# 2 CONSTRAINTS STANDING IN THE WAY

**The Philippines:**
By taking over water operations from the Filipino government, Manila Water faced challenging hurdles due to poor law enforcement.
Photo: Manila Water

## Market conditions in poor areas can often look bad

for business. Functioning, well-developed markets have adequate infrastructure, steady flows of information and a regulatory environment that is friendly to business while limiting downsides. Market participants have skills, knowledge and access to financial products and services. But where poverty prevails, most of these factors are lacking—excluding poor people from meaningful participation in markets, and excluding businesses from the markets of the poor.

The case studies in this report show how these limitations can affect businesses trying to engage the poor. They illustrate five general constraints:

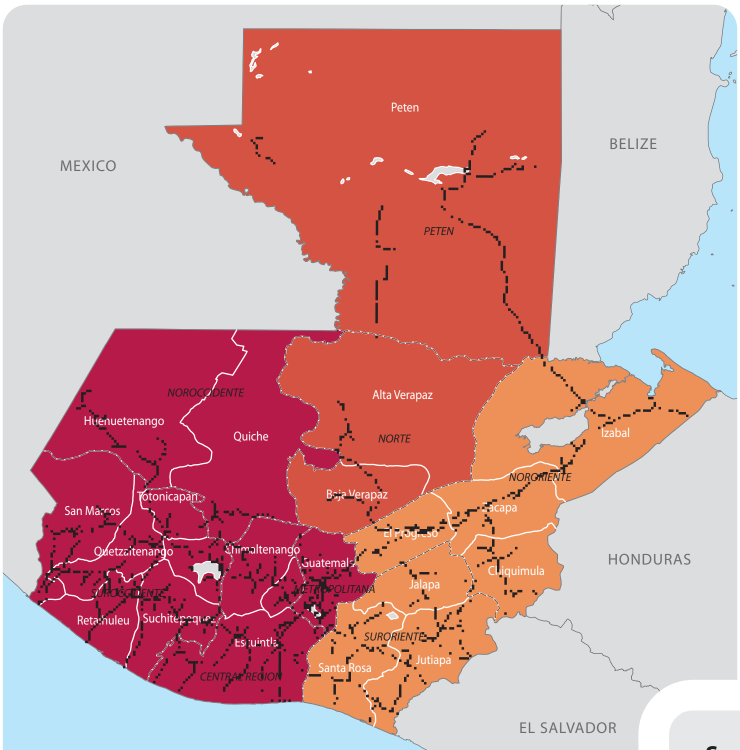
- **Limited market information.** Businesses know too little about poor people—what they prefer, what they can afford and what products and capabilities they have to offer as employees, producers and business owners.
- **Ineffective regulatory environments.** The markets of the poor lack regulatory frameworks that allow business to work. Rules are not enforced. People lack

## Box 2.1. Overlapping market constraints in Guatemala

Given geography's importance in wealth disparities, inclusive business models must analyse the poor's access to goods and services geospatially. A closer look at access to credit in Guatemala shows how regional constraints in market environments might affect market access (see box 1.2). Because the country's road network remains largely underdeveloped, with only about 1.2 kilometres of paved road per 1,000 people, many of Guatemala's poor rural villages are fairly isolated. (By comparison, Costa Rica, with a population about half of Guatemala's, has about 11.1 kilometres of road per 1,000 people.) Overall, 13% of Guatemalan households lack access to motorable roads. But this figure rises to almost 20% for households in the north, northwest and northeast, among the poorest in the country.[1]

In this example two constraints seem to overlap: physical infrastructure and access to credit. The same patterns will likely appear for other constraints, such as market information. In the markets of the poor, the constraints can accompany and reinforce each other: roads reach out to areas with more economic activity, and where roads exist, the economy grows. Other areas are left out. These interlocking constraints can create severe challenges for the poor and for businesses alike.

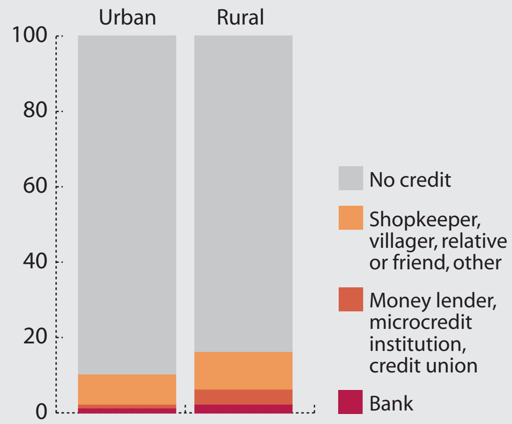
1. World Bank 2003.




**Market heat map: Overlay of poverty levels and roads and access to credit among households living on less than $2 a day in Guatemala (%)**


Note: Black lines in the map represent asphalt roads.
Source: Based on Instituto Nacional de Estadística de Guatemala 2000 and Henninger and Snel 2002. Map produced by OCHA ReliefWeb, 5 February 2008.

**Sources of credit available to households living on less than $2 a day, 2000 (%)**



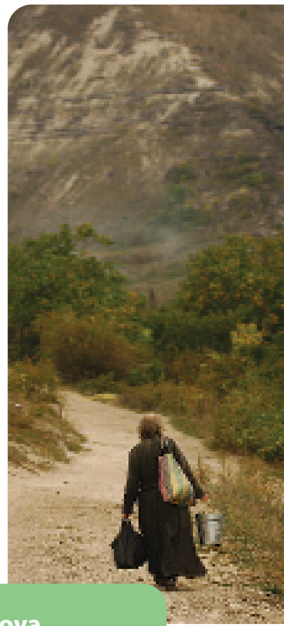
access to the opportunities and protections afforded by a functioning legal system.

- **Inadequate physical infrastructure.** Transportation is complicated by the lack of roads and supporting infrastructure. Water, electricity, sanitation and telecommunications networks are lacking.
- **Missing knowledge and skills.** Consumers may not know the uses and benefits of particular products or may lack the skills to use them effectively. Suppliers, distributors and retailers may lack the knowledge and skills to deliver quality products and services consistently, on time and at a set cost.
- **Restricted access to financial products and services.** Lacking credit, poor producers and consumers cannot finance investments or large purchases. Lacking insurance, they cannot protect what meagre assets and income they may have against shocks, such as illness, drought and theft. And lacking transactional banking services, they face insecure and expensive financial management.

Long identified as major causes of persistent poverty, these constraints have been discussed extensively in the development literature.[1] But how do they appear to businesses? And how might each constraint affect the development of inclusive business models? *Unleashing Entrepreneurship* showed that 'building a sound private sector requires a strong foundation in the global and domestic macro-environments, physical and social infrastructure and rule of law'.[2] It identified access to finance, skills and knowledge and a level playing field for business as the pillars of entrepreneurship. The case studies discussed here confirm those findings: entrepreneurship is severely hampered when the conditions for functioning markets are missing.

Rural villages and urban slums are the primary market environments of the poor. Globally, rural poverty accounts for nearly 75% of extreme poverty (a per capita income of less than $1 a day). But poverty also exists in cities, where it is concentrated in slums. One city dweller in three, or 1 billion people, lives in a slum.[3]

In these contexts, structural challenges keep the poor and businesses from realizing their mutual opportunities. The constraints typically coexist, often reinforcing one another. For example, market information depends on existing physical infrastructure for its flow and on knowledge and skills for its interpretation. Similarly, financial services require that rules and regulations be enforced.



**Moldova**
Photo: UNICEF/ Julie Pudlowski

## MARKET INFORMATION

Entrepreneurs often lack detailed information about markets in poor areas, especially rural ones. These areas frequently lack intermediaries—such as market research or rating services—to consolidate or distribute such information, making it difficult to assess the viability of business ventures.

For example, when Tsinghua Tongfang sought to build a computer for rural households, it did not know the specific agricultural software that would be most useful to consumers. It developed a website with batch capability, for an online community of open-source coders, farmers and agricultural experts. Similarly, when Barclays Bank started its business line for low-income clients in Ghana, the bank had difficulty finding information on the banking services those clients demanded, the volume of their savings and credit needs and the prices they would be willing to pay. Now, with more information about the customers' banking needs, Barclays is better able to develop marketable products—and to price-in premiums and manage risk more effectively. Only by overcoming information asymmetries about pricing, quality and sizing needs of the poor will businesses succeed in these markets.

## Box 2.2. Market heat maps

A lack of accessible information about the poor and the places where they live is one of the main constraints on inclusive business models. National statistical offices, development banks and donors have information from household surveys and market studies—but it remains buried in databases. Making such information more readily accessible can reduce the uncertainty of entering these markets.

Market heat maps illustrate how much the poor participate in markets. They show access to goods and services in selected sectors and countries, and they show how the goods and services are provided. Behind the maps lies a rich literature and extensive practice in poverty mapping. The maps also complement ongoing efforts to obtain detailed data on low-income consumers—for example, an Inter-American Development Bank initiative to compile country-specific information on income groups in Latin American and the Caribbean, and a report by the International Finance Corporation and the World Resources Institute that highlights the market opportunity represented by the poor and near-poor (Hammond and others 2007).

An analytical tool, the heat maps provide detailed information on the nature and composition of markets pertinent to human development. Their visually compelling combination of information allows for a quick read of market inclusiveness and helps to:

➜ **Reveal unmet demand for the poor as consumers and unrealized opportunities for the poor as producers.** Market heat maps show how much the potential consumers for a good or service have (or have not) been reached. They indicate how inclusive markets are for different consumer groups, poor and nonpoor. That information can be translated into unrealized opportunities for expansion and innovation in product and service delivery. In addition, the maps show how the poor are marginalized on the supply side of markets, reflecting unrealized opportunities both for poor people and for society as a whole.

➜ **Assess market inclusiveness.** Market heat maps can shed light on market inclusiveness along spatial dimensions, such as geographic regions, urban versus rural and the like—pinpointing unrealized opportunities.

➜ **Clarify the supply structure.** Market heat maps can also illustrate supply structure, showing the presence and relative market shares of different suppliers. Suppliers can be differentiated by ownership (public, nongovernmental organizations, private), size (multi-national corporations, micro, small and medium-sized enterprises) or any other relevant criterion.

## REGULATORY ENVIRONMENT

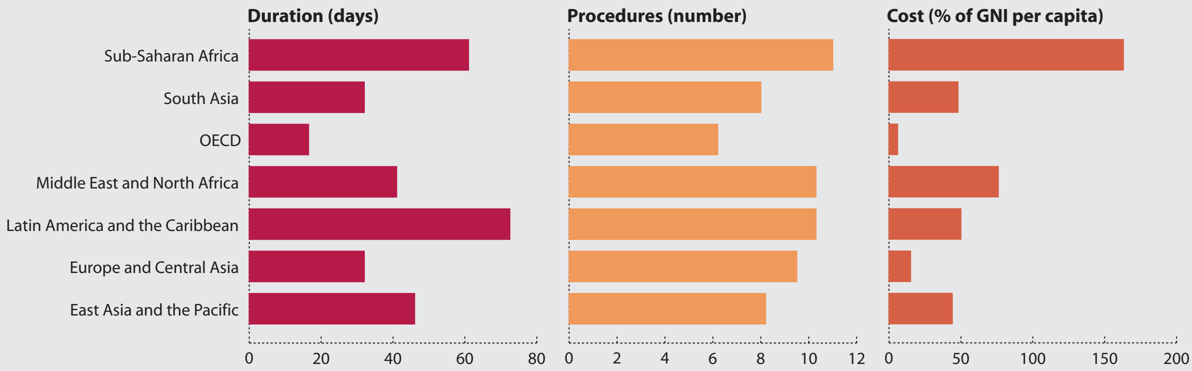
Regulatory systems in poor areas are often not developed enough to support business entry, growth or development. In Poland, the utility company Luban struggles with the absence of a coherent policy framework to support bioenergy development, including better integration of energy and agricultural policies. VidaGas, an energy company in Mozambique, needs a regulatory framework to ensure consumer safety and quality control—a change that would send important signals to investors and other companies—in order to fully establish liquefied petroleum gas as an alternative fuel in its market.

Regulations in developing countries often contain too much red tape. Complying with them takes time and money, imposing excessive opportunity costs, while payments—such as registration and licensing fees—impose significant direct costs. In Senegal, bureaucratic barriers and an unsupportive business environment required Chaka Money Express and its affiliates to go through cumbersome legal procedures to acquire money-transfer licenses.

It can be much more time-consuming and expensive to open a business in regions with higher proportions of developing countries (figure 2.1). In Latin America and the Caribbean, opening a business takes an average of 73 days and costs about 48% of per capita income, while in Organisation for Economic Co-operation and Development countries, it takes on average just 17 days and about 5% of per capita income.

Many developing country businesses operate informally because they cannot afford to comply with regulations. As UNDP's Legal Empowerment of the Poor Initiative has pointed out, economic policies and commercial law in most developing countries usually have been geared to large enterprises, excluding vast numbers of poor

**Figure 2.1. Average time and cost to open a business, by region**




Source: World Bank Doing Business database.

business owners. Poorer business owners rarely benefit from formal legal structures.[4] Informality, however, creates problems for business links. Formal companies find it difficult to procure products and services from informal organizations without binding contracts. And banks and financial services find it difficult to work with poor people who cannot document their identity.

Even more challenging than inadequate regulatory environments are situations in which laws are habitually broken and not enforced. In such situations, even large enterprises can find it difficult to handle major undertakings. When Manila Water took over water operations from the Philippine government, it incurred substantial losses initially because water from the pipelines was regularly stolen and sold. Environments of insecurity and crisis are certainly among the most challenging for business.

## PHYSICAL INFRASTRUCTURE

A lack of physical infrastructure adds substantially to the high transaction costs of doing business with the poor. Especially in rural areas, but also in urban slums, poor people often lack connections to important transportation or data transfer networks. Other missing infrastructure includes logistics, dams and irrigation, water and electricity supply and sanitation and waste collection.[5]

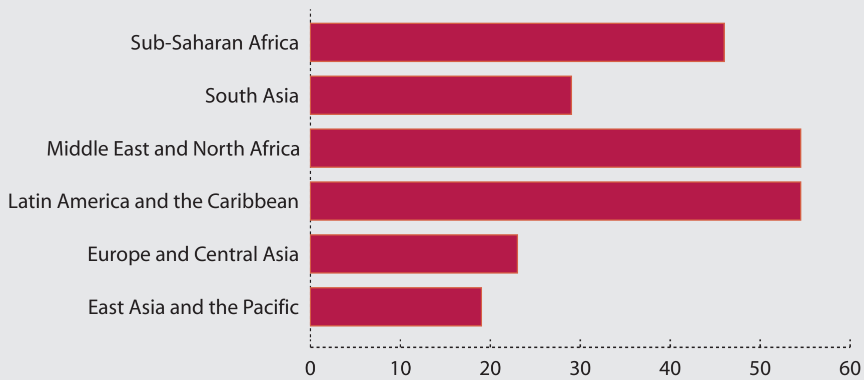
**Democratic Republic of Congo:** Rural areas often lack infrastructure that provides poor people with access to water and sanitation. Photo: UNICEF/Julie Pudlowski

**Vietnam**
Photo: Adam Rogers/UNCDF

Many people in developing countries are not connected to functioning roads. The 53 countries classified as low-income by the World Bank have 239,000 kilometres of roads, while the 60 high-income countries 3.6 million kilometres.[6] When Celtel deployed its telecommunications network in the Democratic Republic of Congo, only one of the country's ten provincial capitals was accessible by road, three by river and six by air. When EQI founded the Siwa Sustainable Development Initiative in Egypt's western desert, it faced higher costs and logistics complicated by the isolation and inaccessibility of the oasis. In Mauritania, where the camel dairy Tiviski was founded, roads were missing, as was the logistics infrastructure for dairy production in a hot desert climate (such as collection hubs with refrigeration).

According to the World Bank's Investment Climate Assessments, physical infrastructure is a major obstacle to business operation and growth in regions with higher proportions of developing countries (figure 2.2).[7]

**Figure 2.2. Businesses see infrastructure as a serious constraint**




Note: Figure shows the share of firms that report the use of electricity, telecommunications or transportation as 'major' or 'severe' obstacles to the operation and growth of their business.
Source: Based on The World Bank 2004 Investment Climate Surveys.

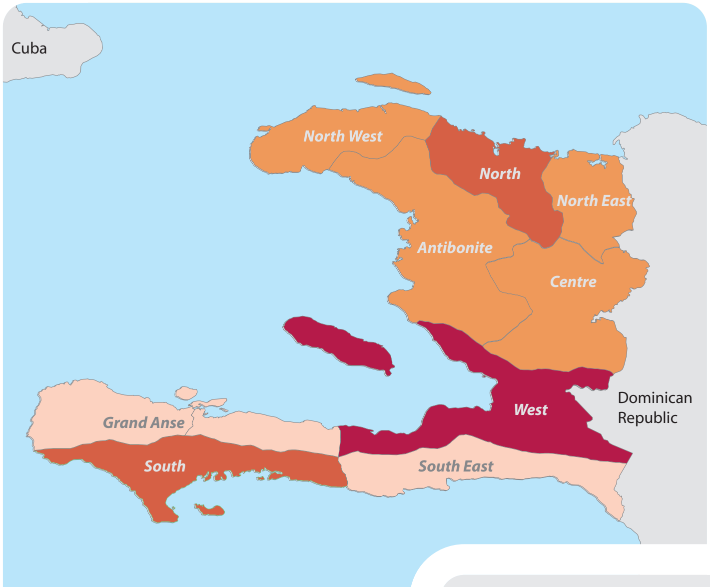
## Box 2.3. Market constraints affect market structure: Haiti's water market

Constraints in the market environment affect market structure. Small and informal providers often serve areas where larger, formal enterprises will not operate because of high costs. Take Haiti's water market. Water distribution depends heavily on a functioning infrastructure, but building an extensive network of pipelines is expensive. Haiti is one of the world's 50 least developed countries, ranking 146 of 177 countries on UNDP's human development index.[1] In 2001, 78% of Haiti's total population—and about 86% of its rural population—lived on less than $2 a day.[2] Low economic growth, natural disasters, political instability and poor governance have eroded basic public services.[3] As the heat map shows, access to piped water networks is generally very limited: only about a third of Haiti's urban poor and fewer than a third of its rural poor have access.[4]

The lack of functional infrastructure and piped water delivery has resulted in a vibrant 'other' water market, at least in urban areas. There the 45% of the population living on less than $2 a day has access to water from trucks, bottled water and water by bucket—services typically provided by small, informal vendors.

The same trend appears in many other countries where water provision through pipelines is lacking or nonexistent. Recent estimates suggest that more than 1 billion people, or about a sixth of the world's population, lack access to improved water sources. Tapping the 'other' private sector could be a practical way to increase access to safe drinking water.

1. UNDP 2007. 2. World Bank 2006, 2007a. 3. World Bank 1998. 4. These figures may differ from those quoted in other literature, mainly because of the different units of analysis and methodology. 5. UNDP 2006; World Bank 2007a. Data on access to an improved water source refer to the percentage of the population with reasonable access (availability of at least 20 litres per person per day within 1 kilometre of dwelling) to an adequate amount of water from a source such as a household connection, public standpipe, borehole, protected well or spring and rainwater collection. Unimproved water sources include vendors, tanker trucks and unprotected wells and springs.

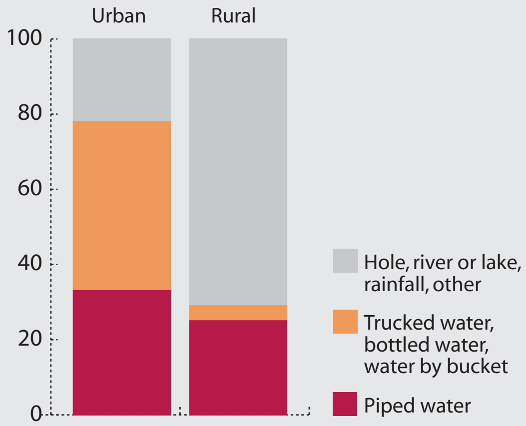



**Market heat map: Access to water in Haiti (%)**

Households with a per capita income of less than $2 a day, 2001

Note: Access to water includes access both to private piped water (inside and outside the house, including from wells inside the house) and to public piped water. Darker shades represent greater access. Source: Based on Institut Haïtien de Statistique et d'Informatique 2001. Map produced by OCHA ReliefWeb.

**Sources of water available to households living on less than $2 a day, 2001 (%)**



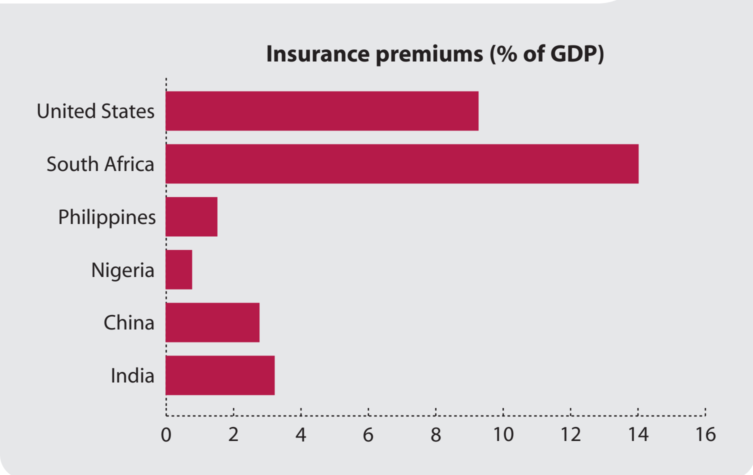
## KNOWLEDGE AND SKILLS

Knowledge and skills are essential for the poor to be included in markets as consumers, employees and producers. But poor people often have limited education or access to information. Formal education among the poor, especially the rural poor, is extremely low. In the least developed countries, only 53% of those over age 15 are literate.[8] Years of schooling vary widely, but the quantity and quality of education are generally significantly lower among the poor. Moreover, the 'digital divide' is wide: only 4% of Africans had access to the Internet in 2005, while many do not even have a radio.[9]

As consumers, poor people may not recognize or be able to leverage a product's use or value. In the example of Tsinghua Tongfang, people in rural China are not accustomed to using and benefiting from computers and other technological tools, so their demand for such products is low—until they learn how to benefit from them. As Jun Li, vice-general manager of the Tsinghua Tongfang computer department, said, 'The first thing we have to do is to let farmers know that computers are useful, and the second thing is to teach them how to use a computer.'

Gaps in human capital and skills can also limit poor people's productivity as employees, preventing them from becoming successful producers in their own right. When people lack basic skills and knowledge, businesses have difficulty ensuring good production standards. The Integrated Tamale Fruit Company produces certified organic mangoes with outgrowers in Ghana, but when the business started, farmers were not familiar with organic farming standards and could not consistently meet high quality standards.

**Figure 2.3. Insurance penetration is low in most developing countries**




Source: Swiss Re 2007 for the United States, Sigma Insurance for emerging markets.

## ACCESS TO FINANCIAL SERVICES

Financial products and services reduce risk and transaction costs and create stability. Credit and insurance reduce vulnerability and allow businesses to seize opportunities. Savings and transactional banking services help manage resources more efficiently. Improved access to basic financial services is especially critical for emerging and potential entrepreneurs—and, by extension, for larger or better-established businesses to buy from or sell to those entrepreneurs.

Credit enables small and medium-sized enterprises to enter the marketplace, scale up production, upgrade technology and change or improve their products and services.[10] For example, without easy access to credit it is difficult for farmers to buy the small-scale, high-efficiency drip irrigation equipment Amanco offers in Mexico, even though it would nearly triple their yields. According to the United Nations Conference on Trade and Development, 'Finance has been identified in many business surveys as the most important factor determining the survival and growth of [small and medium-sized enterprises] in both developing and developed countries.'[11]

Access to credit in developing countries is still much lower than in developed countries. Private credit as a percentage of gross domestic product is 85% in high-income countries, 30% in upper-middle-income countries, 25% in lower-middle-income countries and just 12% in low-income countries.[12] Microcredit, despite its rapid growth, reached only 82 million households at the end of 2006.[13]

Insurance penetration rates are even lower among the poor. Premiums as a share of gross domestic product exceed 9% in the United States but are less than 3% in the Philippines, Nigeria and China (figure 2.3).

**Box 2.4. Microinsurance in India**

**Overcoming constraints can be a business opportunity. Poor people's lack of access to insurance, for example, can mean a huge market for businesses that find ways to surmount obstacles. A recent study by UNDP's Human Development Report Unit found that about 5 million people in India—just 2% of the country's poor—have insurance. The study estimated the market's potential size at $1.4–$1.9 billion (for life and nonlife services). Innovative business models are emerging to capture this large market. In India, Innovative Rainfall-Indexed Insurance is a pilot funded by the World Bank and initiated by Krishna Bhima Samruddi Bank. Its insurance payments depend solely on weather conditions, without any required loss assessments.**

Source: UNDP 2007.

Insurance is a business that facilitates other businesses. People who can buy insurance, and thus control the risk of losses, are freer to make long-term investments. In addition, banks are more willing to provide credit to customers with insurance. A lack of insurance is one reason why producers find it hard to enter contracts with long-term paybacks. In Brazil, VCP sought to include poor farmers in the production of timber for paper production. But the trees could be harvested only after seven years. Without insurance against natural disasters, the farmers would risk losing their whole investment.

Savings and transactional banking reduce costs and expand markets over time by allowing people to make credible commitments. Without accessible banking, trading with the poor becomes very costly. The significant volatility in poor people's incomes becomes a risk to businesses. And poorly developed financial services reduce demand, because the poor cannot finance purchases without savings or credit—even if they could afford those purchases over the long term. In Uganda, only 15% of households save in formal institutions. In Zambia, fees are so high that most people would have to accept a negative return on savings to save formally.[14]

1 See, for example, the joint UK Department for International Development–Asian Development Bank workshop on *Making Markets Work Better for the Poor* in Manila in 2005 (www.dfid.gov.uk/news/files/trade_news/adb-workshop.asp).

2 UNDP 2004.

3 UNFPA 2007.

4 UNDP 2008.

5 World Bank Report on Infrastructure.

6 Low-income countries have per capita gross national income of $905 or less in 2004; high-income countries have per capita gross national income of $11,116 or more (World Bank 2005).

7 Escribano and others 2005.

8 UNDP 2007. Refers to 1995–2005.

9 International Telecommunication Union's World Telecommunications Indicators database.

10 Jenkins and others 2007.

11 Ruffing 2006.

12 UNDP 2004.

13 Associated Press 2006.

14 CGAP 2007.