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Marketing to subsistence consumers: Lessons from practice

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ABSTRACT

Over 4 billion people live in what is commonly referred to as the "bottom of the pyramid" or as subsistence marketplaces. These individuals and families live in substandard housing, with limited or no access to sanitation, potable water, and health care, have low levels of literacy, and earn very low incomes. Scholars and practitioners alike suggest that the problems existing in subsistence marketplaces demand the attention and involvement of responsible businesses and that doing business with consumers in such marketplaces can be both socially responsible and profitable. This research explores the strategies and tactics currently being used across commercial and social enterprises engaged in subsistence marketplaces. The analysis leads to recommendations about marketing practices currently used by companies and organizations that are successfully operating in subsistence marketplaces.

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1. Introduction

Of the 6.5 billion members of the human community, approximately 800 million are at the top of the economic pyramid (Hart, 2005). Conversely, more than 4 billion people live in subsistence marketplaces (Viswanathan and Rosa, 2007), otherwise referred to as the "bottom of the pyramid" (Prahalad, 2005). Subsistence consumers, both individuals and families, live in substandard housing and have limited or no education; they also have limited or no access to sanitation, potable water, and health care, and earn minimal incomes (Prahalad, 2005), perhaps as little as \$1 per day. Solving the problems at the bottom of the pyramid requires the concerted efforts of government and social enterprises as well as commercial enterprises (e.g., Prahalad, 2005; Viswanathan and Rosa, 2007).

Conventional thinking suggests that subsistence consumers would be unable to afford or even need advanced products and technologies. Yet the widely documented adoption of modern technologies, such as mass media entertainment (e.g., TV and radio), wireless communications, and the Internet, by subsistence consumers has called this and related assumptions into question (e.g., Prahalad, 2005). Mounting evidence across the globe suggests that subsistence marketplaces can be both profitable and socially rewarding ventures for companies. However, an understanding of the unique aspects of subsistence marketplaces and appropriate marketing strategies and tactics remains very limited.

This paper offers an analysis of the practices of commercial and social enterprises through a range of case studies, highlighting how specific

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practices address unique characteristics of subsistence marketplaces, and deriving insights for marketing. This paper presents a comparison of successful and unsuccessful cases where appropriate, providing historical perspectives where relevant. The discussion leads to the development of a set of marketing practices currently used by companies and organizations that operate successfully in subsistence marketplaces, including (1) companies pursuing a traditional profit-maximization agenda, (2) companies that have incorporated social responsibility into their strategic intent, and (3) social enterprises. Following the discussion is the presentation of a set of marketing guidelines from these identified practices. The organizations studied and the insights gleaned are summarized in Table 1. This paper begins with a review of the literature on characteristics of subsistence consumers and implications for marketing.

2. Background

Subsistence consumers have uncertainty and a lack of control over many aspects of their day-to-day life (Viswanathan et al., 2007). Daily challenges that exist for these consumers include a lack of water and sanitation services, electricity, and basic health care, and limited or no access to formal financial services (World Resources Institute, 2007). Basic services often taken for granted in developed countries vary greatly in these markets; consumers often struggle with limited transportation and infrastructure.

Subsistence consumers typically spend the majority of their income on daily necessities such as food and clothing (Viswanathan, 2007). A noteworthy characteristic of these marketplaces is the one-to-one interaction between small neighborhood storeowners and local consumers, thus combining economic and social relationships among players in the marketplace (Viswanathan, 2007). Owners of

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Table 1 Summary of practices.

Area of activity	Generalizable managerial implications	Case study example
Researching and understanding subsistence marketplaces	Design research methods appropriate for communal interdependencies, low literacy, and difficulties responding to traditional research instruments Use participatory research methods that incorporate consumers into research process leading to better understanding of problems and more effective solutions	Participatory research methodologies include: Participatory rural appraisal, participatory wealth ranking, financial diaries, and internal learning systems Participatory total community sanitation program * Included members of the community by asking them to participate in a mapping exercise identifying the intensity of local sanitation issues * Increased local support and engagement
Identifying critical needs	Identify needs and provide access at affordable prices	Reliance Infocomm * Set out to provide cellular services to Indian consumers for the price of a postcard. * Mobile phone penetration in India grew from .25% in 2001 to 5.7% in June 2005
	• Identify needs of the value chain to create opportunities for micro-entrepreneurs or to remove inefficiencies	Vodacom community services * Launched an entrepreneurial program to open "phone shops" throughout South Africa * 93% of South Africa's 44 million citizens have access to cellular services
	Develop a deep understanding of consumers and marketplaces to identify needs	VoxivaAlerta System * Recognized a need for a low-cost public health monitoring system and launched a product trial in Peru * Product has since been reconfigured for additional markets SKEPL * Recognized a need for a competitively priced system that could automate the dairy process * Affordable IT-enabled system increased efficiency for dairy farmers in India * More than 2 million family farms in over 1000 villages use the system, with improved productivity and market responsiveness as outcomes
Negotiating social networks	Harness one-to-one interactions and rich social networks	Frameen Bank * Targets women because of the central role they play in families * Offered micro-loans to savings circles (12–15 women) who make loans to individuals * Has a 99% repayment rate and has dispersed over \$6.0 billion to ~7 million borrowers who have no collateral, 96% of whom were women
	Negotiate formal and informal economies, relationships grounded in social contracts, and local norms	Reliance Infocomm * Consumers demonstrated a trend toward collaboration, pooling resources to purchase communally managed cell phones, a phenomenon labeled consumer co-production
Designing the value proposition	Challenge traditional sizing and price-markup conventions and rethink traditional ways of conducting business	
Co-creating products	Understand and incorporate the needs of consumers and the marketplace by co-creating products with customers	Participatory Total Community Sanitation Program * Integrated local producers into the research and design of locally produced latrines * Talented members of the community emerged to participate in the project * Resulted in a less costly design, increased adoption and the widespread implementation of sanitary practices locally, and in neighboring villages
Localizing production	Localize production to increase livelihood opportunities, and awareness of company, and develop a network Reduces transportation costs and adverse environmental effects	* Empowered local villagers to develop their own latrine designs * Empowered local villagers to develop their own latrine designs * Striving for zero cost, consumers designed latrines built from locally renewable materials and/or materials discarded from other projects, at a cost less than \$20 * 100% adoption of latrine usage at the village level became feasible as consumers demonstrated a preference for locally created latrines
Develop sustainable packaging	 Develop packaging to increase transportability, ease of use, and affordability Create ecologically sustainable packaging through use of biodegradable or recyclable materials and local materials 	Novartis Foundation for Sustainable Development * Developed blister packaging to limit loss or damage of prescription drugs * Helped pharmacies and doctors track the number of pills taken

Table 1 (continued)

Area of activity	Generalizable managerial implications	Case study example
Communicating to subsistence consumers	Develop innovative communication through brand name selection, demonstrations and advertising, encouraging word of mouth, and working with local partners	Novartis Foundation for Sustainable Development * Using well-known movie stars, succeeded in portraying leprosy as a treatable common condition * Treatment increased and social stigma declined dramatically Population Services International * Chose recognizable and memorable names with positive connotations for their birth control products * Attractively packaged products were noticeable in small retail establishments. * Brand name and product packaging practices contributed to the success CEMEX * Solidarity networks emerged around brands that stand for certain social values * Patrimonio Hoy program positioned as improving the individual, family and community * Generated significant word of mouth and positive feedback Aravind Eye Hospital * Set out to provide eye care to all, regardless of whether they could afford it * Formed partnerships with local organizations such as the Lions and Rotary Clubs * Local partners distributed information about clinics and helped navigate interdependencies and local customs that presented obstacles Procter and Gamble * Mass media and in-store promotions not sufficient when introducing its product * Adopted product demonstrations in rural villages, often conducted by local community members * Demonstrations helped to overcome product resistance as benefits were
Providing access to products	Enlist local resellers and businesses to create innovative distribution networks and provide access in remote areas	confirmed by trusted peers Smart Communications * Local businesses form a network of over 50,000 "sari sari" storeowners in the Philippines * Introduced prepayment of cellular services * Some storeowners reported earning as much as US\$18 per day in profits Hindustan Lever Limited (HLL) * Project Shakti enlisted local women with entrepreneurial aspirations to deliver and promote health and beauty aids to rural Indian consumers * The program expanded from 50 villages with 150 women in 2001 to 80,000 villages with 25,000 women by 2006
Managing adoption processes	Tailor solutions tailored around high level of interdependence and one-to-one interactions	* Rural farmers were reluctant to adopt a new technology that had not been proven * Free trial option to allow farmers to use the product free of charge for a limited time, a consumer education process and high-quality technical support system *Positive word of mouth from influential farmers and opinion leaders in the community
	Demonstrate benefits in local language and context through peer group members, engender word-of-mouth communications	Reliance Infocomm * Encouraged its 50,000 employees and over 3.3 million shareholders during product launch to try the product at discounted rates * Created additional visibility for its products by targeting a consumer base that already recognized the company as credible. Population Services International * Initial sales of the oral contraceptive Maya were limited, and PSI lost market share to more expensive competing products *Enrolled members as change agents, changed consumer perceptions and increased acceptance of product Participatory Total Community Sanitation Program * Taught village children about sanitation issues as part of the school curricula * Children as change agents led to significantly improved rate of acceptance of latrine usage among the rural poor

small businesses in these markets often play the role of lender, offering familiar customers the ability to make important purchases on credit. These strong social relationships in subsistence market-places create interdependency among members, thus elevating the role of powerful group influences and word of mouth communications (Viswanathan et al., 2007). Companies and organizations must successfully navigate these intricate social networks to succeed in subsistence marketplaces.

Although subsistence consumers suffer from severe material and psychological deprivation, they often employ intricate coping mechanisms to manage cognitive limitations such as limited literacy and numerical skills (Viswanathan et al., 2008a, b, c). Consumers and sellers share information about products and services through face to face communication. Organizations and companies entering these market-places should confront opportunities and challenges in negotiating these well-established social networks.

Scholars have discussed the marketing implications of conducting business in subsistence marketplaces (e.g., Prahalad, 2005; Sridharan and Viswanathan, 2008; Viswanathan, et al., 2008a,b,c). Operating in subsistence marketplaces requires that firms develop a thorough

understanding of the unique characteristics of subsistence consumers and the marketplaces where they live. However, the number of companies and organizations that formally target subsistence marketplaces is relatively small, and many of their efforts have been implemented only recently, so they remain in a state of flux. Even the sparse data available, however, offer patterns of behavior and guidelines for a number of marketing issues.

3. Understanding practices of social and commercial enterprises

3.1. Overview

This section offers an analysis of case studies and examines the practices of organizations operating in subsistence marketplaces. Cases were drawn from the academic and business literatures, company documents, websites and press releases, and identified unique business practices designed to address the circumstances of subsistence. Beginning with the need to research and understand subsistence marketplaces and identifying critical needs, the following section covers a number of issues including designing the value proposition, negotiating social networks, co-creating products, localizing production, developing sustainable packaging, communicating to consumers, creating access to products, and managing the adoption process. Fig. 1 offers a graphical representation of this process.

3.2. Researching and understanding subsistence marketplaces

A number of the cases highlight the central role of innovative research to understand the challenging context of subsistence. Many of the first entrants into subsistence marketplaces, such as India and Bangladesh, and more recently, Peru and Bolivia, were micro-lenders and financial institutions (e.g., Grameen Bank) that provide well-documented examples of research methods well suited to those markets. Some of these methodologies include Participatory Rural Appraisal (Chambers 1994, 1997; Ozanne and Saatcioglu, 2007), Participatory Wealth Ranking (Abbey and Attaran, 2007; Rajaratnam, et al., 1993), Financial Diaries (Rutherford, 2000), and Internal Learning Systems (Noponen, 2002).

An illustration of successfully applied participatory research methods comes from a community sanitation initiative in Bangladesh. The initiative began with a mapping exercise, during which the community mapped all households in the village, in addition to areas in the village that were regularly used for human excrement. By linking areas to households that visited them, villagers traced contamination patterns and better appreciated how drinking water sources are compromised. Following this mapping and linking exercises, outside researchers initiated a process by which the community gave a numeric value (in its own terms) as to how much each house added to the contamination problem, allowing villagers to quantify the magnitude of the problem in terms they could appreciate and respond to communally. Quantification, in turn, engendered a level of awareness that the previous approaches did not achieve, as well as a strong motivation to alleviate the problem. Of particular importance, the community took the lead in implementing all the methodologies involved, and outside researchers served solely as facilitators. As a result, even when the discussion went off-track for short periods of time, the villagers remained engaged in the process and eventually appointed their own committees to develop and implement action plans. High participant involvement is a hallmark of successful research initiatives (e.g., Abbey Edward and Attaran, 2007; Chambers, 1994), largely as a result of including individuals, families, and neighbors in the process of gathering and interpreting data, proposing solutions, and implementing them locally.

Participatory action research begins with the assertion that *all* members of a community, across various levels of influence and status, possess valuable experience-based insights and that including all community members in the problem-and-solution identification process results in more effective and beneficial outcomes (Ozanne and Saatcioglu, 2007). Furthermore, participatory action research enables investigators to integrate consumers into the process as sources of both information and feasible solutions to multifaceted problems. Many existing participatory research methods focus on finances and financial management, perhaps because micro-finance providers have taken the lead in applying marketing management principles and processes to subsistence marketplaces.

At a broader level, researchers are typically trained in methodologies that have been finely honed with Western consumers, such as focus groups, surveys, and experiments. As the discussion above suggests, these techniques have limited effectiveness in subsistence marketplaces because of factors such as communal interdependencies, low literacy and consumer difficulties in responding to traditional conjoint and attitudinal measures. As illustrated above, lacking personal connections with poverty and low literacy, managers and researchers need to bridge the resource and literacy gap in conducting effective market research (Sridharan and Viswanathan, 2008; Viswanathan, et al., 2008c). Viswanathan et al. (2008a,b,c) draw from their research program to describe a number of characteristics of subsistence marketplaces and consequent cognitive (e.g., using concrete, realistic stimuli), emotional (e.g., emphasizing abilities over deficiencies), and administrative (e.g., building relationships with local organizations) considerations in designing research methods. Chakravarti (2006) suggests that this "uncharted territory" calls for ethnographic, data-driven methods with which many marketing professionals remain unfamiliar. Recent literature highlights the need for research teams that include individuals from subsistence contexts as well (Viswanathan et al., 2008a,b,c).

3.3. Identifying critical needs

The analysis of successful organizations suggested a striking characteristic: their ability to identify the needs of subsistence consumers and tailor their marketing strategies and tactics to meet those needs. Many of these companies and organizations started small and aggressively engaged in pioneering research and development. Subsequently, they became leaders in their fields. Equally important, they make services and products available to consumer groups that until recently were well beyond reach. Reliance Infocomm, Vodacom, Voxiva, and SKEPL represent exemplars.

Reliance Infocomm recognized a market need for affordable mobile communications in India and developed a vision "to provide the latest

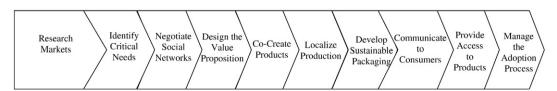


Fig. 1. Marketing in subsistence marketplaces.

telecommunication facilities to every Indian at the price of a post card" (Reliance Infocomm Press, 2002, Press Briefing, accessed via http://www.rcom.co.in/webapp/Communications/rcom/Media/ press_release_detail.jsp?id=72). The company entered the market with an exceptional offering, which included a free digital mobile phone, unlimited free incoming calls, free value-added services, and billing in 15-second increments, charging a one-time fee of approximately US\$67 and a monthly membership fee of \$13—an unprecedented offer in the Indian mobile telecommunications industry (Reliance Infocomm Press, 2002). By challenging the industry's cost and pricing structures, Reliance Infocomm offered millions of previously excluded Indian consumers the opportunity to participate in the mobile telecommunications society. When Reliance Infocomm entered the Indian market in 2001, mobile phone penetration was reported at 0.25%, or 3 million persons out of a population of 1.2 billion. The company contributed significantly to increasing cell phone penetration to 5.7%, or 68 million phones, in India by June 2005 (Varghese, 2006). This jump represents an annualized growth rate in active cell phones of roughly 120% and an even greater growth rate in cell phone users, given the popular practice of sharing cell phones among community members, or even renting usage from village entrepreneurs (Ewing, 2007).

Vodacom Community Services responded to similar needs for mobile telecommunications in the South African market, as well as to a latent need for entrepreneurial opportunities among South Africa's subsistence-level population. As part of a government mandate, Vodacom Community Services began to offer mobile phone services in underserved communities across South Africa. Its innovative strategy—developing turnkey solutions for local entrepreneurs to operate phone shops—made the service available but simultaneously provided crucial opportunities for small businesses. Equally important, the company demonstrated that South Africa's subsistence consumers could be served profitably. Originally subsidized by its parent company, Vodacom Community Services now operates independently. In 2003, the company reported geographic access covering 93% of South Africa's 44 million citizens (Reck and Wood, 2003) along with cell phone usage growth rates that approximate those achieved in the Indian market.

The Voxiva Alerta system, a low-cost public health monitoring system, represents another example of meeting critical needs. According to the World Health Organization (World Health Organization, 2001), public health monitoring systems that allow for the early detection and documentation of contagious disease outbreaks are crucial to containment and prevention. Yet, most early detection systems remain cumbersome, expensive, and poorly suited to environments with few medical workers and low-literate, low-income patient populations. Targeting rural areas with limited infrastructure, Voxiva created a lowcost system that relies on existing telecommunications systems, and with Peru as a testing ground, launched its Alerta ("alert" in Spanish) disease surveillance system. The Alerta system provides Internet access to healthcare providers in remote areas and enables communications between remote areas and the government ministries responsible for health and welfare, all within the capabilities of Peru's relatively antiquated, copper-line telephone infrastructure. The system designed for low-cost installation and operation, provides an excellent solution for subsistence marketplaces that require improved healthcare. Peru's isolated, Andean-dwelling populations offer an ideal test case for the effectiveness of early containment through affordable systems. Noncompliance with Alerta's field trial was relatively limited, in part because Voxiva recognized the need to empower both field workers and central government officials when medical responses were necessary. The field and central agency assessments of Peru's Alerta system consistently were positive, and the system has since been reconfigured to extend to other markets with similar infrastructures and population dispersal conditions.

Shree Kamdhenu Electronics Private Ltd. (SKEPL) recognized the growing inefficiency and declining productivity in the Indian dairy

industry. Because of poor quality control, contaminated environments, and production delays, Indian dairy farmers were excluded from the international dairy market and caught in boom-and-bust cycles that curtailed their ability to plan and invest or to address the root causes of their quality control and production problems. Overcoming a limited budget, SKEPL established the goal of helping milk cooperatives become more efficient through AKASHGANGA, an IT-enabled system to improve dairy farm productivity and quality while accelerating payments for shipped products. The AKASHGANGA system combines automatic milk collection technology, electronic weighing capabilities that replace antiquated and fraud-prone mechanical scales, a computerized information kiosk tailored to the dairy industry, and milk analyzers that test for butter fat content (Sharma and Yadav, 2003). Moreover, the assembled technology is affordable for small dairy farmers in remote parts of the country. As of May 2007, the SKEPL company website (http://akashganga.in) reported that more than 2 million family farms in more than 1000 villages were using its systems, resulting in improved productivity and guicker response to market demands.

A number of characteristics of these business practices are noteworthy. First, these organizations identified critical needs across the realm of communication, healthcare, and dairy agriculture. Related to serving needs, these organizations provided access to remote parts of the world in their efforts to serve critical needs. In addition to making product access possible, these organizations have developed pricing mechanisms that are forward-thinking, innovative, and most importantly, make products and services affordable to subsistence consumers. Some of these organizations also identify the needs of the entire value chain, such as in creating small business opportunities for microentrepreneurs, and streamlining the value chain to remove inefficiencies and difficulties faced by subsistence individuals. Implicit in this discussion and reinforcing the points made in the previous subsection is the level of understanding of subsistence marketplaces that organizations need to develop if they are to identify and serve critical consumer and value chain needs. Because of extreme resource constraints and adverse living conditions, basic needs often go unmet in subsistence marketplaces. These organizations have displayed the vision to identify and address some of the critical needs that face subsistence consumers.

3.4. Negotiating social networks

As discussed earlier, one-to-one interactions in a complex network of relationships between buyers and sellers characterize subsistence marketplaces (Sridharan and Viswanathan, 2008). A widely publicized story in subsistence marketplaces is that of Grameen Bank. A key Grameen segment includes women who operate small family businesses, because of the central role they play in preserving their family unit's well-being and their resulting trustworthiness (Freeman and Higginson, 2007). The women receive an opportunity to save their small income and borrow in amounts (e.g., \$50-\$100) suitable to their needs and business capabilities. Such transaction amounts are too small for most commercial banks, but the sheer number of clients and a 99% repayment rate make the market segment highly profitable. From its inception, Grameen Bank has reached out to poor and rural women directly, as well as worked with community organizations to empower these women while constructively attempting to overturn social customs against women holding property and dealing with outsiders. Originally, bank funding came from soft loans and charitable grants. However, Grameen Bank in 2005 became a self-sustaining, profitable enterprise. As of 2006, Grameen Bank had dispersed more than \$6.0 billion to nearly 7 million borrowers who had no collateral, 96% of whom being women (Bruck, 2006), and its growth continues. Large financial services organizations such as Citibank and Banco Santander are emulating this model.

Consumer-to-consumer interactions in shaping product meaning and function is a unique aspect of subsistence marketplaces (Viswanathan,

2007). In the case of Grameen Bank, consumer-to-consumer interactions and interdependencies resulted in the idea of offering micro loans (e.g., \$250–\$300) to savings circles (12–15 women) that in turn would extend micro-loans (\$20–\$25) to circle members and, as a group, manage the circle's loan portfolio. Similar collaboration appears in the cell phone market, where Reliance Infocomm noted that groups of subsistence consumers pool their resources to purchase communally managed cell phones, a phenomenon labeled consumer co-production (Prahalad, 2006). Microfinance institutions have harnessed the value of existing social networks in these markets after finding that peer pressure and local norms play a substantial role in payback rates. Participating in these markets requires understanding the intricacies of both the formal and informal economies, and the ins and outs of relationships grounded in social rather than legal contracts (London and Hart, 2004; Viswanathan et al., 2009).

3.5. Designing the value proposition

Reliance Infocomm's offer of telecommunications services for the price of a postcard met affordability, visibility, and profitability objectives and brings out another key issue—designing the value proposition. By entering into exclusive agreements with hardware providers that ensured high volumes of production, Reliance Infocomm drove down the prices of handsets to a reasonable rate allowing them to operate in India. Mass production of a limited number of handset models-and then offers of those handsets to customers of competing firms in exchange for free airtime achieved additional price reductions. The company passed on savings to final consumers in the form of lower hardware costs. To implement this program, Reliance Infocomm charged slightly higher rental rates accompanied by free airtime. To cater to consumers who conduct their phone calls in short amounts of time, the company calculated and sold airtime in 15-second intervals rather than the one-minute increments standard in the industry. The outcome of the program was faster adoption of Reliance services, increased call volume, and lower costs—all carried out through the Reliance-owned network. Similarly, Vodacom could offer consumers an affordable cellular rate in South Africa by creating an independently-owned and operated distribution network where the local store operators accept liability and pay upfront for all equipment sold in their stores. Vodacom has expanded its reach without incurring higher inventory carrying costs, and can consequently offer consumers a set rate of \$.11 per minute, less than one-third the going rate for prepaid cellular service in South Africa. In 2007 Vodacom reached between 3 million and 4 million consumers who made close to 100 million phone calls per month, and, because 95% of its customers use prepaid services, the company's financial risk and billing expenses were minimal (Ewing, 2007). An additional social benefit of Vodacom's low-cost offerings is the increased effectiveness and efficiency achieved by subsistence entrepreneurs as a result of their improved communications access. Because of inexpensive cell phones, micro-entrepreneurs sourced materials, contacted clients, and secured services without having to close their stores (Ewing, 2007).

Another company that has achieved high consumer acceptance because of its value proposition is Jaipur Foot. The company's lower-extremity prosthetics sell for around \$35, in contrast to \$8000-\$10,000 for functionally similar Western-made products (Prahalad, 2005). The Indian creator of Jaipur Foot employed a product development approach that started with a target price and profit and worked back to design. As the Jaipur Foot is made of rubber, the company achieved mass production capabilities, used locally sourced materials, and employed a simplified design. The products have the additional advantage of being crafted for the special needs of Indian consumers, being easy for owners to repair themselves, and accommodating habits, such as squatting (rather than sitting) to converse with friends, and climbing trees. The results have been extraordinary;

in 2006 alone, Jaipur Foot provided assistance to more than 70,000 patients.

A cornerstone of effective marketing in subsistence marketplaces is that "innovations must achieve a significant price reduction—at least 90% off the cost of a comparable product or service in the West" (Prahalad, 2005, p. 3). Affordability, in other words, is indispensable for success in subsistence marketplaces. To present a value proposition in subsistence marketplaces, organizations must challenge industry conventions in areas such as product and packaging design, sizing, and price markups, and rethink how they traditionally conduct business. For example, one counterintuitive tactic is to reduce the ratio of fixed to variable cost, quickly adjusting costs in response to demand fluctuations while retaining per unit profitability, even if this means sacrificing economies of scale efficiencies. One such example is that of Narayana Hrudayalaya (NH), a cardiac care clinic in India. NH pays higher fixed costs upfront to guarantee lower variable costs over time (Prahalad, 2005). Similarly, firms might exchange automation and machinery in production and distribution processes for human capital, which involves low costs in many subsistence marketplaces. This admittedly short-term strategy ignores that, as quality of life and expectations rise, labor costs also rise. Initially however, labor costs will be low compared with the cost of imported automation, which may enable producers to charge lower prices. By reducing fixed and variable costs, companies can deliver products and services that subsistence consumers can afford and still earn profits. Although discretionary spending varies between countries, even at income levels slightly above \$2 per day, some discretionary spending is possible, as in the case of low-income Indian consumers' willingness to pay for their children's education and health-care (e.g., Viswanathan, 2007).

3.6. Co-creating products in subsistence marketplaces

The participatory total community sanitation project in Bangladesh successfully integrated local consumers into the production process, emphasizing the importance of co-creating products in subsistence marketplaces. After evaluating a number of costly failed attempts by various agencies and NGOs to introduce outsider-produced latrines, the team devised a strategy that included involving members of the community in all aspects of research, design and production. What they discovered was that community members were actively engaged in solving a widespread problem that had existed for decades. Given the freedom to create a product tailored specifically for their environment, talented members of the community emerged to help with the product design. The outcome was a sense of achievement among villagers, proud that they had created a product that was significantly less costly to produce in addition to an increase in the adoption of latrines, and the widespread implementation of sanitary practices throughout local and neighboring villages.

Prahalad (2005, 2006) strongly advocates including consumers as co-producers, which tacitly suggests that companies need help to understand the needs of subsistence consumers and yield some control over how products are used and their value defined in ways that go beyond the market-defining power of consumers in developed markets (e.g., Rosa, et al., 1999). Yielding such control is not typical among professional marketers, and the idea of consumers as co-producers suggests that marketing managers face the challenge of finding new ways of thinking about themselves, their organizations, and their customers if they hope to capitalize on the opportunities inherent in subsistence marketplaces.

3.7. Localizing production

The participatory community sanitation project in Bangladesh discussed in the previous section successfully localized production, another important aspect of business engagement in subsistence

marketplaces. Following a string of failed community sanitation projects that relied on imported designs and materials, the participatory community project empowered village residents to develop their own latrine designs, provided they met sanitary requirements and were compatible with local water issues and available raw materials. Important parameters included low cost and latrine longevity. External designers tacitly assumed use of the same materials for all units in a village and expected a five- to ten-year life span for each unit. As a result, they were not able to lower latrine costs below \$200 per unit, a price out of reach for approximately half of the village families. However, when subsistence consumers were empowered to develop the local designs and set local parameters, they assumed zero costs for materials and reduced longevity expectations to months instead of years because of the low labor costs. They combined locally accessible and renewable materials, such as bamboo and thatch, with materials discarded from other uses, such as five-gallon plastic buckets. On average, the resulting units cost less than \$25, which made 100% adoption of latrine usage at the village level possible, and a subsequent decline in the incidence of diseases and deaths from bacterial contamination. This project vividly demonstrates how the adoption of local content can result in higher new product adoption rates and, in this case, greater community health as well.

Hindrances to effective marketing in many subsistence marketplaces include underdeveloped and poorly maintained transportation infrastructures (e.g., roadways and bridges), limited and/or unpredictable electrical service, and the absence of sewers and water management systems. In such conditions, transporting raw materials and capital equipment can become prohibitively expensive, or simply impossible. Therefore, organizations seeking to serve subsistence marketplaces should carefully consider sourcing raw materials and equipment locally, even if doing so requires some engineering changes to the offered product or service. In addition, when marketers use local content, they provide livelihood opportunities for members of the local community, and increase awareness of the company and its products, which in turn provides an expanded informal network through which to enhance product familiarity.

One final argument for local content is sustainability. Researchers have noted that if organizations seek to meet the rapidly growing demands of subsistence marketplaces with the transportation and manufacturing approaches currently used in developed economies, the negative impact on societies and the global environment will be disastrous (Hart, 2005). Organizations can practice sustainable marketing by using locally sourced and environmentally compatible raw materials and local labor. The local content reduces transportation costs and their adverse effects on the environment and limits the potential harm to local flora and fauna from foreign substances and waste. In addition, as noted above, localizing production can help sustain local economies and their quality of life.

3.8. Developing sustainable packaging

Much has been said (e.g., Prahalad, 2005) about the need for packaging in subsistence marketplaces that makes products affordable, safely transportable to remote areas (e.g., areas inaccessible to motorized transport), and easy to use without undue storage requirements (e.g., refrigeration and secure storage). Typically, this initiative involves reengineering the unit of sale, whether by changing the quantity sold (e.g., shampoo and detergent in half-ounce portions) or altering the unit level at which services may be purchased (e.g., cell phone time in 15-second increments). Also noteworthy, in this regard, is that subsistence consumer merchants have a long history of "breaking bulk" for Western products, such as selling single cigarettes from open boxes and individual cookies from packages. Reengineering products and services into affordable and transportable packaging at the point of origin, however, standardizes product access for all consumers and improves product freshness and safety by removing

variability from the repackaging that local consumer merchants offer. Enhanced product safety and freshness in turn contribute to a more uniform and positive brand image. Pioneering firms such as Unilever and Procter & Gamble have shown a high acceptance of products and services packaged for subsistence marketplaces and currently other marketers are adopting these practices.

An example of packaging from the pharmaceutical industry (Kumra, 2006) is noteworthy, wherein Novartis developed watertight blister packaging for its tuberculosis, malaria, and leprosy medications. Because many subsistence consumers lack access to secure storage, they carry medications and other valuables with them, exposing medication in traditional packaging to loss and/or water damage in inclement weather. Novartis' watertight blister packs help eliminate both risks and have the added advantage of helping pharmacies and doctors track the number of pills that low-literate consumers have actually consumed by asking patients to exchange empty packs for new ones.

However, the use of packaging raises critical issues relating to ecological sustainability. For marketing this is another area that would benefit from innovation to counter the use and transportation of everincreasing amounts of environmentally-unfriendly materials. As in the case of actual products, the use of local materials for packaging can help reduce some of this burden. Organizations should make efforts to use recyclable or biodegradable materials so that consumers have affordable access to products without further compromising their local environment and the broader ecology. Organizations such as Byrraju Foundation in India promote the use of refillable water cans rather than plastic bottles in villages, pointing the way for marketing to radically rethink the nature of packaging.

3.9. Communicating to subsistence consumers

Due to the unique characteristics of subsistence marketplaces including strong social networks, limited consumer literacy, and widespread economic deprivation, organizations should carefully consider the chosen messaging (Viswanathan, et al., 2008c). Novartis Foundation for Sustainable Development demonstrated the effectiveness of marketing communications in its efforts to encourage persons suffering from leprosy to seek treatment instead of hiding their condition. Because of social stigma, persons who contract leprosy often conceal their symptoms as long as possible, suffering irreparable damage to their bodies and infecting others in the process. The organization's first step was to portray the disease as a treatable condition, instead of as punishment, in its advertising, which featured well-known movie stars as spokespersons. The number of people seeking treatment increased significantly as community members stopped regarding leprosy as a curse (Kumra, 2006).

In a related sense, branding can engender positive associations that improve adoption rates. Population Services International, for example, carefully considered the sensitivity of family planning issues in Bangladesh and was cautious when naming its Maya and Raja birth control products (Kasturi, 1985). The company chose easily recognizable and memorable names with positive social connotations; for instance, Raja means "king or emperor". In addition, the company used attractive packaging for both products, ensuring they would be noticeable in the small retail establishments where they are sold. After solving a series of perception problems with Maya, and gaining endorsements from rural medical practitioners, the company used its brand name to help the product achieve significant success.

Brands can also engender a sense of community. Solidarity networks have emerged around the CEMEX Patrimonio Hoy brand, for example, because of a strong link to specific social values (Flores-Letelier et al., 2003). Patrimonio Hoy is a program designed to make home ownership possible for subsistence consumers with limited resources who are able to save. The program allows consumers to purchase materials to expand their homes on credit and gives them

guidance regarding the planning and building of the structure. The company positioned its program as a means to improve the life of individuals, families, and communities, and the program generates substantial word of mouth wherever implemented, invaluable in building solidarity networks. With CEMEX, members of the served communities regard the brand as a symbol of the values they love, and they gather to celebrate the brand and its shared sense of purpose. Patrimonio Hoy, thus, grows organically and with minimal formal promotion. Moreover, responding to grassroots enthusiasm, CEMEX added a complementary program called *CalleDigna*, or "Streets with Dignity," for consumers who also wished to improve the streets in their communities.

Finally, the example of Aravind Eye Hospital highlights the cultivation of local partners, in its case Lions and Rotary Clubs, to promote eye clinics. Aravind, one of the most advanced eye care providers in the world, has adopted the important mission of providing eye care for all, whether affordable or not. The organization uses eye camps to screen subsistence consumers in remote locations and identify those who are candidates for paid or free eye surgery. Aravind's partners use their local knowledge to distribute information about upcoming clinics in the local area and help clinic personnel navigate the intricate family interdependencies and localized customs that may keep an otherwise ideal candidate from seeking cost-free treatment. Local partners give Aravind access to localized word-of-mouth and familial support networks that otherwise would not be accessible.

Previous studies indicate that consumers with limited literacy abilities typically resist the types of communications and product promotions used in developed markets (e.g., Viswanathan, et al., 2005). Typical promotional tactics including coupons and discounts result in confusion and anxiety, and in some cases lead consumers to alter their purchase decisions. Mass media channels, such as television, may not be effective when compared to well-established social networks in these marketplaces. Innovative promotion of goods and services can contribute to organizational success through tactical initiatives such as brand name selection, demonstrations and advertising, encouragement of word of mouth, and selection of local partners.

Organizations that have been able to tap into the local community for support have succeeded in subsistence marketplaces. Key to this success is the ability to rely on local members of the community to share product experiences and offer demonstrations to members of their peer group. Procter & Gamble, for example, found that mass advertising and in-store promotions were not enough when introducing low-cost PuR water purification technology. In partnership with PSI, P&G conducted product demonstrations in small villages and city slums and involved members of the local subsistence community already familiar with the product as primary spokespersons. Product demonstrations helped overcome subsistence consumers' resistance to the new technology, made the product credible for use in local contexts, and ultimately improved the effectiveness of the advertising and promotional efforts. Although PuR ultimately was removed from the market, the effectiveness of its grassroots promotion remains a guide for the company's subsequent efforts.

3.10. Providing access to products in subsistence marketplaces

Another key element of successful marketing practice is enabling access to products in subsistence marketplaces. Smart Communications in the Philippines has encouraged local businesses to distribute its product, building a network of more than 500,000 *sari sari* storeowners (Smith, 2004). Sari sari stores serve small villages and low-income neighborhoods in large cities, and their owners develop close relationships with customers—close enough to provide customers who cannot otherwise afford their purchases with credit or to hold their savings as needed. Needless to say, trust between storeowners and

customers is strong, and Smart Communications tapped this trust to implement store-based electronic systems that would enable cell phone users to preload their access time. Because storeowners already held funds for some consumers, introducing the idea of prepaying for cell phone services was not difficult, with storeowners acting as the local face of Smart Communications. Storeowners benefit from a small markup on the preloaded air-time, and some report earning as much as US\$18.00 a day, a substantial sum in many subsistence marketplaces.

Even more dramatic is Hindustan Lever Limited's (HLL) Project Shakti. The project enlists local women with entrepreneurial aspirations to deliver and promote health and beauty aids to previously unreachable rural Indian villages (Rajan, 2007; Xavier et al., 2007). Unilever trains its Shakti representatives and treats them as independent contractors. Project Shakti has been very successful, expanding from 50 villages with 150 women in 2001 to 80,000 villages with 25,000 women by 2006 (Beshouri, 2006).

Several companies operating successfully in subsistence market-places focus on distribution innovativeness to meet the needs of consumers. In countries such as India and China, as well as in parts of Latin America and Africa, many subsistence consumers live in rural villages with limited or no access to motor vehicles. Further complicating matters, many of these villages exist without adequate population counts, making market planning and assessments of their potential difficult. Local residents, however, know how to find the villages, how many persons live there, and how to reach even the most isolated members. Not surprisingly, local community members play important roles in marketing programs trying to reach subsistence marketplaces, as exemplified in the cases of Reliance Infocomm's "Entrepreneurship Programme" and Vodacom Community Services network of small kiosks.

3.11. Managing adoption processes in subsistence marketplaces

These cases point to the central role of managing adoption processes in subsistence marketplaces. When SKEPL rolled out AKASHGANGA, the IT-enabled dairy production system early marketing efforts to rural farmers in India were met with quiet resistance—none of it hostile or openly directed at the company. Acknowledging and understanding the sources of this resistance, SKEPL instituted a consumer education process and free trial option, in the belief that hands-on experience among opinion leaders and positive word of mouth from satisfied customers would overcome customer reluctance. The company identified and then won over influential farmers in each community by respecting village norms and social influence networks. After these opinion leaders have become users of AKASHGANGA, other farmers followed suit.

Reliance Infocomm undertook a different method to manage the adoption process. With an employee base of more than 50,000 and a shareholder base of about 3.3 million, the company recognized the potential market for new service offerings among consumers who already considered the company credible and offered both employees and shareholders discounts and referral incentives. Creating visibility for its products and services in the broader market through usage situations that encouraged positive testimonials and consumer-to-consumer trials was the company's primary objective. Response was brisk, and the added credibility extended by consumers affiliated with the company who used its products proved valuable. Anecdotal evidence suggests significant role of management of the adoption process on Reliance Infocomm's success, although this effect is not quantifiable.

Among subsistence consumers, word-of-mouth communication has a long history of effectiveness, as partially illustrated by the contrasting effectiveness of Population Services International's Raja and Maya promotional programs in Bangladesh in the early 1980s (Kasturi, 1985). Population Services International (PSI) marketed both

Raja, a brand of condoms, and Maya, an oral contraceptive, as part of a reproductive health campaign sponsored by the Bangladesh government and USAID. Raja achieved impressive success, but as medical doctors and rural medical practitioners questioned the effectiveness of Maya, the product lost market share, even in competition with oral contraceptives that were ten times more expensive. However, after PSI informed the healthcare community of its objectives and described how Maya worked, and enrolled its members as change agents, consumer perceptions and acceptance of Maya changed. Within two years, Maya achieved a market share leadership position similar to Raja's. Critical to this turnaround was a word-of-mouth chain that began with PSI's direct contact with medical doctors and rural medical practitioners, who, in turn, influenced both urban and rural subsistence consumers. Word-of-mouth efforts received support from mass media advertising that reinforced the brand's image and further promoted its use.

Another example of innovativeness in managing the adoption process comes from the efforts to improve community sanitation practices in rural Bangladesh, Northern India, and parts of Africa (Kar. 2003, Kar and Pasteur, 2005). As discussed earlier, the proper handling of human waste is an integral part of community health programs without which water and food are very likely to be contaminated through bacteria-carrying insects. Changing individual and community perceptions of human waste can be challenging, however, for such reasons as the natural resistance that many people feel toward discussing such personal matters. Personnel affiliated with the Institute for Development Studies in Bangladesh and a variety of national and international social service agencies throughout the developing world have applied participatory research and action methodologies that help communities devise and disseminate solutions to their shared sanitation challenges. Critical to the success of these participatory approaches is the role of children as opinion influencers. In successful programs, schoolchildren learn how bacteria transmits from open sewers and other depositories of human waste, then articulate these dangers and concerns to their nuclear and extended families, delving into topics that adults cannot discuss directly. Through sincere innocence and the ability to ask tough questions, the children trigger conversations within the family and even between families who are commonly affected by specific practices. Once these conversations begin, solutions and behavioral changes often follow. Such strategies have significantly improved the rate of acceptance of latrine use among the rural poor.

These companies exemplify the notion that word-of-mouth promotions can be much more effective than mass media among subsistence consumers. Low literacy rates, fragmented access to media, and a plurality of perspectives toward even the most basic of product and service concepts argue strongly for the need for organizations to design solutions around the high levels of communal interdependence that characterize subsistence marketplaces (e.g., Viswanathan et al., 2007). Furthermore, organizations must expand their set of possible influencers to encompass unconventional constituencies, such as retail store owners, self-help groups, employees, and children. Reflecting again the communal values and interdependent nature of relationships in many subsistence communities, organizations find that taken-for-granted boundaries between stakeholder communities (e.g., consumers distrustful of shareholders and employers) may not hold in subsistence marketplaces. Likewise, intergenerational flows of influence may be more complex than in developed economies, and younger generations can serve as an effective channel for promoting new concepts and disseminating consumption priorities that are beneficial but cannot be presented to older consumers directly (e.g., birth control practices, using latrines, hand washing, cell phones, the Internet). Managing the adoption process is an important factor for success in subsistence marketplaces. Because of their low education, limited numeracy and literacy skills, and limited disposable income and resources, subsistence consumers may adopt new products or services only after their benefits have been demonstrated credibly in their own language and context, as well as validated by at least some in their peer group. Many subsistence consumers turn to oral communications from credible sources, such as family, friends, neighbors, and trusted local merchants, before taking action. Clearly, word of mouth and change agents thus can be important factors in a company's success.

4. Summary

This research suggests that firms must think and act locally to address the unique aspects of subsistence marketplaces and the myriad differences between different settings. Organizations seeking to serve subsistence marketplaces must understand the context in which their products will be positioned and consumed, and insights from those localized contexts should feed back to different marketing decisions within the organization. Companies should involve subsistence consumers as co-producers in all aspects of their marketing activity. Innovative solutions emerge when consumers participate in the design of products, as in the cases of latrines and cell phone services. Marketing research, pricing, distribution, and promotion can harness the same co-productive abilities. Aravind Eye Hospital, for example, can successfully conduct screening camps when empowering local villagers to seek out the best candidates and frames eye surgery as a good option in terms of local values and customs. The local villagers thus serve as co-producers of the distribution and promotional activities. In subsistence marketplaces, localized production does not necessarily result in higher operational costs, and consumer co-producers are often more effective.

Firms should remain flexible and avoid formalizing procedures or creating bureaucracies to support their current activities. The lives of subsistence consumers are fraught with uncertainty, and as a result, they adopt products and activities with a relatively short time horizon in mind. The products many subsistence consumer merchants offer, for example, vary from batch to batch in response to changes in raw material availability, consumer feedback, new information they acquire from many sources, and the vagaries of home production processes. Likewise, consumers change their spending and consumption priorities frequently due to events beyond their control and constant uncertainty. Serving subsistence consumer markets requires adaptivity to respond to constant changes within and across local markets. In subsistence marketplaces, organizations that hope to succeed need to be flexible, taking a cue from the consumers they seek to serve. Firms that consider subsistence consumers and integrate them into all facets of the marketing process will likely emerge as leaders in the marketplace. Including consumers in the early stages of the research process as well as during the creation of solutions will result in more effective product or service offerings.

Although the success stories presented offer insights about effective practices, unsuccessful examples also present important insights as well. In the mid-1990s, Monsanto launched an effort to introduce bioengineered agricultural products to low-income farmers. To maintain the integrity of its products and intellectual property, the seeds were sterilized so that they could not be reproduced locally or saved for use over time. What the company failed to recognize, however, was that low income farmers in subsistence markets typically save seeds for planting during more than one season. The company, failing to recognize this important tradition, was viewed as arrogant and a backlash against Monsanto ensued (London and Hart, 2004) This notable case reiterates the importance of many of the guidelines previously identified, such as integrating consumers into the research and production processes as well as developing a thorough understanding of the final consumer.

Other corporate initiatives in subsistence marketplaces have struggled as well. For example, Procter and Gamble encountered widespread reluctance among consumers to adopt its PuR water purification technology, even though access to clean water is limited in rural economies throughout the world (Simanis et al., 2008). Water purification proved to be a difficult market to enter because of the high costs associated with educating consumers coupled with low margins and low repeat purchase rates. Unfortunately, due to many of these challenges, P&G abandoned the commercial version of the product in many subsistence marketplaces and either pursued philanthropic markets in partnership with Population Services International or repositioned the product to compete in the disaster relief industry. Similarly, the One Laptop Per Child initiative is struggling to stay afloat after high costs doubled product expenses and market imitators emerged. As other firms began to compete in the marketplace, production costs increased due to an absence of previously-expected economies of scale, thus resulting in higher costs and, eventually, prices (Skillings, 2009). The company remains dedicated to providing low-cost laptops to children in subsistence marketplaces and after a round of cost-cutting measures, attempted to find funding and innovative solutions to support its initiatives.

Also noteworthy are the criticisms that have emerged regarding some of the organizations operating in subsistence marketplaces, particularly Hindustan Lever. Critics (e.g., Simanis et al., 2008) suggest that Project Shakti is based on the faulty assumption that the first step in poverty alleviation is to increase the purchasing power of consumers in an effort to solve the problem of material deprivation in these markets. Moreover, these types of programs have been suggested to lack a focus on the empowerment of local individuals through processes of mutual learning and co-creation and suggest that proof of the limitations of these programs is evident in their lack of financial success, in addition to high-turnover of the Shakti women who have participated in the program.

These criticisms highlight the importance of business strategies that follow our guidelines in pursuit of engaging subsistence communities in a process of extended and sincere dialogue and mutual learning—as collaborators in the development of products and services that make sense currently and into the future. Organizations whose focus is on developing solutions that are sensitive to local customs and constraints, and hence more appropriate to the markets in which they are operating will find the greatest and most long-lasting success. Viewing subsistence marketplaces as a large homogenous market is likely to be counterproductive; rather, organizations should work with local individuals to tailor their strategies to align with local customs, needs, and circumstances. In conclusion, operating successfully in subsistence marketplaces or the bottom of the pyramid requires marketing managers to reinvent themselves and their companies, sometimes painfully, but the potential gains for organizations and society at large makes such efforts worthwhile.

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