

# Using the base-of-the-pyramid perspective to catalyze interdependence-based collaborations

Ted London<sup>a,1</sup> and Ravi Anupindi<sup>b</sup>

<sup>a</sup>William Davidson Institute and Ross School of Business, University of Michigan, Ann Arbor, MI 48109-1234; and <sup>b</sup>Operations and Management Science Department, Ross School of Business, University of Michigan, Ann Arbor, MI 48109-1234

Edited by Prabhu Pingali, Bill and Melinda Gates Foundation, Seattle, WA, and approved March 15, 2011 (received for review September 10, 2010)

**Improving food security and nutrition in the developing world remains among society's most intractable challenges and continues despite a wide variety of investments. Both donor- and enterprise-led initiatives, for example, have explored including smallholder farmers in their value chains. However, these efforts have had only modest success, partly because the private and development sectors prefer to maintain their independence. Research from the base-of-the-pyramid domain offers new insights into how collaborative interdependence between sectors can enhance the connection between profits and the alleviation of poverty. In this article, we identify the strengths and weaknesses of donor-led and enterprise-led value chain initiatives. We then explore how insights from the base-of-the-pyramid domain yield a set of interdependence-based collaboration strategies that can achieve more sustainable and scalable outcomes.**

business development | poverty alleviation | market-based approaches | cross-sector partnerships | public-private partnerships

The continuing poverty faced by much of the world's population, which can be the reason for and the consequence of food insecurity and malnutrition, remains one of humanity's greatest failings (1). One result is increased interest by donors and enterprises in using market-based approaches to address the unmet needs of billions of smallholder farmers (SHFs) in the developing world (2, 3). This trend, although encouraging, still faces challenges. In particular, donor-led value chain initiatives (DLIs) and enterprise-led value chain initiatives (ELIs) operate relatively independently of one another, as the goals of generating profits and alleviating poverty are often seen as incompatible. To achieve their promise as sustainable and scalable approaches, these initiatives must become better integrated. An emerging domain, the "base of the pyramid" (BoP; also known as the bottom of the pyramid), offers insights into how this could occur. In this article, we examine DLIs and ELIs and explore how the use of a BoP perspective based on collaborative interdependence can enhance the integration of these efforts.

Value chains encompass the full range of activities and services required to bring a product or service from its conception to its end use. The value chain analysis framework was originally developed as a tool for enterprises to develop sources of competitive advantage (4). The donor community, including the United States Agency for International Development, the United Kingdom's Department for International Development, Germany's Gesellschaft für Technische Zusammenarbeit, and a variety of other development agencies and foundations, has since incorporated the value chain approach as a focal framework for integrating SHF into domestic and international markets, as well as enhancing local nutrition and food security (5). Questions remain, however, as to the efficiency, sustainability, and scalability of these efforts.

Agriculture-oriented businesses in Africa, Asia, and elsewhere, seeking new sources of supply, are also exploring opportunities to include SHFs in their value chains (6). With little prior inclination or experience in this market environment, these enterprise-led value chain initiatives face challenges in identifying opportunities and developing scalable business models that generate competitive advantage.

The development of the BoP domain has helped catalyze new ways of thinking about the intersection of business strategy and

poverty alleviation (7–9). The BoP, estimated at approximately four billion people, is the socioeconomic segment with a per capita purchasing power parity of less than \$3,000, which primarily lives and operates their microenterprises and small enterprises in the informal economy (6, 10). The BoP domain's first major contribution was to offer a compelling logic to business-minded leaders for viewing the poor as an untapped market of consumers, producers, and entrepreneurs. The BoP perspective also offers insight into the mindsets, capabilities, and partnerships that enterprises need to establish to develop viable business models (11, 12).

Most recently, a second generation of BoP strategies has emerged. Rather than an emphasis on "finding a fortune at the BoP," this work suggests that BoP initiative development benefits from a framing based on "creating a fortune with the BoP (13)." A fortune-creating approach involves identifying and enhancing what is "right" in BoP markets, cocreating and piloting business models in deep dialogue with the poor, and establishing competitive advantage based on the capability to become socially embedded in the local context and to assess and enhance mutual value creation (12, 14). Collaborative interdependence, a partnering strategy premised on "how we can help each other," provides the foundation for establishing and maintaining the necessary relationships (15). The BoP literature on partnering, however, has primarily focused on strategies for collaboration by enterprises with the poor and with nongovernmental organizations.

What insights, then, does the BoP perspective offer for enhancing the integration of donor and enterprise investments? To address this research question, the present article focuses first on comparing DLIs and ELIs and then examines the opportunity to use the BoP perspective to better integrate these efforts. We see this effort as an important step toward addressing the broader question of how to make market-based approaches work better for the poor.

We developed this article based on an extensive review of the literature combined with an analysis of prior and ongoing field activities (16). Using this review in conjunction with our prior research in this domain and discussions with leading experts, we selected a representative sample of DLIs and ELIs in East Africa and India. Combining in-depth interviews and field visits, we then developed seven detailed case studies (17). After analyzing all these data, we presented our preliminary findings to a robust set of experts who are well versed in value chain initiatives in three different venues. We used the feedback and insights gained from these interactions to refine our results.

## Serving SHFs: The Challenge

Close to half of the world's poor living in the developing world are small farmers who own or lease land, and agriculture provides income for 1.3 billion landless workers and smallholders (3). In the next 30 y, our world will be home to another two billion people, most of whom will live in developing countries; likely face challenges associated with food security, health, and nutrition; and potentially rely on smallholder agriculture for survival and as a source of income (18).

Author contributions: T.L. and R.A. designed research, performed research, analyzed data, and wrote the paper.

The authors declare no conflict of interest.

This article is a PNAS Direct Submission.

<sup>1</sup>To whom correspondence should be addressed. E-mail: tlondon@umich.edu.

The substantial gap in agricultural yield between developing and developed countries demonstrates the value of increasing productivity of the land. However, increasing local food supply and improving nutrition and health are not simply a matter of providing better seeds, enhancing irrigation, or offering advice for increasing productivity. Access to markets also matters. Improved quality and quantity of outputs should lead to a commensurate increase in income so farmers can afford to feed their families and continually acquire better inputs for their crops. Addressing the unmet needs of local farmers therefore requires a more holistic view that includes increasing productivity and removing transactional constraints faced by these producers (6).

### Two Types of Value Chain Initiatives

DLIs are development programs specifically targeting poor producers, including SHFs. In these initiatives, the donor-funded implementing partner (IP) plays the role of network orchestrator. In executing this role, the IP remains outside the value chain and focuses on facilitating, as opposed to directly implementing, any changes. This facilitation can include improving demand for specific products as well as increasing the supply of higher performing smallholders.

In ELIs, the enterprise acts as the network orchestrator. These enterprises operate within the value chain and look for growth strategies and opportunities for competitive advantage. Investments are viewed through an economic lens of benefits and risks and require building sustainable relationships and transferrable capabilities.

Both DLIs and ELIs, like most initiatives, pass through three stages of development (15): (i) At the design stage, the initiative is conceptualized, and initial goals and metrics are developed. It concludes with the decision of whether or not to implement. (ii) If the initiative proceeds, the implementation stage involves launching the proposed business model. (iii) In the sustainability stage, the initiative assesses the opportunity to sustain and scale the activities implemented. The following discussion presents the key aspects of each stage of prototypical DLIs and ELIs from their perspective as network orchestrators, recognizing that specific initiatives may not follow these patterns exactly.

**DLI Design: Leveraging Experience and Partnerships.** A DLI generally commences with a two-step design process. First the donor decides to invest resources in a targeted industry (such as agriculture or handicrafts) or subsector (such as horticulture or honey) and develops a document inviting organizations to bid on the project. We generically refer to such an invitation as a request for proposal (RFP). (Other types of requests, such as requests for assistance, are also used.) In the RFP, broad parameters of the interventions needed to improve the competitiveness of chosen sectors are identified. A key goal is to transfer skills and resources to local farmers and other partners in the value chain. The length is also determined, typically 3 to 5 y,\* and high-level metrics are specified.

In Zambia, for example, the country-level identification of needs included greater access to markets, enhanced value added and production technologies, increased financial and business development services, and improved enabling environment for growth. The donor then solicited proposals for a project titled Production, Finance and Technology (PROFIT) to address the second and third issues, with expectations that the project would collaborate with the IPs on the other two issues (19). Several broad metrics were identified; for example, increases in number of clients engaged in value-added processing, value of production per unit of harvested land, and number of women in producer organizations.

The second step involves third-party organizations responding to the RFP. A prospective IP has a short amount of time to identify resources required, collaboration partners, and key on-the-ground activities. The bidder has to clearly articulate the design, imple-

mentation, and expected outcomes of its proposed intervention, specifying yearly activities, budgets, and expected outputs. The selection process usually values the experience the IP can bring to the project, including their knowledge of the problems and challenges the poor face. IPs are also assessed on their partnership model, including key organizations and individuals enlisted to execute the project. For example, the Cooperative League of the United States of America, which has more than 50 y of experience in developing countries and a set of strong partnerships, was selected as the IP for the PROFIT project.

**ELI Design: Seeing Opportunities and Finding Partners.** The main focus of the enterprise is to design a solution that is economically beneficial over the long term and creates a competitive advantage for itself within the value chain. ELIs are acutely sensitive to the risks associated with new investments. Working with SHFs is often a new experience that these enterprises may view as daunting, with distant and uncertain economic returns. As a result, an ELI may need support from various nontraditional partners—private, nonprofit, or government—to reduce the perceived risk of launching the initiative.

Working with SHFs, however, may not be in the DNA of every enterprise. Enterprises lacking vision and partnering skills will likely choose not to pursue this strategy. Growth Oriented Micro-enterprise Development (GMED), a 4-y program implemented by Agricultural Cooperative Development International/Volunteers in Overseas Cooperative Assistance, offered support to companies interested in working directly with SHFs in the fresh fruits and vegetables (FFV) sector in India. Of all the companies approached, only ITC, which had a strategic interest and previous experience working with SHFs, saw merit in a partnership with GMED (20).

Even if a company perceives a business opportunity in working with SHFs, it may lack the skills and knowledge to craft an appropriate strategy. Cropserve, an agricultural input supplier in Zambia, had traditionally built its business model supplying primarily to commercial farmers. Their initial approach to reach SHFs was through extension officers based in the larger towns. In addition to gaps in knowledge, however, the local farmers faced transaction inefficiencies in procuring inputs located far away from their villages. Not until a decade later, with support from PROFIT, did Cropserve redesign its initiative to pilot a “farmer as an agent” outreach model to address productivity and transactional constraints in a different way.

Enterprises may also lack the necessary skills needed to work with SHFs and other nontraditional partners. These potential collaborators are often skeptical about the value proposition from working with for-profit enterprises, and therefore gaining co-operation may be difficult. To succeed, an enterprise will have to develop new relationship-building capabilities, which takes time and patience.

**DLI Implementation: Executing Activities and Building Platforms.** In the implementation stage, DLIs execute against a predetermined set of activities and metrics with investments that are capped. Given the short-term and finite duration of the project, there is little provision for experimentation and hence limited tolerance for failure as a source for future learnings.

The emphasis is on facilitation, with the IP and its partners providing education and knowledge transfer, access to technical or financial inputs, and group formation assistance. Indeed, IPs often have dedicated funds budgeted to invest in common goods such as farmer training and group development. Building such platforms improves the quality of and access to local products, which can help facilitate private sector investment. When working with the private sector, the DLI’s goal is usually to engage multiple firms to prevent the creation of local monopolies and to level the playing field for SHFs. The strategy also helps the IP fulfill the predetermined scale of intervention identified in the design.

The PROFIT project promoted the concept of a service-provider as an entrepreneur across the agricultural retail services as well as the cotton value chain. Until the PROFIT intervention, the numerous suppliers of agricultural inputs had their last dis-

\*Extensions of 1 y or more are possible, and the focus can involve new activities or completion of planned tasks not yet finished.

tribution points in towns, which posed an accessibility challenge for SHFs. With guidance, as well as subsidized training from PROFIT, several firms adopted a model that used trained agents to provide inputs and services to the farmers' doorsteps. The goal was to encourage better adoption and subsequent improvement in quality and productivity while also decreasing production costs.

**ELI Implementation: Experimenting and Testing Business Models.** In the implementation stage, the enterprise explores the opportunity to create a competitive advantage and generate sufficient returns. Given the inherent risks, implementation proceeds cautiously, with a relatively low level of investment focused on testing the business model. Executing a pilot also allows a venture to understand, develop, and hone skills at a modest cost. Only when the pilot successfully demonstrates the opportunity for sufficient economic return will the enterprise invest further in expanding the initiative.

ITC, a well diversified private firm, had previous success in using its eChoupal model to work with SHFs in the commodity sector (21). It then embarked on sourcing fresh produce directly from SHFs with small pilots across three states. It partnered with the GMED project to provide training to its extension officers and lead farmers. ITC's pilots attempted to test several aspects of the overall solution: enhancing the productivity of the local farmers, direct sourcing from these farmers, a cold-chain infrastructure, and urban retailing of FFV.

The pilots demonstrated the viability of direct sourcing and extension services. However, FFV retailing turned out to be challenging. ITC scaled down its expansion plans and decided to concentrate in a single region close to its headquarters. After 2 y of further piloting, ITC developed a better understanding of the challenges of FFV retail. To build a more robust business model, ITC decided to explore institutional sales to large hotel chains and other businesses.

**DLI Sustainability: Transferring Resources and Raising the Playing Field.** In a DLI, success for the IP and the donor who funded the project is typically measured by changes in the overall competitiveness of the subsector and the effectiveness of the resources transferred. Enhancing the overall competitiveness emphasizes generating benefits for a variety of existing and new actors operating across the value chain, with a particular focus on more equitably integrating local producers. The goal is to raise the entire playing field.

The design phase lays out the key performance indicators for monitoring project effectiveness. These include process-related metrics that measure the intensity of the activities as well as outcome-related metrics that track the results of the intervention. Examples of process-related metrics include the number of farmers trained, demonstrations conducted, and groups formed. Together these measure the scale of the common platforms being created. Outcome metrics include yield and production costs per acre, which measure the effectiveness of the funded activities.

Separate from monitoring, a project may also have an evaluation component, which measures results against the original objectives. Typically, an evaluation is executed by an independent entity to provide donors with an unbiased assessment of the project. These generally occur after the project has ended, and sometimes at the midpoint as well.

In developing the "farmer-as-an-agent" model, PROFIT worked with several firms, assisting them in training agents for input sales as well as service provision. A process metric used to measure success was the number of agents trained. An outcome metric used was the number of farmers availing the services offered by these agents. Arguably, the model is ready for scaling up with a large pool of trained agents, yet our field observations highlight two critical issues. First, service uptake is still lagging, indicating insufficient demand. Second, we noticed that the lead firm, Cropserve, is not ready to scale because supporting such an agent network would put too many additional strains on the rest of its value chain, including the information technology systems. With PROFIT coming to an end, any further refinements of the model will have to be undertaken by the value chain actors themselves.

In summary, we observe that a DLI seeks to build the foundation for sustainability and scalability by transferring skills and capabilities to the value chain actors and by building platforms that enhance the competitiveness of the sector. Metrics established at the design stage are used to monitor progress and measure success. Although an evaluation may be conducted soon after project completion, there remains limited understanding of long-term sustainability. Therefore, it is hard to know whether these initiatives are sustainable and scalable. Anecdotal evidence suggests otherwise. We postulate a few reasons. One is that the capability to work with SHFs and their partners did not transfer sufficiently. Second, although the facilitated activities demonstrate effectiveness, insufficient attention may have been paid to efficiency, including whether the value chain actors can continue their involvement without external support. Finally, when the focus is on raising the entire playing field and maintaining competitiveness across multiple firms, individual actors may not perceive a unique competitive advantage.

**ELI Sustainability: Developing Capabilities and Competitive Advantage.** The approach ELIs use to design and pilot the viability of business models provides important insights into longer-term sustainability in current markets and scalability into new ones. Prospects for generating and maintaining competitive advantage strongly influence the decision to further invest in current markets. The internal appetite for new market entry also depends on the results of the previous stages. Enterprises that have developed transferable skills and capabilities in working with SHFs and their partners will have greater ability to and interest in exploring entry into new product and geographic markets. External factors, such as the product type and market potential, also influence this latter investment decision.

The example of ITC's activities across different value chains presents an interesting perspective. Although ITC demonstrated transferable skills and capabilities in working with SHFs across various commodities and geographies within India, the company has not had the same success with its initiative in the FFV sector. As discussed earlier, ITC started with pilots in three geographies and ultimately scaled down to one region. Along the way, it realized that, although skills in sourcing from SHFs transferred across contexts, competing in the FFV sector required a different set of capabilities for managing retail. Although demand exists for high-quality produce, ITC has not yet succeeded in attracting consumers to pay a premium for it. ITC is exploring models to further differentiate its products as well as new channel opportunities.

Overall, the sustainability stage allows the enterprise to evaluate its ability to establish a competitive advantage conducive to long-term success in the current market and provides the opportunity to assess the development of capabilities needed for scaling. Of course, business environments are dynamic, changes to which may positively or negatively impact current sources of competitive advantage as well as the opportunity to enter new markets.

**Comparing Approaches.** Articulating key aspects of DLIs and ELIs offers an opportunity to compare the underlying principles of these two approaches. Clear differences emerge in knowledge about local markets and access to relevant expertise in design, a focus on execution versus experimentation during implementation, and the orientation toward transferring resources and increasing competitiveness versus building competitive advantage and creating capabilities as measures of sustainability.

Another way to compare these two approaches is to examine the floor (i.e., likely minimum) and ceiling (i.e., potential maximum) levels of their respective impacts (Table 1). Given their emphasis on best practices, execution, and resource transfer, donor-led projects have a solid floor; certain things, at a minimum, will happen on the ground. The upside, or ceiling, is also fairly well established, given the time frame and guiding metrics; specific investments will be made over a predetermined time frame. However, when the DLI exits at the end of the project, sustainability and scalability remain less certain.

**Table 1. Comparing the relative floors and ceilings of DLIs and ELIs**

Donor-led initiatives	Enterprise-led initiatives
<p>Relatively high floor</p> <ul style="list-style-type: none"> <li>Dedicated funds for investment</li> <li>Committed to implementing a set of activities</li> <li>Focused on transferring resources</li> </ul> <p>Relatively low ceiling</p> <ul style="list-style-type: none"> <li>Capped level of investment</li> <li>Executing short-term project with planned exit</li> <li>Success measured by delivering services</li> </ul>	<p>Relatively low floor</p> <ul style="list-style-type: none"> <li>Small initial investment</li> <li>Commitment only to test activities</li> <li>Focus on minimizing risk</li> </ul> <p>Relatively high ceiling</p> <ul style="list-style-type: none"> <li>Willingness to make escalating investments</li> <li>Seeking long term competitive advantage</li> <li>Success based on sustainability and scalability</li> </ul>

ELIs, on the contrary, have a relatively lower floor and the potential for a higher ceiling. Their emphasis on minimizing risks and small-scale piloting lowers the floor. The enterprise’s design may not be funded or its pilots may be deemed unworthy of further investment. Exit may come early, resulting in only a modest commitment of resources. The upside, however, is potentially substantial. Enterprises have a long-term view in their business development investments; their goal is to create sustainable and scalable initiatives. If the design and piloting go well, then an enduring and wide-spread impact can result.

As they both seek greater incorporation of SHFs in their value chains and have potentially complementary floor and ceiling impacts, better integrating DLIs and ELIs offers much promise. Enterprises are particularly skilled at building viable ventures, and donors have the resources to invest in creating a viable market environment. The partnerships between Cropsolve and PROFIT in Zambia and ITC and GMED in India suggest that a collaborative approach can appeal to both sectors. Effective integration, however, remains a major challenge. Collaborative efforts still retain a strong emphasis on maintaining the independence of the partners. Neither party is comfortable adopting the success metrics of the other. Donors remain concerned about using their resources to enhance company profitability. Companies view donor performance metrics as tangential to their strategic goals. For both parties, economic and societal performance are seen as competing agendas that require unacceptable tradeoffs.

**BoP Perspective: Establishing Collaborative Interdependence**

The status quo under which donors and enterprises have viewed partnering is through a lens of “how can we help you,” which emphasizes maintaining independence. In sharp contrast, the BoP perspective emphasizes that potential partners should rely on collaborative interdependence, a view based on “how we can help each other,” to build cross-sector relationships. Based on identifying opportunities to “create a fortune with the BoP,” this perspective relies on the proposition that the greater the enterprise is able to meet the needs of the poor, the greater the return to the partners involved (7, 9, 12). This relationship clearly suggests that the ability to understand and create value desired by different stakeholders is critical to successful venture performance (14). Applying these ideas to the relationship between donors and enterprises indicates the need for a new form of partnering, which we call the interdependence-based collaboration (IBC) model.

We propose that developing successful IBCs requires that each sector recognize the value of achieving their partner’s goals (11, 13). For donors, this means embracing the view that success of their poverty alleviation efforts is connected to the success of the enterprise. If the enterprise succeeds, then the donor will achieve its performance goals. If not, then the donor will have little to show for its investment. For enterprises, this entails recognizing that venture success is tied to alleviating local constraints such as food insecurity and malnutrition. Only by understanding and responding to these constraints, and in the process alleviating poverty, will the enterprise generate a viable value proposition for those it seeks to serve. IBCs offer a partnership model that emphasizes the need to align the incentives and metrics of the key actors involved.

Adopting a BoP perspective, however, is not business as usual for enterprises or the development community. Both sectors

must reconsider their existing, and likely outdated, mindsets about roles, capabilities, metrics, and investments. Enterprise leaders will need to collaborate with nontraditional partners, embrace socially oriented metrics, and support local capacity building. Donors must invest in building enterprise capabilities and creating more attractive market opportunities, outlays that may benefit a specific company and its profitability.

Applying the BoP perspective to enhance the integration of ELIs and DLIs suggests a portfolio of IBC strategies that donors can use in the design, implementation, and sustainability stages. By catalyzing investment, balancing metrics, creating flexibility, enabling competitive advantage, and ensuring skill transfer, donors can facilitate the partnerships that leverage the high floor of DLIs with the high ceiling of ELIs. Each strategy has important implications that benefit SHFs (Table 2).

**Catalyze Investment.** The BoP perspective recognizes the critical importance of being able to identify and leverage what is “right” in local markets and craft enterprise strategies that enhance existing resources, skills, and social infrastructure (12). As this is a new market context, enterprises are unlikely to possess a deep understanding of the local environment, an expertise often found in the development community. This barrier at the design stage lowers the floor for enterprise engagement.

With appropriate investments in personnel with a solid business background and specific knowledge about operating in BoP markets, the development community can credibly catalyze investment by providing information on both market opportunities and best practices for enterprise design. These efforts can include seminars to attract companies to the opportunity, presentations for specific enterprises to address concerns and catalyze action, and hands-on workshops to help modify action plans, including offering a roadmap for venture development based on previous lessons learned (15). These skills and efforts provide a foundation for initiating further IBC strategies between the two sectors. Increased interest from enterprises expands the opportunity set for SHFs to connect to new markets.

**Balance Metrics and Align Incentives.** The BoP perspective emphasizes mutual value creation and relies on the view that enterprises generate economic returns by creating value for SHFs and other local stakeholders (8, 9). As with any business, the better the enterprise can hear and respond to voices from their target market, the better they can improve their business models. Enterprises that focus on economic performance but neglect to understand the needs of those they seek to serve will likely fail. Donor efforts that overemphasize societal metrics at the expense of economic ones will struggle to sustain their intervention.

The IBC model requires that the partners adopt a balanced scorecard to capture relevant information about economic returns and local impacts. Although enterprises are familiar with measuring economic benefits, they are less knowledgeable about approaches for capturing local impacts. The development community can provide advice on appropriate metrics, particularly in evaluating local effectiveness and efficiency impacts, as well as tracking lessons learned. Examples of effectiveness include increases in income by SHFs, local capability building, and changes in social and geographic isolation (14). These customer-level data

**Table 2. IBC strategies and their impacts on SHFs**

Strategy	Impact
Catalyze investment	Encourages more enterprises to seek opportunities in designing initiatives that engage SHFs
Balance metrics and align incentives	Enhances enterprises' ability to pilot and scale viable business models that best respond to the needs of SHFs
Create flexibility	Facilitates more experiments in the design and implementation stages and targets support for business models that have the best prospects for sustainably serving SHFs
Enable competitive advantage	Improves the opportunity for enterprises to sustain their engagement with SHFs over an extended period
Ensure skill transfer	Develops the capabilities of enterprises to scale their engagement with SHFs into new market contexts

are valuable to enterprises as they provide key insights into how to adjust business models to better meet local needs, especially during the piloting stage. Understanding efficiency impacts are critical to eventual sustainability and scalability; for example, in addition to measuring how many farmers are trained, enterprises should also consider the cost of and returns to SHFs from the training. New initiatives also carry inherent risks of failure. However, these failures generate learning, especially during the piloting phase. Metrics that track lessons learned from cross-sector partnerships, business models, and specific investments can demonstrate progress even when early on-the-ground success is limited.

Incentives in the IBC model must also be aligned to reflect the balanced scorecard. Development professionals' social metrics need to expand beyond simple measurement of achieving targets within budgets and should be tied to the same set of local impacts that the enterprises are encouraged to use. To respond to the longer-term nature of these outcomes, a bonus pool could be set aside pending results that will be measured at 1 y or more after specific activities are undertaken. By balancing metrics and aligning incentives, enterprises and donors are better positioned to sustain their engagements and maintain their commitment to working collaboratively with SHFs.

**Create Flexibility.** Business model creation is an innovative process that will take time to come to fruition. The BoP perspective emphasizes the need for trial and error, particularly in the design and implementation stages (22). Financial commitments also are best viewed as variable investments that likely will start small and are then potentially scalable (23). The development community therefore will benefit from building considerable flexibility into the IBC model in terms of the type, timing, and duration of their support. Enterprise development is filled with evolving challenges, and donors should be capable of responding to differing needs across the initiative's lifecycle.

Collaborative interdependence means that donors should remain committed to enhancing a specific value chain for an extended period, something perhaps more in the order of 8 to 10 y. Flexibility in the type and level of commitment across this timeframe may be necessary. In the first 3 to 5 y, fewer resources may be needed while a wider net is cast. At this stage, donors may seek interactions with a larger set of enterprises and focus on sharing knowledge and providing connections. Later on, they may transition to a smaller team that has access to more resources, as the focus switches to a subset of enterprises that require greater financial support, extended interactions, and detailed advice to take viable business models to scale. Flexibility permits donors to respond to the different needs of enterprises as they move through the design, implementation, and sustainability stages, and allows them to target investments toward business models with the best prospects for sustainably engaging SHFs.

**Enable Competitive Advantage.** Competitive advantage requires building a business model that facilitates enterprise success and limits competitor response. The BoP perspective emphasizes that competitive advantage and the associated long-term sustainability of enterprises emerges from preferential access to platforms, partners, and knowledge (12). However, evidence indicates that the current market environment for serving SHFs may offer few op-

portunities for competitive advantage (24). Donor investments in building platforms and creating other common goods therefore may be critical to generating a source of competitive advantage (25).

In making these investments, however, donors must recognize that a key success metric for enterprises is to gain some measure of inclusivity or preferential access to these platforms. Under the IBC model, donors should invest knowing that their enterprise partners may not want a level playing field and will, instead, want to capture part of the playing field. They should establish an environment that allows enterprises to compete for and achieve competitive advantage over one another. Enabling enterprises to build a competitive business strategy ensures that the SHFs will have an opportunity to engage with the strongest players that can generate the highest ceilings.

**Ensure Skill Transfer.** The BoP perspective emphasizes that scalability requires that enterprises build a specific transferable capability for serving local markets (26). This new capacity, termed social embeddedness, enables enterprises to efficiently access detailed knowledge of the local social and economic context and effectively interpret the information collected (12). In the IBC model, partners must ensure that the enterprise develops and retains the skills and knowledge necessary to sustain activities in current markets and explore new opportunities (15).

In working with enterprises to build social embeddedness, development partners must balance doing too little and doing too much. If they do too little, the enterprise may be limited in its business model development efforts, leading to an early exit. On the contrary, doing too much can create dependence on a donor without generating sufficient skill transfer that would enable the enterprise to sustain and scale the initiative. At some point, the donor will conclude its investments in a specific value chain, and the enterprise will need to have developed an internal capability in social embeddedness. The donor should therefore regularly track the breadth and depth of the transfer of skills in working with SHFs. With this capability, enterprises will be in a stronger position to ensure a level of permanence and scale in their interactions with SHFs.

### The Influence of Context: Prioritizing IBC Strategies

Prioritization and sequencing of the holistic set of recommendations presented to establish and maintain the IBC model can depend on the context. Three attributes, in particular, are important. First is the enterprises' experience working with the SHF segment. Second is the product space; the challenges of addressing constraints for the commodity sector will be different from those faced for high-value agricultural products. Finally, the ultimate customer will also play a role in how the IBC strategies should be applied.

In terms of experience, some enterprises, typified by ITC, have developed viable business models for serving smallholders and are considering opportunities for further growth. ITC's primary needs in collaborating are access to specific technical skills, assistance in developing connections with local producers, and support to conduct early experiments. In this situation, the development sector partner may want to prioritize implementation and sustainability by emphasizing a flexible partnership approach and ensuring skills transfer while investing less in catalyzing action.

Other enterprises, illustrated by Cropserve, may be interested in a particular market but do not have the capability or business model to enter or have failed before. If the enterprise has previously struggled to address smallholder constraints, its confidence in this segment as a growth market is likely eroding. The IBC model therefore must first focus on building a strong team that can engage deeply in designing viable business approaches. A flexible partnership approach and balanced metrics will then come into play as the enterprise pilots and refines new solutions. The partners will also need to explore whether investments in platforms and other common goods are required. Successes demonstrated through pilots should then be used to encourage skill building, so serving SHFs gains a stronger foothold in the organization.

The next category of enterprise, companies that rebuffed GMED's offer in the FFV sector, is the one that does not view SHFs as offering a source of competitive advantage. These companies must first be sensitized to the potential opportunity. Subsequently, development sector partners can then rely on the strategies articulated in working with interested enterprises.

The last enterprise context is that of nonexistence, in which there is no viable private sector in a specific stage(s) of the value chain. For example, in the Mozambique cashew sector, raw cashews were exported, and the lack of any local processing facilities limited the opportunities for value chain enhancements. In such situations, the development sector will need to take on the role of a business incubator to create appropriate enterprises with local partners, an approach adopted by Technoserve (27). A strong team, commitment to cocreation, and establishing competitive advantage are likely the initial key strategies. Only when a viable business model for a local cashew-processing facility is established will other strategies gain prominence.

The sequencing and prioritization of IBC strategies are also impacted by the nature of the product (e.g., commodity vs. high end) and the demand destination (domestic or international). Variations can arise in the technical challenges and the complexity. In the commodity sector, for example, the value chains are often well established with opportunities for low-cost piloting. High-end products, especially those destined for international markets, on the contrary, may require a more substantial initial investment and face more stringent standards. In commodity value chains, therefore, IBCs may find the greatest benefit from prioritizing building competitive advantage and transferring skill to make the market opportunity more accessible and attractive. Enhancing the value chain for high-end products, conversely, may

require emphasizing a flexible partnership model. Enterprises may value knowledge and connections in the pilot stage and then need access to larger amounts of capital when it comes time to scale.

International markets also have more demanding quality, safety, and traceability requirements that impose specific challenges across the value chain. Encouraging SHFs to plant export-only crops or invest in achieving specific certification requirements, for example, requires a deep understanding of how to align metrics and share risk. The resulting business model should recognize, reward, and protect farmers from the hazards they will be facing.

## Conclusion

The central question in market-based approaches to poverty alleviation is not whether they work, but rather how to make them work better. Both the donor community and enterprises have used the value chain approach to engage with SHFs. As we have illustrated, DLIs and ELIs have different strengths and weaknesses as they pass through the stages of design, implementation, and sustainability. Although these approaches are complementary, the two sectors—donors and enterprises—have largely maintained their independence. Using the lens of the BoP perspective, we propose a new model based on collaborative interdependence to better integrate the relatively high floor of DLIs with the relatively high ceiling of ELIs.

In this article, we offer several IBC strategies to enhance partnership efforts between the two sectors. These recommendations are grounded in BoP research. Context may demand that certain strategies take priority and can influence sequencing. Regardless, the strategies offer a partnership model that builds on the strengths of each sector and seeks to amplify the benefits to both enterprises and SHFs. Looking ahead, we recognize that the proposed strategies need to be tested and further refined. We hope the donor and enterprise communities will undertake this task in the true spirit of interdependence and commit to jointly exploring more fruitful models of collaborative engagement.

**ACKNOWLEDGMENTS.** The authors thank Lee Babcock, David McGuire, Christian Pennotti, and Simon Winter for their feedback on earlier drafts of this manuscript. We also are grateful to two anonymous reviewers and editor Prabhu Pingali for their constructive comments. This research was supported by the Bill and Melinda Gates Foundation and the United States Agency for International Development (USAID). The authors' views expressed in this publication do not necessarily reflect the view of the Gates Foundation, USAID, or the US Government.

1. United Nations Food and Agriculture Organization (2008) *Practical Guide Series: An Introduction to the Basic Concepts of Food Security* (European Commission/UN Food and Agriculture Organization, Rome).
2. Commission on the Private Sector and Development (2004) *Unleashing Entrepreneurship: Making Business Work for the Poor* (United Nations Development Programme, New York).
3. The World Bank (2008) *World Development Report 2008: Agriculture for Development* (World Bank, Washington, DC).
4. Porter ME (1985) *Competitive Advantage: Creating and Sustaining Superior Performance* (Free Press, New York).
5. Humphrey J, Navas-Alemán L (2010) *Value Chains, Donor Interventions and Poverty Reduction: A Review of Donor Practices* (Institute of Development Studies, Brighton, UK).
6. London T, Anupindi R, Sheth S (2010) Creating mutual value: Lessons from ventures serving base of the pyramid producers. *J Bus Res* 63:582–594.
7. Prahalad CK, Hart SL (2002) The fortune at the bottom of the pyramid. *Strategy Business* 26:2–14.
8. Prahalad CK, Hammond A (2002) Serving the world's poor, profitably. *Harv Bus Rev* 80:48–57, 124.
9. Prahalad CK (2005) *The Fortune at the Bottom of the Pyramid: Eradicating Poverty Through Profits* (Wharton School Publishing, Upper Saddle River, NJ).
10. Hammond AL, Kramer WJ, Katz RS, Tran JT, Walker C (2007) *The Next Four Billion: Market Size and Business Strategy at the Base of the Pyramid* (World Resources Institute and International Finance Corp, Washington, DC).
11. Bruggmann J, Prahalad CK (2007) Cocreating business's new social compact. *Harv Bus Rev* 85:80–90, 156.
12. London T, Hart SL (2004) Reinventing strategies for emerging markets: Beyond the transnational model. *J Int Bus Stud* 35:350–370.
13. London T, Hart S (2011) *Next Generation Business Strategies for the Base of the Pyramid: New Approaches for Building Mutual Value* (FT Press, Upper Saddle River, NJ).
14. London T (2009) Making better investments at the base of the pyramid. *Harv Bus Rev* 87:106–113.
15. London T (2011) Building better ventures with the base of the pyramid: A roadmap. *Next Generation Business Strategies for the Base of the Pyramid: New Approaches for Building Mutual Value*, eds London T, Hart S (FT Press, Upper Saddle River, NJ), pp 19–44.
16. London T, Anupindi R (2010) *Revisiting Value Chain Initiatives: Insights from the Base of the Pyramid Perspective* (William Davidson Institute, Ann Arbor, MI).
17. Eisenhardt KM (1989) Building theories from case study research. *Acad Manage Rev* 14:532–550.
18. The World Bank (2002) *A Case for Aid: Building a Consensus for Development Assistance* (World Bank, Washington, DC).
19. United States Agency for International Development (2004) *Request for Application Number 690-05-003, USAID Strategic Objective No. 5. Production, Finance, and Technology (PROFIT) Program in Zambia* (USAID, Washington, DC).
20. ACDIVOCA (2008) *Final Report: Microenterprise Development (GMED) Project, October 1, 2004 – November 15, 2008* (USAID, Washington, DC).
21. Anupindi R, Sivakumar S (2006) Supply Chain Reengineering in Agri-Business—A Case Study of ITC's e-Choupal. *Supply Chain Issues in Emerging Economies*, eds Lee HL, Lee C-Y (Springer, New York), pp 265–307.
22. London T (2010) Business model development for base-of-the-pyramid market entry. *Proceedings of the Seventieth Annual Meeting of the Academy of Management*, ed Toombs LA (Academy of Management, Briarcliff Manor, NY), pp 1–6.
23. Simanis E, Hart S (2006) Expanding the possibilities at the base of the pyramid. *Innovations* 1:43–49.
24. Simanis E, Hart S, Duke D (2008) The base of the pyramid protocol: Beyond “basic needs” business strategies. *Innovations* 3:57–84.
25. Simanis E, Hart S (2009) Innovation from the inside out. *MIT Sloan Manage Rev* 50:77–86.
26. Hart SL (2005) *Capitalism at the Crossroads: The Unlimited Business Opportunities in Serving the World's Most Difficult Problems* (Wharton School Publishing, Upper Saddle River, NJ).
27. Karnani A, Koenig C (2009) *TechnoServe: Cash in on Cashews: William Davidson Institute/Ross School of Business GlobalLens Case GL1-428-817* (William Davidson Institute, Ann Arbor, MI).