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Solutions for Nigeria

NIGERIA, LIKE MANY MOSTLY RURAL DEVELOPING COUNTRIES, IS NOT ABLE TO PROVIDE all its population with basic services such as safe potable piped water and affordable electric power. The economics of extending the electric grid and water distribution network into the countryside are daunting, and the people who lack electricity, safe water, and effective medicines are usually poor and clustered within extremely dense urban communities or live in highly dispersed rural communities with limited infrastructure. Two-thirds of Nigerians, around 100 million people, lack household electricity, and about as many do not have safe drinking water. Nigeria also has the world's largest burden of people suffering from infectious diseases, mostly malaria, without effective treatment.

Yet there are solutions. In Karnataka, India, the Solar Electric Light Company (SELCO) sells, installs, and services solar home lighting systems to tens of thousands of poor villagers—at a profit. Local subsidiaries of WaterHealth International of California franchise storefront water stores and community purified water systems in developing countries—at a profit. Potters for Peace of Nicaragua supports local companies manufacturing ceramic water filters. These are sustainable solutions in the sense that they do not depend on donor funds or ongoing financial support from a government, because the profit comes from sales to consumers alone. Can the private sector of a country such as Nigeria be mobilized to provide basic services to the population that the government cannot afford—at a profit?

Many companies have developed business models that, incorporated into a new approach to sustainability, can meet the needs of marginal populations for electricity, safe water, and medicines, while providing new sources of jobs and income. Their models include robust, but not necessarily low-tech, products, customer training, microcredit, service contracts, and franchising opportunities. As limiting as the conditions in Nigeria seem to be, the great advantage to a company is the country's huge number of potential clients. In India and other countries with large numbers of poor people, companies aiming at the customer base at the wide bottom of the economic pyramid have produced new, innovative products and services at substantial profit to themselves as well as benefits to their customers. The market in Nigeria for electric power, safe water, and effective malaria therapy exceeds the total populations of all but a handful of countries.

Mobilizing Science-Based Enterprises for Energy, Water, and Medicines in Nigeria, a recent study issued by the U.S. National Academies and the Nigerian Academy of Science, addresses the potential for a sustainable approach to supplying these basic services to Nigeria's poor by encouraging private companies to become involved. This study revolved around the findings of three workshops that joined successful entrepreneurs from other countries, including executives of SELCO, WaterHealth, and Potters for Peace, with Nigerian business leaders and scientists. They prepared business models, including cost estimates, adapted to the Nigerian market for companies to manufacture, sell, and install solar photovoltaic units and water filtration systems for the rural and urban poor, and to produce the ingredients for and manufacture artemisinin combination therapies (ACTs), the most effective treatment for malaria. The malaria venture differs from the other two because of complexities in the malaria drug market. If a global subsidy for ACTs moves forward as expected, Nigerian products would have to meet international quality standards to qualify for the subsidy, and national regulatory quality controls would need to be developed and enforced, without which Nigerian ACTs could not compete with imported products.

The study concludes that businesses providing small-scale photovoltaic systems, low-cost water filtration systems, and malaria drugs (assuming that Nigerian companies qualify for a putative global subsidy for ACTs) could operate profitably in Nigeria and in other countries of the region. But adoption of this approach may require government incentives, educational campaigns, and a corresponding shift in strategy by donor organizations and bilateral aid agencies. International aid programs may have to be reconfigured so that they resemble venture capital companies with a diverse portfolio of investments (taking into account that startup companies may not always succeed) rather than discrete, one-of-a kind grants.

— Rita R. Colwell and Michael Greene

