Overcoming Rural Distribution Challenges at the Bottom of the Pyramid

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2010/65/AL/ISIC
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A modified version of this paper has been published in the winter 2008 issue of California Management Review.

This paper was presented at the conference on:
“Corporate Responsibility and Global Business: Implications for Corporate and Marketing Strategy.”
London Business School, July 13-14, 2006

Published as a chapter in Global Challenges in Responsible Business,
Cambridge University Press, 2010

Acknowledgements: We thank Cambridge University Press, the various managers, bureaucrats, NGO officials, and rural entrepreneurs who shared valuable insights with us, and Aparna Pande, doctoral student in international relations at Boston University for assisting with the research.
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Summary

While management scholars and development economists have provided a compelling case for greater attention to the bottom of the pyramid, few contributions have examined specific strategies for reaching the bottom of the pyramid. The majority comprising the bottom of the pyramid resides in hundreds of thousands of villages located beyond most multinationals’ distribution networks. Its access to essential goods is limited not just by high prices, but also by inadequate rural distribution. We use the term socially responsible distribution (SRD) to describe initiatives that provide poor producers and consumers with market access for goods and services that they can benefit from buying or selling by helping neutralize the disadvantages they suffer from inadequate physical links to markets, information asymmetries, and weak bargaining power.

This paper examines five SRD case studies of MNCs, government and NGO initiatives. It identifies the role they play in promoting SRD, the different kinds of intervention strategies they use, and the payoffs for multinationals and people at the bottom of the pyramid. The paper examines the obstacles to higher earning potential and access to cheaper consumer goods for poor consumers, identifying direct (e.g., infrastructure shortcomings) and moderating factors (e.g., illiteracy), and the strategies of organizations from the three sectors in addressing these obstacles using broad and targeted interventions. These strategies include bridging the infrastructure gap, use of empowering information, leveraging technology, and cross-sectoral collaboration as well as differentiated distribution and leveraged-bidirectional and leveraged-shared distribution.
Overcoming Rural Distribution Challenges at the Bottom of the Pyramid

Les bons pauvres ne savant pas que leur office est d’exercer notre générosité.  
Jean-Paul Sartre, *Les Mots* (1964)

Recent thinking and practice in management has challenged the widely-held view that the role of the poor, as Sartre put it, is to exercise our generosity. There are alternatives to charity where the poor help themselves and business plays a part by pursuing its economic interests and tapping the economic potential of the bottom of the pyramid (BOP)—the 2.7 billion people who live on less than $2 a day. Prahalad and Hammond (2002, p. 48), in their seminal article on “Serving the World’s Poor, Profitably,” highlighted the potential of market forces in large-scale poverty alleviation: “By stimulating commerce and development at the bottom of the economic pyramid, MNCs could radically improve the lives of billions of people and help bring into being a more stable, less dangerous world.”

This was a particularly welcome message in light of the challenges of meeting the Millennium Development Goals and concern about the role of poverty in fostering terrorism. A literature has since developed that builds on the core argument of Prahalad and his colleagues (see: Prahalad 2005; Prahalad and Hammond 2002; and Prahalad and Hart 2002). However, while multiple case studies have provided further support for the idea of “a fortune at the bottom of the pyramid,” less attention has been given to the specific strategies and business models required (see Chesbrough et al. 2006 for a notable exception). In this paper, we focus on distribution strategies for reaching the rural poor—the majority of the BOP that poses distinct distribution challenges relative to the urban poor, who in many respects are easier to reach. As Prahalad and Hammond (2002, p. 50) point out, “[T]he critical barrier to doing
business in rural regions is distribution access, not a lack of buying power.” We call overcoming this barrier socially responsible distribution.

In the marketing literature, distribution is conceived as the provision of availability. Channels of distribution are the routes leading to customers and the associated marketing management considerations range from gathering and providing customer and product information to physical distribution (see, for example, Kotler 2000, p. 491). However, this literature assumes a developed world marketplace of intense competition and a highly developed communications and distribution infrastructure. The developing world, particularly its rural markets, are almost entirely ignored. Nonetheless, the core question remains the same—how do customers get access to products and services?

We start by clarifying and quantifying the geographic spread of the BOP. We then turn to the challenge of distribution to the BOP and the fundamental reasons why large numbers of the rural poor cannot access basic and essential products and services. Next, we introduce the idea of socially responsible distribution strategies—innovative strategies that offer the opportunity to create access for the rural poor and enhance their welfare while making efficient use of scarce resources. Five case studies from rural India illustrate socially responsible distribution and highlight the importance of cross-sector collaboration among multinationals, non-governmental organizations (NGOs) and governments. However, we do not restrict our attention to MNC initiatives. Our interest is in the use of market mechanisms, be it by a private firm or a state enterprise, thus two of our cases look at innovative distribution strategies adopted by government departments while another is about an NGO. We identify key insights from the case studies and, in conclusion, highlight the major
payoffs and insights from socially responsible distribution for the people at the BOP and MNCs, governments and NGOs.

**GEOGRAPHIC SPREAD OF THE BOP**

The term bottom-of-the-pyramid, used in the economic context, refers to the poor. Sachs (2005) builds on definitions used by the World Bank (Chen and Ravallion 2000; 2004) to distinguish among poverty levels, categorizing them as extreme poverty, moderate poverty and relative poverty. Households in extreme poverty, which occurs almost entirely in developing countries, are unable to meet basic needs. They are “chronically hungry, unable to access health care, lack the amenities of safe drinking water and sanitation, cannot afford education for some or all of the children, and perhaps lack rudimentary shelter - a roof to keep the rain out of the hut, a chimney to remove the smoke from the cook stove - and basic articles of clothing such as shoes.” (Sachs, 2005; 20). Those in moderate poverty manage to barely meet basic needs. Sachs refers to people in relative poverty (in developed countries) as those who meet basic needs, but whose income is so far below national average that they “lack access to cultural goods, entertainment, recreation, and to quality health care, education and other prerequisites for upward social mobility” (Sachs, 2005; 20).

The World Bank, which is the authoritative source of data on income distribution across countries, determined that people with daily consumption income of less than $1.08\(^\text{i}\) (rounded off to $1) lived in extreme poverty (Chen and Ravallion, 2000). A somewhat arbitrary number of $2 is used to estimate those living in moderate poverty, those “more typical of [living in poverty in] low-middle income countries” (Chen and Ravallion, 2000; 7). World Bank data indicate that about 1.1 billion people lived in extreme poverty in 2001. They were concentrated in South Asia (39.5%), Sub-Saharan Africa (28.9%) and East Asia (24.8%) (Chen and
Ravallion, 2004). About 2.7 billion people, or nearly half the global population, live on $2 a day (see table 1).\[ii\]

Insert table 1 here

THE DISTRIBUTION CHALLENGE

Today, more than ever before, enhancing the ability of the rural poor to reach .. markets, and actively engage in them, is one of the most pressing development challenges.

International Fund for Agricultural Development (2001; 161)

The market access disadvantages suffered by the rural poor are rooted in many factors, which affect the flow of goods and services both in and out of rural areas, and adversely affect the rural population’s income and quality of life (see Figure 1).

Insert figure 1 here

Poor road, communications and electricity infrastructure

A large proportion of the rural population in developing countries lives in remote villages that are inadequately connected by roads with the outside world and poorly served by appropriate and affordable transport, which poses a physical barrier to markets. The poor in Ghana regard bad roads as one of the “major obstacles to more successful farming and food security in their communities” (Kunfaa et. al, 2002; 24). Small local demand combined with high cost of transporting goods to and from remote villages depresses farmers’ incomes, and results in higher prices of agricultural inputs and consumer goods they acquire from urban areas. For example, in Chile consumer goods prices in the remote North and South of the country, are 20-25% higher than the more highly-populated central region of Santiago and Valparaiso (Ferreira and Litchfield, 1999). Recognizing the disadvantages suffered by people living in its western and central regions on account of poor connectivity, the Chinese
Government has pledged to build 85,000 km of road to connect those regions to other parts of the country (Guerrera, 2006).

Poor roads can present a significant barrier to school attendance. Okunmadewa, et. al (2002; 101) report that in parts of Nigeria, “[s]choolchildren have to trek many kilometres daily to and from the nearest school, and most cannot attend in the rainy season or other times the road becomes impassable.” Physical location can pose a significant barrier for poor urban neighborhoods as well. A number of poor children living in urban slums fail to attend school regularly owing to distance from home to school, and inability to afford or safely use public transport. In Papua New Guinea the average travel time to the nearest school is an hour (Gibson, 2000). Average distance to the nearest primary school is much higher for the poor than the rich in many developing countries. (See table 2.)

Despite significant improvement in connectivity resulting from growth in mobile telephones, the information highway still bypasses many in developing countries. In 2004, less than 10% of Africans and only 17% of Asians were mobile subscribers compared to 71% of Europeans (International Telecommunications Union, 2006). Internet penetration in Africa was a mere 2.6%, and 8.1% in Asia, compared with 31% in Europe. The rural poor live in areas where communications infrastructure is worse, and even when it exists most are unable access information because they cannot afford cell-phones and computers.

Lack of electricity also shuts out much of the population at the bottom of the pyramid. Developing countries have far lower electrification rates than developed countries; in 2002, 76% of the population in Sub-Saharan Africa (526m people) and 57% (798m) in South Asia lacked electricity (International Energy Agency, 2004).
with other services, the rural population is less fortunate with a greater ratio of people without electricity than in urban areas. (See table 3).

**Information problems**

Inadequate infrastructure and lack of information providers result in unavailability of information necessary for the rural population to make informed choices about buying and selling goods and accessing services. A major challenge is information asymmetries in which small farmers are unaware of commodities’ market prices and trends and see few options regarding when and where to sell their produce while those they trade with are better informed. The International Fund for Agricultural Development (2001; 168) reports “[t]raders, especially if irregular or facing little competition, may be little concerned about reputation, and in such cases asymmetric information often forces the poor to accept low prices for products and to pay high prices for consumer goods.” Rural consumers are also disadvantaged when it comes to purchasing agricultural inputs as they lack information on competing product prices, features and quality.

**Lack of knowledge and skills**

The availability of information is necessary but not sufficient for welfare enhancement. In order to extract the benefits of information, rural farmers must develop knowledge of how best to use it. For example, they must understand how to analyze information on trends to time their sales for maximum profit, or evaluate product life cycle costs when comparing competing diesel pump sets to purchase, or decide what practices to adopt to tackle threats to agricultural crops and what pesticides are appropriate.
Those who are illiterate or poorly educated naturally suffer greater disadvantage in developing the knowledge and skills to derive value from information. Sub-Saharan Africa and South Asia are the regions with the lowest literacy, averaging 64% and 61% respectively. The average years of schooling in India is only 5 years (7.8 years in urban areas and 3.9 in rural areas) compared to 12-13 years in developed countries where there is little difference in urban and rural areas (World Bank, 2005). The average is 5.8 years in Nigeria and 2 years in South Africa.

In describing the plight of the rural poor in India, the World Bank (2005; 21) notes that “illiteracy and malnourishment may prevent [the poor agricultural laborer] from breaking out of the cycle of poverty.” Lower caste laborers become heavily indebted to powerful upper caste landlords and “[e]ven if laws were in place that would allow him to challenge his landlord’s dictates, being illiterate he would find it difficult to navigate the political and judicial institutions that might help him assert his rights.”

The World Bank (2004; 85) reports “there is growing recognition that consumers in even the poorest countries can suffer from the sale of counterfeit goods, as examples ranging from falsely branded pesticides in Kenya to the sale of poisoned meat in China attest.” The illiterate are especially prone to being confused by counterfeits as they cannot read information on packages, and rely entirely on package design to recognize and evaluate brands, while counterfeitters and imitators artfully design packaging closely resembling original products.

**Organizational shortcomings**

It can be difficult to fully realize the power of information and knowledge without organizational improvements. Many farmers live off small land holdings and, unless they are members of cooperatives, lack bargaining power when selling produce and
buying agricultural inputs. They are unable to spread fixed costs over a large enough volume to be competitive. Furthermore, they lack access to valuable information on agricultural practices and experience with consumer products and services that might help enhance productivity and provide the basis for informed purchases.

**Cultural rigidities**

In many countries cultural norms and historical legacy discriminate against certain groups, such as women, the indigenous population, minority ethnic or religious groups, and lower castes. In Latin America, the indigenous population, which is concentrated in rural areas, has higher poverty and lower literacy and lower access to land and credit (Wodon, 1999). Sometimes this is reflected in poor market access for their produce.

**SOCIALLY RESPONSIBLE DISTRIBUTION STRATEGIES**

We refer to socially responsible distribution to describe initiatives that provide poor producers and consumers with market access for goods and services that they can benefit from buying or selling, by helping neutralize the disadvantages they suffer from inadequate physical links to markets, information asymmetries, and weak bargaining power. Governments, civil society, multinational and local companies, and small private entrepreneurs can all play a role in providing socially responsible distribution.

In order to understand how socially responsible distribution meets the challenge of distributing goods and services we looked at the strategies of five organizations drawn from all three sectors – government, the private sector and civil society. We decided to focus our research on India, which has the largest population living in poverty – 826 million in 2001, counting extreme and moderate poverty. India
also has the highest concentration of extreme and moderate poverty (79.9%). The share of its population in extreme poverty, 34.7%, is also very high (though it is well below that of Sub-Saharan Africa, which has the highest share at 46.9%). In 2004, India’s billion people had per capita GNI (gross national income) of $620 ($3100 at purchasing power parity, or PPP) compared to $32,040 for the billion who lived in high-income countries ($30,970 at PPP) (World Bank, 2005).

About three-quarters of the world’s poor live in rural areas and are expected to outnumber the urban poor for at least a generation. Unfortunately, per capita public expenditure on provision of rural services is half that in urban areas (World Bank, 2003a; 6). A staggering 88% of India’s rural population, 658m people, lives in poverty (see table 4).

**Insert table 4 here**

Notwithstanding the poverty, lower income groups in India provide significant markets for certain products. Poorer consumers tend to purchase essentials: consumables such as tea, cooking oil, washing cake and powder, talcum powder, electric bulbs and casual footwear, and durables such as bicycles and transistor radios (Rao and Natarajan, 1996). For some products, as early as the mid-90s, rural demand exceeded urban demand (see table 5). In 2005, rural markets were responsible for 56% of the demand for the fast moving consumer goods (FMCG) category, which comprises food, beverage, household products, personal care products, confectionary and tobacco, and accounted for 80% of consumer spending in India (KPMG International, 2005).

**Insert table 5 here**

In order to study socially responsible distribution strategies, we chose two multinationals, an NGO and two government departments in India that have initiated
programs to bridge the gap in serving the bottom of the pyramid. We spoke with a number of managers, academics and government officials to identify the goods, services and organizations to focus on. ITC Limited and Hindustan Unilever Limited were mentioned by several as having more significant programs for rural distribution than other companies, and so we chose them. In order to broaden industry focus, in selecting the NGO we looked at education, and picked GyanShala since it is run by a professional manager and was financed by reputable agencies such as the Tata Foundation. Our choice of government departments was guided by conversations with senior bureaucrats, who recommended the Departments of Posts and Rural Electrification.

Data were gathered through twenty-six in-depth interviews with rural entrepreneurs, slum dwellers, managers, bureaucrats, and NGO officials. Interviews were conducted in five villages in the states of Andhra Pradesh and Madhya Pradesh, and in the cities of New Delhi, Mumbai, Ahmedabad, Hyderabad and Mhow. (See figure 2 for interview sites.) In addition to organizations we focus on in our case studies, we gathered information from others directly or indirectly involved in promoting welfare at the BOP - the National Bank for Agriculture and Rural Development, the Reserve Bank of India, the Public Distribution Department and the Rural Development Department – with the objective of understanding the institutional nature of the rural BOP environment.

ITC Limited

As noted above, small farmers suffer tremendous disadvantages when selling their produce. They lack accurate information on market prices, which is necessary to ensure that they sell their produce at the best prices. They are often bullied and
cheated by buyers in the process of grading and weighing produce at the point of sale. ITC Limited, a diversified multinational that trades in agricultural commodities, uses information technology to empower small farmers by providing them with real-time market information, and has set up a direct procurement system that gives farmers an alternative channel for selling their produce. In addition, ITC has begun setting up supermarkets to sell a range of goods and services to rural consumers.

ITC Limited was established in India as the Imperial Tobacco Company in 1910, as a subsidiary of what eventually evolved into British American Tobacco. It started out as a tobacco company and over the years diversified into unrelated businesses. In the early 1970s, when the Indian Government passed laws requiring multinationals to dilute their foreign equity, some major companies like Coke and IBM exited India. However, some others like ITC, Ciba Geigy and Unilever, chose to remain in India and treated this as an opportunity to diversify and expand (Encarnation and Vachani, 1985). Today ITC is an associate company of British American Tobacco, which owns 31.7% of its stock (Tassel and Turner, 2006). ITC’s annual sales are $3.7 billion with a little over 50% of the net turnover (after removing excise taxes collected) accounted for by cigarettes (ITC 2006). One of ITC’s major growth activities today is export of agricultural commodities, which grew 68% in 2005-06 to $390m.

Typically, small Indian farmers bring their produce, such as soya bean, to the “mandi,” a state-sanctioned wholesale marketplace where traders bid for farmers’ produce. Farmers line up in front of a trader’s kiosk at the mandi, and each farmer is offered a price for the produce depending on its weight and grade (adjustments are made depending on moisture content, foreign matter, broken seeds, etc.). Farmers’ bargaining position is weak. They lack accurate information on prices offered by other
traders in that mandi and other mandis in the state (having to rely on word of mouth), are unable to verify if their produce is weighed accurately, and are discouraged from turning down an offer because they have already incurred the sunk cost of bringing their produce to the market and would need to incur additional cost to take it back and return another day. Essentially, farmers end up with lower income than would be possible if there were ways to ensure their produce was accurately weighed and graded and they had access to better information which allowed them better options on when and where to sell their produce.

ITC, which previously bought produce from intermediaries (traders who procured it from farmers), set up a system that empowers farmers in two ways: by providing them with real-time information on commodity prices so that they can obtain better prices for their produce, and giving them an alternative selling channel, direct to ITC. The company has set up an “e-Choupal” in each of 6,000 villages. (Choupal means village gathering place in Hindi.) In each village it recruits a progressive farmer and sets up a computer in his home. Given that many of the villages lack internet connectivity, ITC sets up a satellite dish on the roof of the farmer’s home to provide connectivity. It also installs a solar panel and battery to generate and store enough electricity for 20 minutes of uninterrupted computer operation when power supply is unavailable.

ITC has a web portal through which it provides information on soya prices the previous day at each mandi in the state and at its own procurement center. It also presents information on prices in international markets such as the Chicago commodities exchange, which are precursors of local prices. Each evening the portal announces the minimum price ITC will offer the following day at its own procurement center.
ITC’s procurement centers are large, clean and well-maintained. Farmers are able to wait in the shade rather than in the open sun and have access to cool drinking water and bathroom facilities. They use electronic weighing systems which reduce chances of inaccuracy. Farmers are given cash for their produce rather than deferred payment as sometimes happens at the mandi. If prices at the nearby mandi turn out to be higher that day, ITC raises its procurement price to match them. However, if prices at the mandi are lower it abides by the price commitment made the previous evening on its web portal, on which the farmers based their decision to bring the produce to market.

ITC has enhanced the value of its procurement system by turning it into a two-way distribution chain. In addition to assisting procurement of agricultural produce from farmers, its village representatives (or “sanchalaks” as they are called) also sell a range of products and services to villagers, earning a commission on sales. These go all the way from insurance to motorcycles.

ITC has broadened the scope of products distributed to rural areas by building supermarkets (called Choupal Saagars), at some of its commodity procurement centers, to sell a wide variety of products and services, including packaged consumer goods, white goods, agricultural inputs, and health, insurance and banking services. ITC has entered into partnerships for these; for example, Apollo Hospital, which has a chain of hospitals around India, is a partner in providing health services at these “choupal saagars.” An Apollo-affiliated general physician is available for consultation and to conduct basic diagnostic tests. The general physician can access specialists via the internet and telephone as necessary. In March 2006, ITC had 10 Choupal Saagars in 3 states and was planning to build another 40 by the end of 2007.
Hindustan Unilever Limited (HUL)\textsuperscript{iv}

The unavailability of basic consumer goods such as tea and toothpaste, results in rural consumers either forgoing their consumption or purchasing poor-quality counterfeits or substitutes. HUL addresses that problem by extending the reach of its rural distribution by relying on women entrepreneurs to sell its products (the Shakti program). It also delivers information about health and hygiene (via a program called Shakti Vani), which, in turn, facilitates sales of its products, and partners with government to run a rural community portal that provides broader information with social benefits (iShakti).

HUL, Unilever’s Indian subsidiary, is the largest seller of fast moving consumer goods (FMCG) in India. In 2005, HUL had revenues of $2.5 billion and net profits of a little over $300 million. About 45% of its sales are derived from soaps, detergents and household care products, 28% from personal products, and 25% from foods (Hindustan Lever Limited, 2005). It also has the largest private sector rural distribution network in India. HUL has a strong interest in selling to rural consumers given its product focus and the fact that over half of India’s total FMCG demand is in rural markets (KPMG International, 2005).

HUL sees three major marketing challenges associated with rural markets: it is difficult to reach a significant percentage of villages through conventional business methods; low rural literacy and poor media reach create communication challenges; and it is difficult to influence rural customers owing to low brand awareness and low consumption levels. It has three programs for addressing rural challenges:

(i) The Shakti Entrepreneur program appoints women as agents to sell HUL products to homes in clusters of 3-5 villages. The average entrepreneur earns about $16 per month in sales commissions, which helps supplement family
income. (One of the women entrepreneurs we interviewed earned $65 per month.) A field force of 1000 helps train the 20,000 Shakti entrepreneurs in twelve states. By 2010, HUL expects to have 100,000 Shakti entrepreneurs servicing 500,000 villages with a population of 600 million.

(ii) Shakti Vani is a communication program that provides valuable information on health and hygiene, which is also useful in promoting the company’s products such as toothpaste. The program trains village women to communicate with fellow villagers using especially designed communications materials provided by the company.

(iii) iShakti is a more recent program to provide broader information through a rural internet community portal. Villagers register as users and access information via HUL’s web pages on a variety of topics including agriculture, education, veterinary services, and entertainment through kiosks installed in partnership with the state government. The web interface uses voice-over design to make information accessible to the illiterate. When the cursor is moved over an icon a voice announces the topic, and when the icon is clicked, a voice provides information in the local language.

HUL’s strategy differs from ITC’s in a number of ways. Given the larger breadth of its FMCG offering it does not need to carry others’ products and, therefore, limits its sales to its own brands. So far it has focused on a one-way flow of products – out to rural areas. In addition to serving rural customers’ needs for consumer products, HUL’s strategy is laying the foundation for future rural market share - as incomes rise, and consumption of consumer goods increases, HUL is well positioned to capture and retain rural customers, making it difficult for competitors to follow.

Gyanshala
Illiteracy is a significant barrier to enhancing welfare at the bottom of the pyramid. Public education programs’ reach is severely limited by paucity of resources, and thousands of children forgo the opportunity to attend school because the closest public school is too far to attend. Gyanshala is an example of a non-profit entrepreneurial start-up that has developed a scaleable model to provide low-cost consistent-quality education to poor rural and urban children who are inadequately served by existing public education programs. Its model provides very basic education using especially-developed high-quality materials delivered by low-wage well-trained teachers at locations close to the homes of under-privileged children.

Gyanshala, an Ahmedabad-based NGO, was set up in 1999 to create a radical low-cost design for delivering effective education for poor children in grades 1 to 3. In order to provide highly accessible education at low cost in a scaleable format, Gyanshala relies on several key design elements:

(i) Classes are located in the village, or in the urban slum, so that young children can easily walk to them.

(ii) Costs are contained by hiring teachers who live in the community, or close by, have a grade ten high school education, and are willing to work at low wages.

(iii) Teachers are given solid training, and continually and closely monitored and assisted to ensure that they deliver quality instruction.

(iv) High-quality materials are developed and used, and detailed teaching plans guide delivery of each class session in the year to ensure consistent high-quality education.

The net effect is that at the end of a 3-year program young children can read, write and perform basic arithmetic functions, and have developed the habit of reading the daily newspaper, all at an annual cost of $36 per child, which is a third or less of
the typical cost in government schools. Moreover, given the teacher profile there is a
large potential pool of teachers, which helps the model’s scalability. Gyanshala has
also developed a system of selecting, training and monitoring teachers, which helps
ensure quality as it scales up. Gyanshala currently has 5,000 children enrolled in
classes in Gujarat State.

Postal Service

The rural population’s ability to benefit from the growth, industrialization and
development of the country is seriously compromised by poor communications links.
The Indian Postal System has 155,516 post offices (POs) of which 89%, or 139,120,
serve rural areas, giving it the widest physical reach of any Indian organization. In
order to build this large network the postal system has relied on collaboration with
private entrepreneurs, and in order to enhance its economic feasibility and derive
greater benefits for consumers it offers a wider range of services than is typical of
postal systems.

As the postal network penetrates deeper into rural areas transportation cost
increases and population sparsity reduces revenue potential. The Department of Posts
has population, distance and income norms for setting up post offices. The urban
population is expected to have a post office within 1.5 to 2 kms, and normal rural
areas with population exceeding 3000, within 3 kms. In hilly, tribal and desert rural
areas, clusters of villages with population exceeding 1000 are eligible for a post office
within 3 kms. The income norm restricts the permissible loss per post office to about
$50 per year in normal rural areas and $100 per year in the other, more remote, rural
areas. New urban post offices are expected to start out breaking even and earn 5% on
revenues after a year.
Given the difficulty in ensuring break-even operations in rural areas the Department of Posts has extended the reach of its network by relying on private entrepreneurs who serve as its representatives and offer a range of postal services from their own, private, premises; for example, from a small shop they might run in the village. They are paid a commission for managing these “Extra Departmental Post Offices.” Nearly 130,000, or 83% of India’s post offices are managed by such entrepreneurs.

The Department has a strategy of extracting larger value from the investment in the postal network by offering a wide range of services. In addition to normal services such as delivering mail and money orders, it offers basic financial services such as savings accounts and insurance (some of which are also available in other countries, like Japan). Some of the products it carries are from the private sector; for example, it serves as an agent for general (non-life) insurance products of the Oriental Insurance Company and distributes mutual funds and bonds offered by ICICI-Prudential. The Department also offers retail services for the non-profit sector, such as application forms for universities, and for other government agencies; for example, bill payment for utilities, and distribution of passport application forms. The postal network is also used for gathering valuable information - for example, data for the Election Commission - and accepts applications from the public for Government organizations under the Right to Information Act, 2005.

Technology is used to enhance service. With the advent of the internet the Department of Posts has introduced services to bridge the gap between internet users and non-users. The postal system enables customers to send e-mail messages to recipients who lack internet access. The messages arrive at a post office close to the
recipient, are printed at the post office, and delivered to the recipient. Similarly, messages may be sent in reverse direction with the assistance of the post office.

In 2002, the Department introduced the Gramin Sanchar Sewa (Rural Communications Service) to bring valuable telephone service to areas not covered by conventional land-line or cellular service. It uses Wireless Local Loop (WLL) technology, which relies on radio signals to connect with the wider Public Switched Telephone Network (PSTN), thus bridging the infrastructure gap. (The technology is sometimes referred to as radio in the loop, RITL, or fixed-radio access, FRA.) Today about 2700 postal delivery agents provide the service.

**Rural Electrification Department**

Absence of electricity supply affects not just quality of life but the ability to enhance productivity and income using mechanized agricultural and industrial equipment. In 2005, 77.8 million rural households (56% of India’s rural population) lacked access to electricity, making India the country with the largest number of households without electricity (Ministry of Power, 2005). In recent years, the Indian Government has launched ambitious initiatives that aim to extend electricity supply to the entire rural population by the end of the decade. A crucial aspect of these initiatives is the use of radically different business models to enhance the economic feasibility of power distribution and generation.

The major barriers to rural penetration of electric supply have been high cost of revenue collection, high cost of long-distance transmission losses, and large burden of subsidies. State utilities lose money on rural distribution and lack incentives to extend its reach. Energy losses in India are as high as 25% while the OECD average is less than 10% (International Energy Agency, 2002).
In order to improve the financial feasibility of distribution, the Indian Government has launched a scheme to engage franchisees to manage the last mile of the distribution chain – from village transformer to household. The franchisee is in charge of signing on new customers and the utility assumes responsibility for connecting the home to the transformer and for installing and sealing the meter. The franchisee bills customers and collects payments, and pays the utility for the power drawn from the system at an agreed rate that provides for standard transmission losses and a commission for the franchisee’s services. The franchisee has a strong incentive to detect losses, or theft, and maximize collections. When customers default the franchisee can ask the utility to discontinue supply. Currently there are about 400 franchisees, and the Government plans to increase that number to 100,000.

The government proposes to overcome the challenge of large power losses from long-distance transmission by encouraging distributed power generation, and limiting the burden of financing and managing these by allowing private entrepreneurs to invest in capacity and sell power to the grid. Entrepreneurs will be encouraged to use renewable energy sources, such as biomass, for units generating as little as 2.5-5MW, which would usually be enough to serve up to a thousand households. The government will help entrepreneurs arrange special low-cost financing. The model under consideration carefully separates activities between the government and private entrepreneurs with the objective of allowing entrepreneurs easy entry and exit, and facilitating competition. The land on which the generators will be situated, the transformer, and the power cables to the homes will be owned by the government. Entrepreneurs would own and maintain the generating capacity on the land leased from the government. This would allow private investors to exit easily
if the project becomes unattractive. More than one private entrepreneur could supply power into the network.

At a 2000 conference of Indian Chief Ministers and Power Ministers the consensus was that the ability and willingness of rural consumers to pay for electric power is underestimated, suggesting that the barrier to rural electrification was not consumers’ ability to afford it, but inadequate investment in efficient, well-managed, distribution systems. Initial experiments with distribution franchising have been promising. For example, in the north-east Indian state of Assam, which is famous for tea plantations and oil fields, an experiment in 22 villages in 2005 more than doubled electricity billing and raised collection from 12% of billing to 88% (Assam State Electricity Board, 2005).

**INTERVENTION STRATEGIES**

As the cases illustrate, challenges to socially responsible distribution are addressed by all three sectors - government, civil society and private companies - through intervention in a number of ways. The poor benefit by earning higher income and deriving value from free services and from being able to choose among a greater variety of products available for purchase. Some of these benefits are the direct result of entrepreneurial opportunities, services and products provided by organizations. Part of the welfare enhancement results from strengthening bargaining power, which depends on availability of information and its transformation into knowledge.

Four sets of moderating factors significantly affect the availability of information, its transformation into knowledge, and impact on bargaining power: illiteracy, cultural rigidities, market structure and organizational shortcomings. The effect of intervention strategies by the government, NGOs and companies at various
stages is illustrated in figure 3, which distinguishes between direct links and moderating factors in our model of socially responsible distribution.

The government adds value in many ways – by providing infrastructure for transportation, communications and electricity, and information and knowledge through government controlled media and extension services, and certain basic market institutions, such as the mandi. The government’s efforts can be leveraged by drawing on the other sectors. For example, the World Bank (2003a; 47), in enumerating the key principles for design of effective extension programs, suggested that “[e]xisting and new institutions such as NGOs, universities, private firms, and even public agencies can compete for delivery of publicly funded extension services.”

The private sector plays a crucial role. Large companies help empower farmers with information and provide competition to traders who previously exercised monopsony or monopoly power. Private entrepreneurs serve to extend distribution deep into the bottom of the pyramid and earn better livelihoods in the process. Increased product competition at the BOP helps reduce prices.

NGOs assist by providing information and knowledge, alleviating illiteracy and cultural rigidities (such as constraints imposed by caste), and helping organize farmers to leverage knowledge into bargaining power. They supplement the efforts of the government by implementing scaleable models to provide social services and education where the government is unable to keep up with huge demand given its limited resources.

The types of intervention can be further distinguished by separating them into broad or targeted. In figure 4 we provide examples of the intervention by governments, NGOs and companies using this classification. The major difference in
the strategies of the three sectors on scope of intervention is that the private sector’s strategies are typically targeted whereas those of government and NGOs are both broad and targeted. Below, we discuss some of the learning about specific strategies that can enhance socially responsible distribution.

**Bridge the infrastructure gap**

Managers who are used to operating in conditions where infrastructure is taken for granted as being provided by the government, may shy away from entering the bottom of the pyramid, especially the rural part of it, when infrastructure limitations appear to pose significant barriers. Rural markets can actually present significant profit opportunities for certain products and services that are demanded by poorer consumers. Companies like ITC that are willing to bridge the infrastructure gaps, such as lack of internet connectivity and reliable electric power, can extend distribution channels into the BOP. Such companies can set up formidable barriers for followers, who must contend with the prospect of defraying infrastructure investment over smaller volume of product distributed.

Multinationals’ strategies of investing in infrastructure to build new BOP markets are not dissimilar to that of McDonald’s when it entered the former Soviet Union in 1990. McDonald’s recognized that it in order to ensure its core competence would translate to the Soviet environment, where infrastructure made procurement of high quality inputs a major challenge, it had to invest in production of quality inputs and assist suppliers in producing them and moving them to McDonald’s in a timely fashion. McDonald’s made a significant commitment to securing the supply of high-quality commodities and converting them into appropriate inputs in a $40m plant, which was not an activity it typically undertook elsewhere.
Differential, or layered, distribution

As organizations seek greater distribution depth, extending distribution networks outward to remote areas, transportation cost rises and population becomes sparse, rapidly inflating distribution cost. In order to extend reach, it becomes necessary to design differential distribution systems to serve urban and rural areas, with lower-cost distribution layers penetrating the outer extremities of the network.

Differential distribution is key to socially responsible distribution, just as differential pricing is key to socially responsible pricing (Vachani and Smith, 2004). Pharmaceutical multinationals could have saved lives through differential pricing of AIDS drugs in South Africa, but were deterred from doing so by a number of barriers including institutional risks to their developed-country profit margins from gray markets and price referencing. Governments and NGOs play an important role in reducing such risks and, thereby, facilitating differential pricing. Similarly, infrastructural and institutional shortcomings discourage differential differentiation, and governments and NGOs can work with companies to help overcome these difficulties and encourage distribution, bringing valuable products and services to BOP consumers and also helping them raise their incomes.

Outsource the “last mile” to BOP entrepreneurs  Differential distribution requires examination of the distribution chain to select activities that can be outsourced to drastically reduce distribution costs. By outsourcing the “last mile” (in reality, the last several miles) to small private BOP entrepreneurs, companies like HUL and ITC, and government departments like those for Posts and Rural Electrification, can take advantage of talented and motivated local entrepreneurs at much lower cost than company or government employees. This results from their low opportunity cost and negligible overhead, given that they live in the target market and
operate from existing premises. So while the transportation cost of delivering the product or service to the outer reaches of the network is higher than delivering it to urban locations, the fixed overhead is contained by outsourcing the promotion, selling and collections tasks to franchisees.

Organizations treat urban and rural distribution channels differentially in terms of economic benchmarks to evaluate feasibility. Unlike urban channels, companies treat rural channels as longer term investments that lay the foundation for larger future markets while making a social contribution today. Government departments use them to maximize the reach of services with limited deployment of public resources. With the burden of retail distribution shifted partly onto BOP entrepreneurs, scarce public resources can be redeployed to provide a wider span at wholesale distribution to serve a larger array of conduits into rural areas.

**Leveraged distribution**

Challenges of physical access and fragmented demand deter investment in distribution infrastructure reaching into the rural parts of the bottom of the pyramid. For many organizations the task of extending access into the outer extremities of the BOP may seem simply too expensive to undertake. Both the private sector (e.g., ITC) and the government (e.g., the Department of Posts) provide examples of leveraging the investment in rural distribution to enhance its value and improve economic feasibility, first by broadening the distribution network’s scope by sharing it and, second, by increasing value generation by converting it into a bidirectional network. (See figure 5.)

*Insert figure 5 here*

**Bidirectional distribution** The feasibility of distribution can be further improved through additional economies of scope obtained by creating two-way flow
of products and services. ITC’s distribution strategy creatively enhances the value of its procurement system by turning it into a two-way distribution chain. Its sanchalaks serve the function of stimulating purchases from farmers as well as selling products to them. Similarly, the commodity procurement centers not only facilitate direct commodity purchase but build traffic to the company’s supermarket located on the premises. Similarly, the network of the Department of Posts is bidirectional.

Bidirectional distribution has some similarities to the concept of “reverse distribution” (or “reverse logistics”). Reverse distribution systems typically are focused on the return of end-of-life products or the recall of faulty products. These systems often stem from regulatory requirements around recycling, but can provide additional value to manufacturers through, for example, remanufacturing using the returned product and information that can be ascertained on product performance (Blackburn et al. 2004; Toffel 2004). Reverse distribution systems ease the challenges around product recalls (Smith et al. 1996). In contrast, our concept of bidirectional distribution refers to the two-way flow of different products using the same logistics. Bidirectional distribution also has an information component, not about returned products but about information on the consumer’s needs for a wider range of products and services.

**Shared distribution** Once a distribution channel is in place and can carry additional products at low incremental cost, contribution earnings can be raised by widening product range to derive greater economies of scope. ITC has aggressively pursued alliances with a broad range of vendors, which allows it to offer a full range of goods and services in its rural supermarkets and spread recovery of its large fixed cost on that distribution platform across larger sales volume. Similarly, the Department of Posts is delivering greater value to the public and helping cover the
cost of its Extra Departmental POs by carrying products of companies and educational institutions.

This strategy is somewhat similar to that of Amazon.com in e-commerce. Having established a powerful internet distribution channel, Amazon has significantly expanded contributions at low incremental cost by carrying a much wider range of products than its original narrow offering of books.

The network of the Department of Posts is the most complex, carrying products of multiple organizations in both directions.

**Using information to empower the BOP**

The rural poor suffer low incomes as a result of traders’ market power. One of the ways in which governments can enhance rural incomes is through stronger market institutions; for example, through regulation that discourages adulteration, tampering of weights and market-rigging, and enables the rural poor to acquire superior inputs and better prices for their produce (International Fund for Agricultural Development, 2001). Access to information on prices, and the availability of alternate market channels, as provided by ITC, gives farmers the opportunity to capture greater value from sale of their products.

The role of the private sector in dissemination of knowledge is especially powerful in places where public rural extension services are inadequate, as in some African countries. The International Fund for Agricultural Development (2001; 10) notes: “New market routes or other mechanisms to reduce the time-lag before the poor adopt better technologies are badly needed if the poor are not to miss out on new opportunities.” Both HUL and ITC provide valuable information on products and practices, supplementing government extension services. NGOs play a key role in organizing entrepreneurs at the BOP so that they can leverage information into
knowledge and bargaining power, as evident from the thriving self-help group movement in India. HUL’s Shakti entrepreneurs are usually members of self-help groups in the villages they live in.

**Leveraging technology**

The poorest segments of rural populations may not benefit from technology that is embodied in expensive equipment (such as mechanized farm equipment). However, they can benefit a great deal from knowledge of other kinds of technology, such as agricultural practices, which may be applied without significant additional capital. The challenge is to find ways to bring these to the attention of potential users. By using technology, companies like ITC and HUL are able to set up channels to bring a wide array of useful information to rural users. Technology also allows them to make information accessible to the weaker segments, such as the illiterate. This service builds social capital that helps further companies’ objective of selling products on which they can earn contributions today and set the foundation for future profits.

**Cross-sectoral collaboration**

When setting up business models that integrate activities of different sectors it is important to design the system so that responsibilities are clearly demarcated and performance easy to measure. The effectiveness of strategies for cross-sectoral collaboration, especially when significant private and public sector resources need to be combined as required in rural power generation, requires careful analysis of activities that can be put in the hands of entrepreneurs and the infrastructural support and monitoring that government needs to provide. Easy entry and exit is helpful to facilitate participation by the private sector, and so the government has to assume ownership of parts of the value chain that require longer term commitment, especially in public goods.
Scalability

The challenge of socially responsible distribution is to serve an enormous population at the bottom of the pyramid in need of goods and services. This calls for solutions that can stretch scarce resources. A remarkable aspect of Gyanshala’s model to bring basic education to the poorest children in villages and urban slums is that instead of striving to provide a rich educational environment using college graduates, it decided to strip out non-essential aspects of education and focus on providing high-quality essential education, which meant it could deliver valuable service using widely-available basic resources, facilitating scalability while making education highly accessible to the target population by bringing school closer to childrens’ homes.

In their decision to use BOP entrepreneurs to manage distribution’s last mile, the Departments of Posts and Rural electrification, and HUL and ITC have all opted for scaleable models as these human resources are abundantly available. The use of technology platforms also helps in this regard. Having invested a fixed cost in developing or appropriating information and knowledge, organizations, using technology, are able to disseminate it widely at negligible marginal cost.

PAYOFF

Involvement in rural distribution provides a range of benefits for multinationals, as well as people at the bottom of the pyramid.

What’s in it for multinationals?

Multinationals that have invested in rural markets are benefiting by earning contributions on current sales, laying the foundation for substantial future earnings, preempting future competition in rural markets and developing consumer information databases that can secure future competitive advantage.
**Contributions on current sales** Given the cost structure of the rural distribution set up by HUL and ITC it is likely that they are earning positive contributions on sales through franchisees even at the outer extremities of their network. The franchisees get a small commission on product sales, and while shipping costs are higher, other variable costs are not much higher than selling in urban markets. Neither is there a large fixed overhead. On the new supermarket format set up by ITC, however, investment is large and requires substantial volume to break-even. While contributions are probably positive it is not clear if volume is large enough to cover fixed operating costs.

**Future earnings** Reaching out to the bottom of the pyramid with valuable products and services in the face of little competition from other organized sector firms can help build a loyal customer base that will deliver future profits. As developing-country economies grow, some of this rural population will migrate to urban areas and as that happens familiarity with brands they have encountered in rural areas will help them transition to companies’ products in urban areas, once again helping secure future earnings. Similarly, as urban BOP consumers become more affluent they are likely to purchase upscale products of companies whose products they have previously used.

An important factor in creating long-lasting customer loyalty is the creation of trust through provision of goods and services with higher perceived value compared to traditional traders with whom the BOP customers interacted. The free provision of information that empowers farmers by enhancing their bargaining power vis-à-vis traders, or allows them to improve agricultural methods or improve hygiene, can serve to create goodwill and build social capital.
**Preemptive distribution**  ITC and HUL are racing to preempt future competition from distribution heavy-weights. The Indian Government is under pressure from foreign governments to open up its retail sector to foreign competitors, and giants such as Wal-Mart are poised to enter the “last frontier for hyper-markets” (Jain, 2006; 4). Large local companies, such as Reliance, have committed substantial resources to enter the retail sector. Reliance intends to invest $5.6 billion to grab a share of the rapidly-growing organized retail sector, which is expected to triple in size to $15 billion by 2010 (Merchant, 2006). These new players will provide formidable competition that will begin in urban areas and eventually roll out into rural markets. Reliance has announced plans to create 50-acre “rural business hubs” in each district of India in the thirds phase of its strategy, after it begins setting up 200,000 sq ft hypermarkets and 2,000 sq ft supermarkets in urban areas (Jain, 2006). By moving early to blanket rural markets, whose fragmented nature provides logistical advantages to first-movers, ITC and HUL can hope to create entry barriers for some of the followers, or at least strengthen their position against the onslaught of giants like Reliance, much as Wal-Mart shut out competitors like K-Mart in US rural markets during its initial years (Ghemawat, 1986).

**Consumer information databases**  Companies that control the last mile of the distribution chain stand to gain from developing proprietary databases with valuable consumer information that can be used to sell market research services to new entrants, as well as to influence product and brand choices. Government departments are also aware of the value of such market information. They expect entrepreneurs who manage electricity sales as franchisees of the Rural Electrification Ministry will benefit from market information they can provide to companies selling a host of electrical gadgets.
Payoff for the bottom of the pyramid

Intervention by government, NGOs and private companies delivers valuable payoff for the BOP. People are better informed and, given assistance on how to use information, can raise their incomes and derive higher value from purchases of agricultural inputs and consumer goods. Knowledge of better agricultural practices raises productivity and income, and appreciation of health and hygiene factors improves quality of life. Entrepreneurship opportunities build self-esteem and loosen cultural constraints. Better communications with urban areas create stronger awareness of rights and opportunities.

Risks As companies extend their reach into the BOP, bringing goods and services to areas inadequately served by the majority of their competitors, there are naturally opportunities for exercise of monopoly power, and exploitation of consumers and labor, because institutional mechanisms and government oversight are weak in rural areas. These concerns are already being raised by NGOs. Thus, it is important to concurrently create governance mechanisms, perhaps using coalitions of government, civil society and companies that have demonstrated their commitment to enhance the welfare of the BOP.

CONCLUSION

Management scholars and development economists have provided a compelling case for greater attention to the bottom of the pyramid. However, few contributions have examined specific strategies for reaching the bottom of the pyramid. We have introduced the term socially responsible distribution to describe initiatives that provide poor producers and consumers with market access for goods and services that they can benefit from buying or selling by helping neutralize the disadvantages they suffer from inadequate physical links to markets, information
asymmetries, and weak bargaining power. This has been illustrated by five case studies. In doing so, we have identified the role the private sector, governments and NGOs can play in promoting SRD, the different kinds of intervention strategies they use, and the benefits for various parties, including the people at the bottom of the pyramid.

The paper highlighted the obstacles to higher earning potential and access to cheaper consumer goods for poor consumers, identifying direct and moderating factors. The direct factors identified were infrastructure shortcomings, lack of information and knowledge and skills, and low bargaining power. The moderating factors identified were illiteracy, cultural rigidities, (inadequate) market institutions, and organizational shortcomings. The strategies of organizations tackling these obstacles used broad and targeted interventions. These strategies included bridging the infrastructure gap, use of empowering information, leveraging technology, and cross-sectoral collaboration as well as differentiated distribution and leveraged-bidirectional and leveraged-shared distribution. Managers who are interested in reaching into the BOP could well learn from the strategies adopted by the organizations discussed here, which are in many respects at the forefront of efforts to serve and engage with the BOP.
REFERENCES


Figure 1
Factors affecting the rural population’s income and quality of life

Inflow: inputs, consumer goods, services  
Rural area  
Outflow: produce, services

Effect on value from buying goods & services
High cost of procuring inputs & consumer goods.

Effect on income from selling produce
High cost of shipping produce.

FACTORS
Infrastructure: roads, telecom, electricity

Lack of information

Difficulty in assessing price, quality & value of purchases.

Ignorance about market conditions & prices for produce.

Inadequate knowledge & skills

Misjudge when/where to sell produce. Negotiate adverse terms.

Forgo best deals. Misjudge products’ fit with own needs.

Misjudge when/where to sell produce. Negotiate adverse terms.

Organizational shortcomings

Low bargaining power with buyers

Low bargaining power with sellers. Fail to share best

Cultural rigidities

Some segments fail to access services.

Some segments get shortchanged when selling produce.

Illiteracy

Unable to access products & services equitably.

Unable to leverage knowledge – miss income opportunities.

Unable to access products & services equitably.
Figure 2
Interview sites

- Government of India Department of Posts, Rural Electrification, Roads, Public Distribution. (New Delhi)
- Gyanshala HQ and slum classes. (Ahmedabad, Gujarat)
- HUL HQ (Mumbai, Maharashtra)
- GOI development agency & Reserve Bank of India (Mumbai, Maharashtra)
- ITC e-Choupal villages (Madhya Pradesh)
- ITC choupal Saagar super market (Mhow, Madhya Pradesh)
- HUL Shakti entrepreneur villages (Andhra Pradesh)
- ITC Agri Business Division HQ (Hyderabad, Andhra Pradesh)
Figure 3
Intervention to enhance welfare through socially responsible distribution

Higher income, Cheaper consumer goods

Organizational shortcomings

Illiteracy

Cultural rigidities

Infrastructure: Communications, Electricity, Roads

Information

Knowledge & skills

Bargaining power

Higher income, Cheaper consumer goods

SRD Model

Players

Moderating factors
## Figure 4
### Types of Intervention

<table>
<thead>
<tr>
<th>Scope of Intervention</th>
<th>Broad</th>
<th>Targeted</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Direct Effect</strong></td>
<td>Govt.</td>
<td>Private Sector</td>
</tr>
<tr>
<td>Infrastructure development (e.g., Rural Electrification)</td>
<td>• Specific infrastructure projects (e.g., ITC e-choupal)</td>
<td></td>
</tr>
<tr>
<td>Information provision (e.g., govt. controlled media)</td>
<td>• Information pertinent to particular tasks (e.g., ITC commodities data)</td>
<td></td>
</tr>
<tr>
<td>Knowledge provision (e.g., extension services)</td>
<td>• Knowledge provision specific to task (e.g., HUL dental hygiene practices)</td>
<td></td>
</tr>
<tr>
<td>NGOs</td>
<td>• Information provision (e.g., information/warnings of corporate negative externalities)</td>
<td>NGOs</td>
</tr>
<tr>
<td>• Information provision (e.g., information/warnings of corporate negative externalities)</td>
<td>• Information provision specific to tasks (e.g., commodity prices to farmers)</td>
<td></td>
</tr>
<tr>
<td>• Knowledge provision (e.g., Gyanshala addressing illiteracy)</td>
<td>• Knowledge provision specific to tasks (e.g., educating farmers on timing of commodity sales)</td>
<td></td>
</tr>
<tr>
<td><strong>Moderating Effect</strong></td>
<td>Govt.</td>
<td>Private Sector</td>
</tr>
<tr>
<td>Institutional development (e.g., commercial code)</td>
<td>• Measures to overcome illiteracy obstacles to the task (e.g., HUL e-Shakti web interface)</td>
<td></td>
</tr>
<tr>
<td>Addressing market abuse (e.g., anti-trust action)</td>
<td>• Increased competition (e.g., ITC)</td>
<td></td>
</tr>
<tr>
<td>NGOs</td>
<td>• Institutional development (e.g., advocacy of rights of vulnerable/marginalized groups)</td>
<td>NGOs</td>
</tr>
<tr>
<td>• Institutional development (e.g., advocacy of rights of vulnerable/marginalized groups)</td>
<td>• Addressing market abuse (e.g., microfinance to support BOP entrepreneurs, such as Shakti)</td>
<td></td>
</tr>
<tr>
<td>• Addressing market abuse (e.g., advocacy of microfinance as solution to credit abuse)</td>
<td>• Organizational shortcomings (via development of self-help groups)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Govt.</td>
<td>• Development of specific market institutions (e.g., set up &amp; oversee mandi system)</td>
</tr>
</tbody>
</table>
Figure 5
Degrees of leveraged distribution

Unidirectional with single organization’s products. E.g., HUL.

Bidirectional with single organization’s products. E.g., ITC at an earlier stage

Bidirectional for single organization’s products & unidirectional for multiple organization’s products. E.g., ITC currently.

Bidirectional for multiple organizations’ products. E.g., Department of Posts.
Table 1
Population living below $1 and $2 per day, 2001* (million)

<table>
<thead>
<tr>
<th>Region</th>
<th>Region’s below-$1 pop. (m)</th>
<th>% of region’s pop. living below $1</th>
<th>Region’s below-$1 pop. as ratio of total below-$1 pop. (%)</th>
<th>Region’s below-$2 pop. (m)</th>
<th>% of region’s pop. living below $2</th>
<th>Region’s below-$2 pop. as ratio of total below-$2 pop. (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Column #</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
</tr>
<tr>
<td>East Asia</td>
<td>271.3</td>
<td>14.9</td>
<td>24.8</td>
<td>864.3</td>
<td>47.4</td>
<td>31.6</td>
</tr>
<tr>
<td>Of which China</td>
<td>211.6</td>
<td>16.6</td>
<td>19.4</td>
<td>593.6</td>
<td>46.7</td>
<td>21.7</td>
</tr>
<tr>
<td>Eastern Europe &amp; Central Asia</td>
<td>17.6</td>
<td>3.7</td>
<td>1.6</td>
<td>93.5</td>
<td>19.7</td>
<td>3.4</td>
</tr>
<tr>
<td>Latin America &amp; Caribbean</td>
<td>49.8</td>
<td>9.5</td>
<td>4.6</td>
<td>128.2</td>
<td>24.5</td>
<td>4.7</td>
</tr>
<tr>
<td>Middle East &amp; North America</td>
<td>7.1</td>
<td>2.4</td>
<td>0.6</td>
<td>69.8</td>
<td>23.2</td>
<td>2.6</td>
</tr>
<tr>
<td>South Asia</td>
<td>431.1</td>
<td>31.3</td>
<td>39.5</td>
<td>1063.7</td>
<td>77.2</td>
<td>38.9</td>
</tr>
<tr>
<td>Of which India</td>
<td>358.6</td>
<td>34.7</td>
<td>32.8</td>
<td>826.0</td>
<td>79.9</td>
<td>30.2</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>315.8</td>
<td>46.9</td>
<td>28.9</td>
<td>516.0</td>
<td>76.6</td>
<td>18.9</td>
</tr>
<tr>
<td>Total</td>
<td>1092.7</td>
<td>21.1</td>
<td>100.0</td>
<td>2735.6</td>
<td>52.9</td>
<td>100.0</td>
</tr>
</tbody>
</table>

* the precise income used is $1.08 and $2.15 per day at 1993 PPP.

Notes
Numbers in column 2 are the ratio of the region’s total population that lives on less than $1. For example, 14.9% of all East Asians live on less than $1 – so 271.3m is 14.9% of total East Asian population.
Numbers in column 3 indicate what percentage of the world’s population of people living on less than $1 are accounted for by people in that region. For example, 24.8% of the world’s population living on less than $1 (which is 1092.7m) are East Asians; i.e., 271.3m is 24.8% of 1092.7m.
Numbers in columns 5 and 6 are similar to those in columns 2 and 3 with $2 being the benchmark instead of $1.

Table 2
Distance to primary school

<table>
<thead>
<tr>
<th>Country</th>
<th>Distance to the nearest primary school (km)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Poorest fifth</td>
</tr>
<tr>
<td>Bangladesh 96-97</td>
<td>0.2</td>
</tr>
<tr>
<td>Chad 1998</td>
<td>9.9</td>
</tr>
<tr>
<td>India 1998-99</td>
<td>0.5</td>
</tr>
<tr>
<td>Mali 1995-96</td>
<td>7.9</td>
</tr>
<tr>
<td>Nigeria 1999</td>
<td>1.8</td>
</tr>
<tr>
<td>Uganda 1995</td>
<td>1.4</td>
</tr>
<tr>
<td>Zimbabwe 1994</td>
<td>3.0</td>
</tr>
</tbody>
</table>

* Ratio of distance for poorest fifth to distance for richest fifth.
### Table 3
Electrification rates, 2002

<table>
<thead>
<tr>
<th>Region</th>
<th>Electrification rate (%)</th>
<th>Overall</th>
<th>Urban</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-Saharan Africa</td>
<td>23.6</td>
<td>51.5</td>
<td>8.4</td>
<td></td>
</tr>
<tr>
<td>China and East Asia</td>
<td>88.1</td>
<td>96.0</td>
<td>83.1</td>
<td></td>
</tr>
<tr>
<td>South Asia</td>
<td>42.8</td>
<td>69.4</td>
<td>32.5</td>
<td></td>
</tr>
<tr>
<td>Latin America</td>
<td>89.2</td>
<td>97.7</td>
<td>61.4</td>
<td></td>
</tr>
<tr>
<td>Transition economies &amp; OECD</td>
<td>99.5</td>
<td>100.0</td>
<td>98.2</td>
<td></td>
</tr>
<tr>
<td>World</td>
<td>73.7</td>
<td>90.7</td>
<td>58.2</td>
<td></td>
</tr>
</tbody>
</table>


### Table 4
India’s rural and urban population living below $1 and $2 per day, 2001**

<table>
<thead>
<tr>
<th></th>
<th>Total Pop. (m)</th>
<th>Pop. with income below $1/day (m)</th>
<th>% below $1</th>
<th>Pop. with income below $2/day (m)</th>
<th>% below $2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>744</td>
<td>311</td>
<td>41.8</td>
<td>658</td>
<td>88.4</td>
</tr>
<tr>
<td>Urban</td>
<td>289</td>
<td>56</td>
<td>19.3</td>
<td>175</td>
<td>60.5</td>
</tr>
<tr>
<td>Total</td>
<td>1033</td>
<td>367</td>
<td>35.5</td>
<td>833</td>
<td>80.6</td>
</tr>
</tbody>
</table>

Source: World Bank Povcal data source. Some numbers have been calculated using downloaded data.

** the precise income used is $1.08 and $2.15 per day at 1993 PPP.

### Table 5
Rural Share in Purchase of Selected Consumable and Durable Products in India, 1993-94

<table>
<thead>
<tr>
<th>Product</th>
<th>Rural share (%)</th>
<th>Product</th>
<th>Rural share (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Washing cake</td>
<td>71</td>
<td>Portable radios</td>
<td>79</td>
</tr>
<tr>
<td>Casual footwear</td>
<td>69</td>
<td>Bicycles</td>
<td>78</td>
</tr>
<tr>
<td>Cooking oil</td>
<td>67</td>
<td>Mechanical wrist watches</td>
<td>76</td>
</tr>
<tr>
<td>Cigarettes</td>
<td>59</td>
<td>Sewing machines</td>
<td>64</td>
</tr>
<tr>
<td>Toilet soap</td>
<td>57</td>
<td>Table fans</td>
<td>62</td>
</tr>
<tr>
<td>Tea</td>
<td>53</td>
<td>B&amp;W TVs</td>
<td>57</td>
</tr>
<tr>
<td>Washing powder</td>
<td>53</td>
<td>Cassette recorders</td>
<td>53</td>
</tr>
<tr>
<td>Talcum powder</td>
<td>44</td>
<td>Motorcycles</td>
<td>49</td>
</tr>
<tr>
<td>Toothpaste</td>
<td>38</td>
<td>Scooters</td>
<td>30</td>
</tr>
<tr>
<td>Electric bulbs</td>
<td>38</td>
<td>Mixers/grinders</td>
<td>25</td>
</tr>
<tr>
<td>Shampoo</td>
<td>25</td>
<td>Washing machines</td>
<td>12</td>
</tr>
<tr>
<td>Nail polish</td>
<td>24</td>
<td>VCRs</td>
<td>8</td>
</tr>
<tr>
<td>Lipstick</td>
<td>5</td>
<td>Hot water heaters</td>
<td>1</td>
</tr>
</tbody>
</table>

1993 dollars at purchasing price parity

ii Prahalad and his colleagues count a much larger number (four billion) in their definition of the bottom of the pyramid; that is people earning below $1500 per year at purchasing power parity (Prahalad and Hart, 2002, Prahalad, 2005). We choose to work with the more widely-accepted number of poor people, which is around 2 billion as discussed earlier.

iii For other case data on ITC Limited see: Upton and Fuller, 2004, and Prahalad, 2005

iv For other case data on HUL see: Rangan and Rajan, 2005, and Prahalad, 2005.

v “Extension services” refer to programs run by government agencies, universities and cooperatives to provide information, training and education via workshops, classes, events.