The Fortune at the Bottom of the Pyramid: Eradicating Poverty Through Profits

C.K. Prahalad

Co-author of the International Bestseller Competing for the Future

Enabling Dignity and Choice Through Markets
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*The Fortune at the Bottom of the Pyramid*

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*The Secret: What Great Leaders Know-And Do*
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The Fortune at the Bottom of the Pyramid

C. K. Prahalad

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Contents

Preface  xi
About the Author  xix

Part I  The Fortune at the Bottom of the Pyramid  1

Chapter 1  The Market at the Bottom of the Pyramid  3
   The Power of Dominant Logic  6
   The Nature of the BOP Market  10
      There Is Money at the BOP  10
      Access to BOP Markets  13
      The BOP Markets Are Brand Conscious  14
      The BOP Market Is Connected  14
      BOP Consumers Accept Advanced Technology Readily  15
   The Market Development Imperative  16
      Create the Capacity to Consume  16
      The Need for New Goods and Services  19
      Dignity and Choice  20
      Trust Is a Prerequisite  21
   Benefits to the Private Sector  22

Chapter 2  Products and Services for the BOP  23
   A Philosophy for Developing Products and Services for the BOP  24
   Twelve Principles of Innovation for BOP Markets  25
Making It Happen  28
Conclusion  46

Chapter 3  ■ BOP: A Global Opportunity?  47
Engaging the BOP  48
Local Growth Opportunities  50
   Learning to Grow  50
Local Innovations and Global Opportunity  52
BOP Solutions for Developed Markets  53
Lessons for MNCs from BOP Markets  55
   Capital Intensity  55
   Sustainable Development  57
   Innovations  57
The Cost of Managing  58
Learning to Live in a Network of Relationships  61

Chapter 4  ■ The Ecosystem for Wealth Creation  63
Market-Oriented Ecosystem  65
Ecosystems for a Developing Country  66
Learning the Sanctity of Contracts  68
Reducing Inequities in Contracts  69
Building Governance Capabilities Among the Poor  72

Chapter 5  ■ Reducing Corruption:
Transaction Governance Capacity  77
Are the Poor Poor?  78
TGC  81
Building TGC  83
The Andhra Pradesh e-Governance Story  85
eSeva  89
Center for Good Governance  90
Impediments  94
Lessons from the Andhra Pradesh Experiment  94
Appendix: List of eSeva Services  97
Chapter 6  ■ Development as Social Transformation 99

Development as Social Transformation 100
Breaking Down Barriers to Communication 102
BOP Consumers Upgrade 105
Gaining Access to Knowledge 106
Identity for the Individual 107
Women Are Critical for Development 108
Evolving Checks and Balances 108
The Real Test: From the Pyramid to the Diamond 109

Part II  ■ Innovative Practices at the Bottom of the Pyramid 113

Section I  ■ The Market at the Bottom of the Pyramid 115

Casas Bahia: Fulfilling a Dream 117
CEMEX: Innovation in Housing for the Poor 147

Section II  ■ Known Problems and Known Solutions: What Is the Missing Link? 169

The Annapurna Salt Story: Public Health and Private Enterprise 171
Selling Health: Hindustan Lever Limited and the Soap Market 207

Section III  ■ Known Problems and Unique Solutions 241

Jaipur Foot: Challenging Convention 243
The Aravind Eye Care System: Delivering the Most Precious Gift 265

Section IV  ■ Known Problems and Systemwide Reform 287

ICICI Bank: Innovations in Finance 289
The ITC e-Choupal Story: Profitable Rural Transformation 319
The EID Parry Story  On CD
Section V  Scaling Innovations  359

The Voxiva Story  361
Innovations in Energy:
E+Co’s Investment in Tecnosol  On CD

Section VI  Creating Enabling Conditions for the Development of the Private Sector  On CD

Citizen Centricity:
E-Governance in Andhra Pradesh  On CD

Biography  381
Index  389

PART III  CD

35 minutes of video success stories filmed on location in the Bottom of the Pyramid in India, Peru, Mexico, Brazil, and Venezuela

Casas Bahia  (3:54)
CEMEX  (3:07)
Annapurna Salt  (4:05)
Hindustan Lever Limited  (4:16)
Jaipur Foot  (4:40)
Aravind Eye Care  (6:08)
ICICI Bank  (4:23)
ITC e-Choupal  (4:08)
EID Parry  (4:12)
Voxiva  (3:33)
E+Co/Tecnosol  (4:34)
Andhra Pradesh  (3:30)

Interactive practices text in PDF format

The EID Parry Story
Innovations in Energy: E+Co’s Investment in Tecnosol
Citizen Centricity: E-Governance in Andhra Pradesh
This book is a result of a long and lonely journey for me. It started during the Christmas vacation of 1995. During that period of celebration and good cheer, one issue kept nagging me: What are we doing about the poorest people around the world? Why is it that with all our technology, managerial know-how, and investment capacity, we are unable to make even a minor contribution to the problem of pervasive global poverty and disenfranchisement? Why can’t we create inclusive capitalism? Needless to say, these are not new questions. However, as one who is familiar with both the developed and the developing world, the contrasts kept gnawing at me. It became clear that finding a solution to the problems of those at the bottom of the economic pyramid around the world should be an integral part of my next intellectual journey. It was also clear that we have to start with a new approach, a “clean sheet of paper.” We have to learn from the successes and failures of the past; the promises made and not fulfilled. Doing more of the same, by refining the solutions of the past—developmental aid, subsidies, governmental support, localized nongovernmental organization (NGO)—based solutions, exclusive reliance on deregulation and privatization of public assets—is important and has a role to play, but has not redressed the problem of poverty.

Although NGOs worked tirelessly to promote local solutions and local entrepreneurship, the idea of large-scale entrepreneurship as a possible solution to poverty had not taken root. It appeared that many a politician, bureaucrat, and manager in large domestic and global firms agreed on one thing: The poor are wards of the state. This implicit agreement was bothersome. The large-scale private sector was only
marginally involved in dealing with the problems of 80 percent of humanity. The natural question, therefore, was this: What if we mobilized the resources, scale, and scope of large firms to co-create solutions to the problems at the bottom of the pyramid (BOP), those 4 billion people who live on less than $2 a day? **Why can’t we mobilize the investment capacity of large firms with the knowledge and commitment of NGOs and the communities that need help?**

**Why can’t we co-create unique solutions?** That was the beginning of my journey to understand and motivate large firms to imagine and act on their role in creating a more just and humane society by collaborating effectively with other institutions.

It was obvious that managers can sustain their enthusiasm and commitment to activities only if they are grounded in good business practices. The four to five billion people at the BOP can help redefine what “good business practice” is. This was not about philanthropy and notions of corporate social responsibility. These initiatives can take the process of engagement between the poor and the large firm only so far. Great contributions can result from these initiatives, but these activities are unlikely to be fully integrated with the core activities of the firm. For sustaining energy, resources, and innovation, the BOP must become a key element of the central mission for large private-sector firms. The poor must become active, informed, and involved consumers. Poverty reduction can result from co-creating a market around the needs of the poor.

We have to discard many of the “for and against” views of the world. For example, “are you for globalization or against it” is not a good question. Globalization, like all other major social movements, brings some good and some bad. Similarly, global versus local is not a useful debate. The tensions are real. Very early in my career, I learned that even within the multinational corporation (MNC) that is not a settled debate.

Similarly, the debate between small (e.g., microfinance) and large (e.g., multinational firms) is not a useful debate either. Large business can bring efficiency. NGOs can bring creativity to solve the problems that face us all. Certainly, I wanted to avoid the paternalism towards the poor that I saw in NGOs, government agencies, and MNCs.

**This book is concerned about what works.** This is not a debate about who is right. I am even less concerned about what may go wrong. Plenty can and has. I am focused on the potential for learning from the few experiments that are going right. These can show us the way
forward. I do not want the poor of the world to become a constituency. I
want poverty to be a problem that should be solved. This book is about
all of the players—NGOs, large domestic firms, MNCs, government
agencies, and most importantly, the poor themselves—coming together
to solve very complex problems that we face as we enter the 21st century.
The problem of poverty must force us to innovate, not claim "rights to
impose our solutions."

The starting point for this transition had to be twofold. First, we
should consider the implications of the language we use. "Poverty
alleviation" and "the poor" are terms that are loaded with meaning and
historical baggage. The focus on entrepreneurial activities as an antidote
to the current malaise must focus on an active, underserved consumer
community and a potential for global growth in trade and prosperity as
the four to five billion poor become part of a system of inclusive
capitalism. We should commence talking about underserved consumers
and markets. The process must start with respect for Bottom of
Pyramid consumers as individuals. The process of co-creation
assumes that consumers are equally important joint problem-
solvers. Consumers and consumer communities will demand and get
choice. This process of creating an involved and activist consumer is
already emerging. The BOP provides an opportunity to turbocharge this
process of change in the traditional relationship between the firm and
the consumer. Second, we must recognize that the conversion of the BOP
into an active market is essentially a developmental activity. It is not
about serving an existing market more efficiently. New and creative
approaches are needed to convert poverty into an opportunity
for all concerned. That is the challenge.

Once the basic approach was clear, the opportunities became obvious.
The new viewpoint showed a different landscape and a focus on early and
quiet attempts by some firms to explore this terrain. Unilever and its
Indian subsidiary, Hindustan Lever Limited, was one such early
experimenter. Around 1997, I found a kindred spirit in colleague
Professor Stu Hart at the University of Michigan Business School
(UMBS), who was approaching similar problems from a sustainable
development perspective. We produced a working paper called "The
Strategies for the Bottom of the Pyramid." Needless to say, not a single
journal would accept the article for publication. It was too radical.
Reviewers thought that it did not follow the work of developmental
economists. Nobody noticed that we were offering an alternative to the
traditional wisdom of how to alleviate global poverty. Thanks to the Web, various revisions of the working paper circulated freely. Surprisingly, a number of managers read it, accepted its premise, and started to initiate action based on it. Managers at Hewlett-Packard, DuPont, Monsanto, and other corporations started a venture fund and dedicated senior managers’ time and energy to examine this opportunity. Meanwhile, the Digital Dividend conference organized by Dr. Allen Hammond and the World Resources Institute in Seattle in 1999 provided a forum to examine these ideas in depth. I have not looked back. Since 1997, I have used every possible platform—academic, managerial, and governmental—to push the idea of the BOP as a market and a source of innovations. During the last five years, slowly at first but now more rapidly, a large number of NGOs, academics, and managers have started to discuss the need for an alternate approach to poverty alleviation and the potential role of the private sector and entrepreneurship as one of the critical elements.

The publication of the two articles, “The Fortune at the Bottom of the Pyramid,” in *Strategy+Business* (January 2002) with Stu Hart, and “Serve the World’s Poor, Profitably” in the *Harvard Business Review* (September 2002) with Allen Hammond, facilitated the process of widespread discussion within corporations. Today, the discussion is not about “whether” but how fast and where. We have come a long way.

In the fall of 2002, several MBA students at the UMBS came to me and said that they would like to work with me on BOP issues and that they were intrigued by the ideas they had seen in print as well as my message in numerous lectures on campus and outside. I was not easily convinced. I imposed extraordinary demands on them to convince me that they really cared. They convinced me overwhelmingly. They were ready to travel, explore opportunities, and endure the painful task of assembling convincing evidence. That was the start of the now widely accepted XMAP projects (a variant of International Multidisciplinary Action Projects [IMAP], which UMBS has long supported with faculty mentoring.) The X in XMAP stood for experimental. The enthusiasm of the students, especially Cynthia Casas and Praveen Suthrum, provided the glue and helped see the project through administrative difficulties. I am grateful to all the MBA students whose dedication made this book possible.

The book is in three parts. In Part I we develop a framework for the active engagement of the private sector at the BOP. It provides the basis
for a profitable win–win engagement. The focus is on the nature of changes that all players—the large firm, NGOs, governmental agencies, and the poor themselves—must accept to make this process work. Part II describes 12 cases, in a wide variety of businesses, where the BOP is becoming an active market and bringing benefits, far beyond just products, to consumers. The cases represent a wide variety of industries—from retail, health, and financial services to agribusiness and government. They are located in Peru, Brazil, Nicaragua, Mexico, and India. They represent a wide variety of institutions working together—subsidiaries of MNCs, large domestic firms, startups, and NGOs. They are all motivated by the same concern: They want to change the face of poverty by bringing to bear a combination of high-technology solutions, private enterprise, market-based solutions and involvement of multiple organizations. They are solving real problems. The BOP consumers get products and services at an affordable price, but more important, they get recognition, respect, and fair treatment. Building self-esteem and entrepreneurial drive at the BOP is probably the most enduring contribution that the private sector can make. Finally, decision-makers do not often hear the voices of the poor. We tend to make assumptions about how they feel. Part III (video stories on CD) is an attempt to tell the story primarily from their perspective. Each of the research teams—MBA students—went with video cameras and recorded their conversations with the BOP consumers as well as with the company managers. We collected well over 100 hours of video as part of the research. We present 35 minutes of the story from the point of view of the BOP consumers, the so-called poor. They are the primary storytellers. They tell us in their language—from Portuguese to Hindi—their view of what the involvement of the private sector and the resultant transition have meant for them. The three parts—the rationale for and the approach to private-sector involvement, the in-depth case studies, and the voices of the BOP consumers—are all an integral part of the book. They are intended to focus not only on the intellectual but also on the emotional arguments for encouraging private-sector engagement.

No research of this nature can be done without the active support of firms and managers. They gave us open access, their time, and their insights. Their enthusiasm was infectious. None of us who was a part of the research need any more convincing. We do know that the entrepreneurship and inventiveness of dedicated managers can bring a sea of change rapidly. That is true across the world. We could not have
documented the richness of the transformation taking place at the BOP through the efforts of dedicated management teams without an unstinting effort by the students. The names of the students who were involved in developing the cases stories are given at the end of the book.

Research of this nature, on the cutting edge, cannot take place in an academic institution without the active support of the dean. Dean Robert J. Dolan bet on the initiative. Associate Dean Michael D. Gordon remained a constant source of encouragement to me and to the students in all stages of the project, from obtaining enough video cameras to providing substantive inputs to the research. His deep belief and commitment to the research agenda were critical to the project. Several of my colleagues provided support. I owe special thanks to Associate Dean Gene Anderson, Associate Dean Izak Duenyas, and colleagues Andy Lawlor and Jan Svejnar, former Director of the William Davidson Institute.

It was fortuitous that Kofi Annan, Secretary General of the United Nations, constituted a special commission on Private Sector and Development under the auspices of the United Nations Development Program and its Administrator Mark Malloch Brown. As a member of the Commission, I had a chance to share my ideas with the members of the Commission and staff and found a very useful platform for dialogue. Nissim Ezekiel, Yann Risz, Sahb Sobhani, Jan Krutzinna, and Naheed Nenshi showed great willingness to debate and challenge many of the ideas presented in this book. I have benefited from their dialogue. It is my hope that the body of work represented in this book influenced the thinking of the Commission as well.

No project of this size can be done without the active support of a wide variety of people. Cynthia Shaw (UMBS) and Fred Wessells provided editorial assistance in reducing the mountain of data we had collected on each case story into a manageable document. Russ Hall provided additional editorial support and helped in considerably improving the case studies and the text. Many of my colleagues, including Prof. M. S. Krishnan, Prof. Venkat Ramaswamy, Prof. Michael Gordon, and Ron Bendersky (Executive Education, UMBS) helped with detailed suggestions for improving the text. Hrishi Bhattacharyya (Unilever), Allen Hammond (World Resources Institute), and Jeb Brugmann and Craig Cohon (Globalegacy) provided useful insights. The Prentice Hall team has been exceptional in its support and belief in the message. Jerry Wind (Wharton) accepted the idea of
this book with great enthusiasm. The editorial team led by Tim Moore and including John Pierce and Martin Litkowski was remarkable in their support. Their commitment to this book has been a source of strength. Patti Guerrieri was always willing to help and produced yet another revision of the manuscript with patience and quiet competence. Kimberly Ward (UMBS) oversaw the entire project, and Brian Greminger worked magic with the videos. Both of them, by their dedication to the students and to the overall project, were a source of inspiration. Finally, the students stayed with the project for over a year, always managing to do more and accommodating what must have appeared to be random demands on their time.

The biggest supporters of this project were my family. Our children, Murali Krishna and Deepa, and the latter’s husband, Ashwin, kept me going when I was willing to give up the idea of writing a book-length manuscript. As always, my wife, Gayatri, was my source of strength. She deeply believed in the cause and accompanied me to a wide variety of on-site visits, be it Jaipur Foot or the Shakti Amma. She willingly created the space and time for me to work on this project.

It is my hope that this book will provide the impetus for a more active engagement of the private sector in building the marketing ecosystems for transforming the BOP.

C. K. Praballad
San Diego
About the Author

C. K. Prahalad

“...he may well be the most influential thinker on business strategy today.”

BusinessWeek

Internationally recognized as a specialist on corporate strategy and value-added of top management in multinational corporations, he has consulted with many of the world’s foremost companies. In addition to being the Harvey C. Fruehauf Professor of Business Administration at the University of Michigan, he serves on the board of Directors of NCR Corp., Hindustan Lever Ltd., and the World Resources Institute.

A prolific author as well, his book, Competing for the Future (co-authored with Gary Hamel), was a national bestseller and was the Best Selling Business Book of the Year in 1994. He also co-authored Multinational Mission: Balancing Local Demands and Global Vision (in 1987 with Yves Doz) and The Future of Competition: Co-Creating Unique Value with Customers (in 2004 with Venkat Ramaswamy).

He has been named among the top ten management thinkers of the world in every major survey for over ten years.
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We have described the process by which large firms can create products and services that are ideally suited for the BOP markets. It is natural to ask whether the managerial energy required for these innovations is justified. Although there are opportunities for growth in BOP markets, are these opportunities attractive enough for large firms (including MNCs) to go through the changes that are required in their internal systems and processes? To challenge their dominant logic? Similarly, will the social and developmental benefits of such business growth be substantial enough for NGOs and community organizations to give priority to market-based approaches?

I believe the answer is an unambiguous “yes.” Based on emerging evidence, we can identify four distinct sources of opportunity for a large firm that invests the time and energy to understand and cater to the BOP markets:

1. Some BOP markets are large and attractive as stand-alone entities.
2. Many local innovations can be leveraged across other BOP markets, creating a global opportunity for local innovations.

3. Some innovations from the BOP markets will find applications in developed markets.

4. Lessons from the BOP markets can influence the management practices of global firms.

The benefits of operating at the BOP, therefore, do not just accrue in local markets. We describe each one of these opportunities next.

**Engaging the BOP**

There are two ways in which large firms tend to engage the BOP markets. The traditional approach of many MNCs is to start from the business models honed in the developed markets—the top of the pyramid and their zone of comfort. This approach to the BOP market inevitably results in fine-tuning current products and services and management practices. There is growing evidence that this approach is a recipe for failure. MNCs and large firms have to start from a deep understanding of the nature and the requirements of the BOP, as outlined in Chapter 2, and then architect the business models and the management processes around these requirements. This approach to the BOP market will not only allow large firms to succeed in local markets but will also provide the knowledge base to challenge the way they manage the developed markets. Let us consider some examples.

BOP consumers in Latin America are careful in their use of diapers. They use one or two changes per day compared to the five or six changes per day common among the top of the pyramid consumers. Because they can afford only one or two changes, they expect a higher level of absorbency in the diapers and an improved construction of the diaper that will accommodate additional load. This means that the firms have to technically upgrade the quality of their diapers for the BOP consumers compared to the products they currently sell to the rich in those markets. Needless to say, the new product built for the BOP market is higher in quality and provides a better price–performance proposition. Similarly, detergent soap, when used by BOP consumers in India washing their wares in running water, becomes mushy. About 20
to 25 percent of the detergent soap can be lost in the process. Therefore, HLL developed a soap with a coating on five sides, which makes it waterproof. The coated soap saves 20 percent wastage even in a hostile user environment. The innovation is of interest to the rich as well. Access to clean water is a major concern at the BOP. Polluted water (particulate, bacterial, and viral pollutants) is common. Boiling water is the only current alternative to eliminating the bacterial and viral pollutants. A focus on solving this problem has to start with a cost target that is no more than the cost of boiled water. Further, the system has to create a quality level that is better than boiled water (removing sediments). The process is of interest to the rich as well.

The quality, efficacy, potency, and usability of solutions developed for the BOP markets are very attractive for the top of the pyramid. The traditional MNC approach and the approach suggested here—top of the pyramid to BOP and from the BOP to the top of the pyramid—are shown in Figure 3.1.

As the foregoing examples illustrate, the demands of the BOP markets can lead MNCs to focus on next practices. The BOP can be a source of innovations for not only products and processes, but business models as well. Let us start with the growth opportunities in local, stand-alone BOP markets first.
Local Growth Opportunities

Some of the local BOP markets are very large. Large population base is one indicator of the size of the market opportunity at the BOP, not necessarily the per-capita income. For example, China, India, Indonesia, Brazil, Mexico, Russia, South Africa, and Nigeria can potentially be very large emerging BOP markets. If an industry or a firm finds the “sweet spot”—meaning the right business model and the right combination of products and services—these markets could have explosive growth. Consider growth opportunities in China. China today is the world’s largest producer of steel. The growth of the appliances, building, and auto markets has created an insatiable appetite for steel. China’s steel capacity is estimated at 220 million tons compared to 110 million tons in Japan and 90 million tons in the United States. China has also an installed base of over 250 million cell phones. That is larger than the installed base of the United States. China is also one of the largest markets for televisions, appliances, and autos. The growth spurt in China is without parallel. Similarly, India is at the very early stages of a growth spurt in a wide variety of businesses such as two-wheelers (4.8 million during the fiscal year 2002–03), housing loans, and wireless. The housing loan business went from a low of Rs. 19,723 crores during fiscal 1999–2000 ($ 4.4 billion) to Rs. 51,672 crores ($ 11.5 billion) in 2002–2003. During the latter part of 2003, India was adding about 1.5 million telephone subscribers/month.

Needless to say, this growth was not all derived from the very poor. There are a lot of emerging “middle”-class customers here, but most of them earn less than $1,500 per capita ($6,000 per family of four). This growth is not funneled by the top of the pyramid. What is it that MNCs learn in these markets? The lessons for Samsung and LG (South Korean suppliers of cell phones to India), not just for Reliance and Tatas (Indian providers of service), is that they have to adjust to rapid growth, not 2 to 5 percent per year, but perhaps 50 to 100 percent per year.

Learning to Grow

BOP markets can collapse the time frames taken for products, technologies, and concepts to diffuse in the system. Many of the drivers of change and market growth—deregulation, involvement of the private sector in BOP markets, digitization, ubiquitous connectivity and the
attendant change in the aspirations of people, favorable demographics (a young population), and access to credit—are simultaneously present in BOP markets. These drivers interact. The result is the challenge to the “S curve” that is the model for the diffusion of new products and services in the developed world. The changes that played out over 15 years in the developed markets are being collapsed into a short period of just three to five years in many BOP markets. M. S. Banga, CEO of HLL, suggests that the real challenge in BOP markets is that managers have to cope with the “I curve.” The entire management process in most large firms is geared for slow growth, if at all. The I curve challenges the status quo. The S and the I curves, the two approaches to diffusion of innovations (products and services), can be conceptualized as shown in Figure 3.2.

This is good news and bad news. A cell phone today is a telephone, a camera, a watch, a computer, and a partial radio and TV. Why would one need a traditional watch (other than as an ornament) if one had a cell phone? The I curve can rapidly propel some innovations and can equally rapidly destroy some traditional markets.1

Rapid growth can also make new demands on firms. For example, HLL wants to build a network of 1 million direct distributors. This means the recruitment and training of about 30,000 to 40,000 people every month. Evaluating applicants; identifying those who could make good HLL distributors; training them in products, businesses models, and the values of the company; and inducting such a large number into

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1. This example and the discussion of rapid growth are based on a case study presented in Bop to the Top: How Businesses Can Thrive in the New Global Marketplace (New York: Henry Holt, 2004), by Mark Hansen and Bill Drayton.
the system create new demands on the process of management. Very few firms around the world have experience in inducting this many new recruits (independent distributors) per month.

Local Innovations and Global Opportunity

The micro encapsulation of iodine in salt to preserve the iodine in the harsh conditions of transportation, storage, and cooking in India has found market opportunities in Africa, especially in Ivory Coast, Kenya, and Tanzania. Iodine Deficiency Disorder (IDD) is common across the developing world, and the solution found in India has been transported across other similar markets with IDD by Unilever. Similarly, during the late 1980s, in response to the growing success of Nirma, a local entrepreneurial startup in the detergent business that created a new category, focused on the BOP markets, HLL launched Wheel, intended for the same market segment. Wheel today is one of the largest brands in the HLL portfolio in India ($150 million). The BOP market has grown rapidly. BOP markets in India account for a total of 1.0 million tons of detergents, compared with 300,000 tons for the top of the pyramid. More important, the lessons learned in India were not lost on Unilever. It wanted to protect BOP markets in countries such as Brazil, Indonesia, and China. It took the lessons from developing Wheel in India—from the formulation, manufacturing process, packaging, pricing, distribution, and advertising and promotion—to Brazil. It introduced a similar product oriented toward the BOP called Ala. The product was a runaway success. The product was available in 2,000 small neighborhood stores in less than three months. The detergent team that developed the new business model for the BOP in India also went to Brazil and China to help build the distribution systems that were critical for the success of the business. Today, India is seen as a laboratory for similar “India-like” markets within Unilever. Product ideas and concepts are tried out in India with a global BOP market in mind. Similarly, the idea of single-serve units has become a global phenomenon in the BOP markets. The growth in fast-moving consumer goods businesses in Bangladesh, Nepal, Pakistan, and China has been fueled by similar requirements.

The success of Grameen Bank in developing microfinance in Bangladesh as a successful commercial operation has led to global interest
in the process. Grameen Bank was totally focused on BOP customers. The average loan size was less than $20 when it started. There are more than 17,000 microfinance operations that are variants of the Grameen concept around the world, including in the United States. The microfinance revolution now has its own global conference every year.

The success of Jaipur Foot is now exported to a wide variety of countries with similar requirements. The primary demand in all these countries for prosthetics is from BOP customers. They have been available in 19 countries, from Afghanistan to Vietnam. The Aravind Eye Hospital, in a similar vein, is training doctors to establish a low-cost, world-class delivery system for eye care in South Africa, Cambodia, and Vietnam. In an interesting twist of the traditional view of capabilities, the cost and quality advantages of cardiac care in India are allowing it to negotiate terms for the possibility of moving a portion of the patients from the National Health System in the United Kingdom to India. The total cost of the trip for the patient and an accompanying family member, the stays in India, and the cost of patient care will be less than the cost in the United Kingdom. More important, the quality of care is equally good or better. There are no delays in accessing care.

The Indian pharmaceutical industry had to learn to serve the BOP market. Prices were regulated by the government. Further, affordability of the public health system forced very low prices. It also forced them to develop methods for reverse engineering. Controversial as it is, the Indian pharmaceutical industry is able to deliver drugs coming off patents in the United States at a fraction of the cost charged by the established drug companies. However, the focus on the BOP has allowed these firms to invent cost-effective ways to manufacture, test, and distribute.

BOP Solutions for Developed Markets

In the rural areas of countries such as Peru, providing high-quality health care is difficult. More difficult is the surveillance of outbreaks of infectious diseases. These remote regions must be kept under constant surveillance to avoid the spread of disease, be it cholera or SARS. However, these locations are not well-connected for constant communications. PCs are rare, and telephone lines are a luxury. The question for public health professionals in such a situation is simple:
How do we connect remote areas to a real-time surveillance system so that the spread of infectious diseases can be monitored using devices that are currently available on location (often simple telephones)? This implies that the system must be simple and device-agnostic. Remote locations must be connected to a central node so that planners and policymakers are fully informed. Such a system, originally developed for Peru, is finding successes in the United States. The system, originally created by Voxiva, was based on three premises:

1. The system, to be robust, must be based on any device that is available: telephone (landline or wireless) or PC. The local community must know how to use the device. The telephone is the most widely used device for communications.
2. The remote populations were either illiterate or just moderately literate. The system had to deskill diagnosis at the point of patient contact. The chances of having a trained and experienced doctor in remote regions in the Andes are low. However, the quality of the diagnosis must be world-class.
3. The system must be reliable and available in real time so that senior members of the health care system are able to react immediately to emerging problems of infectious diseases. Early detection of health problems and rapid response (reaction time) are critical components of the system.

The system was first deployed in the remote regions of Peru and was a success. Similar problems confront the United States. The CDC and the FDA have to prepare to remotely monitor outbreaks of diseases caused by terrorists or problems in food quality that must be traced rapidly. Blood banks have to be monitored for stock and quality. When the FDA and CDC were looking for a system to help them with remote, real-time surveillance, they found the Voxiva system to be the best. Both of them are now Voxiva customers. Further, as the U.S. Department of Defense was inoculating soldiers with smallpox vaccine as a preventive measure, it needed a system for monitoring soldiers for possible adverse reactions to the vaccine. Voxiva, with its capabilities, was the obvious choice. Voxiva has moved on to sell its platforms for the detection of SARS, HIV, and other public health problems. The underlying platform is low-cost, robust, and simple, needs few skills, and can be grafted onto an existing telecom network.
Lessons for MNCs from BOP Markets

The most interesting lesson for MNCs from operating in the BOP market is about costs—for innovation, distribution, manufacturing, and general “costs of organization.” Because the BOP forces an extraordinary emphasis on price performance, firms must focus on all elements of cost. Shortage and the cost of capital force firms in BOP markets to be very focused on the efficiency of capital use. MNCs tend to impose their management systems and practices on BOP markets and find that it is hard to make a profit. The choices are simple: Change the management systems to cut costs or lose significant amounts of money. The lessons learned from BOP markets by MNCs are covered in the following sections.

Capital Intensity

The judicious use of capital is a critical element of success in BOP markets. For example, HLL works with negative working capital. It focuses on reducing capital intensity in plants and equipment. By focusing on a judicious mix of outsourcing to dedicated suppliers, it not only reduces its capital intensity but creates several small and medium-size enterprises that can conform to the norms and standards set by HLL. HLL, as the only customer to these suppliers, can and does influence their operations. Second, a senior management focus on logistics and distribution is critical for reducing the capital needs of the business. HLL serves 850,000 retail outlets in one of the most difficult distribution terrains. The sales data from every retail outlet is collected and processed in a central processing facility. All the retail outlets are serviced frequently. Finally, a focus on revenue management allows for reducing the capital tied up in receivables. HLL is able to collect revenues in real time as the goods leave the warehouses of their suppliers. The suppliers might provide credit to the dealers and retailers. HLL as a manufacturer can reduce its capital intensity. The results can be compelling. For example, the system for focusing on capital first initiated with the introduction of the detergent Wheel to the BOP provided evidence of how many more opportunities for value creation can be unearthed by serving the needs of the BOP. A comparison of the financial performance of Nirma (the local competitor), HLL in the top of
the pyramid market with Surf, and HLL in the BOP market with Wheel, is shown in Table 3.1.

It is important to separate gross margins from return on capital employed (ROCE). The real economic profit is in the effective use of capital.

A similar situation exists at the Aravind Eye Hospital. It uses the most modern equipment available in any facility in the world. It costs are dramatically brought down by its ability to use the equipment effectively, as it specializes only in eye care and every doctor and nurse team performs an average of 50 surgeries per day. Only 40 percent of its patients pay. A cataract surgery costs $50 compared to $3,000 to $3,500 in the United States. In spite of these differences, Aravind’s ROCE is in the 120 to 130 percent range. Aravind is totally free of debt. The revenues for the year 2001–2002 were Rs. 388.0 million ($86 million) with a surplus (before depreciation) of Rs. 210.5 million ($46.5 million). This would be the envy of every hospital in the United States. The productivity and the volumes at Aravind are the basis for this level of profitability. Every doctor accounts for 2,000 operations per year, compared to a national average of 300 in India. The four locations in the Aravind system process more than 1.4 million patients (including 1,500 eye camps) and perform 200,000 surgeries. They operate with about 80 doctors and a total staff, including paramedics, counselors, and others, of 1,275.

With an ITC e-Choupal, it costs the company about Rs. 100,000 ($2,100) per kiosk installation. The company saves about Rs. 270 per ton on the acquisition of soybeans. The payback period can be as low as one full season. The recovery of that investment requires an acquisition target of about 4,000 to 5,000 tons from a single kiosk (a cluster of villages is supported by the kiosk). Adding additional services such as

<table>
<thead>
<tr>
<th>Table 3.1 Economic Value Creation at the BOP</th>
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<tr>
<td>Sales ($ Million)</td>
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<td>Gross margin (%)</td>
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<td>Return on capital employed (%)</td>
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</tbody>
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Notes: The bottom line can be very profitable. Low margins/high unit sales. Game is about volume and capital efficiency. Economic profit vs. gross margins.

Source: John Ripley, Senior Vice President, Unilever PLC.
selling seeds, fertilizers, and crop insurance can enhance the profitability of the system. The economic returns can be significant.

**Sustainable Development**

BOP markets are a great source for experimentation in sustainable development. First, resources such as water, energy, and transportation are scarce and expensive. Automotive and two-wheeler manufacturers are learning that the BOP customers are very attuned to the total cost of ownership and not just the cost of purchase. The miles per gallon—the efficiency of energy use—is a significant determinant of market success. Similar demands are imposed on water use.

BOP markets can also represent an emerging problem. Single-serve packaging is advantageous to create the capacity to consume at the BOP but can also lead to a major environmental problem. More than 13 billion single-serve packages are sold annually in India and this trend is growing rapidly. Although plastic bags appear attractive, they are not biodegradable. MNCs involved in the BOP markets have the ability and the motivation to find solutions to the problem of packaging in emerging markets.

**Innovations**

As we discussed in depth in Chapter 2, the process of innovation for the BOP forces a new set of disciplines. First, the focus is on price performance. Innovations must become “value-oriented” from the consumer’s perspective. The BOP focuses attention on both the objective and subjective performances of the product or service. Markets at the BOP also focus on the need for 30 to 100 times improvements in price performance. Even if the need is only for 10 to 20 times improvement, the challenge is formidable. The BOP can become a major source of innovations. Consider, for example, the need for user-friendly interfaces. Biometric authentication systems such as fingerprint and voice recognition are emerging from the BOP markets, as we saw in the case of PRODEM FFP in Bolivia and Elektra in Mexico. Logistics and distribution requirements are an integral part of the innovation process at the BOP.

Serving the BOP forces a new business model on MNCs. Management systems developed for a price performance level cannot be fine-tuned to cope with the demands of the BOP markets. Although MNCs are slowly
adapting to the needs of the BOP, very few have consciously focused attention on examining the implications of their own operations in the BOP for their global operations. So far the attention has been on outsourcing from the more cost-efficient locations such as China, Taiwan, Thailand, the Philippines, and India. A $50 CD player is not just about wage rates, but a totally different way of approaching manufacturing.

The I curve has different implications for scaling. The timing of investments, investment intensity, and the pace of market and distribution development become crucial, as is the rate at which costs must be brought down to fuel growth of the market.

The Costs of Managing

ICICI Bank manages, with 16 managers, a portfolio of 200,000 customers at the BOP. The entire network of management consists of a hierarchy shown in Figure 3.3.

There are only 16 managers (employees) from the ICICI side. Each project manager oversees the work of 6 coordinators. Coordinators are women who are experienced in the development of self-help groups. They are identified and are asked to be coordinators. They helped project managers in approval of loans and help develop new SHGs. The coordinator oversees the work of promoters. The primary responsibility of the promoters is the formation of new SHGs. She must form 20 groups.

![Figure 3.3](image-url)
per year. She is financially compensated for the successful formation of new groups. The promoters understand the village culture because they are part of it. They carry credibility because they have been part of a successful SHG. They speak the language of the groups that they deal with. They are also identified from the local communities. As a result, the organizational system that is built in this case is quite unique.

1. The basic unit of analysis is the SHG with 20 members. Loans are given to the SHG and the group decides how to partition the money it receives as loans. The SHG is responsible for paying back the loan and the interest. The bank does not lend to individuals. As such, the credit-worthiness of the SHG depends on how well it can enforce compliance among its members. They all understand that what is at stake is the access to cheap and reliable capital, compared to all the alternatives including the local moneylenders. Therefore, the SHG does credit analysis, project evaluation, monitoring of the use of funds, collection, and reinvestment. The control is totally local and the SHG is empowered. From this perspective, ICICI Bank takes little risk.

2. Market development is also handled by SHG veterans. The promoters are from SHGs and their territories are clearly demarcated. As a result, the person promoting the idea is closest to the community that the bank wants to reach. The promoters are paid an incentive based on the number of SHGs formed by them in good standing.

3. The regional managers or coordinators are also from local communities in which they work. Their work is primarily focused on training and supervising the promoters and evaluating the quality of the SHGs as they are formed.

4. The concept of the structure and the management process is built from the bottom up. There is distributed leadership. The role of the company employees in the day-to-day running of the SHG is minimal. The general sales and administration costs of this system are about 5 to 10 percent of the costs of a typical bank. That makes the system cost-effective and makes small transactions profitable. Further, this also allows for rapid scaling. ICICI increased from 2,000 SHGs in 2002 to 10,000 in 2003.
The SHGs and the direct distribution system we have described, such as Shakti Amma, represent an extraordinary innovation that both cuts costs and risks for the firm and at the same time creates an empowered group of new entrepreneurs with sustainable, rising income opportunities. Business management skills, technology, and contacts are pushed down to the local grassroots level. The SHGs perform several of the functions that the firm would have handled in the traditional approach to managing. For example, the SHG, by validating the individuals who will get the loan, by checking the nature and viability of the project, and by taking responsibility for monitoring the progress of the project is, in essence, an extension of the traditional firm. The bank does not have direct contact with the individuals, but monitors the loan indirectly through the SHG. This represents a new model of relationship between the firm and its consumers. The quality of the SHG is the guarantee of the investment. However, the SHG, being so close to its members—same village, same group, frequent meetings, visibility of progress of projects, and, most important, the ability to assess behaviors—is in a great position to alter the risk profiles of the loans. The large bank gains local responsiveness capability at low (or no) cost. The same is true of the Shakti Amma system. The local entrepreneur knows her village and its needs and can also influence the buying decisions of the villagers. She is at once the salesperson, the supplier, the trusted advisor, and the educator for the village. She is the one who can convince the villagers that iodized salt will be a healthy option for the family. HLL is now experimenting with connecting these individual distributors through an Internet network. The I-Shakti project will create the most dramatic opportunity for the BOP consumers to influence the firm and its decisions regarding product features, costs, availability, and the business model in general.

What we see here is the convergence of the traditional roles of the firm and the consumer and the distributor and the consumer. Functions such as advertising, credit management, risk analysis, and market development are assumed by the consumers-entrepreneurs and the consumer-entrepreneurial community (SHG). The boundaries of the firm expand beyond its legal parameters and begin to engage and empower the large and heretofore economically isolated segment of developing country societies known as the “informal sector.” The resources that are available to the firm expand even more dramatically. Access to the 10,000 SHGs
is, in its simplest form, a huge resource multiplier to the firm. Whether it is resource leverage through selective access, local knowledge, risk reduction, or reduction in capital needs, the firm benefits. This is at best a win–win situation. The local communities take charge of what they want. They make their own decisions and choices. They are accountable and therefore feel a sense of empowerment and self-esteem. They know they can deal with the large firm on an equal basis. Although the resources are limited for the SHG, the bank cannot unilaterally make decisions. In that sense, there is less asymmetry in power.

Learning to Live in a Network of Relationships

MNCs working at the BOP learn rapidly that they have to learn to live with a wide variety of relationships with a large number of institutions. For example, in the case of selling iodized salt, HLL learned very fast that its efforts would impact public policymakers and officials in the health department. NGOs focus on local communities and in many cases conflict with industry practices. HLL had to learn to cope with the agendas of the various parties that might be involved and work with them effectively in a cooperative mode. The case of soap, intended to reduce diarrhea, was more interesting. HLL had to deal not only with state governments and NGOs, but also with the World Bank, which wanted to partly fund the program of education and distribution. It also wanted to be involved in the evaluation of results. As such, the firm had to learn to cope with the differing priorities, time scales, decision cycles, and perspectives of both the causes of the problem and the nature and efficacy of the solution. The reactions of the various groups can vary from open hostility toward the MNC to a willingness to cooperate. At the end of the day, however, MNCs learn how to transform their ideals of good corporate citizenship and social responsibility into their core business of delivering value on a day-to-day business basis. Social sector organizations learn how to scale their still-marginal efforts at “social enterprise” into viable business models serving a mass market.

BOP markets represent 80 percent of humanity. It is reasonable to expect that 4 billion people in search of an improved quality of life will create one of the most vibrant growth markets we have ever seen. Private-sector involvement in development can be a win for both the BOP consumers and the private sector. All of us can learn. The flow of ideas, knowledge, and innovation will become a two-way street—from the
developed countries to the developing as well as the reverse. MNCs can help BOP markets to develop. They can also learn from BOP markets.

In the next chapter, we discuss how the large firm can create a private-sector ecosystem and act as a nodal firm. This ecosystem is a prerequisite for developing markets at the BOP.

Endnote

Index

A
Abhiraman, A. S., 184
Above-knee prosthetic products, 251–252
Achuthanandan, V. S., 219
Acquired Immune Deficiency Syndrome (AIDS), 361
Adatias, 324–325
Advanced tracking process (ATP), 186
Aid agencies, 3, 9
Ald, 52
Alerta disease surveillance system (Peru), 364
Amancio, Celso, 126
Amul cooperative, 19, 31–32, 38, 46, 64, 108
Amway, 44
Andhra Pradesh e-governance story, 85–89
impediments to, 93–94
lessons from, 94–95
Annamalai, Kuttayan, 357, 385
Annapurna Salt, 171–206
advertising, 187
brand creation, 182
competitors, 179–181
Dandi Salt, 180
Tata Salt Ltd., 180
evolution of, 183–184
Hindustan Lever Research Center, 184
and HLRC, 184–185
innovation, 172
iodine deficiency disorder (IDD), 171
manufacturing and distribution, 189–192
market fragmentation, 187–188
market share, 188–189
market strategy, 187–189
message-driven beans, 187
product line and pricing, 186
retail price schemes, 192
salt target market, 185
transport, 190–192
innovations in, 191–192
Aravind Eye Care System, 29, 37–38, 242, 265–288
Aravind Center for Women, Children, and Community Health (ACWCCH), 283
Aravind Medical Research Foundation, 283
Aravind Postgraduate Institute of Ophthalmology, 284
Aurolab, 280–282
financial self-sustainability, 268–269
future of, 284–285
history of, 265–266
innovation, 265
LAICO, 282–283
mission, 267–268
organization of, 266–268
recruitment/training, 270–274
Rotary Aravind International Eye Bank, 283
Aravind Eye Hospital, 45, 266
capital intensity, 56
community outreach programs, 278–280
community-based rehabilitation project, 279
eye camps, 278–279
Aravind Eye Hospital, continued
  eye screening of school children, 279
  refraction camps, 279–280
  composition of staff strength in, 267
  e-world-class delivery system, development of, 53
  Fellowship program, 271–272
  IT kiosks for teleadvice, use of, 280
  outpatient departments, 274–275
  surgical wards, 276–278
  workflow, 274–278
Aravind Medical Research Foundation, 283
Arbitrage restrictions, 329
Arogya (Health) Day, 199
Automatic Milk Collection System Units (AMCUS), 31
Automotive/two-wheeler manufacturers, and BOP customers, 57
Avon, 44, 108

B
Balakrishnan, Dr., 281
Balasubramanian, A., 193
Balu, Rehka, 172–173
Banga, M. S., 44, 51, 221–222
Banga, Vindi, 193
Bank of Madura, 44, 72–73
  history of, 298–301
  ICICI Bank merger with, 301–302
  lending, 74–75
  and maturation of SHGs, 73
  merger with ICICI, 74
  Rural Development Initiative, 299–301
  SHG model, 299–301
Bank-Netherlands Water Partnership, 217
Baron, Scott, 386
Barros, Allan, 125, 131
Bartira, 131
Behavior changes methodology, 226
Below-knee prosthetic products, 251–252
Ben & Jerry's Ice Cream, 364
Bhagwan Mahaveer Viklang Sahayata Samiti, See BMVSS
  Big, 122
  Bimbo bakery, 21, 116
  Biometric authentication systems, 57
  BMVSS, 244, 256–259
  camp system, 261–262
  collaboration with Indian Space Research Organization (ISRO), 263
new locations, 262
BOP (bottom of the pyramid):
  active engagement of private enterprises at, 5
  Andhra Pradesh e-governance experiment, 85–89
  impediments to, 93–94
  lessons from, 94–95
  building governance capabilities among the poor, 72–76
  Center for Good Governance (CGG), 90–93
  guiding principles, 91
  and characteristics of market economy, 5
  economic value creation at, 56
  encouraging consumption and choice at, 10–12
  engaging, 48–49
  eSeva, 89–90
  as global opportunity, 47–62
  lack of money at, 10–12
  learning from, 49
  local growth opportunities, 50–51
  learning to grow, 50–52
  local innovations and global opportunity, 52–53
  market development at, 2
  philosophy for developing products and services for, 24–25
  products/services for, 23–46
  transaction governance capacity (TGC), 81–83
  building, 83–85
  components of, 84
  degrees of, 81
BOP consumers:
  ability to adapt/resilience of, 108–109
  and advanced technology, 15–16
  cost disparities between the rich and, 11–12
  and risk, 12
  upgrade, 105–106
BOP markets:
  access to, 12–13
  access to financial services, 29–30
  brand-consciousness of, 13–14
  business design criteria, 30
  connectedness of, 14–15
  delivery of products/services, 45–46
  developed markets compared to, 34–37
  and firms’ challenge of cost perspectives, 9
large, 50
and multinational corporations (MNCs), 5
nature of, 10–16
as new growth opportunity for private sector, 6
NGOs as lead experimenters in, 32
and the private sector, 6
sustainable development, 33–34
twelve principles of innovation for, 25–26
Brazil:
retail banks in, 125–126
stratification breakdown, 119

C
Cadbury, 15
Cairncross, Sandy, 209
Canara Bank, 297
Capital intensity, and BOP markets, 55–57
Captain Cook, 198
Cargil, and salt market, 180
Carné (passbook), Casas Bahia, 126
Carrefour, 122
Casas Bahia, 14, 107, 115–146
appliance sales, 17
average finance term, 123
business model and positioning, 122–144
carné (passbook), 126
cash management, 130
competitive landscape, 121–122
consumer education process, 127–128
contracts, 141
credit analyst training, 128–130
cross-selling, 122
culture, 124–125
culture and philosophy, importance to, 118–119
customer experience, maximizing, 140
customers, 118
typical, 119–121
default rate at, 17
delivery drivers, 133
delivery process, 134
description of, 115
distribution, 132–133
distribution centers, 133
employee retention, focus on, 133
evaluation of prospective clients, 126–127
expansion, 145
finance, 125–144
furniture sales, 19, 131
default rate for, 127
future of, challenges, 144–145
history of, 115
human resources management, 142–144
identity cards, 107
infrastructure, investments in, 140
management style, 122–125
marketing, 135–137
opportunity, scope and size of, 119
preferred-client card, 137
product design, 131–132
production schedule, 132
products, 131
promotions, 136
purchasing power, 131
reduction of credit, 130, 141
retail landscape, 121–122
role of, 126–128
salespersons:
compensation for, 143
training, 135
stores/storefronts, 134–135
supplier negotiation process, 132
technology, 137–140
example of, 138–139
future of, 142
history with IBM/Linux, 139–140
IT backbone, 141
ongoing IT projects, 141–142
revenues spent on, 140
television advertising, 136
third-party purchase at, 130
training, 128–130, 135
trust, 21
Casas, Cynthia, 388
CASHPOR, 313
Cataract surgery, and commitment to quality in BOP markets, 29
CEMEX, 17–18, 46, 106, 108, 147–168
Construmex, 164–168
business idea, evolution of, 164–167
business model, 165–166
Construmex Mexico, 167
distributors in Mexico, 167
Dolex USA, 167
international growth, 167
purpose of, 165
sales representatives, functions of, 165–167
description of, 115–116
history of, 147–148
CEMEX, continued
initial market research (Guadalajara, Mexico), 152–153
innovation, 147
kiosks/construramas, 149
low-income population, converting into customers, 149
market eye-openers, 152–153
Mexican society, 150–152
housing, 152
savings, 150–151
women and entrepreneurship, 151–152
Mexico, 148
Patrimonio Hoy project, 40, 148–150
cell setup, 153–154
challenges, 163
costs, 159
customer enrollment, 154
distribution, 161
key lessons from, 164
marketing, 159–160
material distribution/delivery, 155–156
offices/cells, identification of, 153
operating model, 159–162
program design, 153–156
promotion, 161
revenues, 159
risk management, 161–162
savings-credit payment cycle, 154–155
socios/partners, 154
strategic importance of, 152–153
value to distributors, 158
value to promoters, 156–157
value to socios/partners, 157–158
value to suppliers, 158
products, 147
value analysis, 156–158
Center for Good Governance (CGG), 90–93, 99
guiding principles, 91
Centers for Disease Control (CDC), 39, 45, 54
Chandra, Ram, 34–37, 250, 262
Chandran, Sudha, 243
China, contract governance, 80
Chouplai, defined, 335
Citicorp, 30
Civil society organizations, 3
Cohen, Ben, 364
Colgate-Palmolive, 198, 214, 216, 219
Communication barriers, breaking down, 102–105
Conagra, and salt market, 180
Confederation of Indian Industries (CII), 80
Connectedness, of BOP market, 14–15
Construmex, 164–168
business idea, evolution of, 164–167
business model, 165–166
Construmex Mexico, 167
distributors in Mexico, 167
Dolex USA, 167
international growth, 167
purpose of, 165
sales representatives, functions of, 165–167
Contracts:
learning the sanctity of, 68–69
reducing inequities in, 69–72
Coordinators, SHGs, 302
Corporate social responsibility (CSR) initiatives, 6
Corruption, 95
as market mechanism for privilege access, 84
reducing, 77–98
Costs of managing, 58–61
Creating the capacity to consume, 16–19
“Three As”, 18
Cross-selling, Casas Bahia, 122
Curtis, Valerie, 209, 216
D
Dadiseth, Keki, 231
Dandi Salt, 180
Data mining, 349
Data warehousing, 349
De Soto, Hernando, 78–84, 107
Delivery of products/services, 45–46
Department of Defense, 45
Deskilling work, 26
Developed markets, BOP solutions for, 53–54
Development, as social transformation, 99–112
Developmental assistance, assumptions at core of, 78
Dhall, Sharat, 193–194, 196, 198–199, 202
DHAN Foundation, 313
Dhawan, Vishal, 181, 184, 188
Dialogue, access, risk benefits, and transparency (DART), 105, 109
Diarrheal disease, 208–209
behavior change, need for, 209–211
causes of, 208–209
handwashing as preventive measure, 209
public health issue in private realm, 210–211
Disease surveillance and response, ingredients of an effective system of, 362
Distribution, 43–44
Casas Bahia, 132–133
“Do-it-yourself” business focused on the BOP market, 17
Dolex USA, 167
Dominant logic:
influence of, 9
of MNCs as it relates to BOP, 9
power of, 6–10
of public policy makers in India, changes in, 8
Donor nations, 3
Dorsiflexion, 248–249
Duarte, Gilberto, 132–133
Duggal, Bikram, 292
Dumas, Jean-Baptiste, 173

E

E+Co, 45, 360
East India Company, 6
Economic pyramid, 4
E-governance, 87
Egypt, trapped resources of, 79
EID Parry Agriline, 43–44, 106, 288, 292
Elektra (Mexico), 14, 43, 57, 116
Entrepreneurism, in Mexican society, 151–152
Escort Hospital, 242
eSeva, 89–90, 107
list of services, 97–98
Extra, 122

F

Fast-moving consumer goods (FMCG) industry (India), 66–68
Favela, defined, 120
Fernandes, Jose Roberto, 143
Financeiras, 125
Fingerprint recognition systems, 57
Foguel, Sami, 385
Food and Drug Administration (FDA), 45
Foreign direct investment (FDI), 64
Formal and informal market segments, comparison of, 151
Furniture sales:
Casas Bahia, 19, 131
default rate for, 127

G

Gillette, 214
Global Public-Private Partnership for Handwashing with Soap, 215–220, 235
Godowns, 189
Godrej Soaps, 215
Gopal Mishra, 192
Grameen Bank (Bangladesh), 64, 108, 299
default rate at, 21
development of microfinance in Bangladesh, 52–53
Grameen Phone (Bangladesh), 14
Graves’ disease, 174
Green, David, 280

H

Habib’s, 65, 116
Handwashing, and diarrheal diseases, 208–209, 215–220
Hashimoto’s thyroiditis, 174
HDFC, 297
Hindustan Lever Limited (HLL), 172–173
See also HLL subsidiary, Unilever
Hindustan Vanaspati Manufacturing Company, 181
HLL subsidiary, Unilever, 46, 63, 67–68, 169–170
ability to reach the masses, 212–213
Annapurna salt:
manufacturing and distribution, 187
market fragmentation, 187–188
market share, 188–189
market strategy, 187–189
message-driven beans, 187
product line and pricing, 186
HLL subsidiary, continued
retail price schemes, 192
salt target market, 185
transport, 190–192
corporate vision, 181
eye into branded staples, 181–182
financial performance, 213
gain from marketing public health messages about soap, 229–231
Gandhidam factory, 189–190
history of, 211
increasing market sales, methods for, 231–234
developing expertise to sell health, 234–235
impact on behavior change/soap sales, 234
scalability, 231–234
as largest Indian soap manufacturer, 211–212
as a nodal form, 68
Popular Foods division, 181
production costs, 190
Project Shakti at Hindustan Lever Ltd. (HLL), India, 193–198, 213
Arogya (Health) Day, 199
background, 193–194
challenges, 202–203
competition, 201
dealer evaluation, 197
gender considerations, 196
goals, 194
implementation approach, 194–198
i-Shakti, 200
leveraging government relationships in site selection, 195–196
leveraging know-how globally, 203
local organization and process, 196–198
long-term vision, 202
newsletters, 200
Project Iodine, 200
promotional video, 200
sales and margins, 200
Shaki dealer, 196–197
Shakti Day, 199–200
Shakti Family Packs, 199
Shakti Pracharani, 197–198
site selection, 195–196
stimulating demand through education, 199–200
stimulating demand through linkages, 199
year 2002 results, 201
year 2003 performance, 201–202
salt production, 189
and soap market, 207–235
diarrheal disease, 208–209
Global Public-Private Partnership for Handwashing with Soap, 215–220
global soap market, 214
innovation, 207
Kerala program, 218–219
Lifebuoy soap, leveraging health messages for, 220–222
soap in India, 215
unmet consumer need, 215
Hindustan Lever Ltd. (HLL), 172–173
Hokenson, Michael, 382
Hostile environments, 26–27
designing for, 42–44
HSBC, 297
Human resources management, Casas Bahia, 142–144
Hung, Ko, 173
Hypothyroidism, 174

I

ICICI Bank, 46, 107, 199, 289–318
and BOP, 294–297
innovative models toward serving, 296–297
costs of managing, 58–59
default rate at, 21
direct access, bank-led model, 297
distribution access, 44
future of, 313–315
increase in bank presence in rural areas, 296
indirect channels partnership model, 312
innovation, 289–318
merger with Bank of Madura (India), 301–302
MFIs, diverse world of, 293
microfinance, history of, 292–294
microfinance institutions, 312–313
nature of market in India, 290–292
and retail banking, 295
rural kiosks, 313
self-help groups (SHGs) working with, 20
affiliations, 307–308
bank loans, 308–309
 dedication to, 310–311
 first monthly meeting, 305
 monthly meetings, 305–306
 positive effects of, 311
 reports of business enterprise progress, 307
 scaling, 302–304
 strategic goals, 294
 Identity cards, Casas Bahia, 107
 India:
 contract law in, 79
 cooking style, and iodine loss, 179
 iodized salt in, 177
 pharmaceutical industry, 53
 public-sector industrial projects, 7
 retail shops, 56
 salt market, 175–179
 wireless market, 28
 Indian Atomic Energy Agency, 31
 Indian Institute of Technology (IIT), 280
 Indian shampoo market, and multinational corporations (MNCs), 17
 Indian Toiletries and Soap Manufacturers Association (ITSMA), 216
 Initial market research (Guadalajara, Mexico), CEMEX, 152–153
 Innovations, 57–58
 Integrated Rural Development Program (IRDP), 352
 Interface design, 43
 International Agency for Prevention of Blandness (IAPB), 283
 International Business Division (IBD):
 ITC, 69
 and soya business, 329–332
 International Council for the Control of Iodine Deficiency (ICCIDD), 172, 174, 185
 International Federation of Eye Banks, 283
 International Monetary Fund, 78
 Iodine, 173
 characteristics, and K15 technology, 177–178
 excess, 174
 iodine loss in Indian salt, 178–179
 supplementation, 174–175
 Iodine deficiency disorder (IDD), 171
 and goiter, 173–174
 in India, 30–31
 innovation, 172
 iodine and, 173–175
 Iodized salt, in India, 177
 IOL, 37–38
 I-Shakti, 200
 ITC, 46, 69–72
 International Business Division (IBD), 69
 and soya business, 329–332
 and salt market, 180
 ITC e-Choupal, 15, 18, 20, 42, 43, 63, 288, 319–358
 access to credit, 351–353
 capital intensity, 56–57
 commission agents, 324–325
 detractors, 353–354
 e-Choupal network, 15, 18, 20
 farmers:
 and customer service, 355
 gains, 343–344
 friction sources, 70–72
 asymmetry in ability to enforce contracts, 71
 asymmetry in ability to social standing, 71–72
 asymmetry in access to information, 70
 asymmetry in choice, 71
 future generations, 355–356
 inbound logistics, 341
 Indian agriculture, paradox of, 320–322
 infrastructure, 101
 innovation, 320
 inspection/grading, 341–342
 insurance/risk management services, 351–353
 intended uses of system, 102
 ITC gains, 344
 logistics/storage, 342–343
 mandi, 101, 323–329
 mandi operations, 325–329
 auction, 326–327
 bagging/weighing, 327
 display/inspection, 326
 inbound logistics, 325
 market inefficiency, 325–329
 outbound logistics, 328–329
 payment, 328
 marketing prior to, 323
 network, orchestrating, 348–350
 oilseed complex, 322–329
 operations, 335–345
 physical location of, 335–336
 price setting/dissemination, 340–341
ITC e-Choupal, continued
procurement savings, in numerical terms, 344–345
product distribution, 350–351
risks/limitations, 354–355
samyojaks, 339–340
subversion of, toward competitive entry, 354–355
sanchalaks, 102–104, 336–338
maintaining village trust, 336–337
picking/training, 336–338
sustaining commercial volume, 338
social impact of, 345–353
agricultural inputs, 347
better lifestyles, 348
farmer as source of innovation, 347–348
improved agriculture, 346
information gap, bridging, 346–347
limited by stratification, 355
status of operation, 350–351
unplanned activities at, 103
vision/planning, 332–335
addressing the whole, 332–333
bureaucracy, managing, 335
IT-driven solution, 333
modularity of investments in size/scope, 334
payback streams, clarity of, 333–334
re-engineering vs. reconstruction, 332
risk assessment/mitigation, 334–335
weighing/payment, 342

J
Jain, Yuri, 208, 210–211, 215, 217, 221
BMVSS, 256–259
camp system, 261–262
cooperation with Indian Space Research Organization (ISRO), 263
new locations, 262
competitive benchmarking, 256
constraints, overcoming, 250–251
design considerations, 35, 250
development of, 250–259
expenses, compared to Ossur, 260–261
fabrication of, 253–254
fitting, 254–256
future of, 262–264

gait cycle, 249
history of, 244
innovation, 244
labor, 253–254
lower limb anatomy, 248–249
lower limb prosthesis, 249
materials sourcing, 252–253
nature/scoped of problem, 244–247
developed world, 244–245
developing world, 245–246
global amputees, 244
operations, 259–260
production equipment, 253
prosthetics, history of, 247–249
scalability, 261–262
traditional design, deviation from, 251–252
treatment costs, 246–247
developed world, 246
developing world, 247
Jhunjhunwala, Ashok, 280, 313
Johnson & Johnson, 214, 215
Johnson, Pamela, 364

K
K15, 177, 183–187
Kachha adatiyas, 324
Kamath, K. V., 292
Kapur, Gunender, 187
Kashyap, Pradeep, 193, 195
Kasliwal, S. C., 250
Kentucky Fried Chicken, 65
Klein, Michael, 117–123, 125, 127, 130, 134, 136–137, 143, 145
Klein, Samuel, 115, 117–118, 122, 128, 130, 143–144
Klein, Saul, 118, 145
Knorr-Annapurna, 183–185, 203
Knowledge, gaining access, 106–107
Kochhar, Chanda, 289–290, 302, 303
Kohli, Gurpreet, 223
Kolumbus, 121
Kunvar Ajay Foods Private Ltd., 180

L
La Popular, 216
Labor, Jaipur Foot, 253–254
LAICO, 266–267, 274, 282–283
LaJoie, William, 388
Land registration, 86–88
Legal identity, importance of, 107
Lever Brothers India Limited, 181
LG, 50
Lifebuoy soap:
   brand revitalization, 221
   history of, 220–221
   leveraging health messages for, 220–223
Lifebuoy Swasthya Chetna (Lifebuoy Glowing Health), 224
   creating behavior change, 226
   diarrhea management workshop, 228
   and HLL, 229
Lifebuoy Health Club, launch of, 228–229
Lifebuoy Village Health Day, 228
   program design, 224–226
   school and village presentation, 227–228
   multicontact programs and Swasthya Chetna, 223–229
   product/cost/marketing strategy, 222–223
Lions Aravind Institute of Community Ophthalmology (LAICO), 266–267, 274, 282–283
   objective of, 282
Local growth opportunities, 50–51
   learning to grow, 50–52
Lojas Cem, 121–122
Lojas Columbo, 121
Lynch, Karen, 365

M
Macke, Scott, 387
Magazine Luiza, 121–122
Managing, costs of, 58–61
Mandi, 15, 69–70, 323–329
Mandi operations, 325–329
   ITC e-Choupal:
      auction, 326–327
      bagging/weighing, 327
      display/inspection, 326
      inbound logistics, 325
      market inefficiency, 325–329
      outbound logistics, 328–329
      payment, 328
Manikutty, S., 286
Marabrás, 121–122
Market development, 16–21
   creating the capacity to consume, 16–19
   dignity/choice, 20
   new goods/services, need for, 19
   trust, 20–21
Market development at BOP, 2
Market-based ecosystems, 100
Market-based solutions, to poverty, 9
Market-oriented ecosystem, 65–66
Markle Foundation, 364–365
Markson, Todd, 383
Mary Kay, 108
Master, Zarius, 188
Mathur, M. K., 262
McDonald's, 37, 65
McKinsey & Company, 80
McMurray, Laura, 222
Mehta, Birin, 190
Mehta, D. R., 256
Mexican society, 150–152
   housing, 152
   savings, 150–151
   women and entrepreneurism, 151–152
Mexico, trapped resources of, 79
Meyer, Paul, 363–364
Micro-Credit Summit, 293–294
Microfinance, history of, 292–294
Microregulations, 80
Microsavings, 72
Milk cooperatives (India), 64
Millennium Development Goals (MDG), United Nations, 3
Mishra, Gopal, 191
Misra, Ruchi, 381
Mohan, Sharmilee, 168, 387–388
Mohanty, P. K., 92
Monsoon Hungama offer, 28
Multinational corporations (MNCs), 5, 172
   dominant logic of, 8–9
   and emerging economies, 24
   and Indian shampoo market, 17
   learning to live in a network of relationships, 61–62
   lessons from BOP markets, 55–58
   capital intensity, 55–57
   innovations, 57–58
   sustainable development, 57
   product portfolios, 23
Murch, Mindy, 239, 384–385
Murhukkaruppan, VR., 283
Mystery of Capital, The (De Soto), 78–79
N
Naidu, Nara Chandrababu, 85
Namperumalsamy, Dr., 266
Narasimhan, Anand, 364
Narayan, Ram, 186, 188
Natchiar, G., 266–271
National Bank for Agriculture and Rural Development (NABARD), 291, 303, 309, 311
National Council of Applied Economic Research (NCAER), 109–112
National Health System (United Kingdom), 45, 53
National Institute of Nutrition (NIN), 178
Natra, J. G., 190
New Ventures, v, 193, 198, 202
Nirma Ltd., 52, 55, 105–106, 215
and salt market, 180
n-Logue, 280
No Due certificate, 306
Nongovernmental/organizations (NGOs), 9, 41, 170, 172, 207, 293

O
Ocean fish, as iodine source, 174
Ogilvy & Mather, 223–224, 226
Oilseed complex, 322–329
OpenRoads, 247

P
Pandav, C. S., 172
Papillary thyroid cancer, 174
Patella-tendon-bearing prosthesis, 252
Patrimonio Calle Digna, 157, 162–163
Patrimonio Hoy Escolar, 157, 162–163
Patrimonio Hoy project, 115
  cell setup, 153–154
  costs, 159
  customer enrollment, 154
  distribution, 161
  marketing, 159–160
    community outreach, 160
    pricing, 160
  word-of-mouth channel, 160
  material distribution/delivery, 155–156
  offices/cells, identification of, 153
  operating model, 159–162
  program design, 153–156
  promoters, 156–157, 160
  promotion, 161
  revenues, 159
  risk management, 161–162
  savings-credit payment cycle, 154–155
  socios/partners, 154, 157–158
  strategic importance of, 162–163
  sustainable growth strategy and innovation, 162–163
  value to distributors, 158
  value to promoters, 156–157
  value to socios/partners, 157–158
  value to suppliers, 158
  Patrimonio Hoy Te Impulsa, 162–163
  PC kiosks, 15
  Performance management system (PMS), 92, 93–94
  Performance, of products/services, 25
  Personal digital assistants (PDAs), 15
  Perus, legislation per year, 80
  Pharmaceutical Division, Aurolab, 281
  Phillips, Jeff, 381
  Pillsbury, and salt market, 180
  Plantar flexion, 248–249
  Poacha, Adi, 200
  Polyurethane foot prostheses, 263
  Ponto Frio, 121–122
  Poor and high-cost economic ecosystems, 11
  Poverty:
    access to distribution in rural markets, 13
    asset-rich, capital-poor countries, 78–79
    disparities in wealth and the preponderance of the poor, 7
    governance capabilities, building, 72–76
    and spending habits, 12
    trapped assets, 79
  Poverty alleviation:
    building a framework for, 1–2
    as a business development task, 5
  Poverty penalty in Dharavi, India, 11–12
  Poverty reduction, assumptions at core of, 78
  PRADAN, 313
  Prahalad, C. K., 168, 239, 286, 357
  Pramanik, Amitava, 184–185
  Preferred-client card, Casas Bahia, 137
  Price performance, 28–30
  Private sector, benefits of poverty alleviation process, 21
  Procter & Gamble (P&G), 17, 201, 214, 219
Index

PRODEM FFP (Bolivia), 19, 57
interface, 43
Products/services:
for BOP (bottom of the pyramid), 23–46
broad system architecture, 27
delivery of, 45–46
deskill work, 26
distribution, 43–44
education of customers on product usage, 26
heterogeneity of consumer base, 27
hostile environments, 26–27
designing for, 42–44
hybrid solutions, 25
hybrids, 30–32
innovate in methods of distribution, 27
interfaces, 43
performance of, 25
price performance, 28–30
process innovation, 26, 37–38
product development, 26
resource intensity, reducing, 26
scalable solutions, 25
scale of operations, 32
Project Iodine, 200
Project manager, SHGs, 302
Project Shakti at Hindustan Lever Ltd.
(HLL), India, 13, 193–198, 213
Arogya (Health) Day, 199
background, 193–194
challenges, 202–203
competition, 201
dealer evaluation, 197
gender considerations, 196
goals, 194
implementation approach, 194–198
i-Shakti, 200
leveraging government relationships in
site selection, 195–196
leveraging know-how globally, 203
local organization and process, 196–198
long-term vision, 202
marketing Anapurna salt through,
198–200
newsletters, 200
Project Iodine, 200
promotional video, 200
sales and margins, 200
Shakti dealer, 196–197
Shakti Day, 199–200
Shakti Family Packs, 199
Shakti Pracharani, 197–198
site selection, 195–196
stimulating demand through education,
199–200
stimulating demand through linkages,
199
year 2002 results, 201
year 2003 performance, 201–202
Promoters, Patrimonio Hoy project,
156–157
Promotions, Casas Bahia, 136
Public-private partnerships (PPPs),
215–220
Pukka adatiyas, 324
Pundiselvi, Ms., 308–309
Purchasing power parity (PPP), 10–12, 218

R
Rahmathulah, Lakshmi, 283
Rail distribution, salt, 191–192
Rajendra, Anuja, 385–386
Rao, Sachin, 357, 382
Ravikumar, P. H., 302
Reeder, Kate, 239, 383
Reliance, 28, 50, 116
Reserve Bank of India (RBI), 290–292
Rural Development Initiative, Bank of
Madura (India), 299–301
Rural income distribution, 111–112
Rural poor, access to distribution, 13
Rural sales promoters (RSPs), 195

S
Salespersons, Casas Bahia:
compensation for, 143
training, 135
Salt farming, 175
Salt market, 175–179
diverse tastes/cultural variations, and
demand for salt in India, 176
iodized salt, 177
players in, 179–181
Samsung, 50
Samyojaks, 339–340
defined, 335
subversion of, toward competitive entry,
354–355
Sanchalak, 70

Index
The Fortune at the Bottom of the Pyramid

SANGAM, 193
Sarawathi, Ms., 309
Savings, Mexican society, 150–151
Seaweed, as iodine source, 174
Self-help groups (SHGs), 58–61, 100, 107, 288
\[ \text{evolution of, 74} \]
and ICICI Bank:
\[ \text{affiliations, 307–308} \]
bank loans, 308–309
dedication to, 310–311
first monthly meeting, 305
monthly meetings, 305–306
positive effects of, 311
reports of business enterprise progress, 307
scaling, 302–304
identities at, 107
maturation model, 73–74
Service of Credit Protection (SPC), 123
Sethi, P. K., 36, 250
Severe Acute Respiratory Syndrome (SARS), 38–39, 361–362
Shah, Tej, 382
Shakti Ammas, 13, 60, 63, 68–69, 108, 170, 196
Shakti Day, 199–200
Shakti, defined, 193
Shakti Family Packs, 199
Shakti Pracharani, 197–198
Shakti program, HLL, Unilever, 44
Shanker Netralayer, 106
Sharma, Ajay, 387
Sharma, Ajit, 168, 383–384
Shiva, Vedana, 219
Singh, Sidharth, 168
Singhal, Anit, 292
Single-serve packaging, 16–17, 57
Small and medium enterprises (SMEs), 63–64
Smallpox Vaccination Program (U.S. Dept. of Defense), 372–373
Smart automated teller machines (ATMs), 19
Soap market:
\[ \text{and HLL subsidiary, Unilever:} \]
\[ \text{Kerala program, 218–219} \]
Lifebuoy soap, leveraging health messages for, 220–223
Soap market, and HLL subsidiary, Unilever: diarrheal disease, 208–209
behavior change, need for, 209–211
causes of, 208–209
handwashing as preventive measure, 209
public health issue in private realm, 210–211
Social service consultants (SSCs), 302
Social transformation:
\[ \text{checks and balances, evolution of,} \]
\[ \text{108–109} \]
drivers of, 105
identity for the individual, 107
knowledge, gaining access to, 106–107
morphing of the pyramid into a diamond, 109–112
women and development, 108
Socialization, humans as prisoners of, 6–7
Spectable Lens Division, Aurolab, 281–282
Srinivasan, Aravind, 273, 275
Srinivasan, G., 268
Standard Chartered, 297
State Bank of India, 295, 297
Sustainable development:, 57
Suthrum, Praveen, 384

T

Tandas, 151
Tata Salt Ltd., 180
Tatas, 50
Taylor, Mark, 245
Technology, Casas Bahia, 137–140
\[ \text{example of, 138–139} \]
\[ \text{future of, 142} \]
history with IBM/Linux, 139–140
IT backbone, 141
ongoing IT projects, 141–142
revenues spent on, 140
Tecnosol, 19
Telefonica (Brazil), 14
Thiagarajan, K. M., 298–299
Thiagarajan, Raj, 73
Thulasiraj, 283
Thyroid stimulating hormone (TSH), 173–174
Top of the pyramid, 4
Total Transactions (TTs), 197
Training, Casas Bahia, 128–130, 135
Transaction governance capacity (TGC), 77–98, 81–83
building, 83–85
components of, 84
criteria required by, 84–85
degrees of, 81
Treatment costs, Jaipur Foot, 246–247
developed world, 246
developing world, 247
Triclosan, 222
Tulavatis, 327
Tupperware, 108
TVS Electronics, 36–37

U
Udawat, Mahesh, 250
UNICEF, 174, 208, 215–218, 235
Unilever, 17, 31, 44, 46, 216, See also HLL subsidiary, Unilever
United States Agency for International Development (USAID), 215–217, 270–271, 364, 375
United Traders Limited, 181
Urban areas, and the poor, 12–13
U.S. Food and Drug Administration (FDA), 45

V
Venkataswamy, Dr. G., 36–37, 265
Virtuous cycle, 93–94, 111
Vohra, Neharika, 286
Voice recognition systems, 57
Voxiva, 45, 54, 361–379
Alerta disease surveillance system, 364, 366–368
application in developed countries, 372–373
cost–benefit, 369–371
deployment for Peruvian navy, 371
how it works, 366–368
user cards, 367
Alerta pilot, 368–371
scorecard, 370–371
challenges, 377–378
founders of, 363–365
global rollout, 375–377
HIV/AIDS in Africa, 375–376
India, 376–377
Iraq, 375
innovation, 361–362
lessons learned, 374
patient monitoring systems, 373
in Peru, 365–368
Ministry of Health, 365–366
problem definition, 365–366
as social venture, 364–365
Voxiva (Peru), 39–40

W
Wanderley, Frederico, 124, 141–142
Waste generation, 34
Water usage, 34
Wealth creation, 63–76
contracts:
learning the sanctity of, 68–69
reducing inequities in, 69–72
ecosystems for a developing country, 66–68
market-oriented ecosystem, 65–66
Weinmann, George, 386
Welfare fund scheme, 308
West African Popular Foods Nigeria, 203
Western India Ltd., 190
Wilson, Andrew, 384
Wireless devices, 15
Women:
and development, 108
in Mexican society, 151–152
Women’s Day, 307
World Bank, 3, 6, 41, 78, 170, 215, 217, 218, 219
InfoDev program, 364
World Health Organization (WHO), 39, 41, 185, 208, 246, 276

X
XMAP projects, xiv

Z
Zambrano, Francisco Garza, 150
Zambrano, Lorenzo, 147