

# GRID LINES

Sharing knowledge, experiences, and innovations in public-private partnerships in infrastructure

## Reaching unserved communities in Africa with basic services

Can small-scale private service providers save the day?

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In many African countries public utilities have failed to provide adequate service to small towns and periurban and rural areas. Sometimes small-scale private service providers have stepped in, bringing basic services to unserved, often poor communities. With urban and especially periurban populations set to grow at unprecedented rates in Africa, and service coverage continuing to lag, governments and donors have begun to recognize that small-scale providers have an increasingly critical role to play. They have also begun to focus on the importance of creating an environment that enables these providers to supply good-quality service.

Traditional public utilities have not always been able to reach periurban or rural communities, for a range of reasons. Even when they have, their services have not always been adequate. Small-scale private providers have often stepped in to fill the gap. These providers might sell water through a public kiosk or from a tanker truck. Or they might develop a small network through which to distribute water or energy to households and businesses.

Small-scale private providers supply basic infrastructure services to many communities across the globe. But they may be especially important in Sub-Saharan Africa, where trends point to growth in both their number and their role.

Many are micro and informal enterprises serving low-income households and dispersed populations in predominantly periurban and rural areas. Where these providers operate, systems for supplying services are generally local, gaps

**TABLE 1**

**Countries with documented activity by small-scale private service providers, by region and sector**

Region	Water & energy	Water	Energy
East Asia & Pacific	4	3	1
Eastern Europe & Central Asia	0	3	0
Latin America & Caribbean	6	5	1
Middle East & North Africa	2	1	0
South Asia	5	0	0
Sub-Saharan Africa	11	11	1

Source: Kariuki and Schwartz 2005.

exist in service coverage, and entry and investment costs are low or negligible. But a growing number are small and medium-size enterprises investing moderate amounts in developing distribution networks in periurban areas and small towns. This note focuses on small-scale private service providers serving communities of less than 50,000.

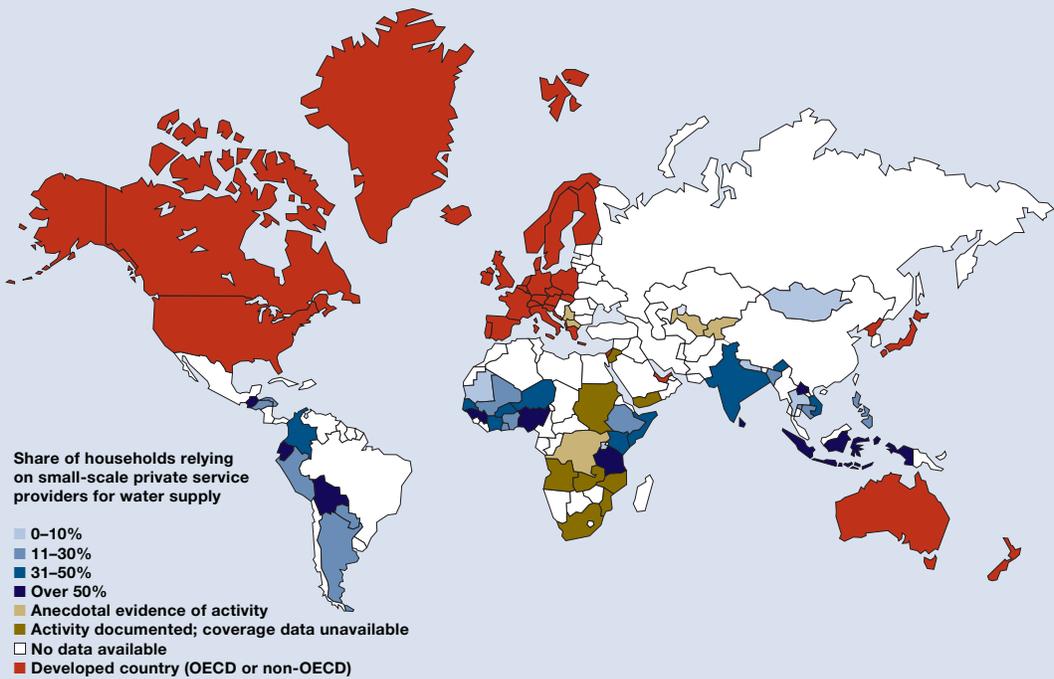
### Small-scale providers: the evidence

How pervasive are small-scale private service providers around the world, and what are their typical characteristics? Interesting insights emerge from a literature review of more than

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**FIGURE 1**  
**In some countries many households rely on small-scale private service providers for water supply**



Source: Kariuki and Schwartz 2005.

## Small-scale providers are active around the world—but particularly so in Africa

400 documents on water supply and electricity sectors—reports, case studies, project reports, and journal articles—with data covering a span of about 15 years (Kariuki and Schwartz 2005). The review identified at least 100 locations in 49 developing countries, in which small-scale water supply and electricity service providers were assumed to serve communities of up to 50,000 people (urban, periurban, or rural).

The review estimated that around 7,000 small-scale private providers of electricity services operate in 32 countries (suppliers of networked services and dealers of solar panels and other household generating equipment, but excluding battery recharging businesses). And 10,000 small-scale private providers of water supply are active in 49 countries. These estimates are based only on the countries for which literature was available. Given the scarcity of documented evidence, they probably represent only a fraction of the total population of small-scale private service providers, though it is difficult to extrapolate reliably across countries or regions from the information.

Small-scale private service providers have traditionally played three basic roles—*gap filler* (providing alternative supply where service qual-

ity is low), *pioneer* (running systems where no public service exists), and *subconcessionaire* (retailing water or electricity purchased from a utility). But more recently they are being called on to assume the role of operator of existing small public systems that need to be expanded or run more efficiently.

Typically established solely to supply water or electricity, small-scale providers take a variety of organizational forms, both for profit and nonprofit. They use a wide variety of technologies, and their capital investments accordingly range from a few hundred to several hundred thousand dollars. Financing is often a constraint, with the main sources being retained earnings, loans from family and friends, and loans from formal and informal lenders. The vast majority have fewer than 50 employees, and most fewer than 10.

### How big a role?

A global overview of the documented activity suggests that small-scale private service providers are active around the world—but particularly so in Africa, where 23 countries have documented cases (table 1). In Africa small-scale providers are active in water supply in at least 11 countries, in both water and energy supply in another

11 countries, and in energy alone only in Zimbabwe (as noted, the documented evidence probably represents only a very small share of the total population). There are also strong indications that the scope and scale of activity by small-scale providers have increased over the past decade in Africa.<sup>1</sup>

The relative importance of small-scale providers in water supply appears to vary across the region (figure 1). The evidence suggests that many countries in East and West Africa rely relatively heavily on such providers for water supply. Less documented evidence tends to be available for Central and southern Africa, though there is anecdotal evidence of small-scale activity in both.

Reliance on small-scale providers for water supply appears to vary across locations even within African countries. Small-scale service providers are particularly active in the capital cities of Côte d'Ivoire, Guinea, Kenya, Senegal, Sudan, Tanzania, and Uganda. The share of the population or households served by such providers in important urban centers ranges widely, from 21 percent in Dakar to 30 percent in Kampala, 35 percent in Abidjan, 56 percent in Dar es Salaam, 60 percent in Nairobi, 66 percent in Conakry, and 80 percent in Khartoum.

Among the 32 developing countries in which there is documented activity in electricity by small-scale private providers, 15 have a high level of activity, primarily in rural areas and small settlements. The 7,000 small-scale service providers operating in the electricity sector serve an estimated 10–50 million clients.<sup>2</sup> Asia accounts for about 85 percent of these providers, however, while Africa, the Middle East, and Latin America each have documented evidence of fewer than 500.

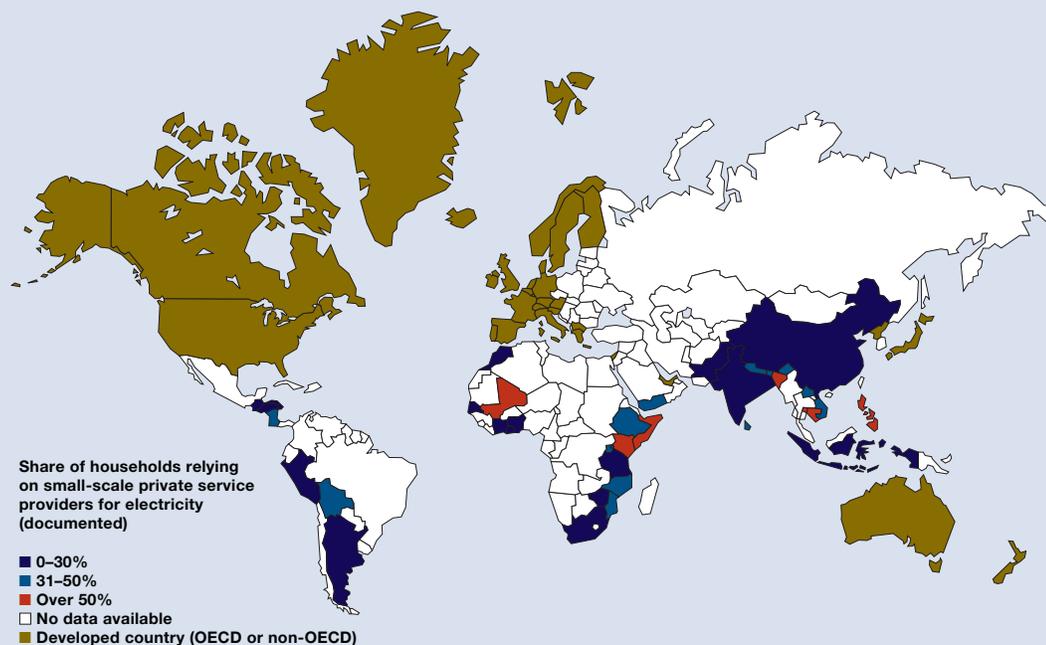
In Africa activity by small-scale providers of electricity services has been constrained, primarily by poor access to financial markets, high transaction costs, and the monopolistic rights granted to national utilities. That said, a few postconflict countries, such as Mozambique, show a notable incidence of activity by such providers (figure 2).

Moreover, among the 12 African countries where activity by small-scale providers in electricity has been documented, the evidence suggests that these providers are relatively important in Kenya, Mali, and Somalia and somewhat so in Mozambique, Ethiopia, and Uganda (table 2). In the other six countries they are less important. But this may be because the literature review excluded battery recharging services, numerous in many African countries.

**The record of activity by small-scale operators is encouraging**

**FIGURE 2**

**Reliance on small-scale private service providers for electricity is also high in some countries**



Source: Kariuki and Schwartz 2005.

## Policy challenges

Small-scale operators have often extended basic infrastructure services in the face of such challenges as lack of finance, resistance by public utilities, and unclear legal status or tenure. That record is encouraging, particularly given the reluctance of international infrastructure investors and operators to develop services in periurban and rural communities and the general failure of public utilities to expand coverage to these areas.

In African countries where urbanization has outpaced the ability of public utilities to provide services, small-scale providers may have an especially important role to play in the medium term. In some cases these providers may not represent a viable solution for the long term, and public utilities will eventually take over their role. But even if small-scale providers represent a solution for the short to medium term, their role should be carefully studied to develop appropriate policy and regulatory responses.

Given the right incentives, small-scale providers of networked services have the potential to become local operators of existing public networks in small towns—and over time this may lead to a new breed of local private operators working in medium-size and large towns. That role will require some rethinking among policymakers as well as donors, which have often viewed small-scale service providers as temporary, as providing an inferior service, or as rent seekers taking advantage of vulnerable consumers. While some small-scale service providers do exhibit these characteristics, many others provide a service that satisfies their customers.

Recognizing the potential role of small-scale providers may create new opportunities for leveraging private investment in infrastructure. But their role cannot be developed in isolation.

Instead, it must be elaborated as part of a broader sector strategy that may seek to phase out certain types of small-scale private service providers while fostering the development of others. This strategy must consider whether a role for the short, medium, or long term is likely, and plan accordingly.



## GRIDLINES

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**TABLE 2**  
Small-scale private electricity service providers and customers served in Sub-Saharan Africa

Country	Small-scale providers	Customers served by small-scale providers	
		Average	As a percentage of all customers
Kenya	20	5,000	21
Mali	100	300	15
Somalia	100	200	12
Mozambique	10	1,000	4
Ethiopia	100	200	3
Uganda	5	500	1
Zimbabwe	30	300	1
Côte d'Ivoire	3	10	0
Ghana	3	10	0
Senegal	3	10	0
South Africa	10	1,000	0
Tanzania	5	300	0
Total	389	736	2

Note: Data are estimates.  
Source: Kariuki and Schwartz 2005.

Moreover, creating an environment more conducive to greater and more formal participation by small-scale providers should in no way delay more fundamental reforms. Most African countries face big deficits in infrastructure, and their efforts to scale up the services of small-scale service providers may be impeded by lack of capacity or resources or even by collusion and rent seeking by larger, formal service providers. Improving or extending the services of small-scale service providers must therefore be part of—not a substitute for—reform of the infrastructure sector.

### Notes

- 1 Whether this apparent increase reflects better reporting or documentation of activity—rather than actual increases in activity—is not entirely clear, however.
- 2 As in water supply, the total number of small-scale private providers in the electricity sector is probably far higher. China alone could have as many as 1,000.

### Reference

Kariuki, Mukami, and Jordan Schwartz. 2005. "Small-Scale Private Service Providers of Water Supply and Electricity: A Review of Incidence, Structure, Pricing, and Operating Characteristics." World Bank Policy Research Working Paper 3727. World Bank, Energy and Water Department; and PPIAF, Washington, D.C.