The Role of the Information and Communications Technology Sector in
Expanding Economic Opportunity

William J. Kramer, Beth Jenkins, and Robert S. Katz

HARVARD UNIVERSITY — JOHN F. KENNEDY SCHOOL OF GOVERNMENT

WORLD RESOURCES INSTITUTE

GLOBAL CHALLENGE NETWORK

Printed on 100% post-consumer recycled paper.

■ Table of Contents

Preface

Beth Jenkins, CSR Initiative, Kennedy School of Government, Harvard University

The past fifty years have witnessed a "revolution" in global economic growth. Yet not everyone has participated in this revolution. More than 65% of the world's population, over four billion people, still lives on the equivalent of less than $4 per person per day. Even worse, the world's poor are severely constrained – and often completely lacking – in opportunity to do better for themselves.

The business community has both the capabilities and the strategic, business reasons to play a major role in creating these opportunities. The CSR Initiative's Economic Opportunity Series, a product of our Economic Opportunity Program, explores this role across a range of industries.

"Economic opportunity enables people to manage their assets in ways that generate incomes and options."

For the poor, livelihood choices – in employment and entrepreneurship – are constrained by a wide range of interdependent obstacles, ranging from geographic isolation to market failures to political exclusion. This suggests that when we think about eradicating poverty, we should think broadly about creating economic opportunity. Economic opportunity is not, in itself, a solution; instead it is a context in which individuals can create their own solutions. It is a combination of factors that enables the poor to manage their assets in ways that generate incomes and options.

Creating or expanding economic opportunity could rightly be considered a responsibility of governments toward their citizens. But in today's global market environment, various risks and opportunities provide reason for business to engage.

One key reason, across industries, is for business to leverage its own comparative advantage in society. As Milton Friedman might say, "the business of business is business" – and this is exactly what gives firms the capability and credibility to expand economic opportunity. Business activity creates jobs, cultivates inter-firm linkages, enables technology transfer, builds human capital and physical infrastructure, generates tax revenues for governments, and, of course offers a variety of products and services to consumers and other businesses. Each of these contributions has multiplier effects on development.

In developing countries, companies' multipliers often fail to reach the scale or leverage of which they might be capable – often due to market failures and governance gaps. More deliberate management attention is required to unlock their full potential.

The Economic Opportunity Series explores four key strategies companies can use to expand economic opportunity:

Creating Inclusive Business Models	Involving the poor as employees, entrepreneurs, suppliers, distributors, retailers, customers, and sources of innovation in financially viable ways
Developing Human Capital	Improving the health, education, experience, and skills of employees, business partners, and members of the community
Building Institutional Capacity	Strengthening the industry associations, market intermediaries, universities, governments, civil society organizations, and grassroots groups who must all be able to play their roles effectively within the system
Helping to Optimize the "Rules of the Game"	Shaping the regulatory and policy frameworks and business norms that help determine how well the economic opportunity system works and the extent to which it is inclusive of the poor

There is enormous variation in the roles companies can play, depending on their industries, their particular business models and relationships, and the contexts in which they operate. The industry reports in the Economic Opportunity Series explore this variation, offering more specific and detailed examples for different industry sectors. The research suggests, in general, that inclusive business models can be the most effective and sustainable ways companies can contribute. Complementary strategies such as developing human capital, building institutional capacity, and helping to optimize the "rules of the game" can also have significant impacts. These strategies are often used in combination with inclusive business models, to enhance both their commercial viability and their development impact.

The research that has gone into this series also suggests that company efforts to expand economic opportunity can draw upon core business, philanthropic, and public donor funding, depending on the balance of business and social benefits expected, the likely timeframe for their realization, and the level of uncertainty or risk involved. Hybrid approaches are increasingly common.

So is collaboration. Complex, systemic challenges like expanding economic opportunity present frustratingly frequent bottlenecks to unilateral action, corporate or otherwise. Even the best-resourced efforts eventually run into limitations on scale somewhere. Collaboration allows parties to share knowledge and information, pool scarce or diverse assets and resources, access new sources of innovation, create economies of scale, and enhance the legitimacy of the parties' own individual activities. In addition to assembling the necessary resources and capabilities, collaboration can generate new capabilities and change operating environments in ways that create new strategic opportunities.

The Economic Opportunity Series is part of a growing effort within the business and development communities to make the links between business activity and poverty alleviation. Experimentation and learning are happening fast. As a result, the series must be considered a work-in-progress, and readers are invited to share their experience and reflections with us. We look forward to being part of the dynamic growth and development occurring in this field.

1 ■ The Role of the ICT Sector in Expanding Economic Opportunity

The information and communications technology (ICT) sector has been a pioneer and a powerful catalyst in addressing the needs and interests of low-income communities in developing countries. But it was not always so. Only in the past twenty years or so has a self-conscious appreciation for the ICT sector's role in expanding economic opportunity emerged.

1.1 A Historical Perspective

One of the principal reasons is that much has changed in a short time. In the technology sector, 20 years are more like five generations. In the 1980s, "universal access" was a goal, but not the reality, of the legacy PTTs, an acronym for the firms providing "post, telephone, and telegraph" services. Smile, if you wish; the words and services do sound anachronistic. So are the technological and business contexts.

The PTTs, comprising much of the ICT sector of their day, were landline-based and, to a large extent, government-owned and -managed. Services were expensive, and in most parts of the world, they had deteriorated to the point where quality could be described as atrocious – if it had ever been good. Data network capability was non-existent. Technological innovation, to say nothing of business model innovation, was slow. The name of the game was rent-seeking; that is, extracting every dollar of revenue as possible from sunk-cost infrastructure, and, as a means to that end, suppressing any new, potentially competitive technology, service, or business model, often using the power of the state for that purpose.

The rate of technological innovation in ICT has accelerated dramatically, and the sector today is orders of magnitude larger than it was 20 years ago, and it encompasses a more diverse universe of players than ever before. Today, the sector includes hardware, software, the Internet, telephony, and content, application, and support service, provided by entities ranging from corporate giants to garage entrepreneurs to individual developers and open-source networks. Relevant content and applications are integral parts of the value proposition, and the "network effect" is crucial – technology only increases productivity when lots of people share access.

As a result, collaboration has become a key business strategy. Some of the largest and most successful firms have established themselves as "keystones" within vast "business ecosystems" in which independent partners, other firms, and even users provide content, applications, and services, thereby increasing the value of their technologies.[1] This report, while acknowledging the incredible diversity in the nature and size of firms in the ICT industry, will focus on such large firms – whether national, regional, or multinational.

1.2 The Fundamental Role of ICTs in Modern Economic Growth and Development

Unbound from the strictures of the PTT days, ICT has become the foundation of every sector of every economy, everywhere. The reasons for this are, by now, fairly well-known, but demand brief repetition here. Information and communications technologies:

- reduce transaction costs and thereby improve productivity

- offer immediate connectivity – voice, data, visual – improving efficiency, transparency, and accuracy

- substitute for other, more expensive means of communicating and transacting, such as physical travel

- increase choice in the marketplace and provide access to otherwise unavailable goods and services

- widen the geographic scope of potential markets, and

- channel knowledge and information of all kinds

These attributes underlie the important part ICTs have played in firm- and macro-level growth. At the macro level, various studies have shown significant, positive impact on GDP from information technology, telecommunications, and mobile telecommunications investment, in both developed and developing countries.[2] At the level of the firm, World Bank surveys of approximately 50 developing countries suggest that "firms using ICT see faster sales growth, higher productivity and faster employment growth."[3]

The attributes listed above are also critical in expanding individual economic opportunity, enabling people to enhance their knowledge and skills; identify, apply, and qualify for better-paying jobs; use their disposable income more wisely; manage their own businesses efficiently; and tap into broader markets for their goods and services. In developing countries, ICTs offer tremendous potential to eliminate or at least work around a number of critical obstacles to economic growth (see Box 1).

BOX 1 ICTS HELP ADDRESS ECONOMIC OPPORTUNITY OBSTACLES

Geographic isolation: ICTs collapse distance and time, overcoming geographic isolation and substituting for expensive travel and lost work time. For example, ICTs can facilitate information exchange, long-distance money transfers, tax returns and other government business, even medical diagnosis.

Lack of competition and high prices for consumers: Faced with few options in the marketplace, the poor often pay more, in absolute terms, for what they buy.[4] Broad, real-time access to market information and transaction capability through telephony and the Internet effectively increase competition, allowing consumers to maximize their incomes and driving reduction in prices over time.

Lack of information and low prices for producers: The Internet and mobile phones can give farmers, fishermen, and other local producers access to market information for multiple, competing marketplaces, enabling them to get the best prices for their goods.

Legal exclusion: A mobile phone is no substitute for clear title to land, but a mobile phone with a camera can document that specific people live in a particular place, and this can facilitate access to land title validation. We are also seeing water and electricity payments made by mobile phone used to document and serve as proxy for legal status.

Political voice: Mobile phones, the Internet, and text messaging are all now tools of knowledge acquisition and political empowerment. Repressive governments are deeply concerned that these tools are in the hands of the disenfranchised, as they are proving to be powerful means by which to organize, amplify, and transmit needs and demands, both domestically and internationally.[5]

Social capital: Maintaining strong family ties is critical to mental and physical well-being, especially while working away from home. ICTs allow people to pursue economic opportunity wherever they find it (or, at least, they reduce the social or familial cost of doing so).

And yet, ICTs are not the entire story. With distressing repetition, the world seems to search for that single, "silver bullet" solution to underdevelopment and poverty. For a while, it seemed ICTs would be next in this category. But ICTs cannot meet development challenges by themselves. As Microsoft has pointed out, "in order to realize their potential, these technologies must be part of a mix of sound government policies, enhanced workforce skills, and infrastructure investments – [a] recipe of interdependent ingredients which promotes initiative and innovation."[6] To fulfill their potential, ICTs require clean and consistent power, a robust, accessible and affordable connectivity network, technical literacy, skilled users and support systems, functional markets, and supportive regulatory and policy frameworks.

In developing countries, all of these factors can act as barriers, particularly among low-income individuals and small- and medium-sized enterprises. In response, large ICT companies have begun to broaden their collaborative strategies to include actors outside the "business ecosystem," as traditionally conceived, such as government agencies, non-governmental organizations (NGOs), microfinance institutions, and social entrepreneurs – eliminating, or sometimes just working around, such barriers to increase the value of their technologies and enhance their economic opportunity impacts.

2 ∎ The Business Case for Engagement

Four billion people worldwide are estimated to earn less than $4 a day.[7] These four billion represent both risk and opportunity for major ICT companies. On the risk side, poverty breeds despair, and people without hope are a threat to stability and progress. This risk affects business generally, and the ICT sector by extension. But the primary motivation for ICT companies to help the poor get richer is opportunity, not risk.

2.1 New and Expanding Markets

As described above, ICTs increase efficiency, productivity, and access to goods, services, information, and markets. Demand for these benefits is high. If the right complements – such as power, connectivity, content, skills and support systems, functional markets, and supportive policy frameworks – can be put in place, demand for ICT will be correspondingly high. New and expanding markets are to be found among low-income individuals and households and among small- and medium-sized enterprises (SMEs).

2.1.1 Low-income individuals an households

Based on household income surveys in 110 countries and standardized expenditure surveys in 36 countries, the World Resources Institute and International Finance Corporation estimate that the four billion people worldwide currently earning less than $4 a day have a collective purchasing power of around $5 trillion.[8] The market for ICTs among these four billion is fast-growing. It is still relatively small, to be sure, accounting for just over $50 billion, or roughly 1% of total purchasing power in these segments.[9] However, available data are relatively old – on average, surveys are from 2002 or prior – so it is not inconceivable that the ICT market has doubled, tripled, or even quadrupled in the years since the data were collected. Compounding the measurement challenge is the fact that much economic activity among the poor goes unmeasured by surveys, meaning that the market at the "base of the pyramid" may be larger still.[10] Those at the "middle of the pyramid" add to this market potential and, with higher purchasing power than those at the base, often represent easier, more intuitive entry points for large ICT companies seeking to move into lower-income market segments.

FIGURE 1 BOP SPENDING ON ICT ($51.4 BILLION)

	$ billions (PPP)
■ Africa	4.4
Asia	28.3
Eastern Europe	5.3
Latin America	13.4

Each square represents approximately $200 million
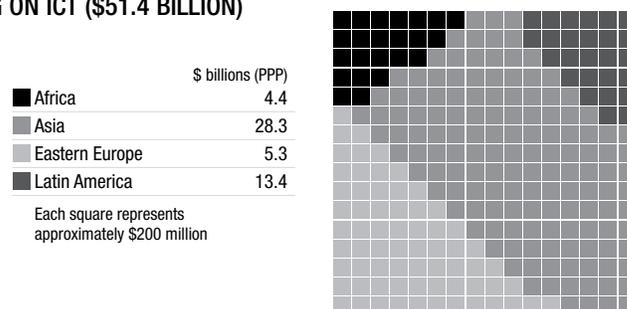
Source: Hammond, Allen L., William J. Kramer, Robert S. Katz, Julia T. Tran, and Courtland Walker. 2007. *The Next Four Billion: Market Size and Business Strategy at the Base of the Pyramid.* Washington, DC: World Resources Institute and IFC.

Three interlocking trends suggest that expenditure on ICTs among low-income consumers and households will continue to grow. First, technological capacity and capabilities continue to expand, and costs continue to fall, roughly as predicted by Moore's Law.[11] Second, as ICTs become cheaper and more powerful, their uptake in low-income groups will grow exponentially because they are productivity tools. Many low-income individuals are self-employed, whether by necessity or by choice, and they will use tools that increase their incomes. Third, as economic opportunity expands, many of these micro-entrepreneurs will enter the formal economy, as the salaried employees of others or as formal small business owner-operators. This will, inevitably, generate new demand for hardware, software, and services.

Mobile telecommunications took 20 years to reach one billion users, but only three years to reach two billion and, forecasts suggest, only two years to reach three billion.[12] Nine of the top 10 markets for new connections are emerging markets.[13] A number of developments have fueled this growth, including pay-as-you-go and prepaid airtime models, increasing handset affordability, and the diversification of services available via mobile, from cash transfers to bill payments to direct deposit of salaries. These innovations will be discussed at more length in Section 3.

2.1.2 Small- and medium-sized enterprises (SMEs)

SMEs are the backbone of all economies, large and small, developed and developing. While the precise causal relationships between SMEs, growth, and poverty have not been conclusively determined, the numbers do reveal some close interaction between SMEs and overall economic health.[14] It appears that the more advanced a country, the larger the formal SME sector. In developed countries, SMEs contribute 60% of employment and 50% of gross domestic product (GDP). In developing countries, the figures are only about 30% and 17%, respectively.[15]

Economists and development experts have attributed much of this difference to excessive or otherwise unsupportive business environment regulation in developing countries, which keeps much economic activity in the informal sector.[16] But positive business environment trends are taking place. The World Bank's annual Doing Business rankings, which track business environment reforms across 178 countries, unleash governments' competitive instincts and motivate governments to improve. Between April 2006 and June 2007, the Doing Business team found 200 reforms introduced in 98 economies. Eastern Europe and Central Asia, South Asia, the Middle East and North Africa, and Sub-Saharan Africa saw more than half of their countries make at least one positive reform.[17] Across all regions, making it easier for new businesses to enter the market was the most popular reform measure.[18]

SMEs are already of increasing interest to large ICT companies (see Box 2). In India, for example, the ICT market amongst SMEs is estimated at $459 million annually, growing at 25% a year. There are approximately 7.6 million SMEs in India, of which, according to Pramodh Menon, a vice president at Cisco, "between 700,000 and one million are ready to adopt IT on a large scale. Our SMB (small and medium business) is growing at twice the industry average."[19] With progressive business environment reform in many countries allowing more and more SMEs to enter the formal sector, the potential market among them will increase.

2.2 Innovation

Developing and emerging markets can also drive innovation. There are two main mechanisms for this. First, low-income customers (including individuals, households, and SMEs) have very sophisticated requirements in terms of relevance. In other words, they must have a rock-solid value proposition to justify the allocation of scarce resources for a purchase. If the purchase in question is a physical product such as a computer or mobile phone, it must not only be affordable, reliable, and relevant, it must also have a low "total cost of ownership" including power and maintenance costs. The One Laptop Per Child project, for example, is considering all of these factors in developing a computer that is "ultra low-cost."[20]

Second, as local ICT ecosystems develop, local equipment manufacturers, software developers, content and service providers, and others – including users themselves – can also be sources of innovation, either adding value to the technologies large companies are offering or informing innovation by those companies themselves.

When Malcolm Gladwell dissected social epidemics in The Tipping Point, he could also have been describing, by analogy, what happens when truly significant technologies are introduced.[21] A familiar example here is Google. Google's users – made up of connectors, mavens, and salesmen, to use Gladwell's typology – applied its powerful search engine to functions and capabilities many of which the company itself had never imagined. Rather than threatening Google, this external activity has made its product more essential and the company more valuable – and, in the process, spawned hundreds of ventures building on top of the original technology.

Another example of innovation arising outside the company in the wider ICT ecosystem can be found in the evolution of text messaging in the Philippines, where high demand and limited ability to pay generated a series of business model innovations – first pre-paid cards, and then over-the-air recharging, which reduced costs even further as it required no paper or plastic at all. Customers began to use text messaging units as currency, transferring minutes among themselves. In short order, many Filipinos were using the new currency to "pay" for items or services totally unrelated to telecommunications, such as taxi fares. The thousands of small retailers that act as recharging stations began to suggest other transactions options, based on their frequent, direct interaction with customers. Both major carriers, Globe Telecom and SMART Communications, now offer a wide, and growing, range of formal "m-transactions" services.

2.3 "Innovation Blowback"

While innovations like these are required to tap and grow low-income markets, they have potentially broad applicability in higher-income segments and in developed countries as well, a phenomenon John Seely Brown and John Hagel have called "innovation blowback." Brown and Hagel observe that "emerging markets are generating a wave of disruptive product and process innovations that are helping established companies and a new generation of entrepreneurs to achieve new price-performance levels for a range of globally traded goods and services."[22] The result, they argue, is that only by facing "the intense competitive pressures of serving the mass market in emerging economies" will companies "acquire the capabilities they will soon need at home."[23]

In the ICT sector, both technological and business model innovations have the potential to blow back. As Mohsen Khalil, Director of the World Bank Group's Global ICT Department, points out, "Pyramid Research estimates that over 80 percent of new subscribers added to global mobile networks will be in Africa, the Middle East, Asia and Eastern Europe over the 2004-2009 period. As a result, it is quite likely that developing countries will be setting trends in applications, revenue models and cost saving approaches."[24]

In addition, ICTs can be expected to facilitate many of the innovations that will "blow back" in other industries, from manufacturing to medicine, as well. Brown and Hagel describe three examples emerging from Asia – in motorcycles, low-horsepower engines, and surgical eyecare – all of which rely on ICTs.[25]

3 ■ Business Strategies for the ICT Sector in Expanding Economic Opportunity

As we have seen, information and communications technologies help expand economic opportunity by enabling people to enhance their knowledge and skills; identify, apply, and qualify for better-paying jobs; use their disposable income more wisely; manage their own businesses efficiently; and tap into broader markets for their goods and services. ICTs also enhance capacity in industries and institutions of all kinds.

Because the technologies themselves have such significant potential for impact, the most important way ICT companies can expand economic opportunity is to get those technologies out there – and simultaneously drive the development and diversification of relevant content, applications, and services. Profitable business models are the most sustainable, scalable mechanisms for doing this, and ICT companies are experimenting with a range of them, though product donation and at-cost provision are still common. Companies are also creating additional economic opportunity impact by working to bring smaller, local firms into their business ecosystems – for example, as manufacturers, software developers, or retailers.

Large ICT companies are also engaging in human capital development on a significant scale. Sometimes these efforts are directly related to inclusive business models, but often they are more philanthropically motivated, with business benefits expected to materialize only in the longer term. To a lesser extent, large ICT companies are also investing in institutional capacity-building, for example through product donation and pro bono time, and engaging with governments to promote policy and regulatory environments conducive to access and innovation. Whereas inclusive business models draw primarily on operational levers to expand economic opportunity, developing human capital, building institutional capacity, and helping to optimize the "rules of the game" seek changes in a firm's competitive context.[26] These changes enhance both the commercial viability and development impact of inclusive business models, in addition to improving the economic opportunity environment more generally.

3.1 Creating Inclusive Business Models

Inclusive business models in the ICT sector seem to take on one of two primary types: they can target local individual, household, and SME markets for sales of technologies and services; they can also support the development of local partner networks in developing countries, creating opportunities for local businesses to start up and grow. These two essential operational modalities are discussed in more depth below. A series of cross-cutting considerations in the development of inclusive business models in the ICT sector are also highlighted.

3.1.1 Selling to local markets

We see two essential and interlocking growth strategies in the ICT sector, which can be characterized as "horizontal deepening" and "vertical deepening."[27] The two strategies are often used in combination.

Horizontal deepening is essentially about adding new customers. A company might sell first to the highly concentrated market(s) it can most easily and cost-effectively reach, and then, over time, simply extend its footprint. A company could also engage in product extension, marginally adapting its products to appeal to additional market segments, and/or adapt its business model to accommodate their needs.

In mobile telecommunications, for example, one could say it was a business model rediscovery that set the wheels in motion for the developing world, in the form of Grameen Telecom's shared-access Village Phone model. In the advanced industrial countries, telephony was first introduced in shared-access form: party lines. As the industry grew, technologies came down in price, and customers could increasingly afford individual lines. Iqbal Quadir, founder of Grameen Telecom, successfully re-invented shared access, with the added attribute of enabling entrepreneurship among village women. The result is a familiar story now: the creation of Bangladesh's largest, and incidentally highly profitable, mobile network.[28]

Recognizing the volatility and uncertainty of income flows among low-income individuals and micro-enterprises, Grameen Telecom introduced a pay-per-use system. This system reduced capital and maintenance costs and established the viability of non-subscription mobile services. It has been replicated widely, for example in Vodacom's phone shops in South Africa or Ghana Telecom's Areeba-to-Areeba stations and mobile vans. Other providers, including Globe Telecom and SMART Communications in the Philippines and Safaricom in Kenya, are now offering prepaid airtime in addition to pay-per-use. Such initiatives have become paradigmatic inclusive business models in the ICT sector. ICT companies such as Reliance Communications, Cisco, and Nortel in India are even offering services on a pay-per-use basis to SMEs, in response to the perennial cash flow problems smaller firms face.[29] Other companies, such as IBM in Argentina and HP in Brazil, are responding with financing programs for technology purchases that address SMEs' difficulty in raising capital for growth.[30]

Vertical deepening modalities seek to grow markets by connecting technology more directly to opportunities and services that increase productivity, income, and quality of life, thus strengthening its value proposition to the purchaser. Vertical deepening can be seen as a strategy for achieving horizontal deepening and for increasing revenue per customer.

For instance, mobile telephony, on its own, brings a host of potential benefits for users: it can substitute for travel, help keep social and business relationships intact, permit access to information, facilitate job searches, and enable entrepreneurial activities. As research by Vodafone and others have shown, people are using mobile phones in a host of creative and resourceful ways.[31] This has accounted for much of the horizontal growth in the market.

At the same time, however, mobile carriers are beginning to offer a range of formal services via cell phone, strengthening the value proposition of ownership. Most of these services currently fall into the mobile

transactions or "m-transactions" category, including deposits and withdrawals, cash and airtime transfers, access to loan applications and credit details, billing and payment for water, electricity, and other goods and services.[32] The availability of these services not only encourages more people to buy phones, but can also help increase revenue per user.

While Globe Telecom in the Philippines has entered the m-transactions arena on its own, most providers are currently partnering with banks to add these services to their value propositions.[33] For example, its main rival, SMART Communications, partners with Banco de Oro (BDO) so that SMART Money mobile accounts are actually BDO accounts, bringing many people into the formal banking sector for the first time. BDO issues a MasterCard debit card with each account and facilitates inward international remittance transfers as well as direct deposit by employers.[34]

In Nigeria, Celtel has launched a new bundle of services explicitly targeting the SME market. The bundle includes a dedicated range of phone numbers, affordable rate structure, entrepreneurship training and exhibition opportunities, and business toolkit on CD. Celtel has even partnered with Leadway Assurance Plc to offer SMEs a 70% discount on auto insurance through the bundle.[35]

In fact, vertical deepening modalities in the ICT sector can be closely intertwined with inclusive business models in many other sectors – financial services, agriculture, retail – anywhere companies seek to target low-income customers or involve small producers and SMEs in their value chains.

For example, ICTs are enabling the agricultural trading unit of ITC Ltd., a diversified conglomerate, to facilitate sourcing from India's thousands of small farmers through its well-known e-Choupal network. ITC supplies computers and connectivity to village-elected farmers who access market prices locally and around the world every day, in order to assist farmers in attaining the best price available. ITC guarantees next-day purchase of the farmers' crops at the day's closing market price, with fair weight, immediate payment, and bonuses for high-quality crops. ITC also uses the e-Choupals to sell seeds, tools, fertilizers, and other products of its own and of partner companies. The system allows farmers to bypass the government-run markets, or mandis, which have bad reputations for under-weighing, poor payment records, and generally inadequate service. Since its creation in 2000, the e-Choupal system has grown to include 5200 kiosks, reaching 3.5 million farmers in 31,000 villages in eight states.[36]

"Vertical deepening modalities in the ICT sector can be closely intertwined with inclusive business models in many other sectors – financial services, agriculture, retail – anywhere companies seek to target low-income customers or involve small producers and SMEs in their value chains."

The Government of Chile is also using ICTs to facilitate procurement from small businesses, using a very different model. When the Government initially switched to doing all of its procurement online, it struggled because the portal was inaccessible to so many potential bidders. In particular, many SMEs were unconnected. Through its Partnerships for Technology Access initiative, Microsoft was able to construct a multi-party deal that offers entrepreneurs and small business owner-operators training, software, and connectivity to the e-procurement portal, which increases their willingness to invest in PCs, as well as low-interest, unsecured, 36-month loans to finance their purchases. Since then, competition for contracts has more than tripled from 1.7 to 5.7 million bids, and the number of

companies registered to bid has grown to more than 200,000. For the government, the system has increased transparency and generated cost savings of $60 million a year.[37]

3.1.2 Developing local partner networks

Like other large firms, large ICT companies today have extensive value chains, often referred to as partner networks or ecosystems, spanning from component and equipment manufacturers to independent software developers and vendors to distributors and retailers to systems architects to technical support services. For example, network giant Cisco Systems has 20,000 channel partners, from whom the company earns 90% of its revenues.[38] SAP, the world leader in collaborative enterprise software with 50% of the market, employs 15,000 developers directly but works externally with more than 750,000.[39]

Large ICT companies are undertaking a variety of efforts to expand these partner networks or ecosystems locally in developing countries. Intel, for example, uses more than 2,000 small- and medium-sized suppliers in Malaysia alone.[40] Cisco has partnered with Citigroup, GE Capital Solutions, and Standard Chartered Bank to offer $2 billion in short-term inventory financing to its channel partners in emerging markets.[41] Other examples include:

- **Hewlett-Packard's Jundiaí factory in Brazil:** HP has announced that it will open a new factory producing PCs for the SMEs in Brazil, with a focus on niche markets such as graphics and communications. The firm has signed agreements with local resellers for distribution.[42]

- **Microsoft Innovation Centers:** Through 110 Innovation Centers in 60 countries, Microsoft works with local universities, industry associations, government agencies, and NGOs to offer training, mentoring, and incubation services to help individuals and entrepreneurs establish careers and businesses in the software industry – at the same time laying critical foundations for its own future growth

- **Intel's Emerging Markets Development Group:** In Intel's experience, there is often some initial pushback against brand-new technologies that challenge fundamental paradigms – exactly the kinds of technologies that are critical to providing access in the developing world. The R&D arm of Intel's Emerging Markets Development Group now develops technical specifications for new devices and provides the product references for free. According to Intel's Marzyeh Ghassemi, the company's goal is "to make it as simple, easy, and convincing as possible to produce and advocate low-cost devices, so that anybody can pick up a reference design and decide for themselves whether there's a business opportunity in it."[43]

Mobile telecommunications carriers are also finding a great deal of scope for local partnering in developing countries. In the Philippines, SMART and Globe have created a business worth more than $200 million a year to more than a million small retailers by adopting business models based on prepaid, rather than subscription-based, usage.[44] These airtime retailers, found in kiosks and shops all over the country, play many roles for their larger partners. They provide billboards for advertising; local access points for airtime purchase, resale, and transfer; trust among populations with many good reasons to see big companies as remote and exploitative; and, perhaps most importantly, front-line knowledge about what customers want and need. These retailers have served as primary drivers of service innovation in the industry. In Kenya, Vodafone and Safaricom's M-PESA mobile transactions service operates through a network of 600 agents based in gas stations, supermarkets, and cybercafés or acting as independent small retailers.[45] In South Africa, Wizzit, which issues

Maestro-branded debit cards in conjunction with m-transactions accounts, employs young adults called "Wizz Kids" who educate and recruit new users in low-income areas.[46]

BOX 3 ICT FIRMS' PHILANTHROPIC ARMS TAKE BUSINESS-BASED SME DEVELOPMENT APPROACHES

The foundations and philanthropic arms of a number of major ICT firms are taking business-based approaches to expanding economic opportunity, leveraging the core competencies their parent companies to invest in SMEs, spin off new ventures serving low-income individuals and entrepreneurs, and more.

Virgin Unite, the philanthropic arm of Virgin Group, says "We've learned a lot about a range of different businesses over the years and have a pretty good success rate of start-ups! So making 'good investments' in businesses to build economies in emerging markets is one of the best ways we can make a difference." Virgin Mobile and Virgin Money were launched in South Africa in 2006 to offer simplified mobile phone service and access to credit. Virgin Money is now exploring ways of offering banking and credit products in rural areas of the country.[47] Similarly, Google.org, the philanthropic arm of Google, is exploring approaches to economic development and poverty as one of three global focus areas. As part of its strategy in this area, the organization is identifying ways of supporting SME development and growth in Africa, including IT-based platforms for access to capital and market opportunities.[48]

3.1.3 Cross-cutting considerations

As in any business, success is a function of many layered considerations. Inclusive business models in the ICT sector often show a combination of several of the following:

Learning about the market. Until recently, business knowledge of low-income markets relied almost exclusively on theory, exhortations to corporate responsibility and a few early business cases rather than data. This is beginning to change with studies such as WRI and IFC's *The Next 4 Billion*[49] and UNDP's *Growing Inclusive Markets*.[50] These studies portray complex, layered, and highly differentiated markets, each one specific in its composition, needs, and effective business responses. Such data are a vital complement to business environment information collected by IFC, the private sector arm of the World Bank, in its *Investment Climate Surveys* and *Doing Business* reports. It is important to emphasize here that beyond macro business and business environment data, an intimate feel for the target markets gained through first-hand, on-the-ground experience is essential.

Designing products and services to meet the market's specific needs. BOP theory argues forcefully that product extension alone will be insufficient to tap low-income markets, and the observation is as applicable to SMEs as it is to households and individual consumers. It is insufficient simply to wring costs out of "A" market products and services and repackage them for "B" and "C" markets. While affordability is essential, it is up to firms to "create the capacity to consume" through innovation in technology, business models, content, and applications which increase the value proposition to the prospective purchaser. Intel, for example, has established four Platform Definition Centers in major developing world cities staffed with ethnographers, designers, engineers, and systems architects who work to understand local needs and respond with relevant technologies.

Business model innovation. The role of business model innovation in creating the capacity to consume among low-income individuals and households, entrepreneurs, and SMEs is worth additional emphasis, especially in the ICT sector. It's not all about the technologies. Low-cost distribution systems, value-added content and services, financing options, and more have played a role in the collection of examples profiled in this report.

Similarly, in partnering with SMEs in the value chain, ICT companies have adopted innovations such as free product references, specialized training and financing, and business incubation. As Erkki Liikanen, EU Commissioner for Enterprise and Information Society put it, "Innovation is […] a multi-dimensional concept, which goes beyond technological innovation to encompass […] new means of distribution, marketing or design."[51] IBM's 2006 Global CEO Study, which surveyed 750 chief executives around the world, underscores the importance of business model innovation, finding that "outperformers" – companies whose operating margin growth over five years exceeded the median – put twice as much emphasis on business model innovation as "underperformers."[52]

Collaboration. Collaboration helps ICT companies address two fundamental challenges to inclusive business model success. The first is establishing and strengthening the value proposition. The value proposition of ICT to the end user rests on systemic, environmental factors such as the availability of affordable, consistent power, technical literacy, effective rule-setting and industry oversight, functioning markets, and more. In addition, relevant content, applications, and services that increase productivity, income, and quality of life (or organizational effectiveness, for institutional purchasers) are also critical. The upshot is that the value proposition of a technology depends on a wide range of external parties in addition to those directly involved in creating it. These parties include other ICT companies, companies in other industries, government agencies, civil society groups, donors, and – thanks to the network effect – users themselves.

The second challenge is business model innovation and implementation. Internally, "tiger team" approaches combining executive, R&D, production, distribution, marketing, and sales functions can be critical. External collaboration can be equally critical. As one participant in IBM's Global CEO Study 2006 put it, "Some of the boldest plans under consideration within our company work by leveraging the collaborative potential of service providers in other domains."[53] In the context of low-income consumers and developing country SMEs, local and/or non-traditional business partners, including local governments, social entrepreneurs, civil society groups, non-governmental organizations (NGOs), and donor agencies can all be relevant collaborators. NGOs, in particular, have proven time and again to be invaluable sources of local market information, low-cost distribution channels, marketing and awareness-raising, and generation of local content and services that fuel demand for technology.

Patience. According to Rupert Murdoch, "big will not beat small anymore. It will be the fast beating the slow."[54] Paradoxically, perhaps, being "fast" involves considerable patience. In achieving its success, the ICT sector has seen considerable experimentation; some has worked, some has not. The business is, overall, characterized by considerable room for failure, and this is particularly true in developing countries. However, successful models have emerged from perceived failures.

The telecenter movement provides one good example. In the early, optimistic days of connectivity, foundations, bilateral donors, multilateral donors – organizations seeking social impact rather than financial returns – were among the first to introduce information technology into low-income settings. Taking their cue from the shared-access model in telephony, these organizations assumed that it was sufficient to collect a few computers and other devices in one place, provide a bit of preliminary training, and wait for demand to happen. It didn't. Many telecenters failed when donor money or interest ran out. The reasons are not hard to define: top-down creation with little collaboration, especially involving users; an over-reliance on the

technology, with little consideration of the business model; and a belief that "doing good" could, and to some should, trump "doing well."

However, while many individual telecenters failed, collectively they were critical in seeding the ICT sector in developing countries. First, the private sector leapt in where the donor community fell away, and working with public sector authorities on business conditions such as legal frameworks, trade barriers, and education and training, found new business models that have succeeded. Second, the donor community found new, more effective models for supporting access to technology. Today, for example, Canada's International Development Research Center, the Swiss Agency for Development and Cooperation, and Microsoft Corporation jointly fund telecentre.org, a network facility linking and supporting telecenters around the world.[55] There are now at least 60,000 telecenters in existence, going by many names, and operating as non-profits, as school-based centers, and as independent, entrepreneurial ventures.

3.2 Developing Human Capital

Effective use of technology to expand economic opportunity, at the national, organizational, and individual levels, requires a certain set of skills. Large ICT companies are therefore employing deliberate human capital development strategies aiming to develop employees, business partners, and customers, both present and future.

The ICT sector has always suffered chronic shortages of technical and engineering skills in the labor force – in both developed and developing countries. To address this gap, corporate leaders including Cisco, HP, IBM, Intel, Microsoft, and others have created robust education initiatives designed to contribute to a steady pipeline of potential employees and business partners.

BOX 4 HUMAN CAPITAL DEVELOPMENT EFFORTS IN THE ICT SECTOR	
Primary and Secondary Education	**Technology Training and Entrepreneurship Support**
Intel Teach to the Future Initiative	Cisco Networking Academies
Intel Science & Engineering Fairs	Microsoft Innovation Centers
Microsoft Partners in Learning	Intel Higher Education Program
Microsoft Math and Science Education	Intel Emerging Markets Development Group
	IBM-IFC SME Toolkit

 The ICT sector also requires a certain level of comfort with technology among customers. In response, most major firms have implemented technical literacy programs. Helping to grow the number of technology users – regardless of which technologies they are using – lays the groundwork for firms' own individual future market growth. Microsoft's Community Technology Skills Program has reached perhaps the largest scale, supporting approximately 29,000 Community Technology Skills Centers (CTSCs) with different combinations of funding, curricula, hardware and software donations, employee volunteer time, and other resources according to local needs and goals. Each CTSC represents a partnership or set of partnerships with local organizations, ranging from libraries to community halls to training centers sponsored by other companies. In South Africa, for example, Microsoft has partnered with the forest products company Sappi to

train community members in Kwa-Dukuza. 75% of the program's graduates go on to further education or employment, mostly with Sappi.[56]

3.3 Building Institutional Capacity

ICTs fundamentally create institutional capabilities. Within companies, government agencies, and civil society organizations alike, they help "reorganize and speed up administrative procedures, [increase] the volume and speed of information […] and [permit] greater collaboration and sharing of experience."[57] These functions are critical in the context of expanding opportunity because "there is increasing evidence that a dense and complex layer of social institutions, formal and informal groups, and networks of interaction and common interest between the individual citizen and the state is good for both the stability and responsiveness of the political system and for the economy."[58]

Because of the fundamental role ICTs play, sales strategies can have direct institutional capacity-building effects. Large ICT companies are also engaging in dedicated efforts to build institutional capacity. These may target local universities and research institutes, industry associations, training and business development service providers, and other institutions vital to the development of healthy local ICT ecosystems. They may also target government, non-profit, and collaborative institutions. Just a few examples include:

- **E-Government:** Information and communications technologies, including the Internet, can enable governments to deliver entitlements and public services with greater efficiency, transparency, and accountability to citizens. Particularly relevant for expanding economic opportunity are business registration and licensing procedures, which can prevent entrepreneurs and small businesses from entering the formal economy where they can grow, diversify, and begin to create jobs at more significant scales. ICTs can also be used to strengthen public health and education systems. Most multinational ICT firms have e-government business lines and sometimes offer product donations and pro bono services as well.

- **Economic opportunity-related civil society organizations:** Capacity-building within this segment often includes equipment or software donations and training or support services in the form of pro bono time. For example, the Chinese hardware company Lenovo, through its Hope through Entrepreneurship Program, supports microfinance institutions such as peer-to-peer lender Kiva.org with donations of laptops and other hardware that allow these institutions to function more effectively in the office and in the field.

- **Enabling collaborative governance:** Expanding economic opportunity requires collaborative action among the different stakeholders involved. SAP AG, the market leader in collaborative enterprise software, is leveraging its core competence to help build the capacity for good governance in resource-rich developing countries through the Extractives Industry Transparency Initiative. The company will be developing software solutions enabling mutual transparency and accountability among the companies and governments involved.

3.4 Helping to Optimize the "Rules of the Game"

Large ICT companies are helping to optimize the "rules of the game" for economic opportunity primarily by advocating for standards, regulations, and policies that support innovation and growth in the sector. A number of issues or dilemmas are of specific importance to the sector in expanding economic opportunity for the poor. For instance:

- **Access and infrastructure:** Many ICT companies are addressing access and infrastructure issues through business investment and innovation – Intel's low-cost devices and WiMax technology for rural connectivity are two examples among many. Government policy can either facilitate or constrain such efforts, imposing limits on the individual efforts of companies, consortia, and even cross-sector partnerships. Public policies, incentives, and other forms of support are particularly important when it comes to building infrastructure.

- **Standards-setting:** As new technological capabilities emerge, new standards need to be developed so that markets can be imagined, created, and served – expanding economic opportunity for individuals, entrepreneurs, and institutions of all types and sizes.[59] Standards-setting is, by nature, a collaborative venture, involving trusted, broadly representative standards-setting bodies (such as IEEE and ISO) along with technologists, manufacturers, regulatory bodies, and end-user communities. In new markets – particularly those spanning traditional industry sectors, such as telecommunications and finance, and those in the developing world – institutional harmonization and oversight are often weak.

- **Intellectual property rights regimes:** Intellectual property (IP) rights are critical to sustained innovation in the ICT sector, and yet as knowledge becomes privatized, commoditized, and expensive, developing countries risk being priced out of the market for the knowledge they need to advance. This danger is generating pushback, as evidenced by the growing open-source software movement, Creative Commons licensing regimes, and – less constructively – blatant flouting of IP controls.

- **Regulatory harmonization:** Non-aligned or even competing institutional interests among regulators can interfere with the clarity and stability required for business investment and planning. Competing interests among telecommunications regulators and import/export commissions around tariff and non-tariff barriers to new technology imports, for instance, can hinder experimentation and dissemination of technologies that could prove critical to rural economic development. Harmonization between telecommunications and financial regulators will be key to enabling innovation and experimentation with business models that cross traditional industry lines (such as providing financial services via mobile phone, or storing health information on data cards).

Even in developed countries, rapidly-changing technological opportunities may run well ahead of public sector capacity to understand and respond, through incentives, regulations, and new institutional structures, in ways that maximize likely benefits for the poor. Where do responsibility and authority lie? Absent any historical experience on which to base judgment, what should governments do? How can they incorporate and adapt to what is being learned through innovation in the industry? Answering these questions effectively demands collaboration at a system-wide level.

Vodafone, Nokia, and Nokia Siemens Networks are making a start at this kind of collective effort, jointly engaging in research, publication, and dialogue on the enabling environment for m-transactions. Their

messages are based on what they've learned not only through commissioned, academic research but also through on-the-ground experimentation with m-transactions models such as M-PESA in Kenya. One critical message is the need for banking regulators and telecoms regulators to work together.[60]

Similarly, *info*Dev, an initiative of the World Bank Group, draws on the experience of a wide range of private sector partners on different projects – including 40 ICT business incubators around the world – in its work with developing country governments. *info*Dev sponsors research and publications, workshops, and larger conferences providing policy-makers with data and good practices for encouraging innovation and broad-based ICT access.[61]

4 ■ Conclusions

A number of factors distinguish the ICT sector in its potential to expand economic opportunity. First, its products and services enable individuals, firms, governments, and other players to expand their economic opportunities as well as create them for others. Second, ICT companies know well that this dynamic isn't automatic, but rather depends on a wide range of other factors and players. This interdependence has led them to take network or ecosystem strategies which often create large numbers of business opportunities for other, smaller firms. And third, underlying these ecosystem strategies are a fundamental collaborative capability and culture.

Many firms have already begun to experiment with ways of deliberately leveraging these attributes to expand economic opportunity. Others are beginning to think about the process. We highlight three important considerations firms may wish to take into account:

1 **Continuous standards-setting.** As new technological capabilities emerge, new standards need to be developed so that markets can be imagined, created, and served – expanding economic opportunity for individuals, entrepreneurs, and institutions of all types and sizes.[62] The ICT sector has been quite successful in this regard. Sometimes, of course, there are competing standards, and then the market will decide, as happened with VHS and Beta, or is happening now with GSM and CDMA. These are natural occurrences in environments of robust technological innovation, and in fact multiple standards can often be accommodated, if they serve necessary purposes. Ironically, the success of past standards-setting, on which the industry is built, now runs the risk of becoming an impediment to future success: when industries are young and the current stakes are small, or at least unknown, collaboration across competitive boundaries is easier to accomplish. Now that the stakes are larger and clearer, incentives often run in the opposite direction. In new markets – particularly those spanning traditional industry sectors, such as telecommunications and finance, and those in the developing world – collaboration for effective, continuous standards-setting demands particular attention.

2 **Business model innovation.** As we have seen, information and communications technologies enable a wide range of economic opportunity benefits for users. Technological innovation is a key piece of the accessibility equation. But technologies demand business models that allow them to become part of the fabric of society. Among low-income individuals and SMEs, business model innovations such as low-cost distribution systems, value-added content and service partnerships, and appropriate financing options have all been critical in this regard. Business model innovations have been critical in facilitating supply and distribution relationships with SMEs as well. Examples include free product references, specialized training and financing, and business incubation.

3 **Leveraging collaborative capabilities.** Collaboration is increasingly important for companies in all industries. On a scale of one to five, says one participant in IBM's Global CEO Study 2006, the importance of collaboration is "enormous. I'd give this a six if I could."[63] For most ICT companies, collaboration is already a

central business strategy. It is a critical part of standard-setting, business model innovation and implementation, and building the value proposition of technology through content, application, and service development and the network effect.

In the context of a systemic challenge, collective investment and collaborative implementation can be some of the most effective ways of achieving an organization's own, individual goals. ICT companies have enormous potential to leverage their collaborative capabilities – using them in other contexts, with other types of collaborators – to expand economic opportunity more widely in developing countries. On one hand, collaboration can span governments, international development agencies, civil society organizations, and grassroots groups. Many of the successful models for expanding economic opportunity in the ICT sector reflect a forthright acceptance – indeed, they capitalize on the fact – that different stakeholders seek different kinds of "return on investment," whether financial, social, environmental, or some combination of the three. But while cross-sector collaboration is occurring, it is not yet a mainstream business practice.

On the other hand, collaboration can also take place across industry sectors. The financial services sector is already playing an increasingly key role in enabling the inclusive business models of other firms, partnering with companies in agribusiness, manufacturing, mining, tourism to provide the investment capital their SME partners need to upgrade, diversify, and scale. The ICT sector has an opportunity to play a similar role, both enhancing the capacity of SMEs and small producers and enabling them to link more efficiently and effectively with the value chains they are, or aspire to be, part of.

As the world's CEOs report in IBM's 2006 survey, collaborative approaches are "theoretically easy" but "practically hard to do."[64] ICT companies will certainly need to build on existing collaborative capabilities, but they are starting from a position of advantage and have much to share with others in the business and development communities. To expand economic opportunity at the scale required to meet the challenge of four billion people living on less than $4 a day, collaboration will be required across the board, at many different levels, and among many different levels. ICT companies have the creativity, capabilities, and tools to play a vital leadership role in enabling this to happen.

5 ■ Case Profiles

5.1 EMERGING MOBILE TRANSACTIONS BUSINESSES: **SMART, GLOBE, AND M-PESA**

Telecommunications carriers are beginning to offer financial transactions via mobile phone in a number of places in the developing world, most notably the Philippines and parts of Africa. For customers, these services reduce the risk associated with carrying cash; save time and expense in money transfer; enable bill payment; and can even allow un-banked customers to begin building credit histories. For carriers, they help with customer acquisition and retention. They can also help open up new markets for traditional commercial banks.

This case profile covers the mobile transactions (or "m-transactions") offerings of three pioneering providers, two in the Philippines and one in Kenya. Standard m-transactions include pre-paid airtime top-up and transfer between accounts; cash deposits, withdrawals and transfers; the ability to receive deposits from third parties; and retail purchases and bill payments.

The three providers profiled here have taken approaches that differ in interesting ways. SMART Communications and Globe Telecom are national companies in the Philippines that entered (and largely created) the m-transactions market using a commercial, profit-oriented, business investment approach. Vodafone is a multinational company that entered the m-transactions business in Kenya with its local affiliate, Safaricom, using more of a business experiment approach. Development motivations factored strongly and start-up costs were shared with the UK's Department for International Development (DfID). Both SMART and Vodafone/Safaricom have partnered with local commercial banks, whereas Globe provides m-transactions services on its own. All three companies are experiencing very rapid growth rates and actively diversifying the services they offer.

5.1.1 SMART COMMUNICATIONS' SMART MONEY

Summarized from the comprehensive analysis of Wishart, Neville A. 2006. Micro-Payment Systems and their Applications to Mobile Networks. An infoDev Report. Washington, DC: The International Bank for Reconstruction and Development/The World Bank.

SMART Communications, a leading national mobile telecommunications carrier in the Philippines, launched SMART Money in December, 2000, with two primary objectives: to differentiate itself in the market, where text and voice services had become commoditized, and in the process to reduce customer churn.

Customers must sign up for SMART Money accounts at SMART stores. Thereafter, they can deposit and withdraw cash at SMART stores as well as thousands of retail outlets ranging from supermarkets to individual kiosks and roadside stands.

Cash is held by Banco de Oro (BDO), a traditional commercial bank – giving customers what are often their first bank accounts. The Central Bank of the Philippines has imposed a limit of P50,000 (approximately $950 US), but otherwise these are traditional bank accounts in every way. Customers' mobile phones are their primary means of access. For a cost of P220 a year, BDO will provide a MasterCard debit card as well, allowing customers to make deposits and withdrawals via ATM in addition to SMART's already large network of affiliated retail outlets. Purchases can also be made via debit card. For customers who have not elected to take up the debit card, purchases can be made via text message: the seller simply sends a text message requesting the transaction, which the buyer approves with a second text message.

In addition to basic m-transactions such as pre-paid airtime top-up and transfer, cash deposits, withdrawals and transfers, and retail purchases, SMART offers customers the option to have their paychecks deposited directly into their SMART Money accounts. Customers can also receive remittances from family members through SMART Padala, a service offered jointly by SMART and TRAVELEX to Overseas Filipino Workers (OFWs). SMART customers do not need to have signed up in advance to receive remittances; remittances will accrue until the recipient has time to visit a SMART shop to activate their SMART Money accounts.

SMART Communications two primary revenue streams in SMART Money are text messaging charges and commissions on SMART Padala remittances. BDO receives the P220 annual fee on accounts with debit cards,

plus interest on the cash float held on behalf of SMART Money account-holders. BDO is also responsible for compliance with Central Bank requirements.

As of November 2005, SMART Communications counted 20 million mobile customers of which 2.5 million had SMART Money accounts. SMART Money transactions amounted to $100 million per month and BDO held a cash float of about $10 million. One in eight OFWs used SMART Padala through a network of 20,000 outlets, sending $50 million home every month. The average revenue per user for SMART Money users was approximately double that of non-users.

In an interview, SMART Communications' chief executive cited two initial hurdles the company faced in getting SMART Money off the ground: to convince distributors to offer prepaid airtime, and to educate customers about the service to increase their comfort levels. Success factors included customers' pre-existing proclivity for text messaging and ability to embrace change.

5.1.2 GLOBE TELECOM'S G-CASH

Summarized from the comprehensive analysis of Wishart, Neville A. 2006. Micro-Payment Systems and their Applications to Mobile Networks. An infoDev Report. Washington, DC: The International Bank for Reconstruction and Development/The World Bank.

Globe Telecom, the other leading national mobile telecommunications carrier in the Philippines, launched its m-transactions service – branded G-Cash – several years after SMART Communications launched SMART Money, in October 2004. For Globe, the service aligned with the corporate mission to "enrich people's lives through communications."[65]

Globe customers can register for G-Cash for free, over-the-air – without visiting a Globe dealer. In contrast with SMART, Globe has chosen to provide mobile financial services itself, rather than in partnership with a traditional commercial bank. As a result, no debit cards are offered. Globe holds customers' cash in a single account under its own name such that the bank has no knowledge of account-holders identities or activities; Globe is therefore responsible for regulatory compliance. The Central Bank has imposed a lower limit on G-Cash accounts than on SMART Money accounts: P10,000 or approximately $189 US.

Like SMART Money, G-Cash enables customers to make a retail purchases at several thousand retail outlets. Some of these have point-of-sale devices integrated into their cash registers, allowing them to bypass the usual text message-based transaction mechanism – Globe's answer to SMART's debit card option. G-Cash customers can also use their accounts to shop online via mobile phone.

Also like SMART Money, G-Cash enables customers to have their paychecks direct-deposited and receive remittances from OFWs without having activated their accounts in advance. Globe also offers the ability to pay bills, such as utility, insurance, and school tuition. Through links with government, Globe offers customers the option to pay income taxes and business registration fees over the air. Finally, a relationship with the Rural Bankers Association of the Philippines (RBA) enables customers to repay microloans using the service. Globe has also worked with the RBA to arrange microloans enabling some of its lowest-income customers to purchase phones.

As of January 2006, Globe Telecom had 12 million subscribers, approximately one million of whom used G-Cash. P3 million, about $56,164 US, was transferred daily. Domestically, Globe had 400 accredited partners with a collective network of about 3,000 retail outlets; internationally, the company had 27 partners with 200 retail outlets in 16 countries.

According to Globe's CEO, these partners were initially hard to convince, but once they began to use G-Cash their enthusiasm grew quickly. Globe's partners have been responsible for thinking of many of the new services being added to the platform. Success factors cited include prior comfort levels with text messaging, unfulfilled demand for safe, reliable transactions services, and the receptiveness of government regulators.

5.1.3 VODAFONE AND SAFARICOM'S M-PESA

After a two-year pilot, Vodafone and its Kenyan affiliate Safaricom (which has participation from Vodafone and Kenya Telecom) formally launched their M-PESA mobile transactions service in March 2007. M-PESA is operated by Safaricom, but owned by Vodafone through a dedicated trust company.

M-PESA has its origins in Vodafone efforts to "understand its role in addressing [international development] issues like the Millennium Development Goals."[66] The company's logic was that mobile phones could facilitate access to finance, which could in turn facilitate entrepreneurial activity, thus generating wealth through jobs and trade. The UK's Department for International Development (DfID) matched Vodafone's investment, reducing its risk in experimenting with this new area of business. "In this regard I believe that challenge funds have a strong role to play," says Vodafone's Nick Hughes.[67]

The M-PESA pilot focused on enabling microloan receipt and repayment, in partnership with Kenyan microfinance institution Faulu. Faulu's borrowers typically repaid small amounts each week, meeting in person to give their money to a group treasurer, and then sending him (with an appropriate contingent of group members for protection) to deposit the money in a local bank. Vodafone rightly viewed this as a costly process for borrowers in terms of time away from productive business activity.

The pilot showed that the system was more helpful to borrowers than to Faulu, whose standard operating procedures and systems did not lend themselves well to integration with M-PESA. In addition, after seeing how customers actually used the service, the company decided to focus full-scale launch on just three essential services: deposits and withdrawals, money transfer, and prepaid airtime purchase.

These services are operated out of a dedicated department within Safaricom which manages a network of approximately 600 small retailers, or M-PESA agents, where people can deposit and withdraw cash and purchase prepaid airtime. In contrast with SMART and Globe, Safaricom found it easy to convince existing dealers to offer the new service, as their businesses had already been built on the basis of rapid mobile phone expansion in Kenya – this was just the next step.

Agents do not have point-of-sale machines because of their high cost, but rather conduct transactions via special M-PESA menus on their mobile phones, which are available in English and Swahili. Safaricom provides regular training through 50 trainers who visit agents in person. Customers' money is held by the Commercial Bank of Africa.

Within its first month after its commercial launch in March, 2007, 20,000 customers had signed up for M-PESA. Safaricom now enjoys a new revenue source in the commissions charged to senders for money transfers, and Vodafone has identified a way into the international remittance market. Vodafone has established a central, corporate team to drive replication in other markets and is also adding additional services to the platform.

These results have far exceeded the company's expectations – though according to Vodafone's Nick Hughes and Susan Lonie, it came on the back of substantial up-front experimentation and perseverance. Says Lonie, "the difficulty with doing something totally new is that you are not terribly sure where you are going until you arrive. We knew a few things, but much of the time we were guessing."[68]

Another success factor, according to Lonie, was "spending a significant amount of time at the start of a project on the ground assessing customer's needs well ahead of designing the functional specification of any technology-based solution."[69] Also critical was a willingness to deal with change in partnership with commercial banks and microfinance institutions, which have different cultures, operating environments, and incentives. Engagement or collaborative change management on the regulatory front will become increasingly important going forward, as the central bank had no pre-existing regulatory framework for m-transactions.

5.2 MICROSOFT'S INNOVATION CENTERS

Working with governments, universities, and industry associations, Microsoft is helping to catalyze the growth of local software economies through a network of 110 Innovation Centers in 60 countries – helping individuals and entrepreneurs establish careers and businesses in the software industry and laying critical foundations for its own future growth.

Drivers

Microsoft sells platform technologies – the Windows operating system, the Office suite, MSN, and others. Its model is to build 80-90% of the platform itself, and leave the rest – especially in enterprise computing – to a vast network of partners who custom tailor final solution for particular markets. Today, this "partner ecosystem" includes more than 750,000 other firms, ranging from original equipment manufacturers (OEMs) to independent software vendors (ISVs) to distributors to retail stores.

Microsoft occupies a unique position in its partner ecosystem. On the one hand, its continued growth and success depend on the willingness of these and future partners to design products and services for its platforms. The company receives 89% of its revenues from partners. On the other hand, while Microsoft is highly dependent upon its partner ecosystem, it also plays an important enabling role within it. Working with Microsoft technologies, partners generate revenues, skills, jobs, and new business opportunities, all of which remain and grow in the local economy. For every dollar Microsoft generates, its partners generate $9-18, depending on the country.[70]

In this context, Microsoft maintains and strengthens its strategic advantage by driving the evolution of its partner ecosystem in ways that benefit it and the entire system at the same time – as business strategist Jim Moore put it, by leading "economic coevolution."[71]

As a producer of platform technologies, Microsoft has a vested interest in the development and success of all those wishing to work with its platforms, and it makes significant investments in them. Microsoft's Enterprise Partner Group provides established partners with continuing education, marketing, and other forms of support. Its Local Software Economy Group supports the development of new partners by fostering the growth of healthy software ecosystems around the world. While the Enterprise Partner Group is a critical part of the company's near-term business strategy, the Local Software Economy (LSE) Group is part of a cluster of initiatives that helps lay the foundations for longer-term success. In contrast with other Microsoft programs targeting individuals and communities at large, the LSE Group focuses specifically on entrepreneurs and small and medium businesses. Microsoft subsidiaries build their own LSE strategies based on their particular contexts and needs.

Microsoft Innovation Centers (MICs) are becoming increasingly common features of subsidiaries' LSE strategies. These centers "connect people and organizations in the innovation ecosystem and give them access to resources, experts, and facilities for collaboration and skills development."[72] They help "customers and partners plan, research and develop new software products and services," enabling them to start and grow businesses of their own. [73]

The Model

MICs are operated jointly with different partners in different locations. Partners may include government agencies, universities, industry associations, and others, such as non-governmental organizations with economic development-related missions.

It is difficult to speak of a "typical" MIC partnership, either in terms of partner composition or in terms of the resources each partner brings to the table. In general, universities have little money to contribute, but instead provide physical facilities and pay for electricity, water, and other utilities. Microsoft then equips the facilities and runs their activities, usually in partnership with business or computer science professors who can ensure pipelines of students. Government partners usually have money but no programs of their own; they will contribute funds or matching funds and, if needed, suites in technology parks or government buildings where they pay for utilities and Microsoft pays for everything "from the walls in." Often Microsoft will obtain hardware donations from other large firms, such as Dell or Hewlett-Packard, and sometimes international donors, such as the US Agency for International Development, will pitch in with matching grants.

MIC staff usually include Microsoft employees responsible for management and program development, along with student interns or other employees – which Microsoft can co-fund – responsible for administrative support. However, Microsoft's local subsidiaries make staffing decisions according to their own opportunities and needs, and so configurations vary.

Microsoft's primary goal with the Innovation Centers is to generate new local business partners – especially ISVs. Governments use the centers to support employment and new business formation strategies, particularly in the development of skilled, service-based economies. Universities use them to expand and upgrade academic offerings to meet labor market needs and to support research. Industry associations use them to unlock and intensify cluster effects that benefit their members.

Microsoft Innovation Centers (MICs) help extend the edges of an already inclusive business model by developing human capital and building local institutional capacity. These services target entrepreneurs, small business owner-operators, local industry associations and intermediaries, and clusters.

MICs offer different services according to local contexts and needs. At the corporate level, Microsoft packages a wide range of activities in three areas – jobs enablement, innovation, and skills and capacity-building – and then subsidiaries choose the ones that would most benefit their local economies. According to Carla Harting, manager of the Innovation Center program worldwide, this approach has been a critical success factor in achieving scale.[74]

In mature countries, where local software economies already exist, MICs incubate start-ups and broker relationships between entrepreneurs and potential financial backers. Sometimes governments play the role of venture capitalists or banks in these initiatives.

In mid-market countries such as Brazil, Russia, India, China, and Mexico, software ecosystems exist but often struggle with quality or limited local market size. In these economies, the MICs might provide quality assistance, help add services to commodity solutions, or coach managers for export boards. Consultants might be on hand to help developers with proof-of-concept or to test for scalability – to see whether their solutions will hold up for medium and large enterprise use. MICs also typically provide a raft of skill- and capacity-building services to entrepreneurs and small business owner-operators. Sometimes it is possible to leverage courses developed by Microsoft's Enterprise Partner Group. Other times, more innovative, customized support is required. In the former Soviet republics, for example, development skills are generally quite strong and fledgling software economies exist, but Microsoft has little on-the-ground presence – so the company has organized developers into "communities of interest" around certain technologies, which work together for eight weeks. Along the way, they receive mentoring from Microsoft employees at headquarters and some of the larger subsidiaries.

70% of the MICs are in emerging market countries. In these countries, a common activity is to train young people and then post their resumes to business jobs portals where Microsoft partners pay to access them. In addition to pools of qualified candidates, another enormous benefit to partners who recruit this way is that governments struggling with youth unemployment or wanting to kick-start local software economies will often pay internship wages or first year salaries for graduates that obtain jobs. Programs like this are common in mature markets as well, such as Italy, Turkey, and the United States – where state governments contribute "reskilling" funds in return for help transitioning workers into new positions, for example displaced auto workers in Detroit or furniture workers in North Carolina.

Other MIC offerings include basic business training; "soft skills" training in presenting, teamwork, and other subjects; instructor certification; and interoperability labs. The MICs reflect a "rising tide lifts all boats" philosophy; users don't have to be Microsoft developers.

It is important to emphasize that, even in emerging market countries such as Nigeria, South Africa, and Rwanda, Microsoft's Innovation Centers target university students, technical partners, and aspiring entrepreneurs – those with the potential, at the present time, to start and grow their own businesses, generating wealth and employment. These are not people at the "base of the economic pyramid," but rather somewhere in the middle or

top. Other Microsoft initiatives, such as the 29,000 center-strong Community Technology Skills Program, provide basic computer literacy training to individuals and communities as part of a longer-term strategy to broaden digital inclusion.

MICs concentrate on early-stage partner development. Entrepreneurs who have established themselves with applications, customers, and the potential to scale up are referred to Microsoft's Enterprise Partner Program with its network of Microsoft Technology Centers (MTCs), which will help take them the rest of the way. This usually involves selling a license for platform software. The MICs, while considered business investments, do not generate direct revenues for Microsoft.

Results

There are currently 110 Microsoft Innovation Centers in 60 countries worldwide.[75] The company aims to open an additional 200 centers in 25 more countries by 2009.

Microsoft measures its success with the MICs according to a number of metrics, including government perceptions; numbers of users and the activities they engage in; whether they get jobs or start their own businesses; and if they start their own businesses, whether they employ other people.

Once a user has found a job, Microsoft generally considers its work done and does not track that person further. Alternatively, if a user starts his or her own business, Microsoft moves that person as quickly as possible to the Enterprise Partner Program, which grows them from there. However, the company does take "proof points" of entrepreneurs around the world who have used the MICs to start or grow their own businesses.

5.3 MICROSOFT'S PARTNERSHIPS FOR TECHNOLOGY ACCESS

Microsoft is creating market opportunity catalyzing "virtuous cycles" in which eCitizens and eGovernments interact to drive social progress. Its Partnerships for Technology Access are customized, multi-party deals designed to transform the ability of governments to provide public services and the ability of citizens to receive the benefits – with technology as an enabler.

Drivers

Demands on developing and emerging country governments are exceeding their ability to deliver – for example, in areas such as education, private sector development, and public health. These governments have the potential to transform the way they address these demands using technology – using eGovernment solutions that Microsoft can provide. For Microsoft, eGovernment is a sizeable business, and one the company would like to grow. Unfortunately, eGovernment solutions are a hard sell in markets where the majority of citizens lack access to technology.

Technology penetration in developing and emerging countries is low. This is partly a function of price, but not entirely. For someone earning $3,000 a year – more than three times the international poverty line of $2 a day – a personal computer (PC) will be a significant purchase even at cost. That person will need financing options and, most importantly, a reason to make the financial sacrifice a PC purchase entails. He or she must see a clear value proposition. eGovernment services can be part of that value proposition if entitlements can be delivered with more accountability or enhanced responsiveness – but an existing base of eCitizens is critical to the value proposition for eGovernment.

Microsoft has turned this classic "chicken and egg" scenario into a business opportunity through an operating framework that uses collaboration to empower eCitizens and eGovernments at the same time, creating "virtuous circles" that advance policy objectives.

The Model

Microsoft's Partnerships for Technology Access (PTAs) are public-private partnerships (PPPs) designed to transform the ability of governments to provide public services and the ability of citizens to receive the benefits.

Each PTA PPP is a customized, multi-party deal assembled according to the specific needs and objectives of the government partner and its constituents. As a result, both PTA offerings and the partners put in place to provide them can vary substantially. A "typical" PTA offer might include a combination of favorable financing, software, hardware, training, government services and technology support. In addition to Microsoft itself, "typical" partners include government agencies, financial institutions, independent software vendors, hardware providers, and Internet service providers. Non-governmental organizations are often part of the PPPs as well.

Eight business development managers worldwide are responsible for identifying and building PTAs. They are based in Beijing, Cairo, Johannesburg, Singapore, Mexico City, São Paulo, and Buenos Aires and Moscow, with regional coverage. Each business development manager has specialized experience spanning public policy, sales, and technology. His or her job is to engage closely with government, civil society, and other actors, keep current with policy developments and objectives, and identify opportunities where Microsoft's core competencies and technologies could be applied, in partnership with others, to create solutions.

To do this, a business development manager must think carefully about what the government partner – including individual policymakers – will need to get out of the alliance in order to justify it. As Diana Pallais, worldwide Managing Director of the PTA initiative, puts it, "Every government leader has a short list of priorities where they intend to effect positive impact. If we can understand those priorities and determine that technology can be of use to them, then they will have an incentive to engage with us on terms that will be more sustainable all around. In sum, we have to structure win-wins or it won't fly."[76]

Once an opportunity is identified, the business development manager will then approach and negotiate with potential partners, ultimately bringing them together in PTA consortia. Establishing and aligning incentives within these consortia, and maintaining that alignment as implementation proceeds, requires active leadership

on Microsoft's part. Pallais states that, in addition to the idea itself, convening the consortium and project leadership are perhaps the most valuable contributions that Microsoft makes.[77]

Each PTA deal must meet three criteria:

1. *Affordability*. As discussed above, affordability is rarely just a question of price. Is it possible to put together a financing package that will make the technology affordable for citizens?
2. *Access*. Does the local supply chain exist to get the technology to citizens? Are electricity and Internet connectivity available and accessible?
3. *Relevance*. Finally, and most critically, what is the value proposition to the citizen? How will the technology – and the content and services it enables – improve citizens' lives?

PTA deals must offer "wins" for all parties involved in order to move ahead. Microsoft believes this makes them more sustainable, such that the "virtuous circle" they create can continue even after Microsoft has exited from a formal role. For Microsoft, the "win" is the ability to tap new markets. For governments, it is the ability to provide public services more efficiently and effectively, hopefully translating into political gains. Non-governmental organizations typically have mission-based incentives to participate. And other private companies participate for customer acquisition purposes, as offering products and services through public programs can help increase affordability and value to the customer. Importantly, citizens are also considered parties in PTA deals – they are, after all, being asked to pay for the technologies on offer – and so there must be "wins" for them as well.

Activities

Government partnerships are at the core of the PTA model. Often the government partner is already experimenting with some degree of online service provision. The PTA deal may include some support to ensure that these services are accessible to the target population in terms of language, navigability, and functionality.

The PTA deal will also address accessibility through the sale of PCs. While many programs to disseminate mobile or shared access technologies exist, including within Microsoft, PTAs aim to place PCs into homes and small businesses. By the same token, while many PC donation programs exist, PTAs involve citizens as paying customers. Embeddedness within a public policy objective helps to increase the relevance and value proposition. Even so, customers tend to come from the middle of the economic pyramid, rather than the base. They are people with some disposable income, but for whom a PC purchase would nevertheless be out of reach without financing. Many have no credit histories or even bank accounts. To secure financing for them, Microsoft has worked with public and private partners on a number of options to reduce risk, such as payment by payroll deduction or using the PCs themselves as collateral. Commercial banks, governments, and government banks will sometimes offer loans at low interest rates, and occasionally small product discounts are offered, but the key to affordability within the PTA program is access to credit.

An additional dimension of the PTA model, which is core to its economic opportunity impact, is its reliance on value chain linkages with local hardware and software vendors and distributors. PTAs expand these partners' markets, which helps create jobs and multiply local business opportunities.

As discussed earlier, PTAs are custom-designed and therefore vary dramatically. Two examples are described briefly below.

1. In Argentina, there are four million pensioners out of a total population of about 40 million. The government pension agency has the second largest budget in the country. The agency had a reputation for slow processes, even for very simple transactions, and wanted to innovate in the way it connected with its constituents. It did have a handful of services already online which offered clear value. For instance, pensioners in Argentina are entitled to receive their spouses' benefits when they die, but to do so they must declare a status change. Done manually, this takes an average of four months. At an average pension of $500 a month, this represents an opportunity cost to the pensioner of $2,000. Online, the same process takes 15 minutes. The PTA response has been to offer seniors the opportunity to buy PCs through the pension agency, which underwrites a loan of three years at zero percent interest. Microsoft invests in computer literacy and training, which are provided through an

NGO network focusing on senior citizens. The opportunity cost savings represent such a compelling value proposition for seniors that up to 2,000 PCs are now being sold each month through this program, with no discount in the price of the machines and no advertising.

2. In Chile, all government procurement is done online via the ChileCompra e-procurement portal. At first, the system struggled to achieve its objectives because the portal was inaccessible to so many potential bidders – in particular, small and medium enterprises lacking access to computers or the Internet were locked out of the market. The PTA response has been "Mi PYME Avanza" or "My Small Business Grows." The program offers entrepreneurs and small business owner-operators training, software, and connectivity to the e-procurement portal, which increases their willingness to invest in PCs, as well as low-interest, unsecured, 36-month loans to finance their purchases. Now, the number of companies registered to bid has grown to more than 200,000, and competition for contracts has more than tripled from 1.7 to 5.7 million bids. For the government, the system has increased transparency and generated cost savings of $60 million a year.[78]

Results	PTA deals do not follow a typical Microsoft sales cycle; according to Pallais, they take a lot of time and a lot of shepherding. However, once incentives are aligned, trust is built, and consortia are in place, roll-out tends to happen quickly.[79] In the three years since the program began (it was formally branded a year and a half later) more than 50 Partnerships for Technology Access have been created.
	For Microsoft, the number one indicator of success for the Partnerships for Technology Access – as for the company generally – is license sales. By June 30, 2007, Microsoft had sold 500,000 PCs with genuine Windows operating systems through PTAs worldwide.[80] Microsoft expects to approach one million PC sales in fiscal year 2008 alone. PTAs are also measured according to conventional business metrics such as return on investment (ROI) and revenues. Measures of satisfaction among partners and citizens are monitored as well.
	Even more important, Microsoft tries to ascertain whether each PTA succeeds in catalyzing the kind of "virtuous circle" described above, with eCitizens driving demand for eGovernment driving demand for eCitizens. The company is also working to develop indicators that will allow it to gauge whether a deal will be sustainable after it exits from a formal role.
Lessons Learned	Microsoft's Partnerships for Technology Access are gaining increasing traction within the company and in the marketplace. There are a number of potential threats; for instance, because the ROI on a PTA is significantly lower than usual for the company, it is possible that a severe downturn in the industry could jeopardize the business model. Similarly, while governments and other development-oriented organizations are currently keen to work with the private sector, the pendulum could always swing in another direction.
	All else constant, Microsoft has found that the success of a PTA in catalyzing "virtuous circles" of eGovernment and eCitizenship depend in large part on aligning incentives among the various parties involved. Critically, this includes customers' incentives; PTA deals are crafted on the basis of clear customer value propositions.
	Aligning incentives also involves setting and managing expectations. According to Pallais, other corporate partners must recognize that while this is business, it is not business as usual – it costs more to play and it involves adjustments in standard operations.[81] Microsoft bears an often disproportionate share of the difference, including the bulk of the convening and leadership up-front, but the remainder needs to be shared for the deal to be sustainable. All partners must expect considerable learning and adjustment to take place. Companies in different industries, government agencies, non-governmental organizations, and others rarely understand each other the way they understand themselves. They must be prepared and invested in starting to develop that understanding in order for their PTAs to succeed.

5.4 IFC AND IBM'S SME TOOLKIT

Through the SME Toolkit, IFC and IBM are helping to address critical barriers facing key players in their business strategies: small- and medium-sized enterprises. The Toolkit facilitates SME start-up and growth by providing owners and entrepreneurs with access to information, training, capital, and markets, as well as the opportunity to collaborate with peers.

Background and Drivers

The International Finance Corporation (IFC), the private sector arm of the World Bank, pursues a for-profit strategy for international economic growth and development – offering equity investments, loans, and technical assistance for entrepreneurs and existing companies seeking to establish or expand operations in developing countries.

Small- and medium-sized enterprises (SMEs) are the growth engines of the world's most productive economies. SMEs can also be critical in helping IFC's larger, more mainstream investments succeed. To receive competitive financing, IFC's clients are challenged to increase procurement from local firms as a mechanism to grow the SME sector. Other times, they seek ways of contributing to local economic development to protect their social license to operate.

The IFC's SME Department includes a dedicated Global Linkages Unit charged with helping its clients respond to these imperatives by facilitating supply and distribution linkages with local SMEs. The SME Department also invests in the capacity of local financial institutions to serve SME clients; provides technical assistance and advisory services to SMEs; and helps governments improve the enabling environment for SMEs to start up and grow.

However, there are formidable barriers facing SMEs in developing countries. These include bureaucratic licensing procedures; burdensome regulatory requirements with high compliance costs; low skill and experience levels; lack of access to information about demand or market opportunities; inability to obtain financing, and therefore to invest in up-to-date production or information technologies or scale up; difficulty obtaining contracts with larger firms; and more.

To help address some of these barriers, IFC launched its SME Toolkit in 2002. In 2006 IBM and the IFC signed a formal agreement to co-develop the website. IBM re-engineered the toolkit with innovative technology that made the platform more flexible and stable. Additionally, web 2.0 technologies such as online forums and live chats were added to foster the development of communities. IBM is also contributing its marketing expertise to enhance the impact of the toolkit launches. Most recently, successful launches in the U.S., South Africa and India garnered nearly 100 media hits.

IBM has a comprehensive strategy for the SME marketplace encompassing specially designed offerings, Business Partner programs, financing options, and local marketing and customer support capabilities. It is developing products, services, and financing options specially designed for SMEs, as well as channel partners specializing in SME sales. In this context, while the SME Toolkit is not intended to generate a revenue stream directly, it is a way for IBM to engage the SME marketplace at large and develop potential future customers via IBMers' core values of "innovation that matters – for our company and the world" and "dedication to every client's success". Already, the market for information technology among SMEs weighs in at about \$465 billion worldwide, according to research firm IDC; this figure grew at a rate of about 7.6% in 2006, compared with 5.6% for the industry as a whole.[82]

Activities

The SME Toolkit is organized around eight subjects: accounting and finance, business planning, human resources, international business, legal and insurance, marketing and sales, operations, and technology. Content includes:[83]

- Online and offline training, including CDs and classroom courses delivered by partner organizations
- Market, trade, customs, and other information on the 64 biggest importing countries
- A calculator to determine readiness for financing
- Free website design and management software
- Downloadable business forms

- Online conferencing
- Blogging capabilities
- Group calendars
- Survey and quiz-building software
- Business directories

Entrepreneurs have very little time; the Toolkit is designed to allow them to access the resources they need with minimal searching. Its new "Web 2.0" collaboration features are intended to enable entrepreneurs and small business owners to seek advice, learn from each other, perhaps even engage in joint bidding. The combination of increased capacity and access to information should facilitate access to capital and new markets.

The SME Toolkit is currently available in 14 languages in 28 markets. In each market, IFC has partnered with different local organizations or sets of organizations responsible for customizing and localizing its contents. Partners have included other companies, government agencies, and civil society organizations. For example, Toolkit partners in South Africa are the government Department for Trade and Industry and Business Partners, an investment firm specializing in SMEs. In Singapore, the local partner is Dunn & Bradstreet; in Latin America it is FUNDES; in India, it is ICICI Bank. Partners play key roles in enhancing the Toolkit's relevance in local contexts. In India, Mr. V. Vaidyanathan, Executive Director at ICICI Bank, says "We are looking at developing the entire ecosystem for SMEs using the platform of technology. We believe this will add more value than focusing on specific parts of the business."[84] ICICI translated the Toolkit into Indian languages such as Hindi and has begun to offer content via mobile phone alert.

Building upon initial investment by IFC, IBM has invested nearly $2 million in re-building the SME Toolkit technology platform and will continue its investment in 2008.

Results   Because the SME Toolkit is a freely available online platform, and because much of its value comes from integration with other players and programs in local market ecosystems, measuring the impact of usage is difficult to do. One preliminary indicator of value to the user is the "best in class" ranking the Toolkit has received, on average, from its two million annual visitors. IFC and IBM aim to launch the Toolkit in additional countries and increase usage steadily over time. One hurdle is lack of Internet access among large proportion of the Toolkit's intended users. In response, the partners plan to develop alternate means of access, such as mobile phones, based on user feedback.[85]

5.5 CISCO NETWORKING ACADEMIES' LEAST-DEVELOPED COUNTRY INITIATIVE

Since 2000, Cisco Networking Academies' Least-Developed Countries Initiative has created opportunities for individual employment and entrepreneurship in a high-skill, high-value industry sector for more than 50,000 students. In the process, they are laying foundations for national competitiveness and the company's own future market growth.

Background

The story of Cisco's Networking Academies is already, in some circles, quite well-known. In 1997, the company made a donation of computers and networking equipment to a school near its corporate offices. Employees later learned the donation was going unused, because administrators lacked the resources to set up and maintain it. They decided to train students to do this, and found that it worked. Not only were students able to maintain their schools' computer networks, they were also able to leverage those skills in the job market after graduation.

With the strong support of Chairman John Morgridge, the network administration training was formalized and expanded, and began to be offered in high schools, community colleges, and a host of other institutions across the country and abroad.

Cisco's Networking Academy curriculum consists of Web-based instructor-led training; hands-on laboratory exercises; online assessments; and performance tracking. The 8-course, 560-hour program runs from basic to advanced skills, covering subjects such as UNIX, Java, security, wireless, PC hardware and software, and networking operating systems. It offers the possibility of obtaining industry-standard certifications, e.g. Cisco Certified Network Associate (CCNA™) and Cisco Certified Network Professional (CCNP™).

In the basic Networking Academy model, Cisco donates the curriculum and leverages internal resources from a variety of teams to provide additional support. For instance, because courses are delivered online, the company must maintain a sophisticated network infrastructure to support them. Host institutions – including schools, community organizations, hospitals, and even prisons – provide classroom space, computers and other equipment, instructors, and students, often in partnership with other organizations, including funders.

By 2000, the Networking Academy program had expanded enormously, but had been unable to penetrate into the least-developed countries (LDCs). At the G-8 Summit in Okinawa, Japan, that year, Cisco, the US Agency for International Development (USAID), the United Nations Development Programme (UNDP), and United Nations Volunteers (UNV) announced that they would partner to provide the additional support levels required to open academies in those countries. In 2001, the International Telecommunications Union (ITU) joined the partnership, volunteering to offer the Networking Academy curriculum in its Internet Training Centers (ITC) in developing countries.

Drivers

Cisco's primary motivations for the Networking Academy program are social or philanthropic: the company believes that education and the Internet are great equalizers, opening up possibilities for both individual and societal advancement.[86] The LDC Initiative's theory of change reflects this philosophy: "By training a workforce to build and maintain an Internet infrastructure, the initiative partners expect to accelerate the LDCs' progress towards full integration into the world economy."[87]

It is this social vision that led Cisco and its development partners USAID, UNDP, UNV, and ITU to launch the LDC Initiative. It was only as the Initiative unfolded, as Cisco simultaneously began to think seriously about developing countries as markets, that the business drivers for the company truly became apparent.

First, it became clear that the Networking Academies help Cisco address a key constraint in its business environment: a shortage of network professionals. As the experience of that first school showed back in 1997, Cisco's products are only useful in conjunction with people who know how to install and maintain them. The company's Networking Academies build this foundation for growth.[88] They also fuel demand for the company's products directly, as once graduates go out into the working world, they are likely to purchase the Cisco systems with which they are familiar.[89]

Second, the Networking Academies helped Cisco form strong relationships with developing country governments. As Amy Christen, Vice President of Operations for Corporate Affairs, explains, "the world economy is increasingly networked – as Tom Friedman would say, the world is flat – and basic networking infrastructure is becoming critical to national competitiveness. You can't build that infrastructure in your country unless you have a workforce that can sustain and grow it."[90]

Cisco studies have shown that shortages of network professionals affect nearly every country, developed and developing, but the company has found that developing country governments are more consciously aware that they have these gaps. As a result, they have been incredibly receptive to the Networking Academy program. Academies are often announced jointly by company representatives and high-level government ministers, with tremendous levels of fanfare and media coverage. Government Networking Academy receptions are common. This level of government support is not something Cisco had experienced in the United States.

Activities

The LDC Initiative launched in 2001, with an initial 20 countries selected to participate. In 2003, the partners launched Phase II of the LDC Initiative, called "Africa 100," in which USAID sponsored 75 new Academies and UNDP 25. All 100 were in place by 2005.

In 2004, the LDC Initiative partners intensified their focus on quality and sustainability of the Networking Academies.[91] They created three toolkits, known collectively as PLAN-IT for a Sustainable Future, to help Academies meet sustainability, gender, and workforce development goals. In 2006, they launched the Africa Sustainability Roadshow to provide training on Academy sustainability as well as the Africa Quality Initiative for quality instructor training.

In addition to building the reach, quality, and sustainability of the Networking Academy network, the LDC Initiative has also used the Academies as platforms for broader development programs addressing local needs. For instance, many countries have adopted gender initiatives, making special efforts to recruit women and sometimes offering scholarships and dedicated classes. For instance, USAID has provided $300,000 in scholarships for women in Algeria, Morocco, Tunisia, Bangladesh, Nepal, Mongolia, and Sri Lanka to attend their local Networking Academies. With UNIFEM, USAID has developed gender programs in the Middle East which have achieved 50% female enrollment in both Morocco and Jordan.[92]

Cisco's primary contributions to the LDC Initiative have been the basic Networking Academy model and curriculum, support for the network infrastructure required for online delivery, and program support – such as tracking student success, revising the curriculum accordingly, and providing annual professional development sessions for instructors, enabling them to keep up with technological advances.

Cisco's development partners, USAID, UNDP, UNV, and ITU, have played a variety of roles in different circumstances. Typical contributions have included funding for instructor training, equipment, and on-the-ground expertise and support in the form of staff time or volunteers. For instance, UN Volunteers, through the United Nations Information Technology Service (UNITeS), has sent more than 30 volunteers sponsored by UNDP, APDIP, UNV, Cisco Learning Institute, and Cisco Corporate Philanthropy to help LDC-based Networking Academies do community outreach and expand into secondary cities. ITU has provided facilities, offering the Cisco Networking Academy Program in its Internet Training Centers.

Results

In its first year, the LDC Initiative reached 58 academies in 27 countries (including 7 non-LDCs in sub-Saharan Africa), surpassing its initial goal of 20 countries.[93] Enrollment has grown every year since inception, and more than 50,000 students have now passed through the program.[94] Approximately 40,000 of these have been in Africa, where more than 10,000 students have obtained CCNA certification.

For students, the Networking Academies' greatest impact has been to expand economic opportunity in the form of jobs and small business opportunities. In a recent impact assessment of Academies in Africa, a research firm commissioned by LDC Initiative partners found that 100% of alumni surveyed reported improved self-confidence,

nearly two thirds obtained employment, and more than 10% started their own businesses.[95] Alumni recommended even more assistance finding internships and jobs. One possible reason is that weak local economies frequently forced graduates to relocate to find work. Fifty-nine percent, almost all of those that obtained jobs, relocated outside their home communities, although only 6% reported wishing to do so.[96]

For Cisco, the business impacts are longer-term and therefore more difficult to quantify. In addition, there has been a reluctance, internally, to link the initiative too closely to business objectives. Staff are justifiably proud of its social mission and record of achievement, and some have a strong desire to keep it "pure." However, while Cisco hasn't deliberately leveraged the LDC Initiative to grow sales – and thus hasn't tried to evaluate the relationship between the Initiative and the corporate bottom line – it has helped the company form close, positive ties with many developing country governments, which seem to have facilitated public sector sales. As Genelle King Heim, Senior Manager, Public Sector Sales, Emerging Markets puts it, "We want to create long-term relationships with these governments and let them know we're committed to their country transformation plans. We can provide connectivity, networking solutions for healthcare and education, and so on, but we can make sure you also have the capacity to maintain those systems. We can help you build the capacity to get your country to the level where you want it to be."[97]

Key Success Factors

Including the LDC Initiative, Cisco's Networking Academies now train more than 500,000 students per year in more than 10,000 Academies in 165 countries – more than twice the number of countries in which it has corporate offices. Over two million students have been trained since the program began in 1997.[98]

Given its philanthropic nature, Chairman John Morgridge's strong support was essential in making the Network Academies a priority and ensuring their continuity, especially in the early days. There have been two primary success factors in the significant replication and scale the program has achieved since then.

First, the core component of the model – the curriculum – is standardized. It can be (and is) used successfully worldwide, while allowing for supporting components such as equipment, physical space, instructors, and funding models to be designed and assembled flexibly, based on local needs and available resources. The curriculum also leverages the most valuable resource the company has – computer networking expertise.[99]

Second, the model is fundamentally rooted in partnership. As Cisco's Christen puts it, "if we'd had to do everything ourselves, it wouldn't have scaled." Some of these partnerships are international, such as the LDC Initiative partnership with UNDP and USAID; each Networking Academy also involves a unique set of local relationships usually spanning some combination of government, civil society, and the participating schools themselves. In order to create and support such relationships at scale, Cisco uses a tiered system based on regional Cisco Academy Training Centers – generally the Networking Academies with which the company has the strongest relationships. Cisco trains these Academy Training Centers, and they in turn provide training and other support to the other academies in their regions. Risk and reward are balanced across partners, and accountability is distributed through the tiered system. Cisco also directly employs approximately 20 regional academy managers who work with the range of local institutions to start new academies and ensure that existing ones are functioning effectively.

For Cisco, whose core business depends on a network of 20,000 channel partners around the world, partnership was a natural strategy.[100] "This is part of the way we've built our company," says Christen. "We have to find partners who complement what we're trying to do with our objectives and build sustained relationships."[101]

5.6 SAP AND THE EXTRACTIVES INDUSTRY TRANSPARENCY INITIATIVE

SAP, the global leader in collaborative enterprise software, is leveraging its expertise in business network transformation to empower a new kind of network: extractive companies and developing country governments seeking to use transparency and mutual accountability to turn the "resource curse" into a springboard for widespread economic opportunity.

Background

The Extractive Industries Transparency Initiative (EITI) was founded in 2002 to promote good governance as "a precondition for converting large revenues from extractive industries into economic growth and poverty reduction. When transparency and accountability are weak, the extractive industries may instead contribute to poverty, corruption, and conflict – the so-called 'resource curse.'"[102]

EITI requires the disclosure and verification of payments made by extractive companies to host governments. Both companies and governments must audit and publish payments made and received; the numbers are then reconciled by outside parties. This kind of transparency has a number of effects critical to economic opportunity and growth. For instance:

- curbing corruption
- improving access to capital
- mitigating conflict over distribution and spending of revenues
- improving the investment climate
- building government capacity
- empowering civil society and other actors[103]

24 countries have either committed to or are actively implementing EITI, spanning Africa, Asia, Europe, and South America.

Founded in 1972 by a number of ex-IBM employees, SAP AG has become the world's largest business software company, with over 50% market share worldwide. The company specializes in software solutions that enable customers to improve their business performance – in particular, identifying and responding to risk and opportunity throughout the extended enterprise

Drivers

So far, Azerbaijan, Cameroon, Gabon, Ghana, Guinea, the Kyrgyz Republic, and Nigeria have released reports, with other resource-rich developing countries committed to do so in the future.

However, sign-on has not been as rapid as EITI – particularly its NGO stakeholders – had hoped, and several countries that originally committed have failed, to date, to disclose and verify the payments they have received from extractive companies. There is now urgent pressure to get those that have signed on to follow through, and to get more countries to sign on, in order to preserve momentum of the initiative.

In 2007, GTZ, the German development agency, saw an opportunity to bring SAP in through its public-private partnership program to help. SAP is the first non-extractive company to support the EITI.

A primary motivation for the company is long-term market development. As Vice President for Corporate Citizenship James Farrar states, "the 'resource curse' has always been about extractives and it has always been about getting companies to 'do no harm.' Really, the challenge is to create economic opportunity. These countries are cash-rich but capacity-poor. If processes like EITI succeed, we will have huge markets there."[104] EITI may bring some near-term market opportunity as well. In fact, it is a requirement of the GTZ public-private partnership program that there be an identifiable commercial opportunity for the company involved. With EITI, SAP's core contribution will be to connect participating companies and governments for transparency and mutual accountability, and this will be pro bono – but participating companies may see value in implementing SAP systems on the back end, internally, as well, to help with business transparency goals. Governments could also see value in adopting more SAP software. Further adoption would go beyond compliance with EITI, and would not be required; as with all SAP solutions, the company-government interface will be fully compatible.

The opportunity for innovation provides an additional motivation for SAP. The company's core business approach is to work with thousands of small programmers and consultants around the world to spur "innovation via ecosystem." Now "EITI is part of the ecosystem from which innovation can arise," Farrar says.

Finally, engagement with EITI supports SAP'social responsibility philosophy. With respect to social and environmental challenges, "to achieve progress, SAP believes the best approach is to co-innovate solutions with other concerned stakeholders just as the company does every day as a matter of business."[105]

Activities

The EITI's International Advisory Group and other analysts have made a number of recommendations for advancing the Initiative. Several stand out as areas in which SAP solutions can be instrumental:[106]
- require countries and companies to validate progress on a regular basis
- increase the government capacity-building benefits of EITI implementation
- formalize the link between EITI adoption and sovereign risk ratings

Nigeria received a mark-up in its sovereign risk rating after implementing EITI. However, for rating agencies to consider EITI implementation on an ongoing basis, they will have to be sure that the processes in place to collect, aggregate, report, and reconcile the data yield reasonably accurate results.

SAP's Governance, Risk, and Compliance (GRC) team develops solutions that help customers collect and document data to ensure compliance with regulatory requirements. Business transparency across the extended enterprise has unlocked value for SAP's customers by helping them identify risks and opportunities earlier and thus manage their portfolios more strategically. Amit Chatterjee, Senior Vice President of the Governance, Risk, and Compliance Business Unit for SAP AG in Palo Alto, believes that similar value can be unlocked through transparency across business, government, and civil society. "SAP systems can start to provide transparency in how companies, governments, and NGOs collect and report on data to each other," he says.[107]

SAP is implementing one to two pilots that could help speed implementation in other countries. The pilots will aim to enable reliable, auditable documentation of product and payment flows. The systems developed will offer users the capability to report at different levels and in different time frames – multiple companies, for example in a pipeline consortium, could even report jointly. SAP also plans to support high tech education in the pilot countries as a way of enabling non-extractive industries to get a toehold.

Lessons Learned

SAP faced a number of tough questions internally and externally about its involvement in EITI. Internally, people worried that supporting the EITI might be construed as advocacy for better human rights performance by governments. The project's internal champions had to raise awareness of the fact that governments voluntarily agree to participate in EITI; SAP would only be involved after they agreed to participate.

Externally, some of those in the development community also resisted, assuming SAP solutions would be too complex and expensive for EITI participants. GTZ played a critical role facilitating the process of relationship-building among all the stakeholders, allowing perceptual barriers to begin to come down. Relationship-building and trust are often both initial hurdles and key success factors in public-private collaboration. SAP's Amit Chatterjee is optimistic. "Around more complex problems, with higher risk and higher betas of success," he says, "ecosystems naturally emerge."[108] SAP is already looking for other areas in which the company can create social value and market potential in connecting disparate stakeholders around major social, economic, and environmental challenges.

5.7 THE UNITED NATIONS GLOBAL ALLIANCE FOR INFORMATION TECHNOLOGY AND DEVELOPMENT

The United Nations Global Alliance for Information Technology and Development is a platform or "network of networks" enabling companies such as Cisco, Intel, Google, Microsoft, and Visa to help shape policy environments that strengthen the role of technology in sustainable development. The GAID platform also enables diverse partnerships to coalesce around research and on-the-ground projects.

Background and Drivers

The United Nations Global Alliance for Information Technology and Development (GAID) was founded in March, 2006, and formally launched in Malaysia in June of that year. GAID is the product of earlier UN exploration and effort to harness technology in service of sustainable development.

One such initiative, the Information and Communications Technology (ICT) Task Force, was established by the Secretary-General in 2001 at the request of the Economic and Social Council (ECOSOC); its mandate ended in 2005. A second initiative, the World Summit on the Information Society, culminated in two major convenings – one in Geneva in December, 2003, and one in Tunis in November, 2005. The objective of stage one was "to develop and foster a clear statement of political will and take concrete steps to establish the foundations for an Information Society for all."[109] The objective of stage two was "to put Geneva's Plan of Action into motion as well as to find solutions and reach agreements in the fields of Internet governance, financing mechanisms, and follow-up and implementation of the Geneva and Tunis documents."[110]

GAID picks up where these initiatives left off, with the mission to "contribute to transforming the spirit and vision of the World Summit on the Information Society (WSIS) into action and promoting the use of ICT for the achievement of the internationally agreed development goals, including the Millennium Development Goals (MDGs)."[111] The network will focus initially on leveraging ICTs in four areas: education, health, entrepreneurship, and governance.

Activities

In its first year, GAID consolidated a governance structure, established a Secretariat, and laid out its goals and operational modalities. Governance occurs at two levels. The first is a 60-member Strategy Council comprising 30 representatives of government and 30 representatives of business, civil society, and the international donor community. The second is a 12-member Steering Committee chaired by Craig Barrett, Chairman of Intel, which both helps set strategic direction and provides day-to-day oversight of the Secretariat. GAID also counts on a network of high-level advisers and a network of champions, including experts, practitioners, and activists. It is funded by a number of governments, international agencies, foundations, and corporations in the ICT sector, including Cisco, Intel, and Talal Abu-Ghazaleh International.

GAID serve as a platform, a "network of networks," with no financial or operational role in on-the-ground projects. The Secretariat's primary functions are outreach and education, with an eye to influencing international, regional, national, and local policy-makers in support of enabling environments for ICT to stimulate economic and social development. The Secretariat also raises brand awareness in order to draw additional participation in the GAID networks.

GAID is made up of five types of overlapping networks, described below.[112] Any individual or organization can propose, mobilize, and spearhead a network according to procedures outlined on GAID's website.

- *Flagship Partnership Initiatives.* These partnerships target implementation of large-scale projects harnessing ICTs for sustainable development goals. As of September 2007, three had been established: accelerating connectivity and access in Africa (led by the International Telecommunications Union, the World Bank, and Intel), enhancing and scaling the telecenter movement (led by Microsoft, the International Development Research Center, and the Swiss Agency for Development and Cooperation), and creating a Cyber Development Corps based on south-south cooperation

- *Flagship Advocacy Initiatives.* These partnerships are broad-based alliances working at a policy advocacy level across countries. As of 2007, two Flagship Advocacy Initiatives were in operation promoting assistive technologies for persons with disabilities and free Internet accessibility for schools.

- *Regional Networks.* GAID Regional Networks build on the regional nodes and Digital Diaspora Networks created by the ICT Task Force. As indicated above, any person or organization can propose a Regional Network, but in order to operate under the GAID umbrella, the Steering Committee must endorse it. Regional Networks are responsible for self-organizing and self-funding. To date, they have been launched in the Transition Countries, Asia Pacific, Europe, and Africa. Regional Networks for Latin America and the Caribbean and for the Arab States were slated for launch in late 2007.

- *Stakeholder Networks.* GAID Stakeholder Networks build on the experience of the WSIS in building networks around stakeholder categories. Stakeholder Networks must also be endorsed by the GAID Steering Committee to operate under its umbrella, but beyond that are self-organizing and self-funding. As of September 2007, networks existed for civil society, youth, gender, persons with disabilities, parliamentarians, and local government and regional authorities.

- *Communities of Expertise.* Like the Regional and Stakeholder Networks, GAID Communities of Expertise (CoEs) are self-initiated, self-organizing, and self-funding, but because are formed around specific, concrete deliverables, they must be endorsed and established by mandate of the Steering Committee. A proposed CoE must have at least three members to be endorsed. As of September 2007, there were 17 CoEs across the four GAID focus areas and four cross-cutting themes (gender, youth, local content, and rural development).

In the entrepreneurship focus area, CoEs include ICT Policy and Finance for Social, Community, and Public Entrepreneurship (Association for Progressive Communications (APC)), Enterprises' Competitiveness through the use of ICTs (ILO, ICC, UNCTAD), and Expanding Financial Services to the Un-Banked (Intel Corporation, Visa, Microsoft, WRI, CGAP, Grameen Foundation, Mercy Corps).

Expanding Financial Services to the Un-Banked is one of the primary company-driven CoEs to be established in GAID's first year. According to the CoE website, "the inability to improve one's living conditions or grow one's business because of lack of financing is a major barrier for sustainable growth and job creation. ICTs have a great potential in extending the reach of financial services to the un-banked, particularly those in remote or rural areas. At the same time, ICTs can make microfinance industry more efficient and secure."[113]

Intel, Visa, Microsoft, and their civil society partners are addressing this barrier through an initial two-year workplan, with funding committed for the first year. The plan includes in-depth research on technologies and business models for the delivery of financial services in emerging markets, with a focus on prospects for sustainability and replicability. The partners will disseminate their findings through the GAID platform in order to enable interested parties around the world to avoid duplication of unsuccessful models, and build on successful ones. They may also work together to implement pilot projects based on their research findings.

Results   GAID's first year was one of institution-building, with key milestones including approval of the initiative's business plan, establishment of governance structures, and hiring of Secretariat staff. The initiative has attracted many credible partners, such as the Development Gateway Foundation, Global Knowledge Partnership, Google, Inter-American Development Bank, Peace Corps, UN Foundation, US Agency for International Development, and World Federation of Scientists, in addition to those listed above. Three Flagship Partnership Initiatives, two Flagship Advocacy Initiatives, six Regional Networks and six Stakeholder Networks, and 17 Communities of Expertise are up and running.

As stated in its first annual report, GAID feels it "has acquired strong brand recognition as an innovative and open United Nations initiative, bringing together all key stakeholders around a single networking platform."[114] Formal evaluation of GAID's activities and impacts will be undertaken in 2008, helping to determine the initiative's workplan for 2009-2010. Subsequent evaluations will be undertaken every two years.

■ End Notes

1. Moore, James F. 1996. The Death of Competition: Leadership and Strategy in the Age of Business Ecosystems. New York, NY: HarperCollins.

2. Among others, see Ahmad, Nadim, Paul Schreyer, and Anita Wölfl. 2004. ICT Investment in OECD Countries and its Economic Impacts. Paris: Organisation for Economic Co-operation and Development. Also Waverman, Leonard, Meloria Meschi, and Melvyn Fuss. 2005. "The Impact of Telecoms on Economic Growth in Developing Countries." In Vodafone. 2005. Africa: The Impact of Mobile Phones. Vodafone Moving the Debate Forward Policy Paper Series, No. 3. London: Vodafone.

3. Khalil, Mohsen and Charles Kenny. n.d. The Next Decade of ICT Development: Access, Applications and the Forces of Convergence. Washington, DC: The World Bank Group. Page 7.

4. WRI calls this the "BOP Penalty"; see Hammond, Allen L., William J. Kramer, Robert S. Katz, Julia T. Tran, and Courtland Walker. 2007. The Next Four Billion: Market Size and Business Strategy at the Base of the Pyramid. Washington, DC: World Resources Institute and IFC.

5. Mass protests in China, Thailand, Indonesia, and many other countries have been organized largely by SMS texting. See MobileActive.org. n.d. MobileActive.org: A Resource for Activists using Mobile Technology Worldwide. http://www.mobileactive.org (accessed September 16, 2007).

6. Microsoft. n.d. Developing Knowledge Economies: A Microsoft Perspective on 'ICT for Development.'

7. Hammond et al 2007, p. 3. This figure is in current US dollars. In purchasing power parity terms, which accounts for the differences in costs of living across countries, the equivalent is less than $10 per person per day.

8. Hammond et al 2007, p. 14.

9. Hammond et al 2007, p. 44.

10. The $50 billion estimate is likely a significant understatement of the actual market, for several reasons. First, the national household surveys on which it is based date from the early 2000s, and therefore fail to capture much of the uptake, which has happened since then. Second, the surveys failed to ask many of the right questions (for example, about costs and uses) about the rapidly-changing technologies. See Hammond et al 2007, p. 44.

11. Moore, Gordon E. 1965. "Cramming more components onto integrated circuits." Electronics 38(8).

12. cellular-news. 2006. 2.5 Billion Mobile Phones in Use. http://www.cellular-news.com/story/19223.php (accessed September 16, 2007).

13. Ibid.

14. See, for example, Beck, Thorsten et al. 2003. SMEs, Growth and Poverty: Cross-Country Evidence. Washington, DC: International Bank for Reconstruction and Development/The World Bank. http://www.worldbank.org/research/bios/tbeck/sme.pdf (accessed September 17, 2007).

15. United Nations Commission on the Private Sector and Development. 2004. Unleashing Entrepreneurship: Making Business Work for the Poor. Report to the Secretary-General of the United Nations. New York, NY: United Nations Development Programme (UNDP). Page 13.

16. UNDP 2004. Also see Schneider, Friedrich. 2002. Size and Measurement of the Informal Economy in 110 Countries Around the World. http://rru.worldbank.org/Documents/PapersLinks/informal_economy.pdf (accessed September 17, 2007).

17. World Bank. 2007. Doing Business 2008: Comparing Regulation in 178 Economies. Overview. http://www.doingbusiness.org/documents/DB-2008-overview.pdf (accessed September 26, 2007). Page 1.

18. Ibid., p. 3.

19. Anthony, Regina. 2007. "Cisco, Nortel target small, medium firms." Mint, Delhi/Mumbai, July 18.

20. One Laptop Per Child. n.d. One Laptop Per Child Website. http://laptop.org/ (accessed September 16, 2007).

21. Gladwell, Malcolm. 2000. The Tipping Point: How Little Things Can Make a Big Difference. Boston: Little, Brown & Co.

22. Seely Brown, John, and John Hagel III. 2005. "Innovation Blowback: Disruptive Management Practices from Asia." McKinsey Quarterly 2005(1): 34-45. Pages 35-36.

23. Ibid., p. 36.

24. Khalil, Mohsen and Charles Kenny. n.d. The Next Decade of ICT Development: Access, Applications and the Forces of Convergence. Washington, DC: The World Bank Group. Page 2.

25. Seely Brown and Hagel 2005.

26. Porter, Michael E. and Mark R. Kramer. 2006. "Strategy and Society: The Link Between Competitive Advantage and Corporate Social Responsibility." Harvard Business Review 84(12): 76-92.

27. Tipson, Frederick, Senior Policy Counsel, Microsoft Corporation. 2007. Personal communication (telephone interview), July 2.

28. For more on the Grameen Phone model, see Sullivan, Nicholas. 2007. You Can Hear Me Now: How Microloans and Cell Phone are Connecting the World's Poor to the Global Economy. San Francisco: Jossey-Bass.

29. Indian Business Insight. 2007. "Reliance Communications, Cisco launch services for SMEs (at Rs1,200-10,000 per month on a pay-per-use basis)." TELECOMLIVE, July 31. Also see Anthony 2007.

30. Business News Americas. 2007. "HP plans instant loan option for SMEs." Business News Americas, September 7. Also see "IBM launches financing program for SMEs," Business News Americas, April 19, 2007.

31. See Vodafone. 2007. The Transformational Potential of M-Transactions. Vodafone Moving the Debate Forward Policy Paper Series, No. 6. London: Vodafone. Also Vodafone. n.d. "The impact of mobile phones in the developing world." http://www.vodafone.com/etc/medialib/attachments/cr_downloads.Par.975 34.File.tmp/SIM_Project_download_3.pdf (accessed September 26, 2007).

32. Wishart, Neville A. 2006. Micro-Payment Systems and their Applications to Mobile Networks. An infoDev Report. Washington, DC: The International Bank for Reconstruction and Development/The World Bank.

33. Ibid.

34. Ibid, p 10.

35. Nweke, Remmy. 2007. "Celtel Targets N379bn Investment." Daily Champion, Lagos, Nigeria, August 29.

36. Figures from ITC Limited. n.d. ITC Limited. http://www.itcportal.com (accessed August 27, 2007).

37. Microsoft. 2007b. Microsoft's Public-Private Partnerships Empower Underserved People Around the World. Press release dated March 20. http://www.microsoft.com/presspass/features/2007/mar07/03-20glfamericas.mspx (accessed May 15, 2007).

38. Cisco Systems. n.d. Corporate Overview. http://newsroom.cisco.com/dlls/company_overview.html (accessed September 16, 2007).

39. Farrar, James, Vice President, Corporate Citizenship, SAP AG. 2007. Personal communication (telephone interview), August 16.

40. Business Times. 2006. "Doing its bit to boost SMBs." Business Times, July 22.

41. Business News Americas. 2006. "Cisco Capital expands financing capabilities for channels in LatAm." Business News Americas, December 13.

42. Business News Americas. 2007. "HP plans to produce PCs locally." Business News Americas, September 6.

43. Ghassemi, Marzyeh, Intel Corporation. 2007. Personal communication (telephone interview), August 13, 2007.

44. Beshouri, Christopher P. 2006. "A Grassroots Approach to Emerging Market Consumers." McKinsey Quarterly 4: 61-71. Pages 62-63.

45. Hughes, Nick, and Susan Lonie. 2007. "M-PESA: Mobile Money for the 'Unbanked': Turning Cellphones into 24-Hour Tellers in Kenya." Innovations: Technology Governance Globalization 2(1/2): 63-81. Page 79.

46. Inter Press Service. 2007. Mobile Phones Revolutionise Banking. Article dated May 23. http://www.wbcsd.org/plugins/DocSearch/details.asp?type=DocDet&ObjectID+MjQ3MTU (accessed June 6, 2007).

47. Virgin Unite. n.d. 'Good' Investments. http://www.virginunite.com/view_content.phtml?id=79 (accessed September 21, 2007).

48. Google.org. n.d. Global Economic Development. http://www.google.org/development.html (accessed September 21, 2007).

49. Hammond et al 2007.

50. United Nations Development Programme (UNDP). Forthcoming. Growing Inclusive Markets: Business for Development and Development for Business. New York: UNDP.

51. Community Research and Development Information Service (CORDIS). n.d. Innovation Policy in Europe: Innovation Communications. http://www.cordis.lu/innovation/en/policy/communications/communications1.htm (accessed September 15, 2007).

52. IBM Corporation (IBM). 2006. Expanding the Innovation Horizon: The Global CEO Study 2006. Somers, NY: IBM. http://www.ibm.com/ibm/ideasfromibm/us/enterprise/mar27/ceo_study.html (September 15, 2007). Page 12.

53. IBM 2006, p. 21.

54. Principal Voices. 2005. Business Innovation – Changing Companies for a Changing World. Time, Fortune, CNN, and Shell.

http://www.principalvoices.com/business.html (accessed September 17, 2007).

55. Telecentre.org. n.d. Telecentre.org. http://www.telecentre.org (accessed September 17, 2007).

56. Microsoft. n.d. Community Opportunity: A Digital Village in South Africa is making a difference for local residents and area schools. Redmond, WA: Microsoft.

57. McNamara, Kerry S. 2003. Information and Communication Technologies, Poverty and Development: Learning from Experience. Background paper for the infoDev Annual Symposium, Geneva, Switzerland, December 9-10. Washington, DC: The World Bank. Page 58.

58. Ibid., p. 63.

59. See, for example, Balto, David A. 2000. Standard Setting in a Network Economy. Presentation to the Cutting Edge Antitrust Law Seminars International, February 17. http://www.ftc.gov/speeches/other/standardsetting.shtm (accessed September 17, 2007).

60. Mortimer-Schutts, Ivan. 2007. "The regulatory implications of mobile and financial services convergence." The Transformational Potential of M-Transactions. Vodafone Moving the Debate Forward Policy Paper Series, No. 6. London: Vodafone. See also Nokia. 2007. Call for new regulatory framework to allow greater access to financial services via mobile phones in developing countries. Press release dated July 4. http://www.csrwire.com/PressReleasePrint.php?id=9100 (accessed July 12, 2007).

61. infoDev. n.d. infoDev: Information for Development Program. http://www.infodev.org/en/index.html (accessed September 26, 2007).

62. See, for example, Balto, David A. 2000. Standard Setting in a Network Economy. Presentation to the Cutting Edge Antitrust Law Seminars International, February 17. http://www.ftc.gov/speeches/other/standardsetting.shtm (accessed September 17, 2007).

63. IBM 2006, p. 23.

64. IBM 2006, p. 23.

65. Wishart 2006, p. 24.

66. Hughes, Nick, and Susan Lonie. 2007. "M-PESA: Mobile Money for the 'Unbanked': Turning Cellphones into 24-Hour Tellers in Kenya." Innovations: Technology Governance Globalization 2(1/2): 63-81. Page 65.

67. Ibid., p. 66.

68. Ibid., p. 69.

69. Ibid., p. 80.

70. Dubel, Tim, Senior Manager, Community Affairs, Corporate and Regulatory Affairs, Microsoft Corporation. 2007. Personal communication (telephone interview), August 3.

71. Moore 1996, p. 12.

72. Microsoft. n.d. Local software economy case study: Microsoft Innovation Centers. http://download.microsoft.com/download/6/9/f/69f8c76b-198e-4114-9c12-f0b13e4d7e4e/innovation_center.pdf (accessed May 15, 2007). Page 1.

73. Microsoft. 2007c. Microsoft Unlimited Potential: Enabling Sustained Social and Economic Opportunity for the Next Five Billion People. Company White Paper. Page 6.

74. Harting, Carla, Microsoft Innovation Centers, Microsoft Corporation. 2007. Personal communication (telephone interview), August 10.

75. Microsoft. 2007a. Microsoft Announces Commitment to Promote Sustained Social and Economic Opportunity for the Next 5 Billion People. Press release, April 19.
http://www.microsoft.com/presspass/press/2007/apr07/04-19UPLaunchPR.mspx?pf=true (accessed May 15, 2007).

76. Pallais, Diana, Managing Director, Partnerships for Technology Access, Microsoft Corporation. 2007. Personal communication (telephone interview), August 21.

77. Ibid.

78. Microsoft 2007b.

79. Pallais 2007.

80. Microsoft 2007b.

81. Pallais 2007.

82. Singh, Karamjit. 2006. "SMEs Going Global: Need for SME strategic partnerships." The Edge Financial Daily, December 18. Data from AMI Partners Research.

83. International Finance Corporation (IFC). n.d. SME Toolkit.
http://www.smetoolkit.org (accessed September 27, 2007).

84. ICICI Bank. 2007. ICICI Bank, IFC and IBM launch SME Toolkit in India. Press release dated August 7.

85. IFC. 2007. IBM and IFC Launch a Small Business Toolkit to Create Jobs and Fuel Growth in Underserved and Emerging Markets. Press Release dated July 26.
http://www.smetoolkit.org/smetoolkit/en/content/en/1189/IBM-and-IFC-Launch-a-Small-Business-Toolkit-to-Create-Jobs-and-Fuel-Growth-in-Underserved-and-Emerging-Markets (accessed September 27, 2007).

86. GCR. 2007. Africa Least Developed Countries Initiative Independent Impact Assessment: Final Report. Study commissioned by Cisco Systems, Cisco Learning Institute, the International Telecommunications Union, United Nations Development Programme, and US Agency for International Development. http://www.itu.int/ITU-D/hrd/publications/reports/2007/itci/fr-LDC_Impact_Assessment.pdf (accessed August 31, 2007).

87. Cisco. n.d. About the Initiative.
http://www.cisco.com/web/learning/netacad/digital_divide/ldc/Initiative.html (accessed September 21, 2007).

88. Porter, Michael E. and Mark R. Kramer. 2002. "The Competitive Advantage of Corporate Philanthropy." Harvard Business Review 12(80): 56-68.

89. King Heim, Genelle. n.d. A Tale of Two Partnerships: Networking Academies vs. Netaid: How to create public private partnerships with NGOs that work in emerging markets. Cisco Systems Internal White Paper.

90. Christen, Amy, Vice President of Operations, Corporate Affairs, Cisco Systems. 2007. Personal communication (telephone interview), September 20, 2007.

91. GCR 2007.

92. Cisco Systems. n.d. Gender Fact Sheet – Cisco Networking Academy Program, European and Emerging Markets.

93. GCR 2007.

94. Ibid.

95. Ibid.

96. Ibid.

97. King Heim, Genelle, Senior Manager, Public Sector Sales, Emerging Markets, Cisco Systems. Personal communication (telephone interview), September 4, 2007.

98. GCR 2007.

99. King Heim n.d.

100. 90% of Cisco's revenues come from these partners. Cisco Systems. n.d. Corporate Overview.
http://newsroom.cisco.com/dlls/company_overview.html (accessed September 16, 2007).

101. Christen 2007.

102. EITI. n.d. About EITI. http://www.eitransparency.org/section/abouteiti (accessed September 5, 2007).

103. Leipprand, Tobias and Philipp Rusch. 2007. Advancing the Extractive Industries Transparency Initiative (EITI). Study conducted in partial fulfillment of the requirements of the Master in Public Policy (MPP) degree at Harvard University's Kennedy School of Government, commissioned by Dr. Graham Baxter, Vice President, Corporate Responsibility, BP plc and Member of the Board of Directors of the EITI. Cambridge, MA: Kennedy School of Government. Page 2.

104. Farrar 2007 .

105. SAP. 2006. SAP Annual Report 2006.
http://www.sap.com/germany/company/investor/reports/gb2006/en/responsibility/corporate-citizenship-3.html (accessed August 29, 2007).

106. Extractive Industries Transparency Initiative (EITI). 2006. Report of the International Advisory Group.
http://www.eitransparency.org/files/document/eiti_iag_report_english.pdf (accessed December 11, 2007). Also see Leipprand and Rusch 2007, p. 20-21.

107. Chatterjee, Amit, Senior Vice President, Governance, Risk, and Compliance Business Unit, SAP AG. 2007. Personal communication (telephone interview), August 16.

108. Chatterjee 2007.

109. International Telecommunications Union. n.d. Basic Information: About WSIS. http://www.itu.int/wsis/basic/about.html (accessed September 29, 2007).

110. Ibid.

111. United Nations Economic and Social Council (ECOSOC). 2007. First annual report of the Global Alliance for Information and Communication Technologies and Development. Item 6 and 7(f) on the provisional agenda, Substantive Session of 2007, Geneva, July 2-27. Page 3.

112. Ibid.

113. GAID. n.d. Expanding Financial Services to the Unbanked. http://www.un-gaid.org/en/node/162 (accessed September 26, 2007).

114. ECOSOC 2007, p. 1.

■ Key References

Ahmad, Nadim, Paul Schreyer, and Anita Wölfl. 2004. ICT Investment in OECD Countries and its Economic Impacts. Paris: Organisation for Economic Co-operation and Development.

Anthony, Regina. 2007. "Cisco, Nortel target small, medium firms." Mint, Delhi/Mumbai, July 18.

Balto, David A. 2000. Standard Setting in a Network Economy. Presentation to the Cutting Edge Antitrust Law Seminars International, February 17. http://www.ftc.gov/speeches/other/standardsetting.shtm (accessed September 17, 2007).

Beck, Thorsten et al. 2003. SMEs, Growth and Poverty: Cross-Country Evidence. Washington, DC: International Bank for Reconstruction and Development/The World Bank. http://www.worldbank.org/research/bios/tbeck/sme.pdf (accessed September 17, 2007).

Beshouri, Christopher P. 2006. "A Grassroots Approach to Emerging Market Consumers." McKinsey Quarterly 4: 61-71.

Business News Americas. 2007. "HP plans to produce PCs locally." Business News Americas, September 6.

_____. 2006. "Cisco Capital expands financing capabilities for channels in LatAm." Business News Americas, December 13.

Business Times. 2006. "Doing its bit to boost SMBs." Business Times, July 22.

cellular-news. 2006. 2.5 Billion Mobile Phones in Use. http://www.cellular-news.com/story/19223.php (accessed September 16, 2007).

Cisco Systems. n.d. Corporate Overview. http://newsroom.cisco.com/dlls/company_overview.html (accessed September 16, 2007).

Community Research and Development Information Service (CORDIS). n.d. Innovation Policy in Europe: Innovation Communications. http://www.cordis.lu/innovation/en/policy/communications/communications1.htm (accessed September 15, 2007).

Economist Intelligence Unit. 2006. Latin America: IBM goes for growth. Economist Intelligence Unit, Country Monitor, August 7.

Extractive Industries Transparency Initiative (EITI). 2006. Report of the International Advisory Group. http://www.eitransparency.org/files/document/eiti_iag_report_english.pdf (accessed December 11, 2007).

_____. n.d. About EITI. http://www.eitransparency.org/section/abouteiti (accessed September 5, 2007).

Farrar, James, Vice President, Corporate Citizenship, SAP AG. 2007. Personal communication (telephone interview), August 16.

GCR. 2007. Africa Least Developed Countries Initiative Independent Impact Assessment: Final Report. Study commissioned by Cisco Systems, Cisco Learning Institute, the International Telecommunications Union, United Nations Development Programme, and US Agency for International Development. http://www.itu.int/ITU-D/hrd/publications/reports/2007/itci/fr-LDC_Impact_Assessment.pdf (accessed August 31, 2007).

Gladwell, Malcolm. 2000. The Tipping Point: How Little Things Can Make a Big Difference. Boston: Little, Brown & Co.

Google.org. n.d. Global Economic Development. http://www.google.org/development.html (accessed September 21, 2007).

Hammond, Allen L., William J. Kramer, Robert S. Katz, Julia T. Tran, and Courtland Walker. 2007. The Next Four Billion: Market Size and Business Strategy at the Base of the Pyramid. Washington, DC: World Resources Institute and IFC.

Hughes, Nick, and Susan Lonie. 2007. "M-PESA: Mobile Money for the 'Unbanked': Turning Cellphones into 24-Hour Tellers in Kenya." Innovations: Technology Governance Globalization 2(1/2): 63-81.

IBM Corporation (IBM). 2006. Expanding the Innovation Horizon: The Global CEO Study 2006. Somers, NY: IBM. http://www.ibm.com/ibm/ideasfromibm/us/enterprise/mar27/ceo_study.html (September 15, 2007).

ICICI Bank. 2007. ICICI Bank, IFC and IBM launch SME Toolkit in India. Press release dated August 7.

Indian Business Insight. 2007. "Reliance Communications, Cisco launch services for SMEs (at Rs1,200-10,000 per month on a pay-per-use basis)." TELECOMLIVE, July 31.

infoDev. n.d. infoDev: Information for Development Program. http://www.infodev.org/en/index.html (accessed September 26, 2007).

International Finance Corporation (IFC). 2007. IBM and IFC Launch a Small Business Toolkit to Create Jobs and Fuel Growth in Underserved and Emerging Markets. Press release dated July 26. http://www.smetoolkit.org/smetoolkit/en/content/en/1189/IBM-and-IFC-Launch-a-Small-Business-Toolkit-to-Create-Jobs-and-Fuel-Growth-in-Underserved-and-Emerging-Markets (accessed September 27, 2007).

ITC Limited. n.d. ITC Limited. http://www.itcportal.com (accessed August 27, 2007).

Khalil, Mohsen and Charles Kenny. n.d. The Next Decade of ICT Development: Access, Applications and the Forces of Convergence. Washington, DC: The World Bank Group.

Le Gras, Gilbert. 2006. "World Bank, IBM draft Web tipsheet for small firms." Reuters News, September 27.

Leipprand, Tobias and Philipp Rusch. 2007. Advancing the Extractive Industries Transparency Initiative (EITI). Study conducted in partial fulfillment of the requirements of the Master in Public Policy (MPP) degree at Harvard University's Kennedy School of Government, commissioned by Dr. Graham Baxter, Vice President, Corporate Responsibility, BP plc and Member of the Board of Directors of the EITI. Cambridge, MA: Kennedy School of Government.

Lukács, Edit. n.d. The Economic Role of SMEs in [The] World Economy, Especially in Europe. University of Miskolc, Hungary. http://www.uni-miskolc.hu/uni/res/kozlemenyek/2005/pdf/lukacs.doc (accessed September 17, 2007).

McNamara, Kerry S. 2003. Information and Communication Technologies, Poverty and Development: Learning from Experience. Background paper for the infoDev Annual Symposium, Geneva, Switzerland, December 9-10. Washington, DC: The World Bank.

Microsoft. 2007a. Microsoft Announces Commitment to Promote Sustained Social and Economic Opportunity for the Next 5 Billion People. Press release, April 19. http://www.microsoft.com/presspass/press/2007/apr07/04-19UPLaunchPR.mspx?pf=true (accessed May 15, 2007).

_____. 2007b. Microsoft's Public-Private Partnerships Empower Underserved People Around the World. Press release dated March 20. http://www.microsoft.com/presspass/features/2007/mar07/03-20glfamericas.mspx (accessed May 15, 2007).

_____. 2007c. Microsoft Unlimited Potential: Enabling Sustained Social and Economic Opportunity for the Next Five Billion People. Company White Paper.

_____. n.d. Developing Knowledge Economies: A Microsoft Perspective on 'ICT for Development.'

_____. n.d. Local software economy case study: Microsoft Innovation Centers. http://download.microsoft.com/download/6/9/f/69f8c76b-198e-4114-9c12-f0b13e4d7e4e/innovation_center.pdf (accessed May 15, 2007).

MobileActive.org. n.d. MobileActive.org: A Resource for Activists using Mobile Technology Worldwide. http://www.mobileactive.org (accessed September 16, 2007).

Moore, Gordon E. 1965. "Cramming more components onto integrated circuits." Electronics 38(8).

Moore, James F. 1996. The Death of Competition: Leadership and Strategy in the Age of Business Ecosystems. New York, NY: HarperCollins.

Mortimer-Schutts, Ivan. 2007. "The regulatory implications of mobile and financial services convergence." The Transformational Potential of M-Transactions. Vodafone Moving the Debate Forward Policy Paper Series, No. 6. London: Vodafone.

Nweke, Remmy. 2007. "Celtel Targets N379bn Investment." Daily Champion, Lagos, Nigeria, August 29.

One Laptop Per Child. n.d. One Laptop Per Child Website. http://laptop.org/ (accessed September 16, 2007).

Porter, Michael E. and Mark R. Kramer. 2006. "Strategy and Society: The Link Between Competitive Advantage and Corporate Social Responsibility." Harvard Business Review 84(12): 76-92.

_____. 2002. "The Competitive Advantage of Corporate Philanthropy." Harvard Business Review 12(80): 56-68.

Principal Voices. 2005. Business Innovation – Changing Companies for a Changing World. Time, Fortune, CNN, and Shell. http://www.principalvoices.com/business.html (accessed September 17, 2007).

SAP. 2006. SAP Annual Report 2006. http://www.sap.com/germany/company/investor/reports/gb2006/en/responsibility/corporate-citizenship-3.html (accessed August 29, 2007).

Schneider, Friedrich. 2002. Size and Measurement of the Informal Economy in 110 Countries Around the World. http://rru.worldbank.org/Documents/PapersLinks/informal_economy.pdf (accessed September 17, 2007).

Seely Brown, John, and John Hagel III. 2005. "Innovation Blowback: Disruptive Management Practices from Asia." McKinsey Quarterly 2005(1): 34-45.

Singh, Karamjit. 2006. "SMEs Going Global: Need for SME strategic partnerships." The Edge Financial Daily, December 18.

SouthAfrica.info. 2007. The South African SME toolkit. SouthAfrica.info, September 6.

Sullivan, Nicholas. 2007. You Can Hear Me Now: How Microloans and Cell Phone are Connecting the World's Poor to the Global Economy. San Francisco: Jossey-Bass.

Telecentre.org. n.d. Telecentre.org. http://www.telecentre.org (accessed September 17, 2007).

Tipson, Frederick, Senior Policy Counsel, Microsoft Corporation. 2007. Personal communication (telephone interview), July 2.

United Nations Development Programme (UNDP). 2004. Unleashing Entrepreneurship: Making Business Work for the Poor. Report of the Commission on the Private Sector and Development to the Secretary-General of the United Nations. New York, NY: UNDP.

Virgin Unite. n.d. 'Good' Investments. http://www.virginunite.com/view_content.phtml?id=79 (accessed September 21, 2007).

Vodafone. 2007. The Transformational Potential of M-Transactions. Vodafone Moving the Debate Forward Policy Paper Series, No. 6. London: Vodafone.

Vodafone. 2005. Africa: The Impact of Mobile Phones. Vodafone Moving the Debate Forward Policy Paper Series, No. 3. London: Vodafone.

Waverman, Leonard, Meloria Meschi, and Melvyn Fuss. 2005. "The Impact of Telecoms on Economic Growth in Developing Countries." In Vodafone. 2005. Africa: The Impact of Mobile Phones. Vodafone Moving the Debate Forward Policy Paper Series, No. 3. London: Vodafone.

Wishart, Neville A. 2006. Micro-Payment Systems and their Applications to Mobile Networks. An infoDev Report. Washington, DC: The International Bank for Reconstruction and Development/The World Bank.

World Bank. 2007. Doing Business 2008: Comparing Regulation in 178 Economies. Overview. http://www.doingbusiness.org/documents/DB-2008-overview.pdf (accessed September 26, 2007).

Xinhua News Agency. 2007. IBM expands footprints in India for more SMB clients. Xinhua News Agency, September 6.

■ Publications in the CSR Initiative's Economic Opportunity Series

2007

Expanding Economic Opportunity: The Role of Large Firms
Beth Jenkins

The Role of the Automotive Sector in Expanding Economic Opportunity
Forthcoming

The Role of the Extractive Sector in Expanding Economic Opportunity
Holly Wise and Sokol Shtylla

The Role of the Financial Services Sector in Expanding Economic Opportunity
Christopher N. Sutton and Beth Jenkins

The Role of the Food and Beverage Sector in Expanding Economic Opportunity
Marc Pfitzer and Ramya Krishnaswamy

The Role of the Health Care Sector in Expanding Economic Opportunity
Adeeb Mahmud and Marcie Parkhurst

The Role of the Information and Communications Technology Sector in Expanding Economic Opportunity
William J. Kramer, Beth Jenkins, and Robert S. Katz

The Role of the Tourism Sector in Expanding Economic Opportunity
Caroline Ashley, Peter DeBrine, Amy Lehr, and Hannah Wilde

The Role of the Utilities Sector in Expanding Economic Opportunity
Christopher N. Sutton

Business Linkages: Lessons, Opportunities, and Challenges
Beth Jenkins, Anna Akhalkatsi, Brad Roberts, and Amanda Gardiner

Building Linkages for Competitive and Responsible Entrepreneurship: Innovative Partnerships to Foster Small Enterprise, Promote Economic Growth, and Reduce Poverty in Developing Countries
Jane Nelson

2006

Tanzania: Lessons in Building Linkages for Competitive and Responsible Entrepreneurship
Tamara Bekefi

Viet Nam: Lessons in Building Linkages for Competitive and Responsible Entrepreneurship
Tamara Bekefi

Leveraging the Development Impact of Business in the Fight against Poverty
Jane Nelson

◼ About the Authors

William J. Kramer is principal of The Global Challenge Network, LLC, an executive education and training company founded in 2007. From 2001 to mid-2007, he worked with World Resources Institute in a variety of posts, including Director Education and Training for the Markets & Enterprise Program, Deputy Director of the Development through Enterprise project, and Senior Fellow. During his WRI tenure, he was involved in all aspects of the Institute's work on pro-poor business strategies. Prior to WRI, he founded The Knowledge Initiative, Inc., a non-profit organization which explored the relationship of new knowledge creation and economic development. Through this non-governmental organization, he did extensive project field work for three years in South Africa, Cote d'Ivoire, Kenya, and Central Europe. Mr. Kramer's work in the non-profit arena followed a 30-year career as an entrepreneur, principally in the book industry. He owned and managed Sidney Kramer Books, for over 50 years the world's leading bookstore for politics, economics, and area studies. He also founded Kramerbooks & afterwords, the original bookstore/café, in Washington, D.C. Mr. Kramer is a frequent lecturer at colleges and universities around the world and a seminar leader for executive education on business engagement with low-income communities. As an international development consultant, Mr. Kramer has worked with global companies, NGOs, and think tanks.

Beth Jenkins is Director of Policy Studies of the Corporate Social Responsibility Initiative at Harvard's Kennedy School of Government. She leads the Initiative's Economic Opportunity Program, a program of research and engagement focused on the role of the private sector in collaborative action to expand economic opportunity in developing countries. Before joining the CSR Initiative, she was responsible for developing and disseminating risk management concepts and capabilities at Booz Allen Hamilton, the consultancy, with special emphasis on the strategic risks companies face as a result of social, environmental, and international development issues. Beth also spent four years working on base-of-the-pyramid business models for companies in the technology and housing sectors at the World Resources Institute and Ashoka, both in Washington DC. She is a graduate of Yale University and Harvard's Kennedy School of Government.

Robert S. Katz is a Research Analyst with the Markets and Enterprise Program of the World Resources Institute. Robert researches, conducts training, and writes about "base of the pyramid" business approaches to poverty. He is the co-founder and Managing Editor of www.NextBillion.net, a web site and blog about enterprise and development. As a principal analyst of household survey data and co-author for The Next 4 Billion: Market Size and Business Strategy at the Base of the Pyramid (March, 2007), he studied BOP market structure and spending patterns extensively. Robert holds a B.A. in Political Economy from Georgetown University.

About the World Resources Institute

The World Resources Institute is an environmental and international development think tank that goes beyond research to create practical ways to protect the Earth and improve people's lives. WRI is the first environmental organization to engage the business sector in a new way of thinking about poverty alleviation. Our work is influencing the way business leaders think about markets, profit, poverty and the environment. WRI's Markets and Enterprise Program produces economically sound policies, bold vision, and practical solutions in collaboration with the business community. The program encourages the private sector to incorporate environmental and social opportunities into core business strategies. For more information, see **www.wri.org/business**

About the Corporate Social Responsibility (CSR) Initiative

Under the direction of John Ruggie (Faculty Chair) and Jane Nelson (Director), the CSR Initiative at Harvard's Kennedy School of Government is a multi-disciplinary and multi-stakeholder program that seeks to study and enhance the public contributions of private enterprise. It explores the intersection of corporate responsibility, corporate governance, and public policy, with a focus on the role of business in addressing global development issues. The Initiative undertakes research, education, and outreach activities that aim to bridge theory and practice, build leadership skills, and support constructive dialogue and collaboration among different sectors. It was founded in 2004 with the support of Walter H. Shorenstein, Chevron Corporation, The Coca-Cola Company, and General Motors and is now also supported by Abbott Laboratories, Cisco Systems, Inc., InBev, InterContinental Hotels Group, Microsoft Corporation, Pfizer, Shell Exploration and Production, and the United Nations Industrial Development Organization (UNIDO). Visit the Initiative's homepage at **http://www.ksg.harvard.edu/m-rcbg/CSRI**