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

Reform, private capital needed to develop infrastructure in Africa

Problems and prospects for private participation

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In Sub-Saharan Africa the story of private participation in infrastructure has been largely one of telecommunications.

With other sectors taken into account, the levels of private activity have been low for the past 15 years. Still, the overwhelming need for infrastructure has motivated regional economic organizations to push for an ambitious agenda of private participation. But to begin solving Africa's infrastructure investment problems will also require broad institutional reform along with greater financial commitments by governments and donors. The private sector appears capable of supplying only a fraction of the estimated US\$5–12 billion a year in additional infrastructure finance that Africa needs to meet its Millennium Development Goals for infrastructure.

By most measures Sub-Saharan Africa has lower access to infrastructure than any other region. The share of the population with access to safe water is three-quarters—and the percentage of paved roads about half—that in East Asia, the region with the second lowest levels. And in all but a handful of African countries less than half the population has access to electricity (World Bank 2005).

The region's track record of investment suggests that the private sector by itself is unlikely to provide the kind of near-term funding needed to address these shortcomings. To meet its Millennium Development Goals for infrastructure, for example, Africa needs an estimated US\$5–12 billion a year

in additional infrastructure finance (Estache 2005, p. 30). But in 1990–2004 the region managed to attract an average of just US\$2.6 billion annually in total investment (private and public) for infrastructure projects with private participation.¹

Africa ranks last among developing regions in investment flows to such projects, with US\$39.4 billion in 1990–2004, far behind such leaders as Latin America (US\$391 billion) and East Asia (US\$199 billion). But its small share of the total investment flows in low- and middle-income countries in 1990–2004 (5 percent) is roughly consistent with its share of their total GDP over the same period (6.2 percent).² Moreover, the data on private activity exclude small-scale private service providers, which probably play an important role in Africa.³

Thus while small, total investment flows to infrastructure projects with private participation in Africa appear at first glance to play a significant role. Yet South Africa accounted for about half these flows in 1990–2004 (US\$19 billion). And Nigeria has claimed a rapidly growing share, about 14 percent over the 15-year period, with much of that investment coming since 2001. Excluding South Africa, the region's share of the total for low- and middle-income countries is less than 2 percent.

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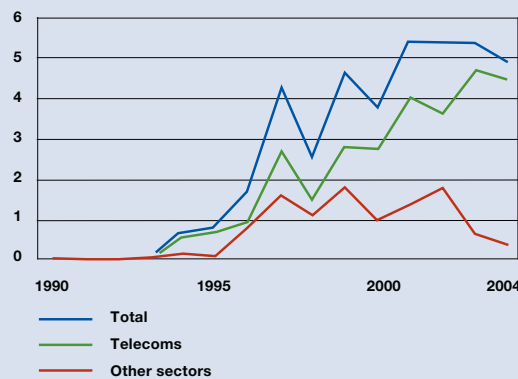


In contrast with the rest of the developing world, where flows in 2004 were still about 50 percent off the 1997 peak, in Africa total investment flows grew strongly at the end of the 1990s and have remained relatively stable since. But investment in Africa has been driven overwhelmingly by growth in telecommunications, which has helped offset weak performance in other sectors since 1997 (figure 1).

FIGURE 1

Telecoms have driven investment

Investment in infrastructure projects with private participation, in Sub-Saharan Africa, 1990–2004 (US\$ billions)



Source: World Bank and PPIAF, PPI Project Database.

The patterns of private activity in African infrastructure are typical of those in the world's poorest countries

Patterns of private activity

Sub-Saharan Africa includes more low-income countries than any other region, and these countries account for 80 percent of the region's infrastructure projects with private participation and half the total investment in these projects. Not surprisingly, the patterns of private activity are typical of those in the world's poorest countries (Houskamp and Tynan 2000):

- By 2004, 47 of 48 Sub-Saharan countries had infrastructure projects with private participation, but only 4 had projects in all 4 infrastructure sectors. The projects' average size was only about a quarter of that in the rest of the developing world. So Africa has relatively widespread private activity, but fewer and smaller projects per country than in more affluent regions. This pattern may reflect the often desperate need to involve the

private sector, combined with capacity and resource constraints that limit the number of projects.

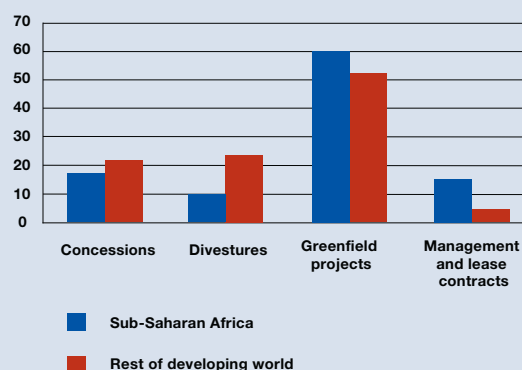
- The sectoral distribution of investment reflects the difficulty of completing infrastructure projects with private participation in poor countries. Less commercial and more politically sensitive sectors like water and sewerage account for a much smaller share of investment in Africa (1 percent) than in the rest of the developing world (5 percent). Telecommunications, now the most competitive and commercial infrastructure sector, receives the largest share of investment in Africa.
- Greenfield activities (such as build-operate-transfer projects) account for 60 percent of all infrastructure projects with private participation in Africa (figure 2). This pattern is common in the poorest countries, where private firms often find it too risky to invest in existing infrastructure through ownership or long-term concession arrangements because of concerns about their ability to fully recover their investment (Houskamp and Tynan 2000).
- Because of this risk aversion, shorter-term and lower-risk contracts (such as management or lease contracts requiring little or no investment) have been more common in Africa than in any other developing region. Management or lease contracts have been used across all sectors—12 in energy, 12 in transport, 10 in water, and 2 in telecommunications.

Patterns across sectors and investors

The story of private participation in infrastructure in Sub-Saharan Africa has been largely one of telecommunications. This sector accounted for almost 73 percent of total investment in infrastructure projects with private participation in 1990–2004, with stand-alone mobile telephony claiming more than half that share. Since the mobile boom began in 1994, investment in that segment has grown by an average of more than 20 percent a year, peaking in 2004 at more than US\$3.2 billion.⁴

FIGURE 2**Greenfield projects preferred by investors in Africa**

Infrastructure projects with private participation by type, 1990–2004 (percentage of projects)



Source: World Bank and PPIAF, PPI Project Database.

Investment in other infrastructure sectors has been much lower, again typical of low-income countries. While 126 telecommunications projects with private participation attracted investment commitments of US\$28.7 billion in 1990–2004, projects in other sectors attracted just US\$10.6 billion. And while investment in telecommunications may still be growing, that in other sectors has declined sharply since 2002 (see figure 1).

Two-thirds of the investment in other sectors went to 54 energy projects. Among recent energy projects, the largest is the 865-kilometer pipeline to transport natural gas from fields in Mozambique to South Africa, a US\$1.2 billion project.

Transport had the next largest share of activity, with US\$3.2 billion. Nearly 60 percent of this went to toll roads, mostly for long-term concessions. More than 50 transport projects reached financial closure in 1990–2004. The largest recent project is the US\$450 million Bakwena Platinum Toll Highway, linking Pretoria to South Africa's border with Botswana.

Investment in projects focusing exclusively on water lagged far behind that in other sectors, at US\$230 million (less than 1 percent of the total) for 14 projects in 1990–2004. But many African governments bundle energy and water into one

large utility that they then turn over to private operators. Africa had 9 such projects in 1990–2004, more than any other developing region. These projects accounted for about 5 percent of total investment, though anecdotal evidence suggests that most investment went into electricity rather than water.

Regional investors, mainly from South Africa, have played a key role in all infrastructure sectors, accounting for more investment (about 38 percent) in Africa than any other category of investor in 1998–2004 (Schur, von Klaudy, and Dellacha 2006).

Questions of sustainability

About 8 percent of infrastructure projects with private participation implemented in Sub-Saharan Africa in 1990–2004 had been canceled or classified as “distressed” by 2004, representing less than 2 percent of investment commitments in the period.⁵ Other developing regions had lower project failure rates (5.5 percent) but lost a much larger share of investment commitments (9.5 percent).

Moreover, while other developing regions have had some of their largest projects canceled or go into distress, all of Africa's 10 largest projects, seven of them in telecommunications, remain operational. Half the canceled or distressed projects in Africa were small greenfield mobile operations that failed to build a sizable customer base. Management and lease contracts are lower risk, and popular in the region, but these characteristics do not guarantee their sustainability. Of the 36 such contracts entered into since 1990, 5 were canceled by 2004.

Africa had a larger share of contracts with private infrastructure firms that concluded in 1990–2004 than other developing regions: 14 percent of energy, transport, and water projects, compared with 2 percent in the rest of the developing world. The main reason for the difference was shorter contract periods in Africa. The conclusion of most of these contracts meant the end of private participation. Of the 17 concluded

Outside the telecom sector, private activity in African infrastructure has been limited

contracts, only 4 were followed by contract renewal or a new contract. The other 13 projects returned to public sector management.

Future prospects

With Africa's low levels of infrastructure investment in the face of rapidly growing needs, regional organizations and their development partners appear to be more favorably disposed toward private participation than ever before. The New Partnership for Africa's Development (NEPAD) is encouraging regional economic communities like the Economic Community of West African States (ECOWAS) and Southern African Development Community (SADC) to include cross-border infrastructure projects in their long-term regional development plans. Several of these organizations are creating project development facilities to structure and appraise these projects and procure private partners for their implementation. And the African Development Bank is allocating more resources to preparing regional infrastructure projects that are likely to involve private participation.

Still, private participation by itself will not solve the region's infrastructure investment problems. To succeed, private participation in infrastructure requires fiscal reform and improvements in public sector management. It also requires careful attention to the basics of project design, including identifying and allocating risk and ensuring sound procurement practices. Developing successful projects requires some things in short supply in the developing world—time, money, and sophisticated skills. Moreover, private participation does not always work well in every infrastructure sector or every developing country. Even if projects are well designed and essen-

tial reforms implemented, meeting Africa's infrastructure development challenges will also require substantial increases in government budgetary allocations and official development assistance.

Notes

- 1 Data are from the Private Participation in Infrastructure (PPI) Project Database. The database includes only low- and middle-income countries, as classified by the World Bank. Country classifications and project information are updated annually. All U.S. dollar amounts are in nominal terms as posted on the PPI Web site (ppi.worldbank.org).
- 2 GDP in nominal U.S. dollars from World Bank (2005).
- 3 It is estimated that nearly half of urban dwellers in Africa rely on small-scale private providers for at least part of their water supply. These providers are also important in electricity. See Kariuki and Schwartz (2005).
- 4 The PPI Project Database underestimates investments in telecommunications because of data gathering problems. It relies on public information, but many operators, especially medium-size mobile operators, do not release data on investments.
- 5 Canceled projects are those in which private sponsors sell or transfer their economic interest back to the government; remove all management and personnel; or cease operation, service provision, or construction. Distressed projects are those under international arbitration or for which cancellation has been formally requested.

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