

## Output-based aid in Uganda Bringing Communication Services to Rural Areas

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In 1999, Uganda had achieved a national teledensity (fixed and mobile) of about one telephone per 100 inhabitants, slightly above the average for Sub-Saharan Africa (excluding South Africa). But with most phone lines concentrated in the Kampala area, rural teledensity was far lower. Indeed, only 380 of the 920 subcounties in Uganda were expected to have any kind of telephone service by 2001. Internet services, still in their infancy, also were limited to Kampala.

In the planning stages at around that time, a new World Bank project was designed in part to address this situation. The Energy for Rural Transformation Project was aimed at creating an environment conducive to commercially oriented, sustainable delivery of both renewable energy and information and communication technology (ICT) services in rural areas.

The ICT component was initially estimated at US\$5.5 million and later increased to US\$12 million in line with more ambitious policy objectives, of which US\$10.5 million was covered by an International Development Association (IDA) credit and the rest by government counterpart funds. Output-based aid (OBA) subsidies in this amount would support the build-out of telecommunications facilities in areas where the operation of the services (but not the construction of the facilities) can be commercially viable, and the social returns of the investments high.

The Ugandan government had already successfully implemented substantial structural reforms in the telecommunications sector, mostly with World Bank assistance. These reforms included drafting and approving the 1997 Uganda Communications Act: creating a regulatory authority; the Uganda Communications Commission; and incorporating and privatizing Uganda Telecommunications Limited (UTL) in 2000. The government had also introduced competition in basic telecommunications services by licensing in 1998 a second national operator with a duopoly provision that expired in July 2005.

While both national operators had significant rollout obligations in their licenses,<sup>1</sup> it was recognized that telephone service might not be commercially viable in all parts of the country. In July 2001, the two operators declared that they could not serve 154 of the country's 920 subcounties on a commercial basis, forfeiting their exclusivity in these areas. As a result, these subcounties became the target areas of the OBA projects.

### The OBA Projects: Structure and Financing

The projects benefiting from the OBA subsidies are designed to achieve three complementary goals:

- Accelerating access to voice telephony by providing at least one public telephone per 2,500 inhabitants throughout Uganda (this equates to an average distance of about 3 kilometers).
- Providing internet access at district capitals by creating broadband Internet points of presence (POPs) in 32 of the total of 56<sup>2</sup> district capitals of the country—to provide local-rate dial-up Internet access—as well as dedicated Internet access for institutions and Internet kiosks connecting to the POPs.
- Establishing rural multipurpose telecenters at “vanguard institutions” (schools, hospitals, associ-

<sup>1</sup> UTL's targets included 100,000 new land lines (with 30,000 to be rural and 3,000 to be public telephones) by July 2005. MTN Uganda's included nearly 88,000 lines (with 2,000 to be public telephones) by the same deadline.

<sup>2</sup> UCC had previously conducted tenders for the provision of Internet POPs in 20 district capitals, and 4 district capitals already had fully private provision of Internet POPs.

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ations of farmers and micro-entrepreneurs) outside district capitals in selected districts.

The targeting of the OBA subsidies in all cases is based on public or shared access to the subsidized facilities—public pay phones, Internet POPs, and public telecenters—in specific geographic areas. For the voice telephony component, however, there is an additional target: the operator is obligated to provide individual (private) lines, when requested, at commercially competitive rates in at least 50% of the target locations.

The subsidy is meant to cover only the initial capital investment gap between the total project costs and the maximum private investment that would be available to obtain a normal rate of return. Operating and maintenance costs are to be covered out of normal market-based tariffs paid by the users.

The subsidies are financed under the general framework of the Rural Communications Development Fund, established by the 1997 Uganda Communications Act and managed by a board of trustees operating at arm's length from the regulator. The fund's main source of revenue is a universal service levy imposed on the turnover of the telecommunications and postal sectors, though the fund may also receive contributions from multilateral and bilateral agencies<sup>3</sup>. While by law the levy can be up to 2.5% of operators' gross revenues (excluding sale of equipment), in 2000 the communications minister chose to set it at 1% of gross revenues.

### Designing the bidding process

For the telephony component, the bidding process included a prequalification phase (not required for the other, simpler components), and the areas to be served were grouped into three roughly homogeneous regions (A, B, and C) for tendering. The Internet POPs and telecenters were to be bid and awarded individually. To avoid concentration, however, the bidding documents specified that no more than 10 Internet POPs would be awarded to the same operator, though it also cited circumstances under which this limit could be eased.

The project locations and the maximum subsidy required to meet the objectives for each of the components were identified through a detailed study and using a cost model based on experience in similar OBA projects, mostly from Latin America. For the telephony component the total maximum subsidy was estimated at US\$8.6 million (US \$3.5 million for region A, US \$2 million for B, and US \$3.1 million for C), and total project costs were at roughly double that amount.

The maximum subsidy available for the telephony component was specified in the bidding documents. Each region was awarded to the bidder requesting the smallest subsidy. With that award came a service agreement, and for operators not yet licensed in Uganda a license. During the five-year service agreement the operator is obligated to maintain the subsidized facilities and provide the service in accordance with the terms of that agreement, which details quality standards and reporting requirements.

### Paying the subsidy

For the telephony component, the subsidy is to be paid in several installments, each one following the achievement of a milestone:

- Service agreement signed (10%).
- 50% of public access objectives met (30%).
- Other 50 % of public access objectives met (30%).
- Private access objectives met (20%).
- 1 year of continuous service operation (10%).

Each winning bidder is required to post a performance bond at the signing of the contract, with the amount reduced at every milestone in proportion to the share of the subsidy paid. For the Internet POPs component a similar but more streamlined set of milestones apply.

### Outcomes of the bidding

In early 2004 the prequalification of bidders for the telephony component was conducted, and the country's three main operators—MTN, UTL, and Celtel—all successfully prequalified. In October 2004, bidding documents were given to all three, reflecting the original target of one public phone for every 5,000 people.

However, in November 2004, a new objective of one public phone for every 2,500 people was agreed with the World Bank. The three prequalified bidders received new bidding documents in March 2005, with a bid deadline of May 16, 2005.

Only MTN and UTL responded by the deadline. Celtel never submitted a bid, and UTL's bid was considered technically nonresponsive. In December 2005, only regions A and C were awarded to MTN. Region B

<sup>3</sup> The IDA credit in support of the objectives of the RCDF is not channeled through the Fund, but it uses the Fund's bidding process and subsidy allocation methods.

was not awarded, since MTN's proposed subsidy exceeded the maximum available for this region. Region B was rebid, and finally awarded to MTN in June 2006. Regions A and C were to be completed by December 2006 but because of the insecurity in the north and in the eastern part of the country, MTN requested for an extension of the project and UCC agreed to extend the whole project to December 2007. Region B is expected to be completed at this time as well. 62% of Public Access points have been installed in Region A and C as of December 2006. Region B had no installations.

The total project costs for all three regions under the telephony component was estimated at close to \$11.7 million and the total subsidy finally awarded was \$5.2 million, thus leveraging close to 55% in private investment. The subsidy had originally been estimated at \$8.6 million, so the OBA competitive process produced savings of about 38% in the amount of subsidy required.

In parallel, 32 Internet POPs in as many district capitals were tendered in October 2004. Bids from five firms were received in January 2005, but only MTN and UTL met the qualification criteria. In July 2005 MTN was awarded 22 Internet POPs, for a total subsidy requirement of US\$685,000, and UTL was awarded 10, for a total of US\$295,000. The two bids combined amounted to about 73% of the maximum subsidy available for Internet POPs.

The rural telecenter component is currently being redesigned and has not yet been implemented. The objective, now is to deploy 20 small telecenters instead of the originally planned 7 large telecenters.

## Other design issues

The bidding process was designed to be open, transparent, international, and competitive, in line with the World Bank's procurement guidelines. The public could follow the process through the regulator's web site. A bidders' conference was held to discuss questions received before the deadline or raised at that event, and written answers were provided to all participants. The bids were opened at a public ceremony with all interested parties participating. All parties involved were satisfied with the transparency of the process.

Achievement of the targets is being monitored by an independent technical auditor, hired under the World Bank project. The monitoring results are expected to be used to improve the process for subsequent projects, whether funded by the World Bank or by the Rural Communications Development Fund.

One unforeseen issue that emerged during bid evaluation was the tax treatment of subsidies. Under the Ugandan tax code a private firm receiving a government subsidy must pay back to the Treasury 30% of that subsidy. This tax was included in the bids as a separate item by the winning bidder. But it was excluded from the award in the expectation that the tax authorities would agree to waive payment of this tax. In the case that the government does not waive the taxes, UCC will reimburse MTN upon proof by MTN that they have paid the said taxes. The lesson: potential tax implications of a subsidy scheme need to be identified early, and solved before the launch of the bidding process.

## Sustainability

The OBA scheme is designed to be both sustainable and replicable. Its sustainability comes through the mandatory contributions to the Rural Communications Development Fund by every operator. Its replicability comes through the bidding documents and experience developed in the World Bank project, which the regulator will use to launch similar projects in the future.

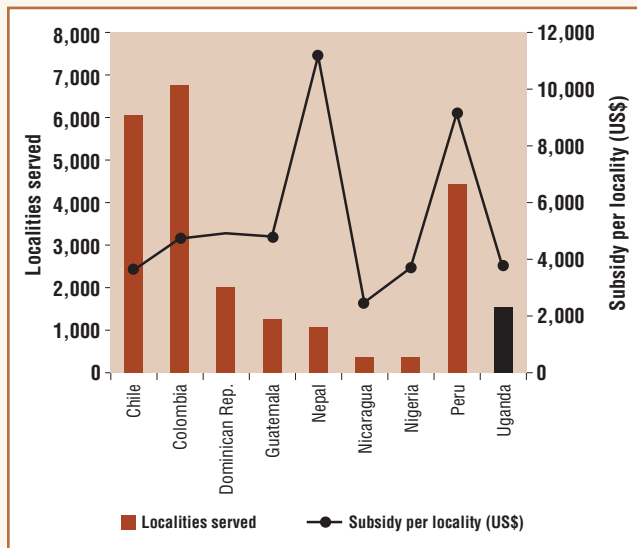
Each project financed through the OBA scheme also is designed to be sustainable. Operators should be able to continue providing service well beyond the five years covered by the service agreement by using one-time subsidies to lower the cost of the initial investment and relying on user fees to cover operating and maintenance costs. By design, future subsidy requirements are expected to be zero.

The operators may freely set user tariffs in the target areas in line with commercial principles, though tariffs may not exceed the average charged by the major operators in the country by more than 50%. Even so, the winning bidder decided to charge the same tariffs in the target areas as those charged elsewhere in the country. Because the general tariff regime is liberal, tariffs will be allowed to evolve with economic conditions in the country, consistent with the basic principle of cost recovery.

## Aid effectiveness

There are several ways to assess the aid effectiveness of the OBA scheme in Uganda. One is to compare the subsidy level allocated through this project with that in comparable OBA projects in other countries. For the telephony project the subsidy per public pay phone comes out to about US\$3,700. As shown in the figure, this is well below the US\$11,000 achieved in Nepal under a similar World Bank-funded project and consid-

## Outcomes of similar OBA projects



erably lower than the average for non-Bank projects in Latin America, where figures have typically ranged between US\$4,000 and US\$12,000 (and, in one project in Chile, US\$2,000).<sup>4</sup> The most likely explanation for the difference is the relatively high population density of Uganda and the project's use of GSM technology, along with the constant decline in equipment costs in telecommunications.

An alternative approach is to compare costs with comparable non-OBA projects. Even though no such projects have been implemented in the same environment, it is still possible to construct a hypothetical non-OBA project capable of delivering the same level of service. For the telephony project, that would consist

of one mobile radio base station in each of the 154 sub-counties to be served.<sup>5</sup> The result: a cost per location more than three times as high as in the OBA project.

Yet another approach to estimate the aid effectiveness of OBA in this particular case in Uganda is to compare three values related to the project: the total project costs, the maximum subsidy (as calculated by the consultants as an acceptable ceiling for the government) and the actual subsidy allocated through the competitive OBA mechanism. This approach shows that OBA includes two sources of savings. The first one is related to leveraging private investment, which in the case of the telephony component comes close to an average of 55% of the total project costs. The second source is the competitive nature of the subsidy award process. In this case, an additional savings of 38% was achieved when comparing the actual subsidy awarded with the maximum subsidy announced in the tender documents. Similar figures apply to the Internet POPs component.

## Conclusions

In summary, the use of OBA to promote private investment in the provision of telecommunications services in rural Uganda has proven an effective tool. It allowed to serve far more communities than anyone had originally anticipated, and at a fraction of the cost of more traditional funding methods.

<sup>4</sup> See Juan Navas-Sabater: Universal Access and Output-Based Aid in Telecommunications and ICT, World Bank, June 2005.

<sup>5</sup> In a few cases a single base station could conceivably serve more than one subcounty, but the impact on the hypothetical project would not be substantial.

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