SAMBAZA:
New E-Currency in East Africa

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Having become interested in international affairs at the age of 13, I suppose I can claim an almost lifelong commitment to Third World development. After I completed my doctorate in 1976, I went to Rwanda in central Africa for two years as a professor of applied statistics at the national university there. It was a fascinating experience and I have continued to follow development affairs since then. A recent news story from Kenya sparked my interest as a security specialist.

Our local public and college radio stations broadcast the BBC News every day and I usually listen to these shows to leaven the relatively parochial coverage from other US stations.

On Thursday, the 10th of November 2005, the BBC World Service “Newshour” included a segment about a fascinating new service provided by Kenya’s largest mobile phone operator, Safaricom. In May 2005, the company introduced Sambaza, “an airtime sharing service that enables our prepaid subscribers to share airtime with their family and friends.” Because Safaricom now has over three million subscribers in Kenya (about 10% of the 33M population), many of whom are in remote rural areas, Sambaza has become an element of a burgeoning small-scale consumer economy.

Most poor rural people in Kenya and indeed the rest of the developing world have no access to banks. It’s very difficult and expensive for their urban relatives to send money to the people back home. Enter Safaricom. Anyone with a mobile phone and a Safaricom account can now transfer minutes of airtime from one phone to another even across the country at no cost. During the radio program, a commentator noted that if someone in the backcountry needed to buy a chicken, her son in Nairobi might send her enough mobile-phone minutes to cover the cost of the purchase. Mom could then pay for the chicken by transferring its price to the phone of the seller. Voilà: the Kenyan equivalent of an electronic payment. That micropayment might then allow Mom to cook the chicken and sell chicken-on-a-stick for a profit. Voilà: Mom is now part of the microeconomy.

Under these circumstances, anyone with a Safaricom mobile phone can even become the equivalent of a bank. Even people without a phone can use the services of someone able to transfer this new electronic currency back and forth among users, opening up tremendous possibilities for development using microloans, especially to women.

What are the security implications? Well, if the volume of monetary transfer becomes significant by local or even international standards, it will not be long before criminals try to take advantage of it. Safaricom and any other mobile phone operator interested in establishing this kind of parallel currency will have to invent ineffective security measures, including...
identification and authentication, to prevent theft.

Another issue is that governments will not stand idly by as a parallel economy develops that precludes taxation. I predict that the more successful these electronic currencies become, the more frantically governments will strive to monitor, regulate, and tax the transactions. Since all the credit transfers must go through Safaricom servers for verification and adjustments of balances, it will be easy for the tax agencies to get their hooks into the new economy.

Let’s hope that the perennial problem of endemic governmental corruption does not destroy a promising new technology with great potential for microeconomic community development.

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