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Serving Customers at the Base of the Pyramid: Two West Michigan Case Studies

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The Base of the Pyramid (BoP) refers to more than 4 billion low-income people who tend to live in emerging market countries and earn less than $2/day. Although people living at the BoP have limited economic resources, the global BoP market is worth about U.S. $5 trillion, and many businesses want to sell products to this important and large market segment. In this paper, we discuss projects from two West Michigan organizations that produce and sell products to people at the BoP in Honduras and Kenya. We use a concept called the relational view of strategy to explain the projects’ sustainable success.

The market at the BoP is large and untapped, and many companies that try to serve it fail. Many products that sell successfully to middle- or upper-income customers sell poorly at the BoP because products are too expensive, too large, too hard to transport, or are inappropriate to buyers’ needs. For example, consumer product companies discovered they could sell more shampoo and laundry detergent to BoP customers when they packaged it in single-use sachets. Customers often lacked either the funds or the space at home to purchase more expensive, larger bottles. So, companies that intend to succeed at the BoP usually try to create or adapt products specifically to these customers’ needs, making them more affordable, likely to create local savings, and helping to alleviate symptoms of poverty.

But how do we know if BoP projects are successful? One of the pioneers of the BoP concept, the late Dr. C.K. Prahalad (2012), suggests that four criteria may determine BoP project success for companies that sell products and customers who buy them:

1. Companies must tailor products to solve the problems of BoP customers and create scalability so that thousands or millions can be sold.
2. Companies must make BoP customers aware of what the product is and does, and that the product is accessible, affordable, and available.
3. Companies must modify the value chain to produce a product adapted to BoP customers’ needs and opportunities.
4. Companies must build partnerships with other organizations that may design, build, test, sell, and educate people about the product.

While these criteria may help us determine if BoP projects are successful, how do we know if they are sustainable? Prahalad’s fourth point, about partnerships, is especially important. Organizations wanting to sell to the BoP learn they must partner with local non-governmental or community groups to reach their customers and sustain their success. For example, Unilever learned that to sell Lifebuoy soap in India, it had to launch community education campaigns along with an affordable bar of soap, because many people were unfamiliar with the health benefits of hand washing. It partnered with a local NGO to train community health workers to spread this message and sold more bars of soap over time as a result. Based on this idea, we use the relational view of strategy and competitive advantage (Dyer & Singh, 1998) to build a stronger set of criteria for measuring the sustainable success of BoP projects. Our view is that the sustainable success of BoP projects depends on partner relationships among organizations engaged in BoP projects, and the resources they create. In short, successful BoP projects demonstrate:

1. Assets created specifically by the partnerships, that lead to tailored and scalable solutions,
2. Sharing of knowledge among producers and users, increasing user awareness, affordability, availability and accessibility,
3. Shared resources and capabilities that lead to changes to the value chain, and
4. Good governance, created by strong partnerships.

Two organizations in West Michigan, Aqua Clara International (ACI) and Triple Quest, design, sell, and produce water purification systems that use biologically treated sand filtration technology for BoP customers in Kenya and Honduras. We interviewed principals of both organizations about their work and used relational view criteria to evaluate how sustainable and successful the projects are.

Aqua Clara International (ACI) is a non-profit organization based in Holland, Michigan. ACI designed the Aqua Clara International water filter and sells it to BoP customers in several countries, including Kenya. The filter consists of a bucket-sized plastic container that holds sand and gravel used to biologically filter water and a PVC plumbing tube that dispenses up to 40 liters of purified water daily (Aqua Clara, 2012). The filter’s size and functionality is tailored to the needs of Kenyans in the target communities. ACI reconfigured its value chain by moving several activities to Kenya, which keeps product costs low. Plastic containers are manufactured, components are sourced, and final assembly takes place in Kenya. The filter is scalable in part
because by 2012, over 2,300 water filters were sold. Local public schools are ACI's principal local partners, and their role is to store components and assemble, demonstrate, and distribute filters from this key community location. Other partners are community development entrepreneurs who buy parts, assemble, and sell the product to their neighbors, and community health promoters who give pre- and post-sale education on how to use the filters. The local knowledge and control of these partners lets ACI focus on technology transfer and training, and increases product sales with limited additional investment. These community partners know best how to raise awareness, create access, and make the product available to their neighbors. The filter is affordable to BoP consumers who earn less than $2 per day, because its average cost of goods sold (COGS) is U.S.$9 and its average retail price is $12, which includes a U.S.$3 commission. ACI and its partners have created strong governance systems and relationships, including thorough due diligence, a sophisticated partner selection process, and metrics to track product activities, sales, usage, problems, successes, and customer feedback (Aqua Clara, 2012; Personal communication, 2012). Based on the criteria in our relational view model, this project has had significant, sustainable success.

Triple Quest is a business venture between Cascade Engineering, a Grand Rapids, Michigan manufacturing company, and a West Michigan private investment fund. Triple Quest purchased intellectual property rights and tooling equipment to manufacture the HydrAid® Filter, consisting of a 30-inch tall plastic container holding biologically treated sand that filters water, a PVC tube, and a valve that channels purified water into a receptacle. The filter's large size is not specifically tailored to local users' needs: it may better serve a typical school or a very large family's drinking and washing needs. Annually, Triple Quest's Michigan plant can manufacture 250,000 plastic containers, which are shipped to its warehouse in Honduras. Initially, Triple Quest sourced sand for filtering in the U.S. and shipped it to Honduras as well, but it reconfigured part of the value chain and now sources sand locally. While Triple Quest achieves manufacturing scalability, it achieves distribution scalability only if a full ocean container of filters is shipped. Ocean freight costs are high, and volume is necessary to lower the per unit price to consumers. Occasionally and space permitting, the U.S. Navy subsidizes ocean freight and duty-free entry of the plastic containers from the U.S. port to Honduras, but the subsidy masks the true cost of goods sold.

Triple Quest does market research in Michigan and Honduras. Triple Quest hired one Honduran representative who manages the warehouse, sources sand, identifies new markets, and delivers components to installers. He creates governance mechanisms by partnering with local NGOs who can reach filter customers in remote communities, and with potential water filter installers and distributors. This dual distribution method, using NGOs and local installers, creates user awareness and access. The delivery of filter kits to Honduran rural areas has been costly and difficult, challenging the product's availability, in part because secondary roads in provincial Honduras are poor and inefficient. The HydrAid® filter is less affordable, because the retail price is U.S.$34 if ocean freight is subsidized (Triple Quest, 2012; Personal communication, 2012). Based on the criteria in our relational view model, this project has had moderate, sustainable success.

Discussion

The relational view tells us that BoP projects will be more successful and sustainable if they connect partners who create unique, relation-specific capabilities, effectively govern their relationships, and include BoP customers as co-producers, suppliers, and agents. The cases we highlighted support this argument. While the two West Michigan organizations use similar, non-proprietary water filtering technology to serve a similar BoP customer demographic, their business models, and their approaches to materials sourcing, manufacturing, promotion, training, sales, channel management, distribution, and after-sales service differ. Each uses resources and capabilities differently and creates different relational resources, resulting in significantly different price points, different sales results, and variance in their potential success.

Conclusion

We applied a concept called the relational view of strategy to explain the sustainable success of two Base of the Pyramid (BoP) projects, implemented by two West Michigan organizations. We found that partnerships, which are critical to the relational view, matter significantly to the success of BoP projects, because such projects often occur in places and cultures where mutual trust, reciprocity between partners, and personal relationships are important. These relationships often spur innovations that lead to critical value chain modifications, reducing the cost and the price of products to BoP customers. In many emerging market countries trust may substitute contract law and market infrastructure to reduce transaction costs and uncertainty. Consistent and repeated interaction between potential partners can build and nurture trust, leading to relation-specific assets, innovations to the value chain, and more successful project results.

Indeed, many innovations to a BoP project's value chain emerge because the projects are targeted to the BoP market. Such innovations occur because the BoP market demands them to reduce cost and increase affordability and accessibility. Another famous BoP project, Aravind Eye Care System in India, worked with suppliers and customers to significantly reduce the cost and price of cataract surgery to reach thousands of price-sensitive patients (Rangan, 2009). If customers were not so price sensitive, such radical cost reduction might not have occurred.
Finally, we found that establishing formal and informal governance mechanisms helps increase trust and relationships among BoP project partners. It is often necessary to hold many meetings with local partners to find the best mechanisms for reporting, accountability, and rewards. But once partners understand and agree to the rules of the game, their desire to protect their reputations discourages partners from behaving opportunistically, and project outcomes tend to be more successful.

References


