

LEAPFROGGING DEVELOPMENT THROUGH TECHNOLOGY ADOPTION

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Although agriculture and natural resources will continue to be important drivers of Africa's economic growth in 2011, it is the application of modern technologies that will have the most significant impact on the growth trajectories of most African economies. Specifically, the greatest opportunity for growth will come from technological innovation and the adoption of new technologies in services sectors, such as banking, insurance, health, education and agriculture. New opportunities have arisen that make it possible for low-income economies to leapfrog other countries by adopting technologies that are suitable to their specific circumstances. Those countries that embrace and invest in technology will be able to sustain growth and be competitive regionally and internationally moving forward.

In the last decade, Africa saw rapid growth in the information and communication technology (ICT) sector, resulting in major transformation of African business operations and processes. The ICT sector

has helped to reduce the cost of communication, increase market information, formalize capital, increase productivity, and facilitate capital accumulation in Africa. Therefore, it is now easier to do business in the region.

The most striking advances in ICT have been in the use of mobile phone technology. Africa is now touted as the world's fastest growing mobile phone market, as the number of mobile phone subscriptions increased from 16 million in 2000 to half a billion by 2010. One of the areas where technology has had a significant impact on the lives of the poor is in mobile banking. Innovations have made it possible for millions of poor Africans to have access to financial services through their mobile phones. However, despite the impressive growth rates in Africa over the last decade, the region continues to lag behind the rest of the world in terms of access to financial services. Only 1 in 5 households in Sub-Saharan Africa have access to formal financial services.

Although mobile banking has the potential to extend financial services to Africa's poorest, it continues to be underutilized in many countries. Evidence suggests that mobile banking has been less successful in countries that do not have a widespread national identification system. Therefore, it is critical that African governments invest in national identification systems in order to reap the benefits of mobile banking. Indeed, having an identity is becoming increasingly more important as Africa enters the digital age.

Mobile phone technology also has the potential to transform the delivery of health services in Africa. About 64 percent of Sub-Saharan Africans live in rural areas where health services are scarce. Mobile-health, or *m-health*, could improve the health of millions of Africans at a fraction of the cost of traditional delivery methods through more efficient transmission of information about drugs, diagnosis and faster identification of disease outbreaks.

Although the agricultural sector is important for growth and development in Africa, agricultural productivity in Africa remains far below the region's potential. One of the most effective ways to increase agricultural productivity in Africa is through the use of high-yield seed varieties. In a recent study, the African Development Bank found that the use of high-yield variety seeds and fertilizers would increase cereal production by 75 percent in Africa. Use of new high-yield seed varieties, chemical fertilizers and other inputs must be prioritized if Africa is to achieve higher growth rates and food security. Technology offers the opportunity to transmit important information about new seeds, new inputs and also

information about market prices at a relatively low cost.

Technology also presents business opportunities for Africa's entrepreneurs. Wages in emerging markets have been increasing, which makes Africa well placed to become the next significant destination for outsourced IT services. The region has a large English- and French-speaking population that is literate in information technology and earns wages much lower than its counterparts in India and China. These factors make Africa an ideal destination for ICT outsourced jobs. Exploiting these opportunities promises to be very important in boosting growth in 2011.

PUBLIC-PRIVATE PARTNERSHIPS TO CLOSE THE DIGITAL DIVIDE

While there has been tremendous progress in the last decade, Africa's adoption of modern technology still lags behind other nations. For many countries, investments in new technologies have been largely neglected. Underinvestment in technology in Africa represents serious market and government failures that can be overcome through public-private partnerships. African governments must invest in improving the business climate and more specifically, the regulatory environment. They should also invest in complementary infrastructure, such as roads and electricity, in order to take advantage of and have proper access to new technologies. There is scope to utilize public and private partnerships especially as it pertains to large infrastructural projects, such as extending fiber optic cables. Also critically important is to increase investments in research and extension services to improve access to information of clients, such as farmers and patients. Technological innova-

tions must be prioritized by African governments so that accelerated and sustainable growth can be achieved in 2011.

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