tanzania that were engaged in sanitation construction serviced 35 households and mason installed 10 units a month.
- The majority of surveyed enterprises involved in on-site sanitation have very simple business structures or no formal constitution as businesses. Most were registered only with local government authorities.

Business Models

- More than 90% of enterprises covered their operating costs. Annual revenues ranged from US\$5,000-US\$6,000 for enterprises in Bangladesh and Tanzania to more than US \$40,000 for enterprises in Indonesia.
- Enterprises could substantially increase their margins by moving from the manufacture and sale of sanitation components to the manufacture and installation of services (essentially adding labor) See Table 6.5.
- Enterprises are not likely to be able to increase margins by lowering costs, because 60-80 percent of costs are linked to materials. Nor can they negotiate lower prices for these products.
- Because the supply chain is fragmented, much effort is spent aggregating materials for construction. In Tanzania, for example, masons building latrines spend about 70 percent of their time organizing material supply.
- Enterprises do little to market their services themselves; they focus on a limited geographical area and rely on referrals and walk-ins. In Indonesia, only about 20 percent of enterprises engaged in some form of marketing or advertising, and just 15 percent used sales agents.
- Fragmented supply chains prevent better alternatives from being offered to potential customers. For most manufacturers, importers, and retailers, sanitation represents a very small part of their total sales. The availability of construction materials is thus driven by the demand for construction activities in other sectors.

Table 6.5 Profits of Bangladeshi Enterprise from Selling Pit Materials and Components and Installing Twin Pit Toilet. (Tk, except where otherwise indicated)

Item	Sale of pit materials and components	Installation of twin pit toilet
Sale price	600	4,400
Cost	510	2,635
Operation profit	90	1,765
Profit margin (percent)	18	67

Are Enterprises Interested in Increasing Investment and Serving the Poor?

Intentions to Invest

- Varies across countries. In Bangladesh, most enterprises considering investment wanted to invest in stocking and expanding sales (80 percent) and manufacturing (77 percent) of latrine and toilet components.
- Few had interest in expanding into installation or repair of latrines and toilets or other sanitation-related businesses.
- The optimism of construction enterprises is reflected in the number of households they expected to serve the following year. Half of respondents in the construction business were sure that they would serve more than 500 households the following year - a quadrupling of volume from the average of 143 households at the time of the interviews. Pit-emptying respondents expected only a modest increase in the number of customers.

Perceived Risks

- Enterprises noted level of demand as an obstacle to investment.
- In Bangladesh, a significant proportion of enterprises worried about finding reliable workers to manage additional business.
- In Tanzania, 63 percent of enterprises were concerned that investment would be too costly to be profitable.

Perceptions of the Poor as a Target Market

- In Bangladesh and Indonesia, more than 60 percent of enterprises agreed or strongly agreed that the poor were target customers for them. In contrast, just 48 percent of respondents in Tanzania did so.
- In Tanzania, respondents recognized that a significant number of households lacked improved sanitation. Masons were much more likely than hardware stores to target the poor.
- A majority of enterprises in B/I/T believe that the poor are not reliable customers in terms of paying on time. They agreed that the inability of poor households to make large cash outlays is the most important constraint on their ability to pay.
- More than 3/4s of enterprises in Tanzania indicated that the poor lived in areas that were expensive to service because of transport and infrastructure problems.

Is the Investment Climate Limiting Private Sector Involvement?

Government Policy and Practice

- The problem isn't what governments are doing, but what they are not doing.
 - None of the countries had specific mechanisms or incentives set up to promote private sector entry into the market.
- Two important areas requiring proactive action from government if a market-based approach is to be successful:
 - Provision of market intelligence
 - Facilitation of entry by enterprises that have research and development capabilities
- Enterprises look to government for innovation.
 - Between 40 and 50 percent of enterprises in Bangladesh, Indonesia, and Tanzania believe that technological improvements are necessary to better meet the needs of the poor, who often live in flood-prone or steeply sloped areas.
 - However, few indicated that a new availability of appropriate, affordable technology would motivate them to specifically cater to poor households.
 - Government can actively promote research and development on sanitation solutions that are suited to the living conditions and life aspirations of the poor through:
 - Grants
 - Patent Protection
 - Contracts and
 - Accreditation systems

Infrastructure

- Inadequate electricity, telecommunications, water, and transport infrastructure can be an obstacle to business operations.
 - In Bangladesh, more than 60 percent of enterprises viewed the water supply as a major to severe obstacle.
 - In all countries but Peru, a majority of enterprises viewed transport as a problem.

Access to Finance and Financial Services

- Enterprises considered inadequate access to finance an obstacle to both their operations in general and their ability to reach poor households.
- A large share of the money that enterprises invested in their sanitation business came from their own family funds.
 - 82 percent in Bangladesh, 72 percent in Indonesia.
- The proportion of enterprises with a bank account or line of credit was greatest in Bangladesh, 47 percent and 52 percent respectively.

Conclusions and Recommendations

Market Potential Is Great

- The current combined market of the four countries is conservatively estimated to be \$300 million a year, but has the potential to increase to \$2.6 billion by providing improved sanitation to those who lack access.

Enterprises Are Not Offering Products and Services Households Want to Buy

- Many poor are not willing to pay for the solutions currently on the market. Moreover, sanitation is a low priority for many poor households – they'd rather “make do” with inferior solutions than purchase what they can afford.
- Enterprises must contend with the environment: buyers often have seasonal income while weather can negatively impact transport.
- The drivers of household decisions to stop open defecation are likely to be different from the drivers of household decisions to move up the sanitation ladder. Therefore the strategies used to motivate each decision may have to be different.
- Very few private enterprises offer a full-service option, most offer very rudimentary technologies, and the burden of coordinating construction usually falls on the consumer.
 - Bundling of services may be one way in which sanitation enterprises could exploit their knowledge of the market.
 - Enterprises recognize that the market for improved on-site sanitation will continue to grow, but they are concerned about the regularity of demand.
- Few enterprises invest in marketing to increase their sales. Even fewer have the business skills to figure out how to use labor to create more value.

A Weak Investment Climate is Constraining Investment

- The top-down approach has not been very successful
 - Despite a variety of high-level strategies and plans, lower-level governments seem to have little impact on private provision of sanitation: enterprises are typically unaware of national policy, and implementation by local level governments is undirected and poorly funded.
- Enterprises believe the government should concentrate on addressing the market imperfections related to households' understanding of the benefits of improved sanitation.

Governments, development partners, and the business community could help relax constraints by encouraging larger businesses and funders of sanitation to develop technologies with more consumer appeal, help reduce distribution costs, support coordination in the supply chain, and help develop financial products that would enable poor households to manage costs.

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