

The Next Billions: Business Strategies to Enhance Food Value Chains and Empower the Poor



Prepared in collaboration with The Boston Consulting Group





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Preface

The World Economic Forum is pleased to present this report on innovative business models that can improve sustainable food production and help to reduce poverty in developing countries.

For the past four years, the Forum has served as a platform for leaders to define and work together on business-led and multi-stakeholder solutions for sustainable food production. Our activities include facilitating multi-stakeholder leadership action through the Global Agenda Council on Food Security; undertaking the research and thought leadership seen in this and other reports; and facilitating the Business Alliance Against Chronic Hunger which is implementing on-the-ground solutions in Kenya. This portfolio of work is championed by the Forum's Consumer Industries community with support from the Bill & Melinda Gates Foundation. We greatly appreciate the Gates Foundation's support for preparation of this report. This project was based on a broad research survey plus three cross-industry, multistakeholder

roundtables conducted in Latin America, Africa and Asia during 2008. The research survey included review of 60 reports and collection of 200 case studies from primary and secondary sources. The roundtables provided ground-level insights from practitioners – ranging from multinational and regional companies to social entrepreneurs – who are pioneering these business models on the ground.

The report documents a series of commercially viable business models that have proven effective at strengthening food value chains in developing countries, and offers recommendations for scaling them up. It presents examples of specific business approaches that can engage poor producers, consumers and entrepreneurs along the food value chain. It outlines design principles for companies interested in developing such initiatives, and suggests actions that all stakeholders can take to facilitate expansion of these business approaches.



Our conclusion is that the kinds of business models outlined in this report offer substantial potential for driving economic growth and food production, benefiting both companies and poor communities. Undertaken by global and local companies – often in partnership with other organizations – they represent the highly dynamic business innovation and growth which is rapidly evolving in “base of the pyramid” (BOP) markets. The report builds on and intends to complement the work of thought leaders in this arena such as C.K. Prahalad’s *Fortune at the Bottom of the Pyramid*, the World Resources Institute and IFC’s *Next 4 Billion* report, Harvard University’s industry-specific *Economic Opportunity* reports, and the United Nations Development Programme’s Growing Inclusive Markets initiative. It also draws from leading works in the agricultural arena by the World Bank, the International Food Policy Research Institute (IFPRI), and the United Nations Food and Agriculture Organization (FAO).

This report project was prepared by the World Economic Forum in partnership with the Boston Consulting Group. Lisa Dreier led the initiative at the Forum together with Jennifer Baarn and Pjal Islam, with input from Helena Leurent, Sarita Nayyar, Cornelia Roettger and Rick Samans. The Forum wishes to thank the Boston Consulting Group for its work, which was led by Arvind Subramanian, Anand Raghuraman and Nimisha Jain with Neetu Vasantu, S. Rajagopal and Marije van Mens.

Richard Samans
Managing Director
World Economic Forum

The report reflects extensive inputs, discussion and review by a number of Forum partners and experts, to whom we are greatly indebted. Corporate reviewers include: Marco Ferroni of Syngenta Foundation, Willem Jan Laan of Unilever, Christian Maas of Metro Cash & Carry International, Susan Morgan of BT, Herbert Oberhaensli of Nestlé S.A., Mara Russell of Land O’Lakes, Chris Shea of General Mills, Gabriel Solomon of the GSM Association, Christina Ularic of Swiss Reinsurance Company, and Steve Yucknut of Kraft Foods. Non-business and expert reviewers include: Marc van Ameringen and Bérange Magarinos of the Global Alliance for Improved Nutrition (GAIN), Andrew Aulisi of the World Resources Institute (WRI), Alain de Janvry of the University of California at Berkeley, Jane Nelson of Harvard University, Richard Rogers of the Bill & Melinda Gates Foundation, Mirjam Schoening of the Schwab Foundation for Social Entrepreneurship, and David Spielman of the International Food Policy Research Institute (IFPRI). Harvard University, the World Resources Institute and the Schwab Foundation for Social Entrepreneurship also served as independent reviewers of the case study selections for the report.

During 2008, the global food crisis starkly illustrated the urgent need to develop sustainable solutions for food security and economic growth benefiting all stakeholders, including the poorest. The ideas in this report intend to contribute toward that larger goal.

Sarita Nayyar
Senior Director, Consumer Industries
World Economic Forum

Executive Summary

Overview

Business actions to strengthen food value chains in developing countries fulfil two vital goals. For the private sector, they open up opportunities in a growing, profitable and largely untapped market. For poor communities, innovative approaches can improve livelihoods. Challenges in the business operating environment have historically limited business incentives to engage in poor regions. But many companies are discovering new approaches which can overcome such challenges and even transform them into opportunities.

This report focuses on business models that are proving effective along the food value chain in poor regions. It presents an array of specific examples, outlines design principles that companies and partners can use to guide new initiatives, and recommends actions that all stakeholders can take to scale up effective models.

The Opportunity

Globally, 3.7 billion people are largely excluded from formal markets. This group, earning US\$ 8^a per day or less, comprises the “base of the pyramid” (BOP) in terms of income levels. With an annual income of US\$ 2.3 trillion a year that has grown at 8% in recent years, this market spends US\$ 1.3 trillion a year on food. Around 70% of the BOP (2.5 billion people) depends on the food value chain for their incomes, either directly as small-scale farmers and farm labourers, or indirectly as small-scale entrepreneurs.

While it is highly diversified, much of the BOP represents a fast-growing consumer market, an underutilized farming sector, and a source of untapped entrepreneurial energy. Engaging the BOP as producers, consumers and entrepreneurs is therefore key to both reducing poverty and driving broader economic growth along the food value chain.

^a The US\$ 8/day income threshold is in Purchasing Power Parity (PPP) dollars, and was defined by the World Resources Institute report, *The Next 4 Billions*.

Understanding Food Value Chains

The process of growing, producing and marketing food involves a variety of industries and stakeholders along multiple steps, forming the food value chain.

- Private-sector actors in the food value chain include agricultural input companies, farmers (particularly smallholders and women), intermediaries, processors and retailers. Business-enabling services such as telecommunications, financial services, energy and logistics play a vital role throughout the chain. Non-business stakeholders are central to food value chain operations; these include governments, NGOs, donor agencies and international organizations.
- In developing regions, food value chains are constrained by limitations related to infrastructure, producer capacity, availability of finance, public-sector capacity, and other factors. These problems often create a “vicious cycle”, in which low productivity and a lack of access to capital depresses income and consumption, trapping the BOP in a downward spiral of deepening poverty. Coordinated engagement by business and other stakeholders can reverse this dynamic, creating a mutually reinforcing “virtuous cycle” of increased production, consumption and entrepreneurship at the local level.

Innovative Business Solutions

Businesses can take a holistic approach to the food value chain with specific interventions at three stages: producers, consumers and entrepreneurs.

Business solutions for producers

Companies can deploy a range of innovative strategies to provide opportunities to BOP producers. These include:

- **Develop agricultural inputs targeted to BOP needs.** New product design, and targeted research and development, can create offerings suited to poor producers’ needs and budgets

- **Improve farmers' access to inputs** by expanding and strengthening rural retail networks, and offering financial services to farmers. Companies can also empower retailers to expand their product and service offerings
- **Strengthen farmer capacity** through training and outreach. Input companies can strengthen farmer awareness of new products and techniques. Buyers can work with farmers to improve production and meet quality standards
- **Improve supply-chain efficiency** through streamlined logistics and warehousing, and working with value-adding intermediaries
- **Optimize sourcing processes** by sourcing from local producers, commercializing local raw materials and creating markets for sustainable trade in high-value products
- **Increase access to financial services** by adopting innovative strategies to provide credit, savings and insurance for individual farmers; creating mobile cash transfer systems; developing new novel risk-mitigation instruments; and providing capital funding for small business
- **Overcome infrastructure gaps** through business-led solutions targeted at both hard infrastructure (storage and transportation, energy, water infrastructure) and soft infrastructure (organizations, policies and regulations that strengthen business operations)

Design Principles for Successful Business Models

While BOP markets vary widely, companies can adapt successful strategies to specific regions or income segments. This report identifies a set of design principles that companies and partners can use in developing effective business models to strengthen food value chains:

Business solutions for consumers

Companies can meet growing consumer demand in the BOP market through several key strategies:

- **Design nutritious food for poor consumers**, by offering nutritionally fortified, affordable foods that meet the preferences of the BOP
- **Expand retail distribution networks** by leveraging informal retail and distribution channels to empower entrepreneurs and expand reach. Reduce delivery costs by partnering with other businesses
- **Strengthen consumer demand** through educational marketing strategies, partnerships with trusted parties, and using certification and labelling to build consumer trust

Business solutions to empower entrepreneurs

Industries such as financial services, telecommunications, energy and transportation are important enablers of business activity along food value chains. Companies can develop innovative strategies to provide needed services in such markets, such as:

- **Provide market information** through telecommunications applications that help farmers access information on market prices and good farming practices

- **Create life-enhancing offerings**: Develop new products and services that improve livelihoods and trigger economic multipliers at the BOP
- **Reconfigure the product supply chain**: Create cost-efficient distribution systems by sourcing from local producers and leveraging existing local distribution channels
- **Educate through marketing communication**: Design marketing programmes that contain educational as well as persuasive messages
- **Collaborate to form non-traditional partnerships**: To lower costs and broaden distribution, move beyond traditional roles to partner with communities, invest in skill building, and create incentives for self-governance among BOP business partners
- **Unshackle the organization**: Design corporate organizational structures – including metrics, incentives and accountability systems – to support, measure and reward long-term success in business initiatives targeting the BOP

Scaling Up: Key Actions for Stakeholders

Scaling up BOP business strategies requires a decentralized and localized approach, in which successful concepts are adapted for transfer from one region to another, often with a new set of partners and collaborators. Achieving scale in these business models, therefore, often requires cooperation among many actors including companies, governments, NGOs, donor agencies and international institutions. Partners can work together on several fronts:

- **Strengthen incentives for business engagement** through boosting incentives, removing barriers and reducing costs that impede commercial activity. This includes establishing financial or market incentives, and improving the enabling environment (policy, infrastructure and services)
- **Prioritize and sequence business initiatives**, working with partners to develop key capacities required for specific business models, and prioritizing high-impact and essential initiatives
- **Provide complementary funding and capacity** to overcome gaps (for example in R&D funding) and strengthen hard and soft infrastructure required for business models to succeed
- **Facilitate corporate engagement** among diverse industries and stakeholders, uniting partners' complementary capacities around common goals to reach the BOP
- **Establish effective models and build momentum**, sharing knowledge and highlighting successes to accelerate learning and encourage broad adoption
- **Collaborate to accelerate progress**, engaging leaders and "orchestrators" to catalyse and support multistakeholder cooperation

The business models discussed in this report have the potential to create substantial value for poor consumers, producers and entrepreneurs as well as for companies. They represent a roadmap for organizations seeking to take a win-win approach in emerging markets. Companies that establish workable, profitable and scalable business models to include the BOP will secure a strong advantage, both commercially and in terms of community and partner relationships. Success in the end will require new thinking, close coordination and alliances among unconventional partners – governments, civil society organizations and the BOP communities themselves.

Chapter 1 – Introduction

- 3.7 billion people around the world live on annual incomes of less than US\$ 3,000 (2002 PPP\$). 70% of them, or 2.5 billion, live in rural areas where agriculture is often the primary economic activity
- Companies, which often play a limited role in the food value chains of developing countries, can enter this market in a way that both meets a social need and creates profitable business opportunities
- This report explores how businesses can achieve this potential, outlining examples of successful business models and basic design principles for operating along food value chains at the base of the pyramid (BOP)

The private sector can play a pivotal role in the food and agriculture sector. However, in developing regions, where both the need and the potential for increased production are greatest, it is often engaged only peripherally. Expanding sustainable business engagement in these areas could bring sizeable gains to both poor, food-insecure communities and the private sector itself.

Globally, 3.7 billion people are largely excluded from formal food markets. This group, earning US\$ 8^b per day or less, comprises the “base of the pyramid” (BOP) in terms of income levels. Around 70% of the BOP (2.5 billion) depends on the food value chain for their incomes, either directly as small-scale farmers and farm labourers, or indirectly as small-scale entrepreneurs.^[1-3] (For a detailed account of the methodology used to reach the estimates in this chapter, see Appendix 1). While it is highly diversified, much of the BOP represents a fast-growing consumer market, an underutilized farming sector, and a source of untapped entrepreneurial energy. Engaging the BOP as producers, consumers, and entrepreneurs is therefore the key to both reducing poverty and driving broader economic growth along the food value chain.

The total income of the BOP is US\$ 2.3 trillion (in 2008 real terms),^c and has been growing rapidly at 8% annually in recent years^[1-3]. The group spends over 50% of their income – an estimated US\$ 1.3 trillion annually – on food. As their income grows, BOP consumers are demanding higher value and more diverse food, as well as other goods and services. Many poor producers have the potential to substantially increase their production, given access

to inputs and training. The BOP is also host to a young and growing population of potential entrepreneurs, many of whom currently lack the essential tools – such as bank accounts, mobile phones or electricity – needed to start a small business. These trends represent a set of business opportunities that cut across industry sectors, from food, beverage and agribusiness to retail and consumer goods, financial and telecommunications services, and others. Those at the BOP who can be profitably engaged by business – referred to here as the “next billions” – represent a large, untapped market.

Early movers can establish several advantages in this growing market. By being first to develop new offerings and innovative delivery channels, companies can gain valuable insights, secure greater market share and win the loyalty of BOP consumers and producers – a key success factor in this market. By creating opportunities for sustainable economic and social gains at the BOP, they will contribute to long-term market growth that benefits their investments. In fact, the BOP market offers an attractive meeting ground where corporate economic benefit and social impact can be realized together.

The “BOP” and the “Next Billions”

“Base of the Pyramid” (BOP) is a collective reference to 3.7 billion people populating the lowest income strata in the world. The income levels for this group range from 0 to a maximum of US\$ 3,000 per person per year (in 2002 PPP\$), or roughly US\$ 8 per person per day.

Within this group are the “next billions” – a large group of consumers, producers and entrepreneurs who can be profitably engaged or served by business, albeit with new and innovative approaches.

^b The threshold for BOP incomes was defined by the World Resources Institute report, *The Next 4 Billions*.^[1]

^c All numbers related to income, expenditure and price in this report are in current US\$, unless stated otherwise.

Despite this potential, the business opportunities embedded within the food value chains of poor regions remain largely untapped. A host of issues combine to prevent, discourage or derail business engagement. These include fragmented and poor quality food production; difficulty in tapping consumer demand; and poor infrastructure and governance. Surveying this landscape, many companies have concluded that their standard business models would not be profitable in such a setting, and they may be right. But the story should not end there.

While many remain on the sidelines, an increasing number of companies are developing innovative strategies to tap into the economic potential that exists throughout the food value chain. Whether supplying inputs to farmers, sourcing high-value products from small-scale producers, or developing and retailing an array of new products and services that meet the needs of poor consumers and entrepreneurs along the chain, these companies are finding approaches that work. Those that are successful are establishing viable business models for an untapped market, while also improving the livelihoods of the BOP.

What are these companies doing right? And how can other companies tap the potential of this market, while also benefiting the poor? More importantly, how can successful business approaches be mainstreamed and scaled up, to help drive sustainable economic growth in the regions that need it most?

This report attempts to answer these questions. It presents a series of specific business models that are proving effective along the food value chain; outlines design principles for companies seeking to develop new models; and recommends priority actions for all stakeholders interested in catalysing such pro-poor business engagement.

Chapter 2 provides an overview of the food value chain, and maps out the role of business and other actors in making it work. Chapter 3 presents specific business models that target both producers and consumers along the food value chain. Chapter 4 outlines innovative private-sector approaches that provide entrepreneurs and small business at the



BOP with the key tools – such as finance, communications and infrastructure – that are needed to create an enabling environment for efficient marketing. Chapter 5 presents design principles to guide the development of effective business models in these markets; and Chapter 6 recommends ways in which these models can be adapted and scaled more broadly, through concerted action by all stakeholders.

This report is a companion to *The Next Billions: Unleashing the Business Potential of Poor Communities*, published by the World Economic Forum and The Boston Consulting Group. That publication outlines strategies for “win-win” approaches to poor markets that cut across all industry sectors and regions. Both volumes address the business strategies that can be effective at the BOP, often requiring collaboration or partnership with other actors. While recognizing that the public sector plays a vital role in establishing and managing the enabling environment for business operations, both reports limit their discussion of public sector actions to those directly related to the targeted business models.

The need for both public and private sector action to improve global food production and food security has never been greater. In 2008, as economic growth slowed, food shortages and price increases had a dramatic effect on the world’s poor. Tens of millions of additional people were driven into hunger, bringing the global total close to one billion. Establishing sustainable solutions to this problem will require innovation, leadership and cooperation among all sectors. Through the types of business models outlined in this report, business can become a catalyst and core partner in advancing sustainable growth that benefits poor communities as well as the bottom line.

Chapter 2 – Understanding the Food Value Chain

- The food value chain involves multiple steps and engages diverse actors; its complexity and inter-dependence is both a challenge and an opportunity for business
- A coordinated set of business-led interventions can activate a “virtuous cycle” of productivity and consumption along the chain, resulting in substantial income gains for the BOP and broad-based economic growth
- With a current income pool of US\$ 2.3 trillion and food expenditure of US\$ 1.3 trillion annually, the base of the pyramid has the potential to significantly grow their incomes over the next decade, given the right set of initiatives

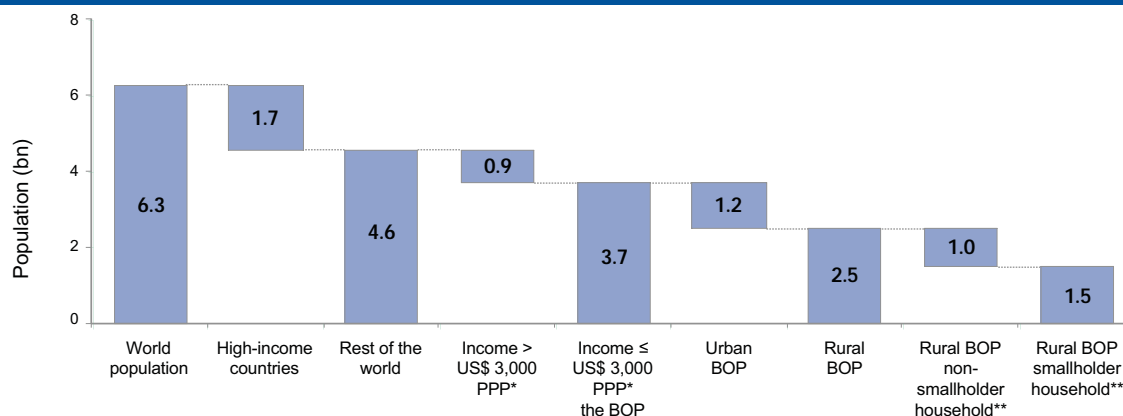
In most developing countries, the agriculture sector is the largest source of employment and a driver of economic growth. Almost 70% of the poor in developing countries – over 2.5 billion people – live in rural areas where agriculture is the main economic activity^[1-3] (for a detailed account of the methodology used to reach the numerical estimates in this chapter, see Appendix 1). Either directly or indirectly, the rural poor are dependent on the food value chain. The complexities of the food value chain, and the inter-dependence of its different components, present both a challenge and an opportunity. At present, food value chains in many poor regions are fragmented and inefficient, making them unprofitable and risky for both the people who depend upon them for survival, and the companies that could drive improvements. As discussed below, a coordinated set of business-led interventions to strengthen operations throughout the chain can

activate a “virtuous cycle” of mutually reinforcing gains in productivity and consumption, resulting in substantial income gains for the BOP.

2.1 A major opportunity

The current income of the BOP totals US\$ 2.3 trillion and has historically been growing at 8% per year^[1-3]. The group spends over half of this income – an estimated US\$ 1.3 trillion annually – on food. Of the 2.5 billion members of the BOP who live in rural areas, about 60% are directly dependent on a small farm for their household income. The other 40% are often closely linked to the food value chain, either through business linkages (e.g. as agricultural input retailers or small traders), or through other means^[1-3]. Together, these rural members of the BOP account for between US\$ 850 billion and US\$ 1.1 trillion in income, nearly half of the total BOP income^[4-10].

Exhibit 1: 2.5 billion people in rural areas are part of the BOP



*Income based on annual income per person per year in 2002 PPP\$

**Smallholder farming households are households of farmers and rural labourers working on a farm of 2 ha or smaller

Source: United Nations, World Bank, WRI.

2.2 Overview of the food value chain

The process of growing, producing and marketing food accounts for most of the activity in the agriculture sector and drives many other parts of the economy. It involves multiple steps, engages a diverse set of actors, and depends heavily on the operating environment, which is influenced by climate, governance and other external factors.

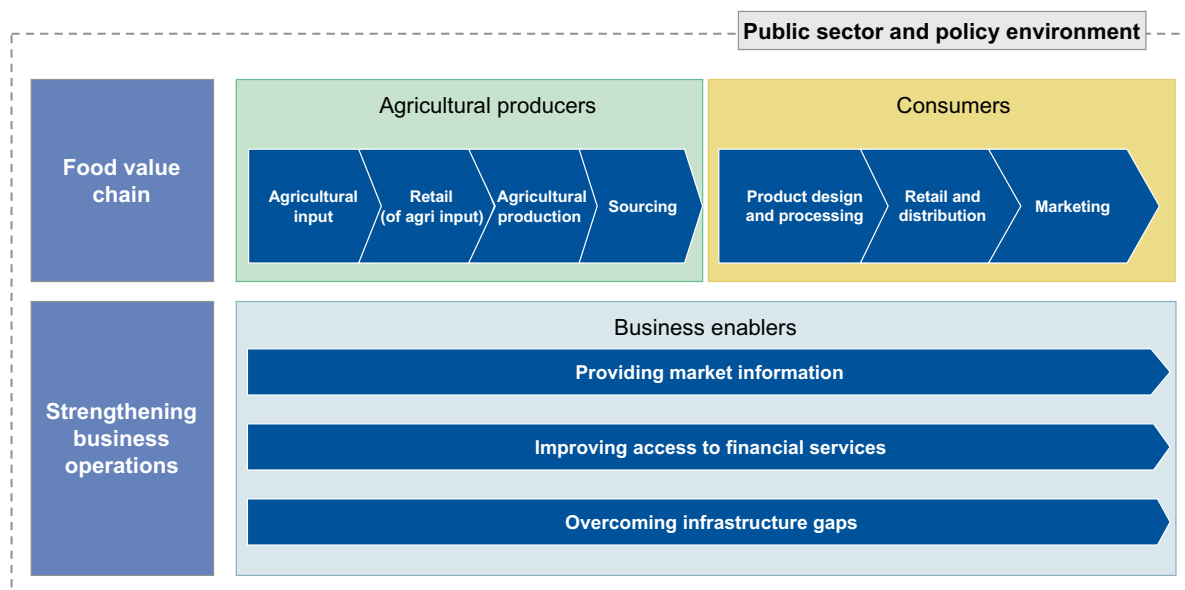
The food value chain starts with agricultural input companies supplying seeds, equipment and other inputs such as fertilizers. Farmers procure the inputs and combine them with other resources needed for agricultural production: land, water, finance, labour and knowledge. After harvesting, on-farm or community processing may take place to add value to the crop. Farmers sell the resulting produce directly to consumers or to intermediaries, who in turn trade with consumers, food processors or traders. Industrial-scale processing, packaging and distribution deliver finished products to consumers through retail outlets or other channels. At each step, participants depend upon business enablers to facilitate commerce, such as provision of financial and communications services, and energy, transport and water management infrastructure. They also

depend upon the larger public-sector enabling environment, which includes government-provided infrastructure and services, policy and regulation. Finally, the chain is influenced by the natural environment (including soil fertility, water supply and climate variations) as well as the larger political and economic context.

There are many different participants in the food value chain. To efficiently link consumers, producers and entrepreneurs, food chains require coordinated participation from industry, governments and non-governmental organizations (NGOs). Other groups such as research institutions, donors and the media also play key roles.

Because smallholder farmers are the main agricultural producers in many poor regions, they merit special consideration from companies and other organizations seeking to enhance business-led growth. Given adequate support to overcome the constraints that they face, these farmers have significant potential to increase their productivity, generating potentially substantial economic gains. Smallholders also represent a large and currently under-served consumer market for relevant goods and services.

Exhibit 2: Opportunities for intervention in the food value chain



Gender is another important aspect of the food value chain, since in most developing countries women undertake the majority of food production, processing and preparation. In the developing world as a whole, women produce 60-80% of food^[11] but earn 22% less than men and have more limited access to credit, training and land rights^[12]. Yet, there is compelling evidence from Burkina Faso and Kenya that agricultural productivity could be raised by as much as 20%, simply by reallocating existing agricultural assets more equally between men and women^[13].

2.3 Diversity in food value chains

Food value chains, and the value captured at each step, can vary widely depending on the product and the region. For example, maize grown primarily for family consumption has a relatively short value chain, whereas fruit that is harvested, processed and then exported involves a more complex chain. Value chains for the same product can also look quite distinct in different regions.

The diversity of food value chains is driven partly by the difference between staple crops, high-value and perishable products – since each has different transport, storage and processing requirements.

Value chains also vary depending on whether the product is for commercial or subsistence use and for local or international markets. Lastly, the assets and capacities of the farmer and the intermediaries within the chain heavily influence the value that is captured at each step. The graph below illustrates the variety of value capture in several food value chains.

This report discusses the basic steps in food value chains in broad terms, but does not discuss differentiation in great detail. Instead it focuses on business-led solutions to constraints that are common across a wide range of food value chains involving the BOP.

2.4 Turning a vicious cycle into a virtuous cycle

Communities in poor, rural regions face numerous challenges and constraints to increase their incomes and engage with the private sector. These include a lack of basic or efficient infrastructure, essential services, education systems and regulatory regimes. These constraints affect the livelihoods of the BOP as they participate in the food value chain as agricultural producers, consumers and entrepreneurs, often acting in two or more of these roles simultaneously.

Exhibit 3: Examples of diversity in food value chains

Yam value chain, Ghana

Actor	Farmer	Travelling trader	Wholesaler	Retailer
Value added*	-	50%	13%	18%

Kaja Apple value chain, Pakistan

Actor	Farmer	Pre-harvest contractor	Commission agent	Wholesaler	Retailer
Value added	-	92%	11%	16%	31%

Cocoa value chain, Ivory Coast

Actor	Farmer	Agent	Trader	Exporter	Processor
Value added	-	9%	15%	60%	24%

* Value added = price received by actor – price paid by actor.

Source: Yam value chain, Ghana: KIT + IIRR; Kaja apple value chain, Pakistan: Asian Journal of Plant Sciences; Cocoa value chain, Ivory Coast: Department of Agricultural Economics, Purdue University

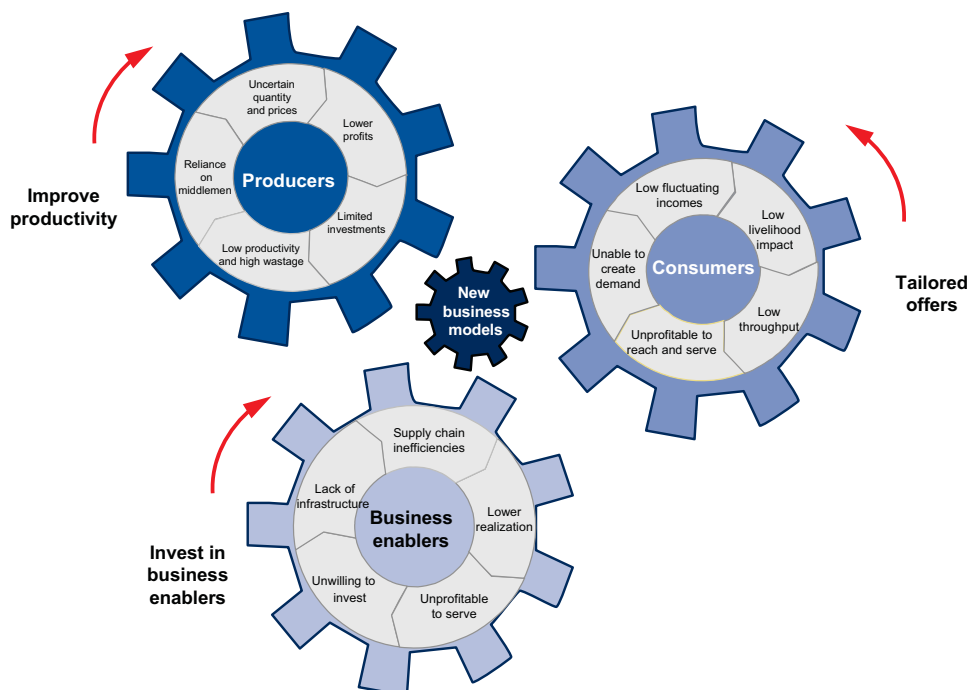
Producers often lack access to inputs and input retailers, support services, credit and the knowledge they need to boost production. They are also highly vulnerable to risk, such as climate shocks (floods and droughts) or pests and disease outbreaks, and have limited access to risk reduction strategies or “safety nets”. They are therefore cautious about investing in new ventures. In many areas they cannot access storage, processing and distribution facilities and suffer high transaction costs and large post-harvest losses. With little information, resources, or bargaining power, they face substantial barriers to accessing markets and securing fair prices. As a result, many small-scale farmers are trapped in low-input, labour intensive, low-yielding farming systems.

Consumers at the BOP also present a challenge to business investment. They have low and volatile incomes and little access to credit facilities. As a result, they are highly price sensitive and risk averse. They spend upwards of 50% of their household budget on food. Their choices are constrained by a lack of information and the cost or lack of access to needed inputs. Similar challenges face potential

entrepreneurs at the BOP, who generally have little access to the training, information and finance they need to realize their business goals.

These problems often create a “vicious cycle”, in which low productivity and a lack of access to capital traps the BOP in a downward spiral of deepening poverty. This limits demand for consumer goods and opportunities for entrepreneurship in BOP communities. To reverse the vicious cycle, companies can develop strategies to engage the BOP as producers, consumers and entrepreneurs. Strengthening and enabling these different roles can create a mutually reinforcing “virtuous cycle”. For example, a successful producer will direct surplus income towards increased consumption, benefiting local entrepreneurs such as retailers of consumer goods, agricultural inputs and telecom services. In addition to alleviating poverty and hunger, productivity gains and increased incomes allow farmers to invest in the future of their farms (e.g. improving soil fertility or diversifying into livestock enterprises), improve their family’s diet and health, and educate their children, all of which build the family income-generating potential still further.

Exhibit 4: Targeted interventions are required to unlock the potential of the BOP



2.5 Business opportunities along the food value chain

Engaging with the BOP in business activities related to the food value chain can generate value for companies in a variety of ways. This value may be found through commercial returns; expanded market access; increased quality, reliability or cost-efficiency of a company's supply base; or new business linkages to local entrepreneurs. Despite the evident challenges, many companies are adopting innovative approaches to reap the benefits. Although they employ different models, their collective experiences provide valuable insights into how companies can unlock the potential of the next billions. These businesses have uncovered opportunities all along the food value chain, working with agricultural suppliers and farmers, intermediaries (traders, wholesalers and other middlemen) and processors. They have also uncovered related opportunities in retailing, telecom and financial services. Examples of these strategies and their effects on business and the BOP are discussed in Chapters 3 and 4.

While the strategies deployed for one product or area are not uniformly applicable to other markets, specific examples discussed in this report have succeeded in boosting the income of BOP participants substantially, for example a tripling of agricultural yields within a year. When taken together, the business strategies outlined in this report could have an enormous impact on BOP income if they were scaled up broadly. Within the BOP, the greatest gains are likely to be captured by farmers and entrepreneurs active in business-enabling sectors such as telecommunications and finance. Farmers stand to benefit most from multiple value-chain interventions (i.e. the combined effects of new technologies, policies and institutions) and are the largest BOP group operating within the food value chain. Business-enabling sectors currently have a small presence in rural areas but can grow rapidly in what is currently a large and virtually untapped market.

The following chapters present a systematic analysis of the untapped business opportunities that lie along the food value chain, which can be important drivers





Hellen Awuor, farmer and entrepreneur, Kenya

Siaya is the poorest district in Kenya, with 64% of its 500,000 inhabitants living below the national rural poverty line. Most of the district's inhabitants are subsistence farmers growing maize, and many experience seasonal hunger. The district has limited market-related infrastructure and access, further restricting farmer incomes. Diversifying into high-value crops is one way farmers can increase their incomes from small plots of land.

Hellen Awuor, a farmer and entrepreneur in Siaya district, has successfully diversified her farm production and income sources. In addition to growing maize and beans for home consumption, she has expanded into horticulture (onions, tomatoes, spinach, avocados and bananas) which she sells in the local market. She spends the resulting earnings (which range from US\$ 2 to 12 per week) on processed goods like sugar, as well as children's school fees and medicine. A cow and 10 chickens provide additional family nutrition. Through training received from a local agricultural extension officer, Hellen plans to expand her chicken brood for sale in the local market. Hellen also buys and sells used clothing to local residents, and describes herself as "a businesswoman". Her son, Carlos, recently started beekeeping on the land, producing honey for a local company which provided training and equipment.

Source: World Economic Forum, BAACH Kenya 2007^[14]

and contributors to mutually reinforcing growth. The focus is on models that serve, engage or benefit the BOP in their various roles along the chain. For companies and partner organizations seeking to develop or broaden their approaches in such markets, the report also distills key insights on what is needed to create sustainable, scalable business models to develop these opportunities.

Chapter 3 – Solutions to Unleash the Potential of Producers and Consumers

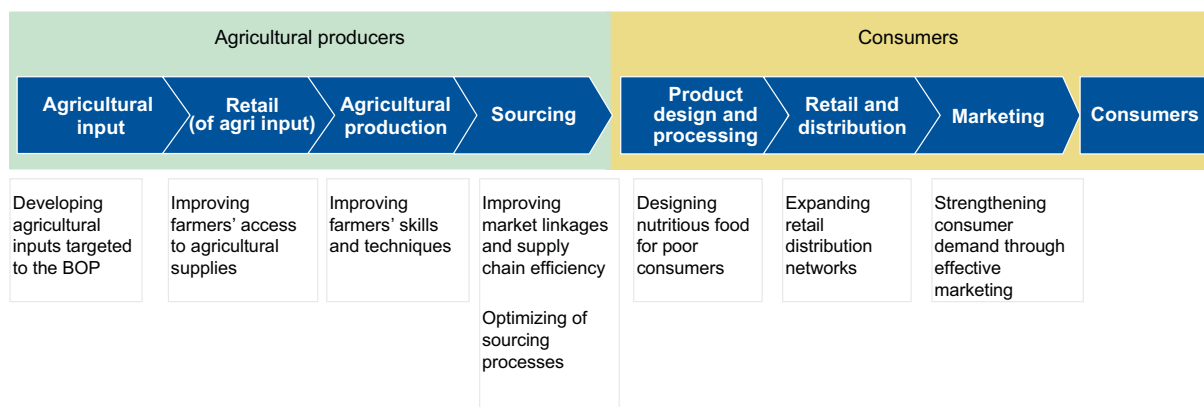
- Successfully engaging the BOP as both producers and consumers requires new and innovative business models. This chapter presents examples of effective models being applied along the food value chain
- Business models targeted to agricultural producers include developing and expanding distribution networks to increase BOP access to agricultural inputs, improving farmer productivity and supply chain efficiency, and sourcing products for local and international markets
- Models targeted to consumers include: designing nutritious foods targeted to BOP needs; expanding retail distribution through entrepreneurs and business-to-business collaboration; and conducting educational marketing campaigns to stimulate demand
- Holistic business models addressing whole value chains are some of the most effective; companies can lead or coordinate action throughout the chain

In an era of rising food demand, companies are increasingly seeking ways to expand their supply base and meet the needs of new consumers. Doing so effectively will require companies to develop strategies for working effectively with smallholder farmers – who form the majority of the farm sector in most developing countries – as well as the poor in their capacity as consumers and entrepreneurs. Companies can work with local farmers to substantially increase the volume and quality of their production by facilitating access to inputs and training, and by establishing local and international market linkages. Demand-driven business models are highly effective in justifying front-end investments in the food value chain.

As BOP incomes grow, companies are also seeking new ways of meeting the rising demand for food and other products from BOP consumers. Innovative approaches, such as designing affordable, nutritionally fortified foods and extending retail distribution networks deep into poor communities through unconventional partnerships, are proving effective for meeting the needs of BOP consumers while also contributing to their health and livelihoods.

This chapter describes specific interventions that have reached the BOP at different points along the food value chain. The business models presented here are aimed at both BOP producers and consumers, and can have a substantial impact on improving the livelihoods of the poor while also

Exhibit 5: Business solutions for producers and consumers along the food value chain



Successful business models can either target one step or integrate different elements of the chain, adopting a holistic approach to align opportunities on the demand side with improvements on the supply side.

providing financial returns to farmers and commercial enterprises. However, it should be noted that adopting such models is a deliberate choice and requires innovations and commitment from all partners.

3.1 Business solutions for producers

- By adopting innovative business models, companies can work with BOP producers to significantly boost the quality and quantity of their agricultural production, thus expanding the company's supply base and the farmer's income
- Companies can expand and deepen markets for agricultural inputs by developing products targeted to BOP producers' needs, adopting new retail distribution strategies combined with credit access and other services, and extending training and information to farmers
- Demand-driven models are most effective for boosting production; agricultural, food and beverage companies that support BOP producers at each step of the farming and marketing process can secure the best results

Companies seeking to expand their market share and distribution networks for agricultural inputs, their supply base for agricultural products, and their business linkages in new markets can find significant untapped potential and unmet demand in poor regions. However, effectively engaging the potential of these markets often requires entirely new business approaches that involve working with farmers and entrepreneurs at the BOP.

Companies can adapt their business approaches to serve and empower BOP producers. The following sections outline business models that are proving effective in developing targeted products, expanding distribution and spurring demand-driven production for local and international markets.

Developing agricultural inputs targeted to the BOP

Traditionally, agricultural suppliers have targeted more affluent farmers. Companies that have ventured into BOP markets have done so through re-packaging existing products to make them more affordable, or through adapting products for local conditions and needs. They have also offered farm equipment, such as processing and storage facilities, for lease rather than for purchase to reduce farmers' upfront investment costs.

Tailored new product design and R&D. A new generation of agricultural technologies is emerging, focused on the practical needs and constraints faced by the BOP, to deliver near-term benefits for farmers. International Development Enterprises India (IDE India), a social enterprise, shows how treadle pump suppliers can actively engage farmers and other actors in the chain to achieve profitable results. (See box 1).

Syngenta, a global seed and crop protection company, has demonstrated the payoff of long-term commitment to developing locally-targeted solutions. The company has spent 11 years developing sugar beet varieties suitable for tropical climates. By switching to the new sugar beet variety, farmers can obtain the same quantity of sugar (or alcohol or ethanol) per unit of land, in half the time. This significantly improves productivity and the efficiency of land use. Using almost 30% less water than typically required for sugar cane, the sugar beet can serve as a raw material for both the food and the biofuel sectors. Almost 2,000 farmers in India and up to 1,000 in Colombia have participated in the pilot project. The goal is to bring 100,000 ha under production in the medium term in Asia, Africa and Latin America, while also improving the technology transfer methodology to facilitate replication.^[16]

For many companies, financing a long-term R&D effort to develop products for a low-margin market poses a financial challenge. In some cases, public financing or private donor funding can help catalyse R&D focused on BOP needs. The Consultative Group on International Agricultural Research (CGIAR), for example, is a donor-funded organization that works with governments, private enterprises and NGOs. The organization conducts research on crops and other commodities that benefit poor farmers. The CGIAR provides genetic and breeding materials to other research organizations, which adapt them to local conditions and make them available to private seed companies. This approach has produced hybrid maize breeding lines in Mexico and other parts of Latin America through the work of Centro Internacional de Mejoramiento de Maíz y Trigo (CIMMYT), and hybrid millet, sorghum and pigeon pea lines in parts of India and Africa through the work of the International Crops Research Institute for the Semi-Arid Tropics, (ICRISAT)^[17]. The adoption of these technologies varies widely between countries and regions, and faces greater limitations in Africa.

Improving farmers' access to agricultural inputs

Even when appropriate inputs are available in-country, poor farmers have to overcome both logistical and financial hurdles to access them. In sub-Saharan Africa, farmers face some of the highest fertilizer prices worldwide, a trend that worsened as global fertilizer prices nearly doubled in 2007-2008. Distance is also a barrier: 40% of African farmers live four hours or more from the nearest input retailer.^[2] A lack of financial services and fertilizer subsidies makes purchases impossible for many at the start of the planting season, when cash supplies are low. As a result, African farmers have the lowest rates of fertilizer use worldwide, using only 13 kg per hectare compared to 190 kg per hectare in East Asia.^[2] Some companies are introducing innovative approaches to extend their distribution networks to small-scale farmers through direct investment or partnerships with intermediaries. These models have several common elements: a) they aggregate both farmers' goods and buyers' demand to create critical mass; b) they act as a two-way trading platform; and c) they bundle services and products to enhance their appeal.

Box 1 – International Development Enterprises, India: A coordinated approach to servicing small-scale farmers

International Development Enterprises India (IDE India) is a social enterprise that engages with small-scale farmers by supplying manually operated treadle pumps. The pumps help farmers to boost their productivity, increasing their earnings by around US\$ 400 per annum. The cost of the pump can be recovered within three months from the first harvest. In order to build awareness of the benefits of irrigation pumps, IDE India conducts live and video demonstrations and distributes flyers. They also engage the support of village opinion leaders – influential farmers who are trained to market the product to their peers.

IDE India trains farmers to use and repair the pumps; select crops, planting material and fertilizer; and utilize market information. To keep retail prices low, product manufacturing is outsourced to local manufacturers, who follow a stringent quality assurance program and participate in IDE India's

warranty scheme. The enterprise has also facilitated partnerships in service hubs that provide processing facilities and allow for intermediary sales of produce. In addition, IDE India facilitates an innovative financing mechanism, where the agricultural input companies directly finance the farmers, thus bypassing the need for external financiers.

This broad-based support has helped farmers increase their productivity; many have doubled their income within two years of purchase. IDE India has also created jobs by establishing and training local distributors. This multi-pronged approach has proven highly successful for the commercial pump suppliers and, to date, more than 650,000 treadle pumps have been sold through IDE India's network of dealers and distributors.

Source: International Development Enterprises, India^[15]

Retail hubs in high-density areas. In rural India, Godrej Agrovet Ltd, a leading agribusinesses player, has established a chain of rural outlets, each serving approximately 20 villages and 20,000 farming families. These outlets offer one-stop shops, providing agricultural equipment and useful services such as soil and water testing, veterinary and financial services, post offices and pharmacies. The company has partnered with other companies, such as Tata Agrico (a subsidiary of Tata Steel) to expand its offering of services^[18]. Other farm outlets in India are starting to provide weather and commodity price information and even trading services. Some retail hubs offer post-harvest services such as processing and warehousing.

Empowerment of retailers in low-density areas.

In low population density or remote rural areas, companies can link to micro retail networks to deliver supplies and to disseminate knowledge to farmers. Some companies have empowered local retailers to become their dealers and to educate farmers on the use and benefits of their products. The dealers receive training in both technical knowledge and retail management skills. Bayer CropScience introduced practical, small package sizes of fertilizer and pesticides in Kenya while simultaneously running its Green World training programme,^[19] which also provided training for more than 2,000 dealers on crop protection and agricultural practices. Such agro-dealer networks can provide both dealers and farmers with access to funding. In another Kenyan example, Equity Bank launched a US\$ 50 million credit line for 15,000 agro-dealers and other small-scale enterprises operating along the food value chain. In complement to this initiative, the Government of Kenya launched a subsidy programme through which farmers can redeem vouchers at agro-dealer stores to expand access to and demand for inputs^[20].

Strengthening farmer capacity

Farmers in developing countries often lack technical information on new products and farming techniques and, given the limitations of government-sponsored agricultural extension services, have few opportunities to access training. Smallholders often have many dependents and limited income, with no risk protection or safety net. Given their high

exposure to risk, they are understandably cautious about trying new products and techniques. Private companies, which trade with farmers as either buyers or suppliers, can bridge this gap by offering farmer training programmes – so-called outgrower schemes – increase farmers’ knowledge and willingness to adopt the new technology.

Training and outreach by agricultural suppliers.

Seed and fertilizer companies have taken the lead in providing coordinated educational and training services to farmers. Both sides benefit from these programmes. Farmers gain know-how and the means to improve their productivity, while suppliers benefit from feedback and customer loyalty. Suppliers can take these programmes a step further by adding services that will not only improve productivity but also enable farmers to enter new markets or to meet more stringent quality requirements.

In Brazil, seed company Bayer CropScience has collaborated with HortiBrasil, an NGO, to enable 500 small-scale fruit producers obtain an international certification through the Garantia de Sabor – the “good flavour guarantee” – label. Bayer supplies seeds and education to farmers through an outgrower programme,^[21] while third-party monitors regularly review their adherence to sustainable farming techniques and certify the quality standards of the fruit. In parallel, Bayer builds market acceptance by educating wholesale traders about the new label. The produce sold under the label is priced at a premium in retail markets and is suitable for export, providing a considerable opportunity for farmers to improve their productivity and incomes. By investing in the brand, the partners hope to create regular consumer demand for the products in local and international markets.

Training and capacity-building by buyers.

Buyers or traders who want to ensure adequate supply and quality often develop outgrower programmes with farmers. These programmes can range from supplying seeds and fertilizers to providing training and monitoring programmes. Under these programmes, buyers will guarantee purchase of certain volumes at specified prices. They will sometimes make payments in advance of the harvest, smoothing out cash flow and creating

stability that can give farmers the confidence to invest in goods and services that will further improve their incomes. Such advance-payment schemes must be structured equitably to ensure a competitive price at harvest time.

Buyers can also take an extra step and ensure that post-harvest loss is minimized between farm and factory, thereby increasing profitability for both farmers and wholesalers. Metro Cash & Carry, one of the largest food wholesalers in Vietnam, buys fresh produce from several smallholders in the Lam Dong province, a vegetable-growing region. In partnership with local authorities and NGOs, Metro has invested in training programmes for farmers and other small-scale service providers along the food supply chain. So far the company and its local partners have trained 18,000 farmers in Vietnam and are running similar programmes in other countries.^[22]

Improving market linkages and supply chain efficiency

Inefficient supply chains raise costs and reduce profits for companies and farmers alike. Investments in better transportation, warehousing, infrastructure, storage and intermediaries can boost returns over the long term for all participants in the supply chain.

Improving logistics and warehousing. Post-harvest losses in developing regions can be significant. For perishable products, such as milk and vegetables, 50% of the product may be spoiled before it reaches the consumer market. Losses affect farmers both directly (when their products spoil before sale) and indirectly (by lowering prices paid by traders and processors, who are also affected by wastage). Investing in on-farm processing, warehouse systems, logistics and training can increase the speed and



efficiency of delivery to market. Sometimes, simple means are sufficient. Metro's Cash & Carry outlet in India suffered losses in its tomato supply as high as 40%. It turned out that during their breaks, handlers sat or slept on top of bagged tomatoes. By changing its packaging to crates, Metro was able to reduce waste to 15%.^[23] TNT, a global mail, express and logistics provider, has provided analyses and recommendations to public agencies and partnerships with a goal of improving efficiency of transport and supply chain networks in several African countries to reduce transport costs and travel time.^[24]

Investing in intermediaries that add value. While intermediaries in developing markets are often seen as one of the main causes of supply chain inefficiency, they can be useful in providing funding, marketing, logistics and other goods or services that would be otherwise unavailable to farmers. They may also hold valuable knowledge about producer communities that they can communicate to buyers. Moreover, they help aggregate a highly fragmented supply base, increasing efficiency for buyers who want to buy larger volumes of produce. Companies need to determine which intermediaries add value, so that they can then be supported. Retailer PT

Carrefour Indonesia has done this with fresh produce wholesaler Bimandiri. The wholesaler helps Carrefour establish and enforce quality and quantity standards and, at the same time, helps smallholders to receive a negotiated and fair price.^[25]

Optimizing of sourcing processes

Local procurement systems can benefit poor farmers as well as processing and retail companies. Initiatives to establish such systems are often the result of commercial incentives to reduce costs. These can entail replacing high-cost imports with low-cost local goods or new products developed locally.

Switching from imports to local sourcing. Rising demand for processed foods, combined with high tariffs and increasing production costs, are driving companies to view local small-scale farm produce as a viable alternative to imports. For example, to increase its supply of high-quality corn in China, General Mills switched from imports to local sourcing and reduced procurement costs by 25% in the process. The company currently sources corn for the Chinese version of its Bugles snack from 528



small farms in Yongqing Village, in the Heilongjiang province. General Mills partnered with a local miller, Xingda, which provided logistical support and managed local relationships.^[26] Such partnerships are essential in improving farmers' efficiency and to tap the benefits these farmers can add in terms of costs, reliability and quality. Likewise, Olam, one of Nigeria's largest food processing companies, has partnered with the United States Agency for International Development (USAID) to procure rice from small-scale farmers after an increase in tariffs made imports less attractive. Olam provided farmers with inputs, technical assistance and access to processing facilities. Because the farmers needed to produce a better and more consistent quality, Olam and USAID also established model farms, used for extensive training and research. In addition, Olam launched a high-quality branded rice product to ensure it would capture sufficient margins. Collaboration with Olam resulted in an average yield increase of 75% in the first two years and a net income growth of over 155%. The programme currently involves over 8,000 farmers.^[27] Such local-supply programmes can maximize value capture when focused on premium products. However, as SAB Miller has proven (see Box 2), sourcing for lower-priced products can benefit smallholders as well.

Commercializing local raw material. Local staple crops or raw materials often hold untapped potential for commercialization. Unilever has cooperated with a wide range of partners to unlock hidden value in processing the *Allanblackia* seed, a traditional source of cooking oil in a number of African countries. The resulting Novella Africa project has designed a supply and processing chain to procure, extract and market the oil as an alternative to other vegetable oils in soap and processed foods. In the project's second commercial phase, farmers are supplying several additional processing companies. One of the key success factors is cooperation among the private sector, government and NGO partners, which provided an international perspective and on-the-ground experience. This enabled the initiative to be scaled out from Ghana to Tanzania, Nigeria, Liberia and Cameroon.^[29]



Liu Fuyou, farmer, People's Republic of China

Liu Fuyou lives in Yongqing Village in Heilongjiang province in China. For generations, his family has been growing corn on 2.5 acres of land. In 2003, Fuyou signed a contract farming agreement with General Mills, which guaranteed an above-market price for 100% purchase of his crop. General Mills provides technical assistance, quality seeds and financing for purchasing inputs such as fertilizers. Liu Fuyou previously had no access to such services, and his income varied unpredictably based on weather and market prices.

Since becoming a contract farmer, Liu Fuyou's yields have tripled. His household income has more than tripled, from a range of US\$ 680-800 to US\$ 3,300. Liu Fuyou has invested the increased income in improving the life of his family. He built a new house to replace their previous mud and grass structure, and installed storage buildings and a perimeter wall. He also bought a small tractor, a television, radio, mobile phones and other household appliances. The family has improved its diet, buying more meat and varied foodstuffs.

Similar impacts are visible in the livelihoods of other contract farmers in the community. Many families have invested in housing improvements, tractors and motorcycles, and other items. Increased spending has catalysed the growth of local micro-enterprises such as small shops and restaurants. The village road has been paved, improving the community's access to nearby towns and markets.

Source: General Mills 2008^[28]

Box 2 – SABMiller: Global smallholder sourcing strategy

Brewer SABMiller has rolled out several new product innovation, quality improvement and import substitution projects in Africa and India. When identifying suitable regions, SABMiller looks at growing markets with an undersupply in agricultural products, supportive partners, and existing infrastructure in critical areas such as water supply and transportation. One of the key challenges is identifying and managing relationships with government, NGO partners and other stakeholders. Currently over 10,000 smallholder farmers are involved in projects in India, Tanzania, South Africa, Uganda and Zambia. The company expects to increase the number of participating farmers to 30,000 by 2012. In most cases, the business benefits have already exceeded the initial investment and farmers have seen a significant increase in their incomes.

With the introduction of the Eagle Lager brand in Uganda, SABMiller expanded its import substitution model and redesigned its products to accommodate the availability of local supplies of sorghum. The brewer participated with the local government in research on sorghum and designed a supply chain that accommodates small-scale farmers. While SABMiller also works with commercial farmers, for the Eagle brand it is committed to buying from subsistence and more vulnerable producers. The brand is expected to provide direct financial benefits to more than 5,000 farming families in 2009.

Source: SABMiller Company Information 2008^[30]

Building markets for high-value sustainable trade. Trade barriers, inadequate logistics and a lack of agents to advocate and promote products generally restrict or prevent small-scale farmers from accessing high-end markets. Sustainable trade practices, partly based on principles of the fair trade movement, help farmers circumvent such roadblocks. The main aim is to provide consumers with food that has been grown in accordance with environmental, health, safety and fair-wage or pricing standards. Sustainable trade practices also make the sourcing and certification process an essential part of the final consumer product, justifying a price premium. For example, the cooperative Kuapa Kokoo, representing 40,000 cocoa farmers in Ghana, partly owns Divine Chocolate Ltd, a trading company that markets a premium chocolate made with Kuapa Kokoo members' products.^[31] Although adhering to sustainable trade practices, the brand also targets the broader market for high-quality chocolate.

Large companies are increasingly applying these ideas in their international supply chains. For example, Kraft Foods sources several key commodities from developing countries facing unique environmental, economic and social concerns. In the early 1990s, the company began adopting sustainable practices in procuring coffee. In 2003, the company sought certification from the Rainforest Alliance certification. Certified products comply with the Sustainable Agriculture Network^d standards for protecting wildlife, wild lands, workers' rights and local communities. Today, with eight coffee brands in more than 20 countries carrying the Rainforest Alliance seal, Kraft is the largest buyer of Rainforest Alliance Certified beans.^[32]

^d The Sustainable Agriculture network is an international coalition of leading conservation groups

3.2 Business solutions for consumers

Companies often find it difficult to access the BOP as a consumer market, since they generally have low and fluctuating incomes and are often located at the end of informal and inefficient market chains. In addition, there is little information available on their behaviour and preferences, and marketing strategies devised for higher-income markets are often ineffective in creating or strengthening consumer demand. Companies can overcome these obstacles and launch successful products by introducing new products developed through well-targeted design, cost-efficient processing and effective marketing. Executing such business models effectively often requires partnerships with other organizations.

Designing nutritious food for poor consumers

Nutritional deficiencies cause substantial damage to human health and economic productivity. Providing food enriched with micronutrients such as iron and vitamin A is recognized as one of the most cost-effective solutions. Fortified foods in the form of enriched staples, such as flour and salt, or processed foods with nutritional supplements are an effective delivery mechanism for such micronutrients. Although fortifying food is technically a relatively straightforward process, large-scale fortification efforts have to overcome a number of hurdles. Many developed countries lack regulation, leaving food companies to introduce fortification on a voluntary basis, often at added cost. Consumers may be willing to prioritize fortified foods once aware of their benefits, but reaching them with the information is a challenge. Companies seeking to provide fortified foods to the BOP must therefore invest in effective and affordable products, establish cost-effective local processing capacity and undertake well designed and targeted marketing campaigns.

For these reasons, many food fortification programmes still involve donor funding, at least in the development or transitional phases. Donor funding often focuses on supporting fortification of staple foods, due to their broader reach and lower cost. Processed foods, by comparison, are more often sold at a premium. However, several food companies have achieved commercial success with fortified products, based on transitional or no donor



funding. As income levels rise among the BOP, those with discretionary income can become a strong market for nutritionally enhanced products. Success requires creating low-cost products that meet market conditions and have durable packaging, a long shelf life and little need for clean water or electricity.

Britannia Industries, the Naandi Foundation and the Global Alliance for Improved Nutrition (GAIN) recently cooperated to make fortified foods more widely available for lower-income groups in India. Britannia is a leading Indian food manufacturer and its biscuits reach more than 70% and 45% of urban and rural markets, respectively. The Naandi Foundation is a public trust that focuses on the protection of child rights, particularly in education and nutrition. GAIN is a Swiss foundation that works to catalyse partnerships and create an enabling environment for fortification. The partners utilized Naandi's established infrastructure of school feeding programmes in Andhra Pradesh to distribute iron-fortified biscuits to over 150,000 children. Britannia has now launched commercially an iron-fortified version of its popular Tiger biscuits called Banana biscuits. Over 2 billion packets of Banana biscuits have been sold to date using traditional market channels to reach the general population. In addition to improving children's nutritional status, the initiative helped Britannia to gain insight into the BOP consumer market and position itself as a food company with a nutritional focus. Furthermore, it created opportunities to explore the development of additional lines of fortified food products for both low-income and affluent consumers.^[33]



The French company Nutriset developed a ready-to-use peanut-based paste, Plumpy'Nut, to provide nutritional support to malnourished children in developing countries. In addition to tasting good, the paste is packaged in foil packets so that it can be distributed easily throughout relief camps and other challenging environments. To reduce cost and expand distribution, the company has set up a franchise system in Central and Eastern Africa to license Plumpy'Nut to local producers.^[34]

Expanding retail distribution networks

One of the main challenges to commercial enterprise in BOP markets is reaching consumers. While all poor consumers tap into retail networks to purchase essential goods, these mostly informal systems are often comprised of multiple small-scale intermediaries with limited incentive or opportunity to create economies of scale. Poor infrastructure, such as roads and warehousing, compounds existing inefficiencies and raises costs. As a result, the poor often pay higher costs per unit for essential services than wealthier members of the community, the so-called "BOP penalty". Companies can reduce delivery costs and make goods more affordable to consumers through both conventional and unconventional means. Effective strategies include working with existing informal channels, training entrepreneurs and collaborating with other companies.



Leverage informal retail and distribution networks

Providing small-scale retailers with tools and information can allow companies to utilize existing informal trading channels and turn small-scale retailers into product agents, thereby expanding their reach. Given the right training and tools, many poor consumers themselves can become successful small-scale retailers, assisting companies providing last-mile access to the consumers that are hardest to reach. In Brazil, Nestlé engages rural women to operate as distributors. They travel door-to-door demonstrating product benefits and selling directly to consumers. By creating incentives for local retail entrepreneurs rather than hiring salaried employees or franchise holders, the company reduces its need to monitor individual sales performance. Once a company has established a critical mass of micro-retailers, it can start to provide additional services such as credit or portfolio expansion. These arrangements help companies build trust within a community and reach the target segment efficiently.

Organized retail is one of the fastest growing sectors in developing countries. For example, in Thailand, the US\$ 56 billion retail market has grown annually by 12% since 2002.^[36] While they are sometimes seen as a threat, large-scale retailers can also provide commercial opportunities for small-scale entrepreneurs. Instead of striving to replace micro-retailers, some of these large players are partnering with them to extend their own footprint. India's Subhiksha Trading, an arm of Subhiksha, an urban

supermarket, pharmacy and telecom chain, for example, is becoming a wholesaler to micro-retailers in urban and suburban areas.^[37]

Business-to-business collaboration to extend and improve distribution networks. Collaboration with other companies can help reduce delivery costs to the BOP. Hariyali Kisaan Bazaar, a rural retail chain managed by DCM Shriram Consolidated Ltd in India, bundles the services and products of 80 different suppliers into one single store.^[38] Mi Tienda, a Mexican retail association, helps small rural shops maintain a diversified and current inventory. The organization's network of regional buyers acts as an intermediary between large wholesalers and the small shops. They deliver fresh produce daily, even in small quantities.^[39] Such initiatives save costs, diversify inventory and expand distribution networks.

Strengthening consumer demand through effective marketing

Educational marketing. Since they are unfamiliar with many commercial products, BOP consumers commonly look to trusted sources such as friends and family for advice in making purchasing decisions, rather than relying on messages from the media. Numerous companies have developed innovative pathways of communication, often borrowing from social marketing models to use word-of-mouth advocacy, peer marketing, village meetings and performance art.

Creation of partnerships with "trusted parties".

Successful marketing strategies often depend on partnerships, especially with organizations and brands that are deemed trustworthy. In China, a

Box 3 – Zhenji: Fortifying soy sauce in China

In launching a national campaign to combat iron deficiency, China's Center for Disease Control (CDC) partnered with GAIN and Zhenji (Shijiazhuang Zhenji Brew Group Co., Ltd), a leading soy manufacturer, to introduce an affordable soy product fortified with iron. The campaign has been a major success for all players. Sales of the fortified soy sauce increased from 1,500 to 20,000 tons per year over two years, reaching sales of nearly US\$ 5 million. The product is marketed in nearly 90% of Chinese stores that sell soy sauces. Zhenji increased production capacity to 100,000 tons per year to meet growing demand. Awareness levels among high-risk individuals in many provinces was close to 100%, and anaemia rates fell from 20% to approximately 8%.

Several key strategies helped drive this success:

- *Aligning public and private incentives:* CDC provided the fortification formula and manufacturing technology to Zhenji for free and conducted a nationwide educational campaign. In return, the company agreed to keep the price affordable.
- *Leveraging public-sector resources:* CDC created teams at national and local levels to manage

relationships with various government agencies, including coordination with the health department on quality control.

- *Clear value proposition to consumers:* The campaign offered consumers a superior product with health benefits priced at only 1 cent more per bottle than traditional soy products, which was far cheaper than medicinal treatments for iron-deficiency anaemia (IDA).
- *Combined marketing efforts:* The CDC spearheaded an educational media campaign through TV, newspapers, flyers, and other media that targeted consumers directly. It was able to promote the product on television through its access to free "educational" airtime. This lent government credibility and raised awareness of the product, while lowering costs for Zhenji. Zhenji focused its marketing efforts on retailers and rural doctors, using promotions and discounts to drive traffic to stores and garner support for the product

Source: Global Alliance for Improved Nutrition, 2008^[35]

successful marketing campaign for a fortified soy sauce involved China's Center for Disease Control (CDC), a governmental institution that is viewed by local consumers and medical professionals as the leading authority on nutrition. (See box 3)

Certification and labelling. Certified labels help to differentiate products and increase consumer trust. When the South African government introduced large-scale fortification of maize flour, it developed a distinctive logo to set the product apart. One of the key lessons of this project, however, was that certified labels require a level of investment and marketing similar to that required for branded products. After initial donor funding for the start-up phase, the maize fortification project is fully commercially viable.^[40]

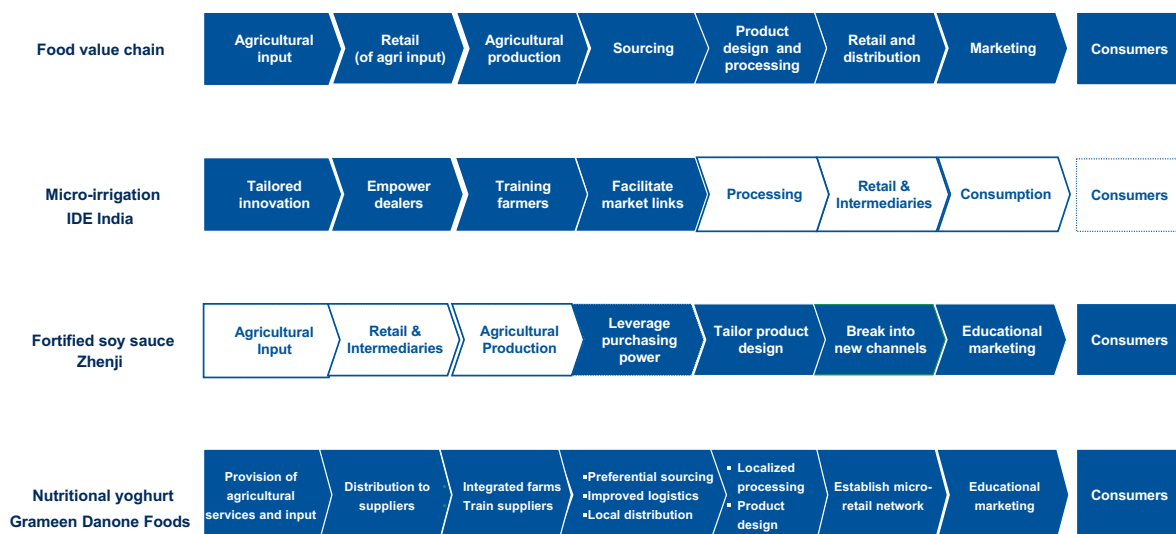
3.3 The case for holistic solutions

While many companies engage in just one stage of the food value chain, holistic approaches can unlock even greater value. Holistic business models take into account all three roles played by the BOP – that of producers, consumers and entrepreneurs – and

rely on a coordinated approach to address multiple stages of the food supply chain. In the Novella Africa project, Unilever and its partners strove to involve both small-scale farmers and micro-entrepreneurs in the food value chain, reducing costs for consumers at the same time. A key insight from projects that address the full supply chain is that interventions linking farm production with market demand have the strongest potential to provide sustainable economic growth and lift large numbers of people out of poverty. The introduction of Shukti Doi yoghurt by Grameen Danone Foods Ltd is a prime example (See box 4).

Undoubtedly, private enterprises have stronger bargaining power and greater resources than most micro-entrepreneurs, farmers and consumers. While companies could take advantage of this imbalance, leveraging their position or engaging in monopolistic behaviour, that approach would be short-sighted. To the contrary,, some companies have adopted successful BOP strategies that require investments in community-scale infrastructure or capacity-building which could conceivably benefit the company's competitors. While this represents a

Exhibit 6: Approaches to improving food value chains



departure from traditional practice, it can be seen as necessary and increasingly common practice in BOP markets. Companies can view these investments as benefiting the BOP and broader business community as a whole.

Not all companies have the full array of resources and competencies required to remodel entire supply chains, or engage the poor effectively in their different roles. Partnering with other companies and

stakeholders can provide such capacity. When engaging partners in a multi-stage project, however, companies should place special attention on prioritizing and sequencing interventions. Companies will need to gain insight into smallholders' supply chains, identify the key issues and determine where best to start.

Box 4 – Grameen Danone Foods Ltd, Bangladesh: A holistic value chain approach

In 2006, Groupe Danone and Grameen Bank created Grameen Danone Foods Ltd, Bangladesh to develop a healthy, affordable yoghurt-based product that would be marketed to and provide income for poor families. Two years later, Grameen Danone is selling *Shokti Doi* ("energy yoghurt") at 6 cents for a 60 g cup, which is substantially less than other products in the market. A single cup is fortified with sufficient nutrients to meet up to 30% of a child's daily requirements. Grameen Danone currently has 100 full-time employees.

To keep costs low, Grameen Danone decided to create a local supply chain from scratch. The company established microfarms for milk production, working with NGOs to train framers. It set up a milk processing factory that relied on human labour more than technology. It developed a unique distribution model by training women to market the yogurt door-to-door; currently 1,600 of these "Grameen Ladies" are selling products. The

model has garnered substantial attention for its innovation and potential for scaling. Key elements of success included:

- *Environmental sustainability:* Grameen Danone worked to minimize environmental impact. The factory was designed to use harvested rainwater, solar power and biogas. Milk was collected within 30 kilometres of factories to minimize transport costs. Yoghurt cups were made from biodegradable cornstarch.
- *Holistic value chain approach:* Grameen Danone's local supply chain model benefits both the community and the company by empowering producers and entrepreneurs while keeping production and distribution costs low.

Source: Harvard Corporate Social Responsibility Initiative, 2007^[41]

Chapter 4 – Empowering Entrepreneurs through Business-enabling Products and Services

- Business sectors that enable entrepreneurship play an important role in bridging three gaps that currently restrict the food value chain: access to information, financial services and infrastructure
- Telecommunications access and applications can provide key market information, enable trading and facilitate mobile cash transfers
- Financial services can enable investment and growth at each step of the food value chain, whether provided to individuals, communities or producer groups, or small and medium enterprises
- Infrastructure shortages can be overcome in some cases through business innovation – addressing “hard” infrastructure for energy, water and logistics; and “soft” infrastructure related to producer organizations, policies and standards

A functioning food value chain is a market-based system, with business activities taking place at each step. The people and enterprises operating along the chain need certain tools, services and capacities to conduct business efficiently. Industries such as financial services, telecommunications, energy and transport are powerful enablers of business activity and are therefore essential for improving the efficiency of the food value chain. In addition to providing goods and services, entrepreneurs themselves are central to making the system work. Taken together, we call these actors “business enablers”. Although not part of the food and agriculture sector directly, they enable and stimulate many of the functions of the food value chain, while driving economic growth by harnessing and enabling latent entrepreneurship.

Public-sector investments and services are crucial to the smooth functioning of the food value chain, but in many BOP communities they are highly limited. This chapter will focus on specific solutions that companies themselves can put forward to strengthen business operations in such environments. It highlights three key gaps that currently restrict food value chains and can be addressed by private-sector operators: access to market information; access to financial services; and access to soft and hard infrastructure.

4.1 Providing Market Information

Most small-scale farmers have little or no access to information on what products are in demand, how to tailor production to the market and what price buyers are willing to pay. Because they lack information and adequate storage facilities, farmers are often forced to sell surplus produce immediately after the harvest, when prices are typically lowest. In addition, because they lack adequate access to markets, they often must rely on middlemen, which reduces farmers’ profits and raises cost to the consumer. A study by the Pakistan Institute of Development Economics estimates that middlemen pocket as much as 50 to 60% of the profits in the value chain from farm to consumer. By contrast, when farmers can access market- and agriculture-related information, they can produce and sell their goods based on the best economic opportunities, thus maximizing their gains.

Historically, this information gap has not been easy to bridge. Farmers are scattered across rural areas without access to conventional channels of communication. Agricultural suppliers and buyers have been reluctant to invest in developing these channels because of the costs involved. Today, however, new technologies are providing some innovative solutions. Simply connecting people in distant locations by mobile phone has powerful market effects. Off the coast of Kerala in India, for example, fishermen now call potential buyers while still at sea and then dock their boat directly at the site of the buyer offering the best price. Before the advent of mobile phones, the same buyers often returned empty-handed from the marketplace closest

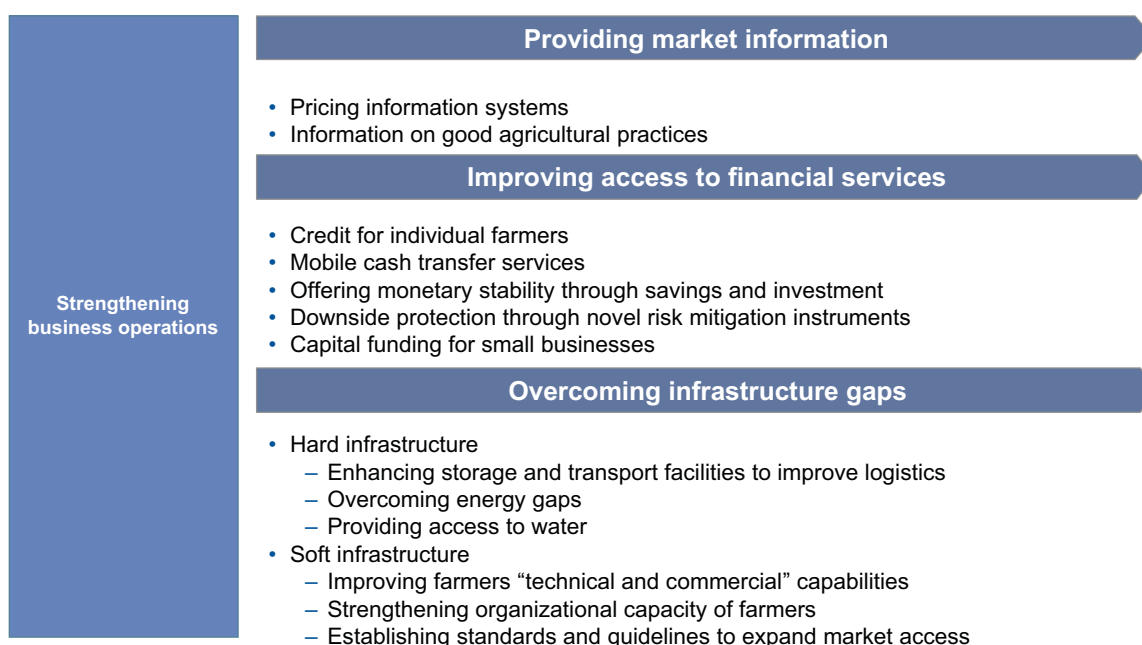
to them, unaware of a big haul a few kilometres away. In China, Qualcomm helped to empower entrepreneurs with mobile handsets through its Wireless Reach programme. The company partnered with PlaNet Finance and China Unicom to donate 2,000 handsets, precharged with service vouchers valid for two years, to microfinance borrowers and officers. PlaNet Finance provided key price and loan information to recipients through SMS messages. The mobile access helped increase the efficiency of entrepreneurs' small enterprises, while improving their access to markets. The increased access to communications also helped farmers stay abreast of relevant news such as impending weather changes.^[42]

Pricing information systems. New technology in Uganda is helping farmers to get the best price for their crops and avoid being cheated by unscrupulous middlemen. Foodnet, an organization that helps improve market efficiency and processing in the agricultural sector, has introduced a system allowing farmers to use their mobile phones to learn, within seconds, the current price of maize at markets throughout the country.^[43]



Technology, however, is not the only way to get information to and from farmers. The First Mile Project in Tanzania has had great success in bringing market information to farmers with *kalmia shu shu shus*, or market spies. These market spies roam the markets, chatting with traders, wholesalers and transporters to get the latest news. They then deliver information via mobile phone text messages and also share their insights on community billboard postings. Although funding for the project ceases in

Exhibit 7: Key business enablers in the food value chain



2009, the spies are already charging commissions for their services. While it remains to be seen if the commission fees will cover their costs, many are confident that both buyers and sellers will be willing to pay, as the benefits of their service outweigh the costs.^[44]

Information on good agricultural practices.

Providing farmers with information on good agricultural practices is a “quick win” solution that has shown impressive results. In a partnership between BT, Cisco and OneWorld, the LifeLines India project has already demonstrated a 20 to 30% increase in productivity among users. The service is simple: farmers can dial a fixed voicemail number where they can record their queries. A dedicated knowledge worker then finds the answer through a panel of agricultural and veterinary experts, using an innovative Internet-based application. Farmers can retrieve the answer by voicemail at a cost of Rest. 5 (11 cents). After 2.5 years of operation, the service is receiving over 12,000 calls per month^[47].

4.2 Increasing Access to Financial Services

Financial services such as credit, savings and insurance are essential tools for investing in enhanced production, managing price and income volatility, and mitigating risks such as drought or crop failure. However, most small-scale farmers have little or no access to such services, a constraint to investment that affects the majority of the BOP. Nearly half the poor households in Brazil do not have a formal bank account, while in China the share of households without access is about three quarters.^[49] Most BOP communities are uneconomical to reach through conventional banking methods such as centralized branches. Even if BOP communities can be reached, banks lack information about individuals’ credit and risk profiles (such as transactional history and future cash flows), which hinders their ability to construct suitable financial products. To tap the unmet demand for financial services at the BOP effectively, financial institutions need to address the barriers related to both access and information.

Box 5 – Kenya Agricultural Commodity Exchange (KACE): Providing market information to farmers

KACE, an agricultural service provider founded in 1997, facilitates trade by communicating the prices of more than 42 commodities in 10 regional markets through several channels. It provides kiosks where buyers and sellers can place offers and bids for a fee. These kiosks are used by about 24,000 farmers and generate US\$ 5,000 a month in trading volume. At one of the markets (Bungoma, in Nyanza Province), farmers who sold through the kiosk received 22% higher prices than those who sold outside.

KACE also provides an SMS-based price information service, accessed via the Safaricom mobile phone network. Users, including farmers, can discover prices of products in 10 regional markets, thus strengthening their bargaining power with local traders. To date, 1.2 million messages have been delivered.

Lastly, KACE also offers an online trading platform for agricultural products, as well as information through mass media, such as television and FM radio. The online platform allows users to place commodity offers and bids for electronic trading through the internet. This widens the market reach beyond local markets to regional and even global markets. Mass-media channels bring the market to the doorsteps of the farmer in remote areas, often in local languages. To date, fees cover only 60% of operating costs, with USAID filling the funding gap. But given the growth in usage, sponsors expect the program to become self-sustaining in the near future.

Source: KACE, 2004^[45], Kenya BDS, 2007^[46]

Credit for individual farmers. Lack of access to credit is a major barrier preventing the BOP from improving economic conditions. Many rely on informal lenders who charge extremely high interest rates, placing a heavy burden on the limited resources of the poor. This is another example of the “BOP penalty” phenomenon, where the poor pay higher prices for basic services than their wealthier neighbours.

Micro-finance institutions (MFIs) work at the community level, lending small amounts of money to customers whose businesses and needs they understand well. This popular model is striking for its low number of defaults, often securing repayment rates above 90%. MFIs rely on community influence to establish creditworthiness, prevent default and arbitrate conflicts. Successful models have been demonstrated by the Grameen Bank in Asia, Amhara Credit and Savings Institution (ACSI) in Africa, and Accion in Latin America.

The MFI model has evolved in the last 25 to 30 years, with institutions tapping global financial markets to overcome capital constraints and expand the scale of their operations, thereby benefiting more borrowers. The Bangladesh Rural Advancement Committee (BRAC) recently securitized and sold a portion of a US\$ 180 million loan portfolio to an investor consortium led by Citibank. The deal was structured by MF Analytics Ltd. This marks the first ever such transaction by an MFI, setting a new precedent for the sector and potentially encouraging other MFIs that have achieved a sizeable loan portfolio to tap into capital markets and expand their operations.^[50]



Mobile cash transfer services. Cash transfers through mobile phones have grown rapidly, as telecom companies begin to offer the service in specific countries. Cash transfers are highly appealing to the BOP because they enable secure transfer of small amounts of money between individuals or small businesses, for a low fee, without requiring either individual to have a bank account. Globe Telecom Inc.’s GCash initiative in the

Box 6 – Grameenphone Community Information Centers, Bangladesh: Encouraging rural entrepreneurs to bridge the digital divide

Grameenphone, a joint venture between Telenor and Grameen Telecom of Bangladesh, started the Grameenphone Community Information Center (GCIS) program in 2006 with 16 centres. Each GCIC provides Web access, a printer-scanner, a Webcam and both fixed and mobile pay phones.

Rather than own the facility itself, Grameenphone collaborates with local entrepreneurs, who share in the profits. In addition to providing access to

telecommunications, the program provides locally relevant online content on such topics as health and agriculture, with information sourced from partners including Anovatec (a healthcare service provider), Noakhali Web (an online newspaper), and other non-governmental development organizations. The initiative has now established over 500 GCICs.

Source: Grameenphone, 2006^[48]

Philippines allows Globe's subscribers to use their mobile phones to pay bills and make loan payments at a nominal fee. In order to expand coverage, Globe has developed a network of locations where cash can be converted into "mobile currency". In addition to its existing stores, it has partnered with leading department stores and banks in around 1,800 locations to gain access to their ATM networks. Globe's GCash service is also used by overseas Philippino workers to send remittances to their families with great success. Total remittances to the Philippines hit US\$ 9 billion in 2005, trailing only India and Mexico in total value.^[51]

Offering monetary stability through savings and investments. Self-help groups and microfinance organizations have successfully brought financial services to remote places in many developing countries. Self-help groups are community-based organizations, often consisting mainly of women, who act as intermediaries between development organizations and/or companies and individuals. One common self-help model requires members to deposit small sums in a bank, building a group credit

history to qualify for loans. Muthoot Fincorp, a non-banking financial corporation in southern India, has been able to tap this customer segment effectively. Their product, Swarnavarsham, allows customers to buy gold and make instalments monthly, weekly, or even daily basis, providing flexibility to allow for the income volatility of poor customers.

Downside protection through novel risk mitigation instruments. The poor are highly vulnerable to economic shocks such as crop failure. Historically, insurance has not been available to these customers and both the concept and the cost of insurance are unfamiliar. There is, however, unmet demand for these services, as evidenced in an initiative driven by insurers Swiss Re, ICICI Lombard and BASIX, to offer weather insurance to small-scale farmers in India. Within three years of start-up, the association had sold insurance to more than 6,700 farmers in four Indian states. Payouts are triggered automatically, based on the weather rather than actual crop damage. The system is easy to use both for farmers, because they do not need to file a claim, and for insurers, because they do not need to make claim visits.^[53]

Box 7 – Standard Chartered Bank, Pakistan: Providing credit cards for farmers

Standard Chartered Bank introduced the Kissan credit card in Pakistan in 2003 in conjunction with the Financial Deepening Challenge Fund. The card enables 20,000 farmers in the provinces of Sindh and Punjab to purchase farm inputs and repay them at harvest time. Some of its best practices are worth noting:

- *Rule-based lending:* The bank developed clear rules to identify potential customers. The rules covered the size of land holding, the level of the borrower's farming experience, the types of crops grown, and whether the farmer owns his or her land. These rules were defined based on an understanding of local market conditions.
- *Group lending:* Approved farmers join a group created by the bank. If one person fails to pay, all members' cards are cancelled. The resulting peer pressure encourages a high repayment rate.

- *Wide merchant coverage:* To increase the usefulness of the card, Standard Chartered made deals with almost 325 merchants and suppliers, including such large companies as Syngenta, Fauji Fertilizer, Engro, and Pakistan State Oil.
- *Active education of farmers:* Most of Pakistan's farmers low levels of formal education and little exposure to traditional financial institutions. Many are suspicious of banks. The bank created a well-trained sales force that actively communicates the benefits of products and builds trust with farmers before beginning to sell them.

Source: Harvard Corporate Social Responsibility Initiative, 2007^[52]

Capital funding for small business. Small and medium enterprises (SMEs) in the agriculture sector often have high potential for business and employment growth, but are constrained by limited access to capital. To address this gap, some organizations are exploring equity investments in SMEs that operate along the food value chain serving the BOP. These investors place less emphasis on collateral or creditworthiness and more on the capabilities of the entrepreneurs and viability of their business plans. Two such initiatives are African Agricultural Capital (AAC) and the Africa Enterprise Challenge Fund (AECF). AAC is backed by US\$ 7 million from the Rockefeller Foundation and other private donors. The fund has made 15 investments in small- and medium-sized agricultural ventures in East Africa.^[54] The AECF is a US\$ 100 million pool established by several donor agencies. AECF funds private companies to develop innovative business models in the agriculture and financial services sectors. It is expected to stimulate US\$ 200 million in additional private-sector investment over the next seven years.^[55]



Veronica Odongo, agro-dealer, Kenya

Veronica Odongo runs Yala Farmland Stores in Yala, a small town in western Kenya. She has worked for the past 10 years as an agro-dealer selling seeds, fertilizer and other farm inputs. She serves about 1,000 customers a week during the busy planting season. She does not track the profits from her business, but as a widow with four children finds that they are sufficient to support her family. Veronica's business has increased since the Millennium Village Project, which operates in the area, initiated a fertilizer subsidy programme with local companies, enabling farmers to redeem their vouchers through local agro-dealers. Voucher programmes using agro-dealers, coupled with credit from banks and micro-finance institutions, have attracted attention throughout the region with national programmes currently underway in Kenya, Malawi, Rwanda and Tanzania.

Source: World Economic Forum and Millennium Village Project, 2007^[56]

Box 8 - Equity Bank, Kenya: Financing farmers and enterprises along the food value chain

Equity Bank of Kenya, one of Kenya's largest banks, launched a project in 2007 aimed at providing US\$ 50 million in credit and other financial services to Kenya's farmers, agricultural input dealers, and other players in the agricultural value chain. Two project partners, the International Fund for Agricultural Development (IFAD) and the Alliance for a Green Revolution in Africa (AGRA), provided a US\$ 5 million cash guarantee fund to reduce Equity Bank's risk.

The Kenyan Ministry of Agriculture is also a partner in the project, which provides targeted subsidies to poor farmers in the form of vouchers, which they can use to purchase inputs from agricultural input dealers. The Ministry also conducts outreach to build awareness of the program, and helps monitor its results. If successful, project partners plan to replicate this approach more broadly in Africa.

Source: International Fund for Agricultural Development, 2008^[20]

4.3 Overcoming Infrastructure Gaps

Infrastructure is a major constraint in the operation of the food value chain. It includes both “hard” infrastructure such as transport, energy and water facilities and networks; and “soft” infrastructure, which forms the organizational basis of many business models, such as producer organizations, regulations and standards.

Large-scale infrastructure projects traditionally require government funding, often with backing from international lenders, and take time to complete, placing them outside the domain of most individual companies. However, to meet specific infrastructural needs in the near term, companies can adopt strategies to overcome gaps in both “hard” and “soft” infrastructure through new technologies, investments or partnerships. This section focuses on business-led solutions that can be applied at community level, rather than national or individual farm-level.

Hard infrastructure. Three types of hard infrastructure are especially relevant to food value chains. The first is storage and transportation infrastructure, which has a direct bearing on efficient supply chain logistics. The second is energy, which helps improve the quality of life of the BOP and enhances the productivity of farmers and entrepreneurs and their capacity for

value capture. The third is water infrastructure for irrigation, drinking and sanitation. Each of these continues to be a problem in the majority of developing countries. In many areas, almost 30% of all fresh produce is lost before reaching the market because of inadequate storage. Only 7% of arable land in Africa is irrigated; the remainder depends on rainfall.^[57] Irrigation can substantially raise agricultural yields, but establishing cost-effective irrigation systems for poor farmers is a challenge. Africa is similarly challenged for electricity access, with only 35% of the population supplied with electricity compared with an average of 68% in other developing countries^[58].

Enhancing storage and transport facilities is one way to improve logistics. Food and beverage companies can make investments in storage infrastructure that benefits both producers and themselves. Tiviski Dairy, a dairy for camel milk in Mauritania, has invested in storage and logistics infrastructure in order to raise the quality of the milk it buys from local herders. These steps have been so successful that the dairy is now targeting Europe as an export market.^[59]

The lack of energy services in rural areas is a major constraint to growing, processing, storing and marketing agricultural products. The Institute for the Development of Natural Energy and Sustainability

Box 9 – Nestlé, China: Combining sustainable waste management with energy production

Nestlé participates in a pilot initiative in the Shuangcheng district in China to construct small farm-based “biogesters” that convert cow manure to biogas. The scheme was initiated to address the issue of animal waste, driven by growing consumer demand for dairy products. The biogesters provide a sustainable way to deal with manure storage, while providing low-cost energy for farm households. Nestlé identified cheap, adequately sized biogas digesters, and by 2007, close to 4,000 units had been installed at 74 farms. Farmers using the biogesters benefit by saving energy and waste management costs. Although the project targeted only Nestlé suppliers initially, non-supplier farms are now also participants.

Several elements drive the project’s success:

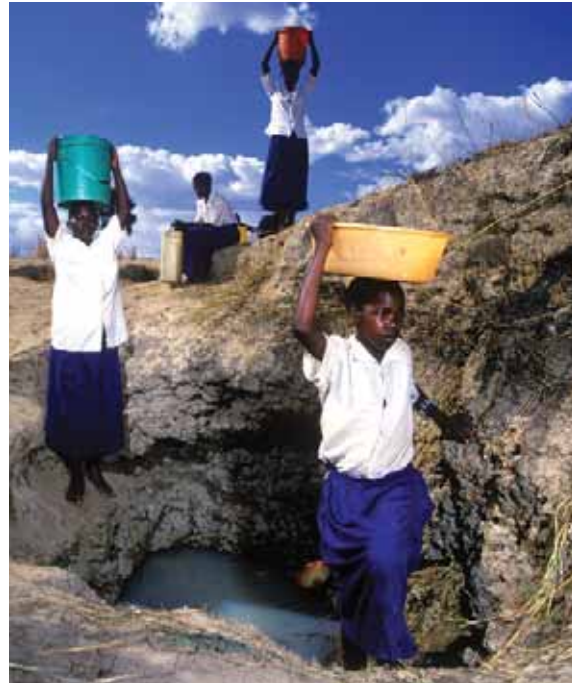
- The biogesters were designed to keep upfront investments low with tangible, near-term financial benefits so that farmers would be willing to adopt them
- The active participation and endorsement of local government officials lent credibility to the program
- Nestlé’s network of dairy farmers provided the initial market for the project
- The company provided support to farmers in interacting with other service providers. For example, Nestlé connected farmers with local banks for credit and helped them investigate opportunities to trade carbon credits

Source: Nestlé CT Agriculture, 2006^[62]

(IDEAAS) has successfully implemented solar projects in remote areas of Brazil. The IDEAAS solution is priced competitively with household monthly expenditures on other sources of energy, such as kerosene, wood and candles.^[60] In Namibia, Motorola Inc. has pioneered a low-maintenance design for operating a mobile phone base station based on solar and wind power, allowing placement of transmission towers in remote areas and increasing mobile phone usage^[61].

Water for drinking, sanitation, and irrigation is fast becoming a precious commodity for the BOP. Although this is a global problem, many companies have been addressing this issue at a local level. The Naandi Foundation in India has partnered with organizations such as WaterHealth International USA and Tata Projects Limited, India to develop low-cost water-treatment systems. After studying the issues plaguing safe water access in individual communities, the partnership deployed community-scale treatment systems. More than 300 plants are in operation and directly benefiting close to 2 million people.^[63]

Soft infrastructure. Soft infrastructure consists of the capabilities, organizations, and policies or regulations that enable or strengthen business operations. Capabilities range from basic education to specific skills such as technical know-how about production and processing techniques, market insights, management and financial skills. Effective organizational structures such as cooperatives and producers' associations increase the bargaining power of producers and can act as catalysts for commerce. Policies and regulations include both industry-specific standards and laws governing business operations. These instruments are largely within the domain of the public sector, which in many countries suffers from weak governance and enforcement capacity. Standards and guidelines relating to food quality and safety, for example, are essential for successful functioning of the food chain, especially as urban and export markets grow. While gaps in soft infrastructure pose significant challenges to business, companies can put forward several solutions to address them.



Many companies are bridging gaps in producers' capacity by investing in direct training initiatives throughout the supply chain. ECOM Agroindustrial Corporation in Honduras provides technical assistance to farmers, which includes training in sustainable farming techniques. ECOM and its customers are willing to pay a premium price for crops due to the full traceability, quality and consistency of the coffee.^[64]

Cooperatives often act as a bridge between large companies and BOP producers, creating economies of scale unavailable to individual farmers. Cooperatives can serve as a two-way channel for exchanging information on trade, training and marketing with farmers. Ghana's Kuapa Kokoo cooperative has acquired an ownership stake in a premium chocolate brand targeting high-end consumer markets. However, other cooperatives are constrained by a lack of management expertise, resources and incentive structures. The UPCOCOA initiative in Cameroon demonstrates how stakeholders can join forces to enhance the management skills of cocoa cooperatives and encourage entrepreneurship. The initiative, which is supported by companies active in the non-farm part of the cocoa supply chain (including Archer Daniel Midland Cocoa BV, Mars and Rabobank), focuses

on marketing, quality, productivity, and pest management. A milestone was reached with the launch of UcoProc, a consortium of cooperatives that acts as an umbrella group, strengthening marketing and accounting at the individual cooperative and farm levels. The initiative was designed with broad implementation in mind and the second phase will focus on spreading knowledge and best practices throughout the cocoa sector in Cameroon. Additional aspects will also be enhanced, for example by improving the quality and quantity of the crop, streamlining logistics, and increasing farmers' earning capacity and creditworthiness.^{165]}

Private enterprises can improve market access by applying their expertise on standards to address the deficiencies that exist in food safety and quality standards in many emerging economies. Bayer CropScience's "Flavour Guarantee" project in Brazil, for example, enables produce from small farmers to be sold to supermarkets worldwide. It has linked up with a local NGO, HortiBrasil, to train farmers on meeting its standards so they can obtain a certification label for their produce.

As the examples in this chapter have shown, business enablers can drive substantial value creation and bridge important gaps along the food value chain. Telecom companies can facilitate communication and cash transfers. Financial institutions can help small-scale farmers manage scarcity and volatility by providing credit, insurance, savings and growth capital. Other industries can devise innovative solutions that bridge gaps in transportation, energy or water services. Such initiatives create valuable opportunities for cross-industry collaboration, enabling companies to capture synergies and enhance value creation along the food value chain. For example, food and beverage companies can partner with telecoms and banks to serve the needs of farmers. Retailers and logistics companies can collaborate to strengthen distribution networks, partnering with other companies, such as finance, telecom and agribusiness that wish to extend the reach of their products. Such collaboration is often the key to reducing the costs of market access and rural operations in rural areas, and has major potential value that has been little explored.

Box 10 – Land O'Lakes International, Africa: Improving Dairy Standards

The International Development Division (IDD) of Land O'Lakes, a farmer-owned dairy cooperative and the leading livestock feed company in North America, assists smallholder livestock farmers and governments in Africa through various initiatives focused on dairy value chains. Land O'Lakes has collaborated with the Uganda National Bureau of Standards (UNBS) on minimum quality standards for milk and milk products. In addition, it is working to harmonize standards across countries in eastern

and southern Africa. Such an initiative is crucial, given the varying climatic and farm conditions under which milk is produced in the region. For this initiative, Land O'Lakes IDD focused on products with strong potential for intra-regional trade and export growth. The cooperative is playing a key role in facilitating meetings and helping government representatives to work together.

Source: ESADA 4th African Dairy Conference, 2008^{166]}

Chapter 5 – Unleashing Potential: Design Principles for Success

This chapter presents a set of five design principles that companies can use in tailoring their own solutions to enter the BOP market. These principles are relevant across multiple sectors, value chains and regions. They include:

- **Create life-enhancing offerings**, designing product offerings and income opportunities that meet the needs of the BOP
- **Reconfigure the product supply chain** by sourcing from local producers; leveraging local distribution channels; and overcoming infrastructure constraints
- **Educate through marketing and communication** to build awareness of product benefits and brand loyalty
- **Collaborate in non-traditional partnerships** by partnering and investing in communities; sharing capabilities and assets among partners; and aligning incentives for mutual gain
- **Unshackle the organization** to align top-down commitment, bottom-up innovation, and systemic support within the company to facilitate BOP business engagement

The preceding chapters illustrate how many organizations are challenging conventional thinking and are developing inclusive, financially viable, innovative, and scalable business models to serve the BOP. However, it is important to note that what works for one company or region will not necessarily work for another. The high degree of variation and localization means that companies considering entering the BOP market need to develop a set of strategic tools that can be adapted and applied to specific settings. This chapter presents a set of design principles that can help companies tailor their own solutions.

The design principles are structured along the lines of a typical business model, are targeted to the circumstances of the BOP, and present a framework for innovation. The framework's four main principles are: create life-enhancing offerings, reconfigure the product supply chain, educate through marketing, and collaborate in non-traditional partnerships, and "unshackling the organization" to help new business models succeed (See Exhibit 8.). It should be noted, however, that there is no "silver bullet" in this market; experience shows that organizations need to consider many kinds of innovations in approaching the BOP market.

**Exhibit 8: Framework for innovation:
Design principles for success**



5.1 Create life-enhancing offerings

The BOP often have to make difficult compromises: their incomes are limited and variable, yet they need many products and services; they require information or training, yet are cautious about trusting new information sources; they are eager to improve their livelihoods, yet wary of taking risks on new ventures or products; they live in dispersed towns and rural villages, yet they must often deliver their wares to distant markets. Companies will need to construct their offers in ways that allow consumers and producers to overcome these common constraints.

Whether they are producers or consumers, the BOP have different needs from those in the mainstream segments of developed markets. To target new products appropriately, the following practical guidelines can be followed:

- *Price for the budgets of low incomes:* To lower prices, consider reducing costs along the supply chain. Grameen Danone in Bangladesh and Nestlé's "Ideal" initiative in South America cut costs by using local sourcing and manufacturing, and employing a local door-to-door sales force. Companies may also be able to offer credit terms that make their products more affordable to BOP consumers.
- *Tailor products to meet local needs and preferences:* Products that break down or depend on scarce resources are impractical for the BOP. An electric pump that requires uninterrupted power, for instance, is not suited to an environment with an unpredictable or intermittent supply of electricity. IDE India introduced a variety of micro-irrigation pumps that are simple and operated by manual labour, and are therefore tailored to the conditions in which many smallholder farmers operate.^[15] Manufacturers can introduce products and services with features that will be useful to the BOP. For example, Unilever's Popular Foods initiative in Africa, which offers Annapurna iodized salt and Krrunchy iron-fortified biscuits, has been highly successful.^[67] Another example is mobile cash-transfer services such as M-PESA, developed and launched by Vodafone through



Kenyan-based Safaricom. After quickly capturing a large market in Kenya, Safaricom is now rolling out the initiative in other African and Asian countries.^[68] Products with a high degree of reliability are also required at the BOP, since securing spare parts or repairs is difficult. Manufacturers can engage local distributors to demonstrate the practicality of their products in a given environment have been successful in generating word-of-mouth promotion.

- *Develop environmentally sustainable approaches:* Rising incomes among the BOP will spur additional consumption and commercial activities, putting immense pressure on natural resources such as land, water and energy. The costs of growing food and manufacturing products are likely to rise, making the need for sustainable solutions all the more urgent. By introducing strategies that seek to minimize environmental impact, companies can reduce their costs and establish a socially responsible reputation, while protecting their future sources of raw materials. Renewable energy technologies, such as the IDEAAS solar-power-based project in Brazil^[60] or Nestlé's manure-based power generation technology in China^[62] are two examples of successful programmes. The need to produce more food without damaging the environment also increases the demand for sustainable farming technologies that can increase productivity without negative impacts. Similarly, innovative packaging and delivery methods designed for the poor can be more cost-effective and environmentally sustainable than conventional strategies.

5.2 Reconfigure the product supply chain

BOP distribution networks need to reach distant neighbourhoods and villages, while remaining viable at low volumes and prices and maintaining adequate control over pricing, stocking and service. Food sourced from local producers needs to meet quality and safety standards as well as being offered at a suitable price. Cost-efficient distribution often relies on making a trade-off between cost and coverage, as well as the level of control. Food products with limited shelf lives are especially problematic. The following recommendations will help companies design supply chains and distribution networks appropriate to the BOP:

- *Source from local producers.* Both companies and the poor can benefit greatly by uncovering “hidden assets” related to food production within local communities. Sourcing locally can reduce the cost of reaching the BOP and can provide customized products matched to local preferences. Most importantly, local sourcing provides income for local farmers, expanding the supply base and giving trust and credibility to the company brand. Both Unilever’s Allanblackia initiative and SAB Miller’s sorghum lager helped to commercialize a local crop which also benefited local markets. Grameen Danone’s Shokti Doi yoghurt is sourced from, partly processed by, distributed, and consumed by the BOP.^[41]
- *Broaden reach and save costs by leveraging local distribution channels.* Small-scale entrepreneurs can broaden the reach of distribution networks. Hindustan Unilever outsources the last mile of its distribution network to Shakti Ammas, women entrepreneurs in small villages. They receive the company’s products through the mail and sell them throughout the neighbourhood.^[69] Service providers can also create partnerships that make the most of low-cost and well-established channels in poor communities. Companies can also distribute their products alongside those of other businesses targeting poor consumers in the same locations. Agricultural suppliers can share storage and retail space to bring down supply



chain costs. Godrej Aadhar, the rural retail venture of Godrej Agrovet in India, successfully bundles multiple products and services into a rural hub, thereby reducing the cost of reaching Indian small-scale farmers.^[18] Companies can capture discretionary spending by offering their products where low-income consumers shop and work. Local retailers often have loyal followings and are accustomed to selling small volumes at low prices. Standard Chartered Bank’s Kissan credit card in Pakistan, for example, was designed for the use of farmers buying agricultural supplies, but it is also accepted at retail grocery stores and fuel stations owned by Pakistan Oil.^[52]

- *Find creative ways to overcome infrastructure constraints.* Companies can collaborate to share distribution costs and assets such as warehouses. New offers such as telecom-based mobile cash transfer services can enable transactions without formal bank branches. Safaricom’s M-PESA service, for example, licenses small retailers to serve as local agents.
- *Bring sustainable trade into the mainstream.* Consumers in developed markets are increasingly willing to pay a premium for fair-trade or sustainable trade products, to benefit BOP producers. For example, in 2009 Starbucks became the world’s largest buyer of Fair Trade Certified coffee, which it sells in 43 countries worldwide.^[70] In such a case, companies’ branding and marketing efforts should translate the added value from sustainable procurement into brand equity, to enable premium pricing.

5.3 Educate through marketing communication

Because BOP consumers are often unfamiliar with new products and their benefits, marketing programmes are more effective if they contain educational as well as persuasive messages.

- *Educate about product benefits.* Educating farmers and input retailers on using new products or technologies not only raises awareness of the benefits, but also ensure that farmers reap the full rewards, thereby raising incomes and demand for the products. Free trials and clear instructions are useful marketing tools, while individual training is even better. In Kenya for example, Bayer CropScience trains agricultural input retailers on the benefits of new fertilizer kits. The company has set up special demonstrations, exhibitions and field days on model farms. Similarly, in the programme run by CNFA/AGMARK (Agricultural Market Development Trust), farmers receive training on how to get the best results from agricultural inputs and farming techniques.^[71]
- *Create word-of-mouth advocacy networks.* Advocacy networks are powerful sales tools in this market. Nestlé's success with its biogester installation programme in China, for example, is due largely to the participation of local champions who educate farmers about the benefits of the programme and secure their cooperation.^[62]
- *Aim for trust and identity in branding.* Another constraint on demand, from a rural consumer's perspective, is the lack of information about product usage and benefits for first-time users. There are very few established brands in these markets, and few consumer-protection regulation of truth in advertising or labelling. As a result, poor consumers are generally more willing to accept an unfamiliar product if it carries a well-known brand. New products can therefore benefit from being launched under a familiar brand name or endorsed by a trusted institution.

Box 11 – Successful partnering with local communities

Successful partnership strategies rely on first making an effort to understand the local context and earn the community's goodwill. Unilever in India, for instance, insists on all its managers spending time each year in BOP homes and villages. Nestlé has invested in improving basic facilities, such as clean drinking water and latrines in schools, in the Indian villages where it procures milk. Although the facilities are not directly related to the actual procurement of milk, they address local needs and strengthen the relationship.^[72]

Given the key role that women play in food production, including local women in the value chain is another approach to partnering with communities. Land O'Lakes International Development (IDD), for example, insists that women make up at least 30% of the members of its partner dairy associations in Zambia. This has resulted in more women moving into the formal sector.

The next step is to align the community's interests with those of the company to minimize oversight to ensure compliance with standards. Land O'Lakes

International Development works with the Zambian government extension system to organize small-holder milk producers into dairy associations through which they can access the technical support they need to enhance their milk production and ensure quality. Land O'Lakes IDD ensures the associations are accountable to their members and viable as business units, so that they can continue to provide consistent quality over time.^[73]

Aggregating production can also help guarantee a consistent flow of goods, despite individual variations within the group. For instance, women often need to balance farm labour with domestic responsibilities; households also face varying shocks and demands (for example, funeral or marriage costs) which affect their productivity. By working collectively, producers can organize their workflow to meet production commitments as a group.

5.4 Collaborate to form non-traditional partnerships

Serving the BOP requires companies to go beyond traditional “we-make-it-and-you-buy-it” relationships to include the BOP in production and distribution as well as consumption. This approach has potential to lower costs and expand distribution. Collaboration is needed on two levels: partnering with local communities, and collaborating with other unconventional partners. Collaboration with local communities captures “hidden” assets in the form of untapped resources and local knowledge. In addition, by increasing local incomes, companies can enhance the ability of BOP consumers to purchase goods and services, thereby generating a virtuous economic cycle with built-in sustainability. Additional non-traditional partners include other companies (even competitors), civil society organizations and government. Such collaboration helps to share marketing and distribution costs and overcome gaps in market infrastructure.

Unlock local potential by engaging with communities

Partner with communities rather than individuals.

One of the biggest challenges facing companies sourcing from local producers is the expense of collecting small quantities from widely dispersed sources. One solution is to source products from community aggregators rather than from individual producers (see Box 11).

- *Invest in talent and expertise building.* Another drawback to using local producers is their lack of training. However, most companies are reluctant to invest in training a talent pool that could be employed by its competitors. Such investments are therefore often unprofitable for a single company. One solution is to set up training consortiums with government organizations, competitors, NGOs and companies from other industries. ECOM Agroindustrial Corporation's sustainable high-grade coffee procurement initiative in Honduras exemplifies this approach. ECOM developed a certification programme for coffee growers with Utz Certified and others, and engaged the Coffee Support Network to help pilot the programme. The company created and



funded a local NGO, Alianza para la Sostenibilidad (APS) to provide technical assistance and promote best practices among farmers. Several other organizations, such as El Instituto Hondureño del Café (IHCAFE), Centre de cooperation Internationale en Recherche Agronomique pour le Développement (CIRAD), and CropLife, pitched in with their expertise in such areas as soil testing, fertilizer training and farming practices. The government's Secretariat of Labour also helped to educate farmers on relevant labour laws.^{164]}

- *Create incentives that encourage self-governance.* Many firms are reluctant to source from the BOP because they believe the quality of produce will be sub-standard. While quality control systems are costly to establish and maintain, it is possible to set up low-cost local checkpoints by aligning the interests of co-producers. This might involve including them as shareholders, rather than just salaried employees. Companies can achieve best results by adopting a systematic approach. Firstly, they need to design processes and products that can easily accommodate local participation. Secondly, co-producers must be given the necessary skills. Finally, companies should bring in other players to collaborate on solutions and harness hidden assets to make it possible for co-producers to be self-monitoring.

The Integrated Tamale Fruit Company's approach in Ghana is illustrative. Instead of acquiring a very large piece of land, which is physically and financially impractical, the company generates high volumes through an out-grower scheme, which started in 2001 and today includes 1,300

farmers. The company provides the out-growers with farm supplies and technical services and offers bridge loans that can be repaid when the farmers sell their produce. The arrangement allows the company to source a reliably large volume of good quality organic mangoes, and farmers can enter mango production knowing they have a ready market for the crop.^[74]

Form deep collaborations with unconventional partners

- *Share products and assets.* Some companies have formed partnerships to bundle products for sale, share distribution and retail networks, and access common logistics and facilities. Consider the partnership of Indian Farmers Fertilizer Cooperative Limited (IFFCO) and Bharti Airtel, a telecommunications company. Airtel realized that IFFCO had established an efficient channel reaching widely dispersed rural farmers, so it partnered with the cooperative to market and distribute its own products to Indian farmers.^[75]

Another form of channel sharing might involve a global food and beverage company sharing R&D expertise with more local companies to make improved nutrition foods available at affordable prices. The local companies provide a deeper reach and more efficient sales force, while the global company brings superior R&D expertise. The global company might even be able to receive government benefits for such initiatives. Nutriset, French producer of the fortified Plumpy'Nut paste, is rolling out licensing to local operators located closer to its customers. Nutriset is also transferring production know-how and expertise as part of these licensing arrangements.^[32]

Partnering with competitors can also have advantages. The mobile phone industry is highly competitive; yet, in India, three of the largest players – Bharti, Vodafone and Idea – have created a joint entity through which they share telecom towers in rural areas. That has made it possible for them to reach over 400,000 villages across the country, achieving a quicker rollout on a more cost-effective basis.^[76]

- *Share capabilities and knowledge.* Organizations can collaborate in more complex ways: sharing knowledge for product innovation, processing information, and increasing efficiency. For example, farm equipment makers can extend credit if they have access to the knowledge of micro-finance institutions about the creditworthiness of groups of individuals. An insurance company might enter the low-income agricultural market through the sales channel of local producers or distributors. Such practices help to eliminate market inefficiencies and give companies access to critical knowledge on market movements and local consumer behaviour.
- *Make partnerships work.* Non-traditional partnerships can help producers, partners, and consumers develop valuable skills that generate long-term profits. They also help to build mutually beneficial infrastructure for all stakeholders, including governments. To make them work, companies need to assess their own capabilities, assets, and knowledge base; then identify potential partners based on the resources they need. The potential for collaborating with available partners can be analysed with a long-term view of profits. Partners need to establish clear governance structures, define responsibilities and agree on the distribution of outcomes so that everyone benefits. Finally, before work begins, they need to ensure that their systems and performance measures are aligned. One of the most important considerations when partnering in the BOP market is that some companies have a head start. These leaders could be active drivers or facilitators, and not merely participators. Such companies can orchestrate partnership arrangements in which it is easy for new players to enter and old ones to leave, maintaining flexibility to adapt to changing conditions.

5.5 Unshackle the organization

One of the largest stumbling blocks encountered in the BOP market is the lack of incentives or support that would enable BOP initiatives to succeed. When they first enter emerging markets, most multinational companies focus on sourcing from or serving the more affluent segment. As a result, their cultures, organizational structures, and metrics may need to be substantially revised to enable effective operations in BOP markets. Companies can consider several strategies:

- *Demonstrate top-down commitment.* Success in BOP markets requires strong top-down commitment and active advocacy within the organization. These initiatives should be on senior management's radar and receive disproportional recognition, in order to motivate employees to be a part of the effort.
- *Create focus and accountability.* In addition to strong top-down commitment, success requires the presence of a few internal "champions" to drive the initiatives. Organizations will need to look out for champions from both within and outside the company, finding people who are passionate and have the drive and conviction to succeed. Some companies establish a separate unit for innovation led by a senior executive. Several large financial institutions, such as Barclays, have departments focusing on micro-finance opportunities to tap the low-income segment.
- *Provide decision rights, autonomy and flexibility.* A centralized, top-down approach can sometimes inhibit the initiative required to develop innovative approaches. Therefore, it is important to empower the separate departments and champions so they are not constrained by the norms and processes that govern developed markets. Business units targeting the BOP should be lean and agile, minimizing costs while maintaining flexibility to adapt and innovate.
- *Establish objective metrics.* BOP business initiatives require time and resources, and often generate lower returns or require a longer initial payback. Companies may need to re-evaluate the metrics they use to make business decisions. For example, it may be helpful to define different metrics for the short and long term. In the short term, when companies are investing in a product or market – selling processed foods in a market where they are considered a luxury, for example – volume and market growth could be key metrics of performance. In later years, profitability and return on investment could become more important measures.
- *Provide access to capabilities and knowledge.* Developing cross-organizational networks can help to design new offerings, distribution channels and marketing programmes. Organizations can accelerate the innovation process by exchanging best practices with business units already serving low-income consumers. Global companies can increase their presence in emerging markets to achieve economies of scale. Acquiring or partnering with local companies can speed the development of appropriate brands and business models for the BOP market. Creating synergies between a company's core business, CSR, and philanthropic activities can also yield benefits.



Agricultural input company Syngenta's philanthropic activities are consolidated in the Syngenta Foundation, an institution focused on increasing opportunities for subsistence rural communities through innovative science. Although operating on an independent mandate,

the Syngenta Foundation can tap into the knowledge, technology and human resource base of the parent company Syngenta AG. This increases the benefits on the ground while infusing insight on low-income farmers into the commercial operations of the company.¹⁷⁷

Box 12 – Five Strategies for Success: Designing Business Models to Include the Next Billions

1. Create life-enhancing offerings

- Price for the budgets of low incomes
- Tailor products to meet local needs and preferences
- Develop environmentally sustainable approaches

2. Reconfigure the product supply chain

- Source from local producers
- Broaden reach and save costs by leveraging local distribution channels
- Find creative ways to overcome infrastructure constraints
- Bring sustainable trade into the mainstream

3. Educate through marketing communication

- Educate about product benefits
- Create word-of-mouth advocacy networks
- Aim for trust and identity in branding

4. Collaborate to form non-traditional partnerships

- Partner with communities rather than individuals
- Invest in talent and expertise building
- Create incentives that encourage self-governance
- Share products and assets
- Share capabilities and knowledge
- Make partnerships work

5. Unshackle the organization

- Demonstrate top-down commitment
- Create focus and accountability
- Provide decision rights, autonomy and flexibility
- Establish objective metrics
- Provide access to capabilities and knowledge

Chapter 6 – Conclusion: Key Actions for Scaling up

The business models discussed in this report have significant potential to both benefit the poor, and create new business opportunities for companies. They present opportunities for the poor to improve food production and food security, raise incomes, increase access to essential goods and services, and empower small-scale entrepreneurs. At the same time, they offer the prospect of generating commercial returns and driving economic growth, essential factors in the sustainability and scalability of any initiative. Yet, despite this seemingly “win-win” situation, many of the initiatives remain limited in their scope, either because they are at an early stage of pilot testing, or because they have proved successful in one setting but have not been adapted to others. Given the broad range of BOP needs and opportunities that could be addressed by these models, the major question is how to scale them up. The key challenge for companies is to mainstream BOP inclusion into standard business operations and to work with other stakeholders to apply effective models across many different geographical settings.

Scaling up BOP business strategies requires a decentralized and localized approach, in which successful concepts are adapted for transfer from one region to another, often with a new set of partners and collaborators. Maintaining a strong local focus helps to target opportunities and reduces risks among markets that may appear similar but in fact are highly diverse in their needs. However, localization makes companies highly dependent on local conditions and actors to reach their goals. Achieving scale in these business models, therefore, often requires cooperation among many actors. Governments, NGOs, donor agencies, and international research organizations can play key



roles in supporting private-sector growth in BOP markets through strengthening the incentives for business engagement, providing complementary funding, sharing experiences and building capacity.

6.1 Strengthening incentives for business engagement

The economic value locked within BOP communities is not easy to access. Over the past decade, due to a perceived lack of short-term financial rewards, many BOP projects have been funded through corporate social responsibility (CSR) initiatives or external funding, and this tends to constrain their scalability. The most direct route to strengthen profit incentives is for companies to develop broader and better strategies for generating commercial returns at the BOP. A number of examples have been presented in this report. However other stakeholders can also take specific actions to boost incentives, remove barriers, and reduce the costs that impede commercial activity. By aligning incentive structures and combining capacities, the various actors involved in food value chains can strengthen the business case for larger-scale pro-poor engagement.

Governments, for example, can play a key role in establishing incentives for pro-poor and environmentally responsible corporate behaviour through enabling policies and regulations. Public policy determines the conditions for operations along the entire food value chain, both locally and globally. On a macro level, international trade policy greatly affects the viability of export and import business models. Nationally, government regulations on product safety, commodity pricing, labour and land rights, contract enforcement, cross-border trade, and many other issues affect business operations directly along the food value chain. India's deregulation of the retail sector, for example, has enabled the growth of rural retail hubs, such as Godrej Aadhara and DCM Shriram Consolidated Limited (DSCL) Hariyali; while in Nigeria, increased tariffs on rice imports has provided an incentive for local production. In Kenya and Malawi, targeted fertilizer subsidies and credit services for poor farmers have strengthened private-sector agro-dealer networks. In many BOP markets, ineffective or poorly implemented policies and regulations

constrain or discourage business activity. However, by structuring targeted incentives within an effective enabling environment, governments can accelerate pro-poor business growth.

6.2 Prioritizing and sequencing business initiatives

Companies considering initiating or expanding their engagement with the BOP should prioritize opportunities based on their own capabilities, their long-term strategic goals, and the market potential. Defining metrics tailored to BOP market characteristics will allow the company to assess the value of new models in both commercial and social terms. Advance planning is key to allow sequencing of initiatives and partner involvement in order to bridge the gaps in food value chains. For example, companies considering sourcing products at large scale in specific regions may need to begin building local capacity and organizations – with government, NGO or university partners – far in advance of initiating production. Non-business organizations can support such planning processes, or bring business into ongoing public-sector planning efforts.

6.3 Providing complementary funding and capacity

Essential hard and soft infrastructure – from roads and electricity to farmers’ organizations – is often missing in the BOP environment. In some settings, companies themselves can fill these gaps, as discussed in Chapter 4. However companies must often rely on other stakeholders, including governments and NGOs, to provide the missing links that would make the business models work. Those stakeholders, in turn, require public or donor financing to execute their roles.

Public-sector investment in key services is critical for food value chain business models. In addition, publicly funded agricultural research can play a powerful role. To secure such resources, political will is essential, especially when governments face resource constraints. In 2003, African governments committed themselves to dedicating 10% of national budgets to the agriculture sector, but today the regional average is still only 4%.^[78] Development assistance therefore plays a key role in enabling public-sector investment

in the food value chain. In 2007, after 20 years of declining investments, the World Bank pledged to a substantial increase in its commitment to agriculture sector finance, and encouraged bilateral donor agencies to do the same.

Both private- and public-sector donors – including charitable foundations, individuals and bilateral aid agencies – play a key role in funding NGOs that enable business linkages with the BOP. NGOs bring expertise in organizing and capacity building at the local level, and can create the trust needed to work effectively with local communities. NGOs often act as facilitators among the groups of farmers, entrepreneurs, or even consumers who will determine the success of a business model, particularly in its early stages. Companies partnering with NGOs will need either to provide the necessary financing directly or, more often, to find a funding partner. For example, the Bill & Melinda Gates Foundation made a US\$ 47 million grant to Technoserve Inc. to assist coffee growers in three East African countries in securing premium prices for high-quality Arabica coffee. This grant was part of the foundation’s US\$ 306 million commitment to agricultural development announced in early 2008.^[79]

6.4 Facilitating corporate engagement

Companies can initiate cross-industry and multistakeholder collaboration through business alliances or individual partnerships. However, coalescing around common interests or finding the right partners often requires facilitation by a third party. Experts and intermediary organizations can assist companies in forming the necessary partnerships and business strategies. GAIN’s work with companies, governments and other stakeholders on food fortification initiatives is an example of such facilitation. Companies can also play a convening and catalyzing role. Yara International, a leading fertilizer company, hosts an annual conference on the African Green Revolution, engaging companies, government officials, donors and civil society representatives. The company awards a Yara Prize to one or more individuals each year for outstanding contributions towards the African Green Revolution in support of the Millennium Development Goals (MDGs). The event has helped expand links and catalyse joint efforts between public and private-sector actors.^[80]

Research organizations and NGOs can also help identify viable market opportunities among the BOP and bring them to the attention of the private sector. For instance, the World Resources Institute's Next 4 Billion report estimated the size of the BOP market. The Coca-Cola Company conducted a collaborative research project with the International Finance Corporation (IFC) and Harvard University to investigate ways of augmenting the economic and social impact of its "manual distribution centres" (MDCs), which are run by local entrepreneurs. The company invited partners to participate in an "in-market learning laboratory" to define improvements on the ground. The result will be an upgraded model applied for up to 2,000 new independent distributors (employing up to 8,400 people) in Africa by 2010^[81]. At a local level, the Tegemeo Institute in Kenya conducted a study to identify commercially viable opportunities in the food sector for the World Economic Forum's Business Alliance Against Chronic Hunger, which catalysed corporate investments to develop those opportunities.^[82]

6.5 Establishing models and building momentum

Success breeds success. Proven business models are often adapted by other companies. The success of Danone's dairy initiative with the Grameen Bank has prompted other large food companies to initiate similar enterprises. The success of companies such as Unilever and Nestlé has encouraged others to distribute their products through micro-entrepreneurs. The Grameen Bank is widely credited for establishing the viability of microfinance provision for the poor.

Stakeholders, such as government, academia, international organizations, NGOs and the media, can accelerate this process by highlighting effective models, facilitating learning and knowledge-sharing, and monitoring and evaluating results. Raising the visibility of successful emerging-market business initiatives creates both learning and goodwill for companies. The Business Call to Action (BCtA), for example, initiated by United Kingdom Prime Minister Gordon Brown, encourages companies to implement innovative business models that support the MDGs on reducing hunger and poverty. Corporations have

announced BCtA commitments at high-profile global events, attracting substantial media coverage.

Changing consumer preferences can be an important driving force. Growing awareness of poverty issues has raised consumers' willingness to pay a premium for locally sourced, fair trade, or environmentally sustainable products, encouraging more companies to enter these markets.

6.6 Collaborating to accelerate progress

Most of the business models discussed in this report were neither conventional nor easy to initiate in their early stages. To unleash the large potential that exists for both the BOP as well as for businesses, commitment is required not only from companies, but also from governments, NGOs, donor agencies, international organizations, research institutions and universities, as well as the general public. Each stakeholder has a unique set of capacities and mandates that can often be enhanced or extended through effective collaboration with others. Therefore, an "orchestrator" is often needed to understand their complementary roles and capacities, promote the potential value of collaboration, and facilitate collaborative efforts.

The following table outlines actions that can be taken by different stakeholders to enable further expansion of the business models discussed in this report. A more detailed set of actions targeted to specific business models is included in Appendix 4.

The innovative approaches described in this report can open up avenues of new growth opportunities for companies that are moving into BOP markets. When undertaken in partnership with poor communities, such ventures can catalyse new opportunities that hold the potential to transform the livelihoods of the poor. Companies that establish workable, profitable and scalable business models to include the BOP will secure a strong advantage both commercially, and in terms of community and partner relationships. Success in the end will require new thinking, close coordination, and alliances among unconventional partners – government, civil society organizations and BOP communities themselves.

Applying Stakeholders' Capacities to Accelerate Business Engagement

Stakeholder group	Core capacities and actions
Companies	<ul style="list-style-type: none"> • Invest in R&D and new product development for the BOP market • Innovate to adapt supply chains and distribution networks • Partner or collaborate with others to align complementary investments, share supply and distribution costs, and improve the enabling environment • Invest in capacity building of suppliers and distributors • Target marketing to boost demand among the BOP • Realign corporate incentives to reward BOP market development • Share best practices internally and externally • Create directives for social responsibility within business supply chains
Government	<ul style="list-style-type: none"> • Invest in infrastructure to accelerate agricultural market development (e.g. transport, storage, water, energy) • Invest in services to accelerate agricultural market development (e.g. agricultural extension, entrepreneurship training) • Reform policies to encourage pro-poor service provision (e.g. finance, telecom) and stimulate agriculture sector development, trade and competitiveness • Apply targeted, time-limited subsidies to improve access to essential goods (e.g. fertilizer, fortified foods) • Undertake or fund R&D for products targeted to the BOP • Target public education campaigns to stimulate demand for fortified foods • Convene, align and mobilize stakeholders around common priorities
NGOs	<ul style="list-style-type: none"> • Advise companies on poor communities' needs and potential opportunities • Organize small-scale producers and facilitate linkages with buyers • Strengthen producer capacity and product quality through training • Train and facilitate entrepreneurship development for retailers • Certify, monitor and evaluate business models • Advocate to strengthen public support and investment in poor communities • Highlight effective models, share best practices and lessons learned • Facilitate partnership development among stakeholders
Donors, international organizations, and research/academic organizations	<ul style="list-style-type: none"> • Undertake or fund R&D for new product development targeted to poor communities' needs • Conduct research to identify pro-poor business and market development opportunities and communicate them to stakeholders • Identify key public-sector policy and investment priorities • Convene, align and mobilize stakeholders around common priorities • Fund training and capacity building for farmers and entrepreneurs • Fund the start-up phase of new business models to enable experimentation • Conduct public education campaigns on key products or concepts • Monitor, evaluate and assess impacts of business models • Share best practices and lessons learned, regionally and globally

Terminology

Base of the pyramid (BOP)

The 3.7 billion people populating the lowest income strata in the world, who earn up to US\$ 3,000 per person per year (in 2002 PPP\$), or roughly US\$ 8 per person per day (in 2002 PPP\$).

BOP Entrepreneurs

Sometimes referred to as entrepreneurs. These are individuals at the BOP who are conducting a business activity of some kind (selling, trading, etc). In this report, we refer to entrepreneurs as distinct from producers or farmers, even though the same individual may occupy both roles simultaneously.

BOP Penalty

The additional costs for basic goods and services that BOP customers often pay, compared to higher-income customers. For example, water trucked into slums and sold to households often has a higher unit price, and lower quality, than water provided to central neighbourhoods through municipal water systems.

BOP Producers

Sometimes referred to as producers. Refers to farmers who can be classified as part of the BOP due to their income levels.

Business enablers

Companies providing goods and services which enable commercial and market-based activity. These can include financial services, telecom, energy, transport and logistics products and services, among others.

Business model

The product or service offering, as well as the operational processes and financial arrangements, which comprise a specific private-sector activity or programme. "Operational processes" include preparation and delivery of the product to the customer. "Financial arrangements" include investments, credit, costs and revenue that lead to value creation. "Business model innovation" involves significant changes in two or more components of the business model to redefine a company's position in the market and create superior value.

Civil society organizations

Nongovernmental, not-for-profit organizations whose activities are dedicated to the public interest in some way. These can include NGOs, cooperatives, citizen groups, charitable foundations and international donor organizations.

Discretionary income

Surplus income left after individual or household spending on essentials such as food, fuel, housing, medicines and transport. Also called "disposable income", it is often spent on information and communication services (ICT), higher education, packaged goods, durables, and lifestyle and entertainment goods and services.

Food Fortification

The process of adding micronutrients to food products – either staple foods such as salt and flour, or packaged products such as biscuits. This is done to prevent or remedy nutritional deficiencies in the target population.

Next billions

Consumers, producers and entrepreneurs within the BOP who are currently excluded from formal markets, but could be engaged profitably by companies through innovative business models.

Purchasing power parity (PPP)

The value of a given amount of foreign currency, expressed in terms of the US dollar value of a similar basket of goods. PPP is based on the theory of long-term equilibrium exchange rates, which states that exchange rates of any two countries tend to equalize their purchasing power in the long term. In 2005 for example, US\$ 1 could be exchanged for 7.6 Chinese Yuan. However, the PPP value of US\$ 1 in China was 1.8 Yuan, meaning that it would take 1.8 Yuan to purchase goods and services valued at US\$ 1 by the World Bank.

Smallholders

Also referred to as small farmers or producers. Refers to farmers whose livelihood depends on a farm plot of 2 hectares or less.

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This reports quotes existing data from secondary sources, and also provides new estimates using inputs from various sources. This appendix discusses calculation methods and sources used for the following estimates presented in this report:

1. **Size of the BOP population:** This was estimated at 3.7 billion in 2002. Data is derived from 2002 data sources, based on data in two leading reports (*The Next 4 Billion* by the World Resources Institute, 2007⁽¹⁾, and the 2007 *World Development Report* by the World Bank⁽²⁾).
2. **Total BOP income:** This was estimated at US\$ 2.3 trillion in 2008. In this case, 2008 data was estimated since no comparable, widely recognized data on aggregate income and expenditure data of the BOP are available. The estimate is based on extrapolation from income statistics of the BOP for 2002.
3. **BOP income growth rates:** We calculated 8% growth rates in the BOP market (based on 2002-2008 data) which, if projected forward to 2015, lead to a total market of US\$ 4.0 trillion.
4. **Population breakdown:** Starting with a world population of 6.3 billion, the total number of rural BOP living on smallholder farms is calculated to be 1.5 billion in 2002.
5. **Food expenditure of the BOP:** This was estimated at US\$ 1.3 trillion in 2008.
6. **Total income of the rural BOP population:** US\$ 850 billion-1.1 trillion. Data is presented for 2008.

All statements made within this report refer to nominal US\$ unless otherwise mentioned.

1. Size of the BOP population

The following steps were taken to arrive at an overall population estimate of the BOP:

1. **Starting point:** Database of The Economist Intelligence Unit (EIU) 2002³, which presents household population numbers distributed over nominal household income levels.
2. **Establishing upper income threshold for the BOP:** The income threshold of US\$ 3,000 per person per year equivalent to US\$ 8 per day (in 2002 PPP\$) was used, presented in the World Resource Institute's 2007 report, *The Next 4 Billion*. WRI determined this threshold based on global income-expenditure surveys.

3. **Conversion of PPP income per country/region to income in nominal US\$:** US\$ 3,000 PPP was converted to nominal US\$ for each country, based on the PPP to local currency factors from the International Monetary Fund and exchange rates from US\$ to local currency for 2002. This was done in order to compare EIU income strata (presented in nominal US\$) to income thresholds for countries/regions (presented in US\$ PPP). Conversion factors for entire regions such as Africa were obtained from secondary research.
4. **Conversion of WRI individual incomes to household incomes:** Adjustment of income thresholds from individual to household levels were conducted to compare EIU income strata (presented for households) to income data for countries/regions (presented for individuals).
5. **Total BOP population:** BOP population from each country/region were summed to create an aggregate total. BOP population from each country/region is calculated by comparing the adjusted WRI income data to the EIU income strata database. If income levels were between pre-specified income strata (e.g. US\$ 1,000-2,000), the population within the strata was assumed to have a uniform distribution to determine the population within that level.

This analysis does not utilize the World Bank's latest revised definitions of the poverty line (Source: Policy Research Working Paper of the World Bank Development Research Group, August 2008 4). This is largely due to lack of information on PPP adjustments made on a regional basis (which the World Bank states are a departure from past methods of calculating populations below the poverty line). Hence, our population estimates differ from the latest published World Bank report.

2. Total BOP income

The following steps were taken to arrive at an overall income estimate of the BOP:

1. *Starting point income of 2002*: Database of the Economist Intelligence Unit (EIU) 2002 3. Total BOP income of each region/country was computed as the weighted sum of the average income for each income bracket (e.g. average income of the bracket US\$ 1,000-2,000 is US\$ 1,500) and the population within that income bracket. This assumes, however, that the population within an income bracket is uniformly distributed, an assumption consistent with Step 5 in Section 1 in interpolating populations for given cut-offs. This results in an income pool of US\$ 1.7 trillion in 2002.
2. *Computing income growth figures*: Average income growth for the BOP income brackets in each country were computed from 2002 to 2008. The resultant growth figure was determined to be 5% nominal rate per annum. Note that this is a different figure from the 8% historic growth 2002-2008 (explained below), which also captures the "wealth effect", e.g. upward migration of the BOP to higher income brackets, as explained below.
3. *Computing 2008 income figures*: The growth of the aggregated/total income of each segment for a specific region/country was used to extrapolate the total BOP income of 2002. Subsequently, this data was used to calculate today's (2008) income pool of US\$ 2.3 trillion.

3. BOP income growth rates

To project the potential growth of BOP income over time, the historic growth rates were calculated based on 2002-2008 data and then applied forward, as follows:

1. It was assumed that BOP incomes would migrate upward only, into higher income brackets, over time. The potential for downward migration was not factored into the estimate.
2. The aggregated wealth of the migrators was determined over time for each region. This was done by computing the number of people leaving the BOP income bracket every year using the EIU's population statistics from the years 2002 to 2008.
3. The aggregated wealth of migrators was added to the aggregated wealth of the non-migratory BOP population. This was done knowing the number of migrators every year and assuming that the average income of these migrators is the income bracket immediately above the BOP.
4. The resulting growth rate of 8% per year was used to project the combined wealth of the BOP population from 2008 to 2015.

Given that the food and economic crises of 2008 have negatively impacted the livelihoods of the poor and emerging market growth rates to a degree not yet fully quantified, the projected continued 8% growth rate should be considered as a potential scenario but not a definitive prediction. As of December 2008, the World Bank was projecting continued growth in emerging markets for 2009, albeit at lower levels than previously expected.^[30]

4. Population breakdown: Estimating rural BOP smallholders and their families

The table below provides an overview of sources and the calculation method used to estimate the total population of rural BOP smallholders and their families, from a starting point of world population. All numbers are for 2002.

Category	Source	Method of classification
World Population – 6.3 billion	<ul style="list-style-type: none"> United Nations population division “World population” (2002) 	–
Rest of the world – 4.6 billion (non high-income countries)	<ul style="list-style-type: none"> World Bank “Agriculture for Development”, 2008, see list below^[2] 	<ul style="list-style-type: none"> Classification of developing countries as used by the World Bank, “Agriculture for Development”, 2008 report
Base of the Pyramid – 3.7 billion	<ul style="list-style-type: none"> World Resources Institute, <i>The Next 4 Billions</i>, 2007^[1] The Economist Intelligence Unit, 2008^[3] 	<ul style="list-style-type: none"> BOP income threshold of US\$ 3,000 (2002 PPP\$)
Rural Base of the Pyramid – 2.5 billion	<ul style="list-style-type: none"> World Bank, <i>Agriculture for Development</i>, 2008^[2] 	<ul style="list-style-type: none"> 74% rural poor of total poor Estimation of 56% rural of BOP excluding poor (based on triangulation of numbers for rural poor and rural “Rest of the world”)
Rural BOP smallholders and their families – 1.5 billion	<ul style="list-style-type: none"> World Bank, <i>Agriculture for Development</i>, 2008^[2] 	–

5. Food expenditure of the BOP

To calculate the total spending on food by individuals at the Base of the Pyramid, percentages of average household expenditure on food for the three subcategories of the BOP have been determined:

Category	Population (Billion)	Portion of household expenditure spent on food
Lowest segment	1.0	73%
Middle segment	1.6	59%
Top segment	1.1	41%
Total	3.7	57%

The average household food expenditure (57%) was multiplied with the BOP total income of US\$ 2.3 trillion to generate a total estimated food expenditure of US\$ 1.3 trillion.

Sources: World Resources Institute, *The Next 4 Billion*, 2007^[1] and The Economist Intelligence Unit Population Statistics Database, 2008.^[3]

6. Total income of the rural BOP population

The total income of the rural BOP population is based on the net income of individuals. This consists of labour income and/or margin.

The income of the rural BOP varies largely across regions and type of products. Extensive bottom-up research will have to be performed to determine a more precise estimate of rural BOP income. The estimation of rural BOP income presented in this report (US\$ 850 billion-1.1 trillion) is based on a top-down calculation method. The main data sources used for this calculation are *The Next 4 Billions*, World Resource Institute, 2007^[1]; *Agriculture for Development*, World Bank, 2008^[2]; the FAO databases^{[8],[11]}; and the *Trading Up* Report from the Royal Tropical Institute.^[5]

The following steps were taken to arrive at the total income of the rural BOP population:

1. Total BOP population was categorized based on geography (countries/regions) and source of income (e.g. agricultural production, retail, trade, etc.)
2. For each subcategory, income was estimated on the basis of input numbers from the sources above from local databanks for each country/region, such as IRS, IFAD [6], Goscomstat^[7], USDA Reports^[9], and the China Bureau of Statistics^[10]
3. Income from each subcategory was summed to estimate total income of the rural BOP population

Appendix 2

Case Study Selection Process

This report features several examples and case studies of BOP business models. These case studies represent a wide array of geographic regions, industry sectors, partners, and business models. They are intended to illustrate high-quality and innovative business approaches.

The case studies were selected through a rigorous screening process. The report team conducted research of secondary sources (60 published reports, several organizational databases and Web research) and primary sources (company and organizational interviews and submissions) and created a database of 200 case studies with the following characteristics:

1. **Business-led** initiatives (or those featuring strong private-enterprise engagement) that are proven or intended to be commercially viable, and do not depend on donor funding or subsidies for the long term
2. **Targeted to BOP** consumers, producers and entrepreneurs
3. **Demonstrable social benefits**, such as increased income; creation of new market opportunities; or provision of access to needed goods and services
4. **Strong potential for scaling** across multiple geographies, based on existing record or potential for replication
5. **Relevant to the food value chain**, or offering strategies or insights (such as retail franchising) that could be applied to food value chain business initiatives



To determine which case studies to include in the report, the team (comprised of employees of the World Economic Forum and The Boston Consulting Group), applied a second filter to select cases with the following characteristics:

1. **Innovation** in the business model, for example, a new product design; alternate go-to-market strategy; unusual partnerships
2. **Relevance** to the themes or ideas discussed in the report
3. **Novelty** within the public sphere; initiatives that had already received heavy international publicity were de-emphasized in favour of lesser-known but equally valid examples
4. **Partner involvement**, illustrating collaboration between sectors; government engagement; or other actors

As a final step, selected case studies were evaluated by an impartial team of expert reviewers from the following institutions: The John F. Kennedy School of Government at Harvard University; the World Resources Institute, and The Schwab Foundation for Social Entrepreneurship.

Case study reviewers were asked to evaluate the case study selections according to the above criteria, taking into consideration additional factors such as regional balance. Feedback and recommended additions from the expert review group determined the final selection of cases incorporated into the report.

While some of the case studies featured in this report have been independently evaluated, many have not. The authors themselves did not independently evaluate the accuracy of case studies. Future studies that independently quantify the commercial and social outcomes of BOP business models would be valuable to the broader community of stakeholders interested in such initiatives. At present, there is limited availability of such data.

Appendix 3

List of Case Studies Cited

Chapter	Aim of the intervention	Example	Country/ region	Organizations involved/mentioned
Business Solutions to Unleash the Potential of Producers and Consumers	Developing agricultural inputs targeted to the BOP	Manually operated treadle pumps	India	IDE India
		Providing superior breeding materials to private seed companies	Latin America	CGIAR
		Introduction of new tropical sugar beet variety	Global	Syngenta AG
	Improving farmers' access to agricultural input	Godrej Aadhar rural retail hubs	India	Godrej Agrovet, Tata Agrico
		Green World agro-dealer training programme	Kenya	Bayer CropScience AG
		Agro-dealer funding with government guarantees	Kenya	Equity Bank, Government of Kenya
		Garantia de Sabor – quality certification standards to enable worldwide supermarket access	Brazil	Bayer CropScience AG, HortiBrasil
		Farmer training and improving skills of actors along the supply chain	Vietnam	Metro Cash & Carry International
	Improving logistics and warehousing	Improved packaging of fresh produce to reduce post-harvest waste	India	Metro Cash & Carry International
		Logistical analysis	Africa	TNT
	Investing in intermediaries that add value	Preferential treatment of equitable suppliers	Indonesia	Groupe Carrefour, Bimandiri
	Optimization of sourcing processes	Local corn sourcing for Bugles snacks	China	General Mills Inc.
		Building a local rice supply chain	Nigeria	Olam Ltd
		Small holder sourcing strategy	Global	SABMiller Plc
		Commercializing the Allanblackia seed	Africa	Unilever Plc
	Building markets for sustainable trade	Divine Chocolate – fair trade premium chocolate brand	Ghana	Kuapa Kokoo
		Sustainably traded coffee	Latin America Global	Kraft Foods Inc.; Rainforest Alliance
	Designing nutritious food for poor consumers	Iron-fortified biscuits distributed through school feeding and commercial channels	India	Britannia Industries Ltd, GAIN, Naandi
		Plumpy'Nut – ready-to-eat therapeutic fortified food for children	Africa	Nutriset S.A.
		Iron fortified soy sauce	China	Zhenji, GAIN, China Center for Disease Control
Expanding retail distribution networks	Employing female entrepreneurs for last-mile distribution	Brazil	Nestlé S.A.	
	Wholesaling through micro-retailers	India	Subhiksha Trading Services Ltd	
	Harijali Kissan Bazaar rural retail hubs	India	DCM Shriram Consolidated Ltd	
	Providing a sourcing platform for small rural retailers	Mexico	Mi Tienda	
Holistic Solutions	<i>Shakti Doi</i> yoghurt – locally produced, and distributed fortified food	Bangladesh	Grameen Danone Ltd	

continued on the next page >>

Chapter	Aim of the intervention	Example	Country/ region	Organizations involved/mentioned
Business solutions to empower entrepreneurs and create an enabling environment	Providing market information	Market information through mobile phones	Uganda	Foodnet
		First Mile – using “market spies” to gather price information	Tanzania	IFAD
		Market price information for farmers via kiosks, SMS and an online trading platform	Kenya	KACE
		Lifelines – voicemail service for agricultural information	India	BT, Cisco, OneWorld
		Telecommunications access for entrepreneurs and microfinance providers	China	Qualcomm Inc., PlaNet Finance and China Unicom
		Rural Internet kiosks with telecom services	Bangladesh	Grameenphone, Telenor
	Increasing access to financial services	Provision of microfinance services	Asia, Africa, Latin America	Grameen Bank, ACSI, Accion
		Securitization of microfinance loan portfolio	Bangladesh	Citibank, BRAC, MF Analytics
		GCash mobile cash transfer services	Philippines	Globe Telecom Inc.
		M-PESA mobile cash transfer services	Kenya	Safaricom, Vodafone
		Kissan - credit card for farmers	Pakistan	Standard Chartered Bank
		Swarnavarsham – consumer financing scheme	India	Muthoot Fincorp
		Financing farmers and micro-enterprises (particularly agro-dealers) along the food value chain	Kenya	Equity Bank, USAID, IFAD AGRA, Government of Kenya
		Rainfall indexed crop insurance	India	ICICI Lombard, Swiss Re, BASIS
		Africa Agriculture Capital – equity funding for agriculture-sector SMEs	Africa	Rockefeller Foundation, the Gatsby Charitable Foundation and Volksvermogen NV
		Africa Enterprise Challenge Fund – equity funding for pro-poor business ventures in the agriculture and financial service sectors	Africa	DFID, African Development Bank, CGAP, IFAD
	Overcoming infrastructure gaps	Investing in cold chain storage and logistics	Mauritania	Tiviski Dairy
		Solar power-based energy solutions for remote areas	Brazil	IDEAAS
		Solar and wind power-based mobile phone base station	Namibia	Motorola Inc.
		Biogester – generating electricity on diary farms	China	Nestlé S.A.
Low-cost water treatment		India	Naandi Foundation, Water Health International USA, Tata Projects Ltd	
Comprehensive training programme for coffee farmers		Honduras	ECOM Agroindustrial, Uz Certified, IHCAFE, CIRAD and CropLife	

continued on the next page >>

Chapter	Aim of the intervention	Example	Country/ region	Organizations involved/mentioned	
Unleashing Potential: Strategies for Success		UPCOCO – building capacity of cooperatives in the cocoa sector	Cameroon	ADM Cocoa BV, Mars Inc. and RaboBank	
		Capacity building across the dairy value chain; developing standards	Uganda	Land O'Lakes International Development	
		Popular brand of fortified foods	Africa	Unilever	
	Create life-enhancing offerings	Reconfigure the supply chain	Shakthi Ammas – rural women entrepreneurs to sell consumer products	India	Unilever
			Sourcing fair trade coffee from small producers	Global	Starbucks
	Educational communication	Farmer training and educational marketing about agricultural inputs	Kenya	CNFA/AGMARK, Rockefeller Foundation	
	Creative collaboration		Improving local sanitation in partner communities	India	Nestlé
			Capacity building of farmer associations and promoting gender equality	Zambia	Land O'Lakes International Development
			Encouraging self governance and self-monitoring of producers	Ghana	Integrated Tamale Fruit Company
			Sharing distribution networks	India	IFFCO, Bharti Airtel
Indus Towers sharing telecom towers in rural areas			India	Bharti, Vodafone, Idea	
Unshackling the organization	Dedicated micro-banking department	United Kingdom	Barclays		
Scaling up Business Engagement: Key Actions for Stakeholders	Providing complementary funding and capacity	Syngenta Foundation – aligning philanthropic activities with commercial activities	Colombia	Syngenta Foundation	
		Funding capacity-building for small-scale coffee growers	Africa	Bill & Melinda Gates Foundation	
		Collaborative research effort on Manual Distribution Centers (MDCs)	Global	The Coca-Cola Company, International Finance Corporation (IFC) and Harvard University	
		Research to identify commercial opportunities for smallholders	Kenya	BAACH Kenya, World Economic Forum and Tegemeo Institute	

Appendix 4

Actions for Scaling Up Business Models

Business Models for Producers: Actions to Enable Scaling Up

Business Model	Companies	Governments	NGOs	Donors, international organizations and academia
Developing agricultural inputs targeted to the BOP	<ul style="list-style-type: none"> Build insight into constraints and opportunities of BOP farmers Invest in R&D of agricultural inputs-focused on BOP needs Collaborate with others to reduce costs and share knowledge 	<ul style="list-style-type: none"> Public funding for local agricultural research institutes Improve education and training of agricultural scientists Provide tax incentives for research 	<ul style="list-style-type: none"> Advise on community needs and identifying appropriate target groups Facilitate introduction of new techniques and products 	<ul style="list-style-type: none"> Undertake or fund R&D; evaluate impact Disseminate information on new products and best practices Share data and best practices; highlight successful models
Improving farmers' access to agricultural inputs	<ul style="list-style-type: none"> Establish or extend retail distribution networks for inputs Empower agro-dealers Provide credit to farmers buying inputs and agro-dealers 	<ul style="list-style-type: none"> Minimize duties on essential inputs Provide targeted, time-limited fertilizer subsidies for poor farmers Leverage existing institutions and networks to reach underserved areas 	<ul style="list-style-type: none"> Train agro-dealers and retailers on product information and business skills Support impact evaluation process 	<ul style="list-style-type: none"> Fund retailer training and financial services Share data and best practices; highlight successful models
Strengthening farmer capacity	<ul style="list-style-type: none"> Train farmers on input usage; quality and safety standards and market-focused production Train "trainers" who can teach farmers and others 	<ul style="list-style-type: none"> Strengthen and expand market-focused agricultural extension services Collaborate existing agricultural extension services 	<ul style="list-style-type: none"> Conduct farmer training Support impact evaluation 	<ul style="list-style-type: none"> Fund and conduct training Support set up of model farms Share data and best practices
Building markets for high-value sustainable trade	<ul style="list-style-type: none"> Develop and contract for high-value products Train and support farmers Monitor standards compliance Develop branding and consumer awareness marketing plan 	<ul style="list-style-type: none"> Boost sectoral competitiveness Incentivize local production Build processing facilities and necessary infrastructure Secure IP rights for products 	<ul style="list-style-type: none"> Farmer organizing, training and facilitation Certification and monitoring 	<ul style="list-style-type: none"> Monitor compliance; assess impacts Fund training and certification for local value capture Share data and best practices; highlight successful models
Switching from imports to local sourcing	<ul style="list-style-type: none"> Develop local supply chains Commit to smallholder sourcing Create branded products 	<ul style="list-style-type: none"> Incentivize local production Collaborate with companies Promote locally grown products Scale up production 	<ul style="list-style-type: none"> Link farmers with markets Establish farmer training and organize farmers Share data and best practices 	<ul style="list-style-type: none"> Identify market opportunities Fund the start-up phase of new production schemes Share data and best practices
Commercializing local raw material	<ul style="list-style-type: none"> Conduct research and identification Commercialize, brand and distribute new products Build local businesses or subsidiaries to formulate quality products 	<ul style="list-style-type: none"> Regulate and certify new products Conduct social marketing to strengthen demand for new products 	<ul style="list-style-type: none"> Access community knowledge on local products and resources Serve as an honest broker to help farmers capture value Train and organize farmers 	<ul style="list-style-type: none"> Research and evaluate new products Use media channels to advocate product benefits Share information on findings
Improving market linkages and supply chain efficiency	<ul style="list-style-type: none"> Commit to interact with value-added intermediaries Invest in building capacity Incentivize value-added activities 	<ul style="list-style-type: none"> Create an effective business enabling environment 	<ul style="list-style-type: none"> Act as an intermediary between companies, farmers and entrepreneurs 	<ul style="list-style-type: none"> Fund intermediaries networks and models Share data and best practices; highlight successful models

Business Models for Consumers: Actions to Enable Scaling Up

Business Model	Companies	Governments	NGOs	Donors, international organizations and academia
Designing nutritious food for poor consumers	<ul style="list-style-type: none"> • Commit resources for tailored product design • Cross-subsidize within established product portfolio • Partner with peers and suppliers to seek cost efficiencies • Partner with local research institutes • Participate in PPPs • Market into multiple channels: humanitarian, institutional, and commercial 	<ul style="list-style-type: none"> • Introduce mandatory fortification policy • Introduce IP regulation • Strengthen food safety standards and regulation 	<ul style="list-style-type: none"> • Support data collection on the BOP to feed into R&D processes • Support distribution of fortified products • Participate in pilot projects • Assist in impact evaluation 	<ul style="list-style-type: none"> • Provide funds for R&D and data collection • Strengthen food safety standards • Support coordination of public-private partnerships • Share knowledge on design/impact/evaluation • Fund impact evaluation
Strengthening consumer demand through effective marketing	<ul style="list-style-type: none"> • Partner with local entities that can ensure effective outreach • Use brand building expertise to create brand loyalty 	<ul style="list-style-type: none"> • Make government media platforms available for social marketing • Use government health agencies to partner with private sector • Support creation and marketing of certified labelling 	<ul style="list-style-type: none"> • Support outreach by leveraging NGO footprint and platforms • Participate in PPPs to secure consumers' trust • Manage community-based marketing 	<ul style="list-style-type: none"> • Advise on and evaluate product health benefits • Fund marketing campaigns • Share best practices and introduce alternative marketing models • Participate to establish credibility
Expanding retail distribution networks	<ul style="list-style-type: none"> • Set up tailored service and training for micro-retailers with mutual benefits • Share best practices internally and externally • Partner with entities who have local footprint • Seek business-to-business partnerships to bundle services and aggregate supply and distribution 	<ul style="list-style-type: none"> • Support set up of trade unions for micro-retailers • Provide tax incentives for retail support schemes • Support legislation that allows cross-industry synergies • Provide policy incentives for retail innovation 	<ul style="list-style-type: none"> • Support set up of co-operatives for micro-retailers • Support training and educational programmes • Support outreach by leveraging NGO footprint and platforms 	<ul style="list-style-type: none"> • Make investment funds available for micro-entrepreneurs and innovative models • Share data and best practices

Models for Business Enablers: Actions to Enable Scaling Up

Business Model	Companies	Governments	NGOs	Donors, international organizations and academia
Pricing information systems through mobile technology	<ul style="list-style-type: none"> Re-engineer products and services for usability and affordability Lower first-purchase threshold for mobile phones Sponsor education and marketing campaigns Partner with institutions and entities who can contribute either content or technology 	<ul style="list-style-type: none"> Lower import barriers for handsets and equipment Lower regulatory barriers Harmonize and lower call tariffs for cross-border communication in the region Support expansion of coverage 	<ul style="list-style-type: none"> Support education programmes Monitor and report on programmes 	<ul style="list-style-type: none"> Provide funding to develop pro-poor applications Set up information systems and databases Share data and best practices
Information on good agricultural practices	<ul style="list-style-type: none"> Lower first purchase threshold Sponsor educational marketing campaigns Partner with institutions and entities who can contribute either content or technology Provide funding and knowledge to help set up local entrepreneurial ventures 	<ul style="list-style-type: none"> Lower import barriers for handsets and equipment Lower regulatory barriers Harmonize and lower call tariffs for cross-border communication in the region Provide tax incentives to companies that work with local entrepreneurs Provide agricultural expertise 	<ul style="list-style-type: none"> Support education programmes Help identify appropriate target groups Provide agricultural expertise 	<ul style="list-style-type: none"> Set up information systems and databases Share data and best practices
Credit for individual farmers	<ul style="list-style-type: none"> Provide financial services directly to farmers Partner with institutions and entities which provide credit Explore ways to support the creation and operation of credit rating agencies 	<ul style="list-style-type: none"> Streamline regulations to expedite approval processes for credit-granting schemes Monitor impact Explore ways to support the creation and operation of credit rating agencies 	<ul style="list-style-type: none"> Support education programmes Help identify appropriate target groups Provide technical assistance to help farmers use credit for income generation activities 	<ul style="list-style-type: none"> Provide financing to support financial services to the poor Provide loan guarantees or seed financing to SMEs Explore ways to support the creation and operation of credit rating agencies
Mobile cash transfer services	<ul style="list-style-type: none"> Design cost-effective open platforms for mobile payments Develop cross-sector collaboration, for example between telecom and finance companies 	<ul style="list-style-type: none"> Establish policies and regulations to allow mobile payments Ensure that policies are fair and equitable for companies and end users 	<ul style="list-style-type: none"> Support education programmes Monitor and report on government and company interventions 	<ul style="list-style-type: none"> Share best practices and knowledge Monitor and evaluate effectiveness Provide start-up financing to catalyse innovations
Monetary stability through savings and investments	<ul style="list-style-type: none"> Design tailored products and offerings that address local needs 	<ul style="list-style-type: none"> Encourage specialized savings and investment products through policy and regulation Provide guarantees for such products if necessary 	<ul style="list-style-type: none"> Support education programmes on the importance of savings and investments 	<ul style="list-style-type: none"> Provide funding Develop mechanisms to facilitate replication across regions

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Business Model	Companies	Governments	NGOs	Donors, international organizations and academia
Downside protection through novel risk mitigation instruments	<ul style="list-style-type: none"> • Design tailored products and offerings that address local needs • Create localized databases and tracking tools for continuous improvement in risk mitigation strategies to lower cost to the end user 	<ul style="list-style-type: none"> • Establish policy measures for specialized insurance products, and risk management • Ensure protection of the public interest through effective policy mechanisms 	<ul style="list-style-type: none"> • Support education programmes • Monitor and report on programmes 	<ul style="list-style-type: none"> • Share best practices and knowledge • Develop mechanisms to facilitate replication across regions
Capital funding for small businesses	<ul style="list-style-type: none"> • Contribute investment funds set up by inter-governmental organizations • Provide technical assistance with regards to risk management, process efficiencies and management structures 	<ul style="list-style-type: none"> • Set up investment funds for micro-entrepreneurs • Establish policies to encourage SME finance 	<ul style="list-style-type: none"> • Conduct training programmes • Monitor and report on programmes 	<ul style="list-style-type: none"> • Set up investment funds for micro-entrepreneurs • Assess and report on risks and returns in poor regions • Establish transparent risk monitoring systems
Hard infrastructure	<ul style="list-style-type: none"> • Build partnerships to create synergies and bundle technologies and competencies across sectors • Incorporate environmental sustainability as a core requirement 	<ul style="list-style-type: none"> • Provide tax incentives to encourage private-sector investments in infrastructure • Promote PPP models 	<ul style="list-style-type: none"> • Help identify BOP needs and solutions • Provide independent evaluation of environmental sustainability 	<ul style="list-style-type: none"> • Provide funding • Identify and disseminate best practices • Provide technical assistance
Soft infrastructure	<ul style="list-style-type: none"> • Conduct management and commercial skill building for cooperatives • Help develop and encourage compliance with food standards and norms 	<ul style="list-style-type: none"> • Set up educational and training programmes • Partner with the private sector to improve producer capacity and organization • Establish and enforce quality standards 	<ul style="list-style-type: none"> • Support capacity building programmes • Support cooperatives and farmer organizations • Monitor standards and implementation 	<ul style="list-style-type: none"> • Provide funding for producer capacity building and organization • Share best practices and information • Facilitate PPPs





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