Mobile Phone Banking and Low-Income Customers

Evidence from South Africa

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INTRODUCTION

Banking through mobile phones has been common in developed countries for years. But the real potential of "m-banking"[1] may be to make basic financial services more accessible to millions of poor people across the world. Earlier this year, the mobile phone became the first communications technology to have more users in developing countries than in developed ones. More than 800 million mobile phones were sold in developing countries in the past three years (GSM Association 2006).

As mobile phone usage expands, so may opportunities to bank the unbanked. With m-banking, low-income people no longer need to use scarce time and financial resources to travel to distant bank branches. And since m-banking transactions cost far less to process than transactions at an automated teller machine (ATM) or branch, banks can make a profit handling even small money transfers and payments (BAI 2004 and Booz Allen 2003).

Mobile phones are already reaching the unbanked poor: in South Africa and Botswana, one-third of people who do not have a bank account—many who are poor—do own a mobile phone or have access to one (FinMark Trust 2004 and FinMark Trust 2005a). Nevertheless, questions remain about whether poor customers will adopt m-banking. For example, will low-income customers view banking through their mobile phones as reliable? Will limited schooling and unfamiliarity with technology slow their adoption of the service?

This paper presents the first public findings on how low-income people view and use m-banking, using results of a survey of 515 low-income individuals in South Africa. Three hundred of those surveyed do not use m-banking, while 215 are customers of WIZZIT, a startup mobile banking provider. WIZZIT targets the 16 million South Africans who lack or have difficulty accessing formal banking services.

The study was conducted in South Africa because it is the only country where an m-banking service is targeted at low-income people and where there are enough identifiable low-income customers to construct an adequate sample. Box 1 describes the study methodology and important limitations.

Although the findings are not representative of all low-income m-banking customers and potential customers, they are encouraging. WIZZIT's low-income customers give m-banking high marks for its convenience, accessibility, and affordability. A WIZZIT account is as much as one-third cheaper as an account at one of South Africa's big retail banks for the same basket of services.

The study also sets out to determine which low-income segments are using WIZZIT. Many WIZZIT customers are indeed poor, but they are not among South Africa's poorest people. They tend to have more income and assets and be more financially and technologically sophisticated than other low-income South Africans.

Finally, the study sought to understand perceptions about banking, technology, and m-banking among low-income people. Both WIZZIT customers and noncustomers say they are open to using new technology, but still value human interaction. Most noncustomers surveyed know little or nothing about m-banking and perceive it as expensive and complicated. Some who are unemployed see themselves as ineligible for bank accounts. These perceptions must be dispelled if m-banking is to be adopted by a broader base of low-income South Africans.

Part one of this paper introduces WIZZIT. Part two details findings from the survey in South Africa. Part three puts this research into a broader context to assist banks, mobile network operators, and other parties interested in extending financial services to low-income people.

The study was designed by the Consultative Group to Assist the Poor (CGAP) and produced through a partnership among CGAP, the United Nations Foundation (UNF), and Vodafone Group Foundation (VGF). FinMark Trust made important contributions to the study methodology.

[1] In this paper, we refer to the delivery of banking services through mobile phones as *mobile banking* or *m-banking*. The terms *mobile payments* (*m-payments*) and *mobile commerce* (*m-commerce*) are also used, but these usually refer to the use of mobile phones to make retail payments and person-to-person transfers only.

Box 1 Study Methodology

The study findings are based on surveys of 215 low-income WIZZIT users and 300 low-income nonusers conducted in July and August 2006. The questionnaire drew in part from FinScope, a nationwide household survey of financial services needs and usage in South Africa that is managed by FinMark Trust. A considerable number of new questions specific to m-banking were included in the survey. Research Surveys, a consumer knowledge and information firm in South Africa, helped design the questionnaire, implemented the survey, and provided initial data analysis. SAtoZ, a consulting firm, provided mapping services to draw the user sample and identify locales for the nonuser sample.

Users were randomly selected from a client list provided by WIZZIT and interviewed by telephone. Nonusers were interviewed in person and found by randomly selecting households from the same municipalities in which WIZZIT user respondents live. Ninety nonusers were surveyed in metropolitan areas and 210 in nonmetropolitan areas, including rural farm areas. Interviews were conducted in five languages: Zulu, Xhosa, SeSotho, English, and Afrikaans. To ensure both user and nonuser respondents had low incomes, the survey included questions to categorize respondents by Living Standard Measurement (LSM), a tool commonly used in South Africa to segment people by income and assets. Only people who scored LSM 5 (out of 10) or below were included in the sample.

The user and nonuser samples have important limitations. Findings should not be considered true of all low-income mobile banking users or potential users in South Africa or elsewhere. First, because WIZZIT is a relatively recent start-up, its customers are not evenly distributed throughout the country. Second, some of the poorest WIZZIT users may have been excluded. They are more likely to live in areas with poor network coverage, may also have been more likely to reject a call from an unknown phone number to avoid a charge, or may own a SIM card that they use in another person's mobile phone. Third, the geographic mapping of users is extremely difficult and may have yielded an unrepresentative sample of nonusers who live in the same broad municipal areas. Finally, the nonuser sample was also designed to include minimum numbers of people who own neither a mobile phone nor a bank account, people who have both, and those who own one but not the other. Because the proportions of these segments within the sample do not match the proportions in South African society, the nonuser sample is not nationally representative.

Therefore, all statements of results in this paper should be understood to come with the qualifiers, as in the following example: "XX percent of WIZZIT users in the LSM 1–5 categories with contactable mobile phone numbers and who agreed to be interviewed, said that m-banking was inexpensive." The user portion of the study has a 6.8 percent margin of error, and the nonuser portion has a 5.8 percent margin of error, both at a 95 percent level of confidence. In other words, if the user survey was conducted 100 times, the results would be expected to vary by less than 6.8 percent in 95 times out of 100.

PART I: INTRODUCTION TO WIZZIT

WIZZIT is a startup mobile banking provider that offers a transaction banking account accessible via mobile phone and debit card. The company operates as a division of the South African Bank of Athens. WIZZIT targets the 16 million people in South Africa (48 percent of adults) who are unbanked or who have difficulty accessing formal financial services. Since its launch in December 2004, WIZZIT has acquired more than 50,000 customers.

WIZZIT bills itself as a "virtual bank" and has no branches of its own. Customers can use their mobile phone to make person-to-person payments, transfer money, purchase prepaid electricity, and buy airtime for a prepaid mobile phone subscription. WIZZIT also gives customers a Maestro branded debit card with which they can make purchases and get cash back at retail outlets and withdraw money at any South African ATM. Customers can also make cash deposits at any Absa Bank or Postbank branch. According to WIZZIT, this gives its customers access to more branches than any other bank in South Africa.

The company brands its service as "a bank in your pocket" for prospective customers who already have bank accounts. It also promotes WIZZIT as "the easy way to pay" for customers who want to avoid carrying cash and the inconvenience of long queues at utility offices. To appeal to lower income customers, WIZZIT does not have a minimum balance requirement and does not charge fixed monthly fees. It uses a pay-as-you-go pricing model, with charges ranging from US$ 0.13 to US$ 0.66 per transaction depending on the type of transaction. Customers are charged US$ 5.26 to sign up.[2]

[2] October 21, 2006, mid-market exchange rate of 7.602 South African Rand per U.S. dollar was used when converting SAR to USD.

WIZZIT uses no mass media advertising, such as TV commercials. Instead, it markets its services through more than 2,000 "WIZZ Kids," who are typically young individuals drawn from the lower income population, which WIZZIT views as its core market. WIZZ Kids educate potential customers about WIZZIT and earn a commission for each new customer. For new users, signing up is as easy as keying one's national identification number into the mobile phone. WIZZIT provides customer support via a call center that is available 15 hours per day in the 11 official languages spoken in South Africa.

PART II: FINDINGS

Four main findings emerged from the surveys. First, low-income people use WIZZIT's m-banking services and give it high ratings for convenience, cost, and security. Second, although the users surveyed are low-income people, they are not among South Africa's poorest people. They tend to have higher income and assets than nonusers and also greater financial and technological sophistication. Third, although users and nonusers say they are open to using new technology, they still value human interaction. Finally, beyond low awareness, some potential customers do not use WIZZIT because they also perceive themselves as ineligible for bank accounts and see m-banking as expensive and insecure.

These findings are not unexpected. The people using WIZZIT today look like early adopters, with higher incomes, education, and technological sophistication. This reflects what one would expect for people adopting new technologies anywhere. However, the findings confirm that there is a market for m-banking among the poor. Providers must increase awareness of m-banking services, however, and overcome several strongly held beliefs, if more poor people are to use them.

Low-income customers value the WIZZIT m-banking service.

Customers surveyed use WIZZIT because it is "cheaper" (70 percent), "safe" (69 percent), "convenient" (68 percent), and "fast" (68 percent). Customers report spending an average of 32 minutes and US$ 2.27 to reach a bank branch by bus or other transport. Although customers must still visit bank branches for cash deposits, with m-banking they can use their mobile phones to check their account balance, make payments, or transfer money to friends and family—without expending valuable time and financial resources.

Table 1 shows the banking transactions WIZZIT users conduct, on average, each month and the number of transactions performed using WIZZIT. About three-quarters of

Table 1 Average Basket of Transactions Conducted by WIZZIT Users per Month

	Total	Buy airtime	Balance inquiry	Cash withdrawal	Cash deposit	Money transfers	Pay electricity	Mini-statement	Pay store accounts	Electronic bank transfer	Set up debit order	Set up stop order	Check deposit
All Banking Transactions	12.8	3.7	2.7	1.7	0.8	0.8	0.7	0.7	0.5	0.4	0.4	0.2	0.1
Transactions Using WIZZIT (all channels)	9.3	2.6	1.9	1.3	0.7	0.5	0.5	0.5	0.5	0.4	0.3	0.1	0.1
Transactions Using WIZZIT (mobile phone)	6.6	2.6	1.9	0.1	0.1	0.5	0.4	0.4	0.2	0.2	0.2	0.1	0.0

NOTE: Figures based on average number of transactions of each type conducted monthly, weighted by the number of users who say they conduct them. Not all users conduct all types of transactions. The "average basket" should be viewed as the mean usage among surveyed users, rather than a profile of a typical WIZZIT user. Row two shows all transactions via all WIZZIT channels, including mobile phone, ATM, and partner bank branches. Row three shows only WIZZIT transactions conducted via mobile phone.

Table 2 Cost of Using WIZZIT vs Traditional Bank Account or Mzansi Account

	Transactions WIZZIT Users Conduct	Same Transactions w/ Big 4 Full-Service Account	Same Transactions with Mzansi
	USD	USD	USD
Bank fees per month	5	7	6
Airtime fees per month	0.3	0	0
Transport to bank per month	1	1	1
TOTAL MONTHLY COST	6	9	8
ANNUALIZED COST	70	103	94
Annual cost as days of income	7.5	11	10
Annual cost as % of annual income	2.1%	3.1%	2.8%

NOTE: Annex A provides additional detail regarding calculation of these figures.

all transactions are conducted using WIZZIT's m-banking service. Non-WIZZIT transactions are performed via accounts at other banks or directly with stores (as with airtime purchases, for example).

On average, WIZZIT users surveyed appear to conduct more banking transactions per month using the mobile phone than nonusers conduct using all other channels. In particular, WIZZIT users check their account balance on their mobile phones twice as often as nonusers check their balance (2.3 times per month to 1.3 times per month). This may be because it is convenient to check balances using a mobile phone or it may be because of the lower cost of using WIZZIT.

Table 2 shows the cost of using WIZZIT to perform the transactions identified in Table 1 each month.[3] Comparisons are made to the average cost if the same basket of transactions was performed via the cheapest, full-service account offered by South Africa's "Big Four" banks (Absa, First National Bank, Ned Bank, and Standard Bank) and the average cost via a Mzansi account. Mzansi accounts are entry-level transactional bank accounts designed by South Africa's banking sector especially for low-income customers.

As Table 2 indicates, WIZZIT accounts cost considerably less than the lowest cost full-service bank accounts available and Mzansi accounts. The WIZZIT account costs about US$ 6 per month. Annualized, this is about 2 percent of the estimated average personal income per annum for customers surveyed. FinMark Trust estimates that 2 percent of personal annual income is the most low-income people can afford to spend on banking services (Porteous 2004). By comparison, the Big Four and Mzansi accounts fall above this threshold.

Lower cost may be one reason WIZZIT users give the service high ratings. Of all banking channels, m-banking falls closest to what WIZZIT users surveyed say is their ideal way of doing banking. M-banking was most associated with statements such as "more affordable," "makes banking more convenient," "easy to access," and "you pay less service fees." Nine out of 10 users surveyed say the m-banking service is "not expensive" or is "inexpensive" for the benefits it gives them. In contrast, bank branches and ATMs are strongly associated with having high fees, taking up too much time because of long queues, providing poor customer services, and being unsafe because of risk of robbery. Annex B includes two correspondence maps that depict how users and nonusers perceive banking channels.

The appeal of m-banking may be drawing customers away from ATM and branch channels. Table 3 shows where the 215 WIZZIT customers surveyed do their banking and where the 126 nonusers with bank accounts conduct transactions.

[3] Note that these figures are relevant only for users surveyed in this study: results would vary for users with different usage patterns and income levels.

WIZZIT's low-income users appear better off than most poor South Africans on income and assets and are more financially and technologically sophisticated.

To measure affluence, the survey included questions that permitted respondents to be categorized by Living Standards Measure (LSM), a tool based on household assets and income. The Financial Services Measure (FSM) was used to gauge respondents' financial sophistication. See Box 2 for more information about the LSM and FSM.

The survey results do not reveal whether most of WIZZIT's customers have low incomes or whether most are affluent. To find 215 low-income WIZZIT users willing to respond to the survey, 3,405 customers were called. About 1,600 of these customers were screened out as middle or high income based on their LSM categorization. About 1,400 customers did not answer their phones or refused to participate.

WIZZIT users surveyed clearly fall into the low-income segment. Forty-three percent of WIZZIT user households surveyed fall below South Africa's poverty line of about US$ 257 per month for a family of five, and a further 12 percent earn up to one-half more than the poverty line amount (which means that they are probably still vulnerable). Only 3 percent of WIZZIT users surveyed reported earning more than the average monthly South African household income of US$ 1,000.

Table 3 Percent of Monthly Transactions Conducted at Each Channel

Action	Banked Non users (126)	Users (215)
Pay for electricity	Municipal Office 77% Bank 15%	Cell 61% Municipal Office 19% Bank 7%
Transfer money between accounts	Bank 56% ATM 44%	Cell 67% Bank 32% ATM 7%
Buy airtime	ATM 46% Store 23%	Cell 81% Store 17% ATM 4%
Check account balance	ATM 79% Bank 33%	Cell 83% ATM 20% Bank 9%
Make electronic bank transfer	Bank 50% ATM 50%	Cell 49% Bank 24% ATM 16%
Pay store accounts	Store 95% Bank 5%	Cell 45% Store 44% Bank 7%

Box 2 Segmenting Individuals to Predict Use of Formal Financial Services

The Living Standard Measure (LSM) is commonly used to segment consumers according to income and assets. It relies primarily on household ownership of various assets, including land, dwelling, productive assets, and consumer durables. The LSM model classifies people into 10 tiers, with LSM 1 signifying the most asset-poor people in society.

In its work on access to financial services, FinMark Trust found that segmenting people by income and assets does little to help predict how these segments will use formal financial services. To address this, in 2004, FinMark Trust developed the Financial Services Measure (FSM), which categorizes individuals by financial sophistication and is more predictive of their use of formal financial services.

The FSM model includes a combination of four broad components: (1) financial penetration (take-up of a comprehensive list of financial services, both formal and informal); (2) attitudes to money—including financial knowledge and control and financial discipline; (3) physical access to banks; and (4) connectedness and optimism. The resulting categorization ranges from FSM 1 (least financially sophisticated) to FSM 8 (most sophisticated).

Each categorization has a description, such as this one for FSM 3 individuals: "Higher income levels, younger black women, live in tribal land, access to financial services still a problem due to location, much higher financial interaction (35 percent have an ATM card, 25 percent have a savings or transaction account), more positive about life, mostly fall into LSM categories between 3 and 6."

This study was not designed to figure out if the FSM categorization can predict whether and how people will use m-banking services. Further work is needed to understand exactly how to segment individuals to determine their likely adoption and use of m-banking. The results of this study suggest that perceptual questions around banking and mobile phones will be important in this new classification.

Table 4 Key Demographic Indicators for WIZZIT Users and Nonusers

	Users (n=215)	Non users (n=300)	South African Adults*
Personal income <R1,000 (US$ 135) per month	30%	71%	64%
Household income <R2,000 (US$ 270) per month	43%	50%	39%
LSM 1 and 2	6%	23%	16%
FSM 1 and 2	28%	93%	45%
Own or borrow mobile phone	100%	65%	49%
At least high school education	63%	31%	29%
Unemployed	15%	45%	27%
Male	71%	50%	49%

*FinMark 2005b, except for education and gender: Statistics South Africa 2003; for employment: Statistics South Africa 2006. The official unemployment rate is 26.7%. Including the 3.3 million "discouraged work-seekers" in the labor force yields a revised unemployment rate of 38.8%. This may be closer to unemployment rates in low-income, black communities in South Africa.

Though poor, WIZZIT users surveyed tend to be better off regarding income and assets than other low-income South Africans, more likely to be employed, and more financially sophisticated. Only 6 percent of WIZZIT user households surveyed are "destitute" (LSM 1 and 2), while 16 percent of all South African households (and 23 percent of nonuser households) are destitute. Although only 15 percent of WIZZIT users surveyed reported being unemployed, 40 percent of nonusers and 27 percent of all South Africans are unemployed. Only a quarter of WIZZIT users surveyed can be considered financially unsophisticated, or FSM 1 and 2, while 93 percent of nonusers and 45 percent of all South Africans fall into these categories.

So, although poor, WIZZIT users surveyed are not among the poorest in South Africa (shown in Table 4). Because there are vast numbers of South Africans who are at the bottom in terms of income, assets, employment, and financial sophistication, and few of these people are currently using WIZZIT, the user sample tends to look better off.[4]

WIZZIT customers surveyed are more likely to use their mobile phones for advanced tasks than nonusers who own mobile phones: 62 percent keep a diary (nonusers, 19 percent), 64 percent play games (nonusers, 39 percent), 34 percent receive multimedia messages (nonusers, 6 percent).

Because WIZZIT is less than 2 years old, it is too early to tell whether it will continue to appeal mainly to the more advantaged portion of the low-income segment or whether these "early adopters" will be replaced by a broader base of low-income customers.

Although users and nonusers say they are open to using new technology, they still value human interaction.

Almost all WIZZIT users surveyed (97 percent) said that they are "prepared to use technology," and less than one-third of nonusers surveyed felt that "cell phone banking is (or would be) difficult or confusing to use." Figure 1 shows responses to several statements about technology from WIZZIT users, nonusers who own mobile phones, and nonusers without mobile phones.

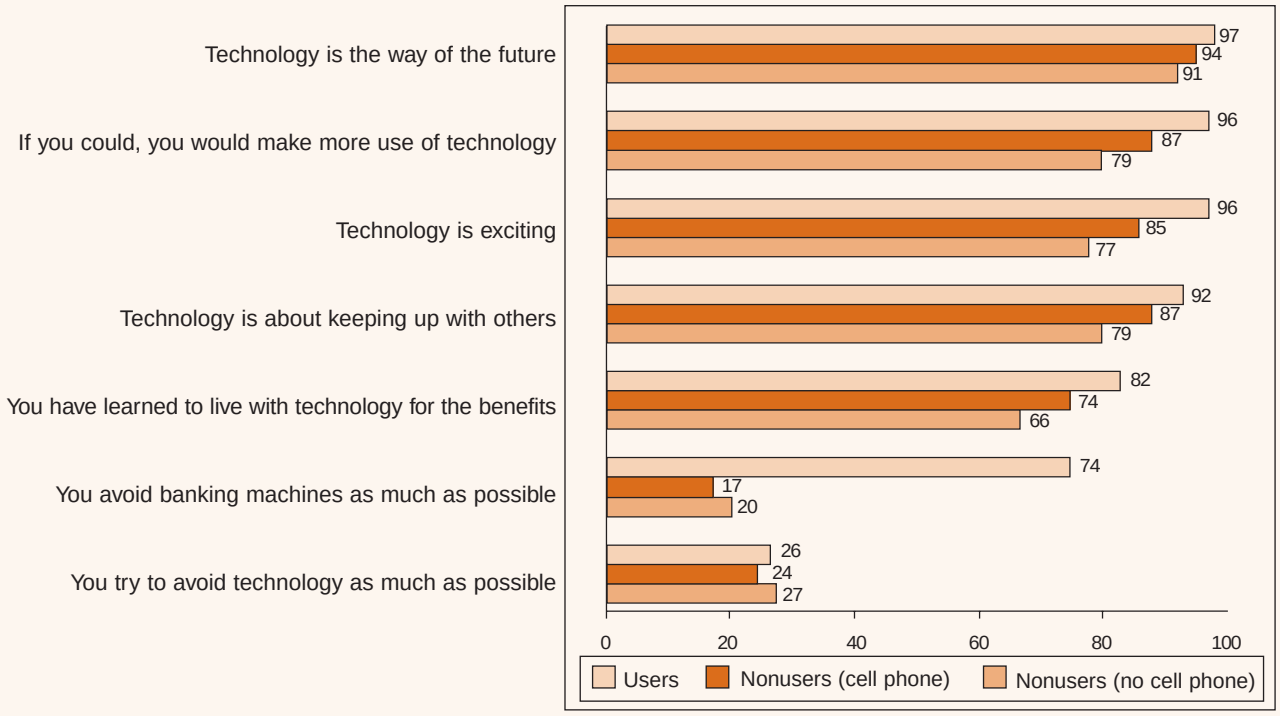
South Africans in general—and banking customers in particular—may be more comfortable with technology than individuals in other developing countries. Banks in South Africa aggressively deploy ATMs and self-service kiosks to serve customers. Of the 41 percent of nonusers surveyed who have a bank account, 94 percent have an ATM card, and 71 percent use the ATM as their primary banking channel.

But other survey results suggest that users and nonusers still have difficulty with technology and may prefer human interaction: 51 percent of nonusers and 49 percent of users agree with the statement "you would rather deal face to face with a person rather than an electronic device, even if the device is faster."

Still, there is little evidence from this study that suggests some lower-income people have trouble using m-banking. While the study did not set out to survey individuals who have stopped using WIZZIT, 22 were encountered during sampling. They have education and

[4] Annex C contains further detail of the demographic profiles of users and nonusers. The project partners (CGAP, UNF, and FinMark Trust) intend to make the full data set publicly available via the Web.

Figure 1 Attitudes toward Technology among Users (215), Nonusers with Mobile Phones (149), and Nonusers without Mobile Phones (151)



employment levels similar to current users and were more likely to live in households with higher incomes. Their main reason for not using WIZZIT is because they "don't understand the technology" (27%). The third most common reason is that the service is "too complicated" (23%). Training in how to use the m-banking service—for all customers—may help reduce the number of "drop-outs."

Few nonusers have heard of m-banking, and most have negative perceptions about banking and m-banking that may restrict their adoption of the service.

Given WIZZIT's early stage of deveopment, it is not surprising that 65 percent of the nonusers surveyed were not familiar with the term "cell phone banking," although they live in the same municipalities as WIZZIT users.[5]

This lack of awareness may be responsible, in part, for the fact that nonusers see m-banking as more expensive and less secure than other banks, while users are far more positive about the service.

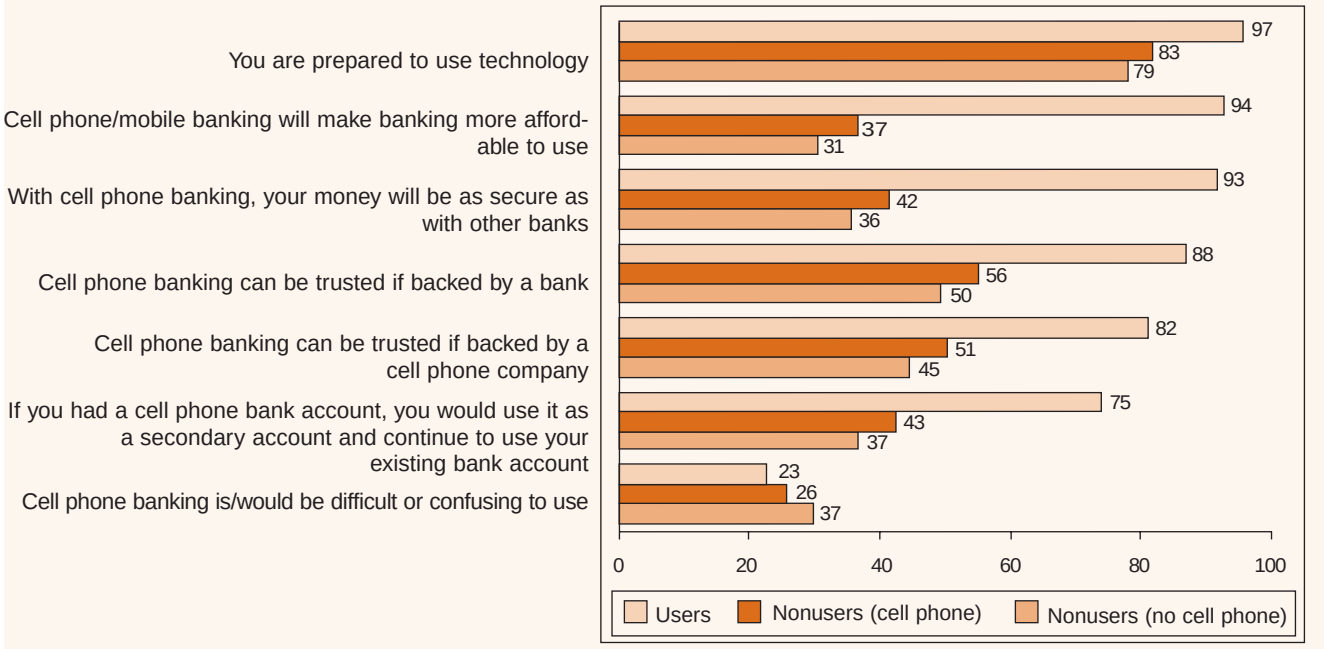
When asked what an m-banking transaction would cost, nonusers guessed an average of US$ 1.74, although WIZZIT actually charges much less—between US$ 0.13 and US$ 0.66 per transaction. Seventy-four percent of these respondents then agreed that paying US$ 2.67 per month for banking—what WIZZIT estimates most of its customers pay[6]—is "affordable" or "inexpensive," suggesting that WIZZIT could have powerful appeal if more people knew about it.

Besides a general lack of awareness among consumers, m-banking services must compete with perceptions about traditional banking channels. (See "Banking Channel Perceptions" in Annex A). Nonusers who use banks perceive ATMs as convenient and affordable and bank branches as secure, although they have negative feelings about "high fees" and "long queues."

[5] Only 1% of nonusers who were familiar with the term identified WIZZIT as a provider, suggesting that the company's "below the line" marketing via WIZZ Kids has not generated widespread awareness.

[6] WIZZIT's US$ 2.67 estimate is based on customers using electronic deposit and cash back at merchants for most of their withdrawals. Users in this study conducted more cash deposits and ATM withdrawals.

Figure 2 Views of M-Banking among Users (215), Nonusers with Mobile Phones (149), and Nonusers without Mobile Phones (151)



Perceptions about what it takes to be banked may prevent nonusers without bank accounts from adopting m-banking. Eighty-four percent of unbanked nonusers would like to open an account, but 65 percent of these respondents cite a lack of regular income as the main reason for not having a bank account, and 60 percent cite a lack of employment.

Nonusers who are already banked and who own a mobile phone seem to have more positive perceptions about m-banking and display socioeconomic characteristics that are similar to WIZZIT users. Although many of these nonusers are still less affluent than users, they have similar personal and household income levels, have similar education levels, and are twice as likely to be employed full-time as other nonusers.

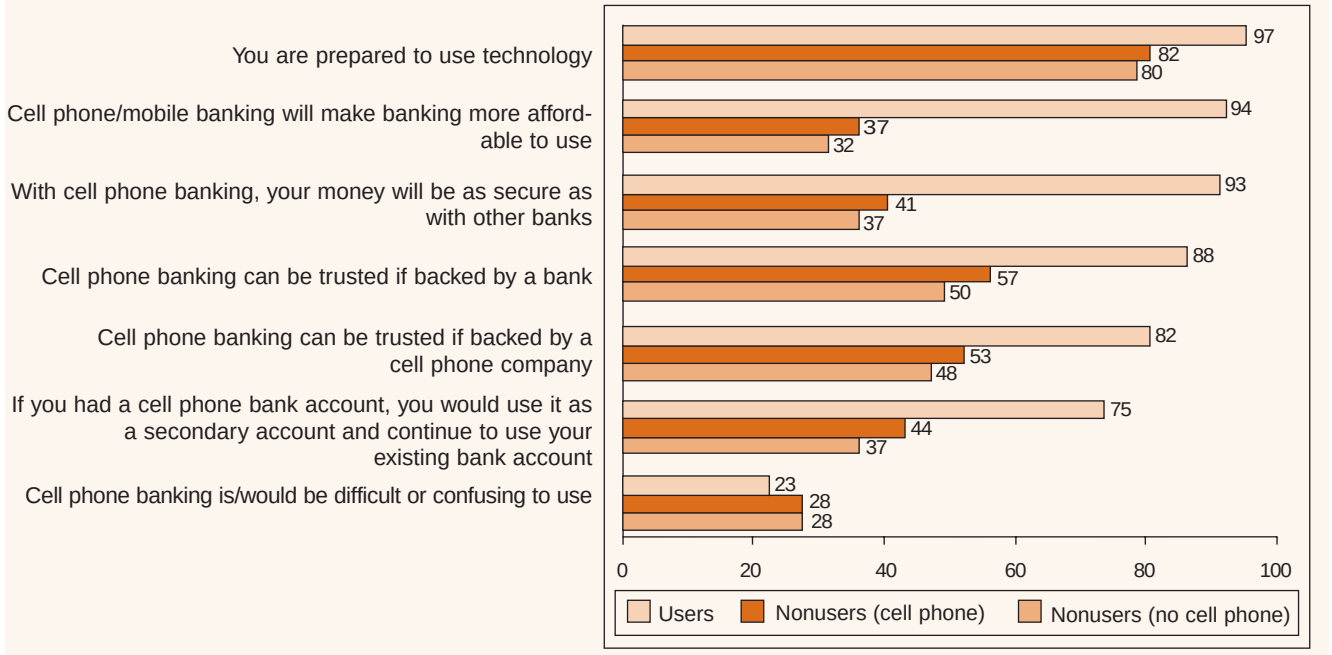
Once they use it, WIZZIT's customers seem to have very positive feelings about the service. More than two-thirds of the 215 users surveyed say that m-banking is the most convenient, fastest, and cheapest banking channel (see Annex B). They also have high confidence in the safety and reliability of the service: 93 percent of users surveyed say their "money is as secure as with other banks" (see Figure 3). And users are more than twice as likely as nonusers to have their paycheck or other primary income electronically deposited into their m-banking account (84 percent versus 42 percent).

Part III: Conclusions

The study has yielded several insights from one of the first major initiatives dedicated to offering m-banking services to the poor. It shows that m-banking services are valued by poor people in South Africa and, for the WIZZIT users surveyed, are more affordable than traditional banking. It also shows that early adopters of WIZZIT have low incomes, but are wealthier and more technologically and financially sophisticated than most poor people in the country. Further, m-banking providers must build greater awareness of their services and must find the right balance between human interaction and technology to appeal to more low-income customers.

More important, the study identifies that perceptions about banking, m-banking, and technology are important in determining the rate of adoption. Income alone is not a sufficient indicator. The study argues for a deeper exploration of these perceptions and how they may be used to segment the low-income market.

Figure 3 Views of M-Banking among Users (215), Banked Nonusers (124), and Unbanked Nonusers (176)



For example, the study reveals that some South Africans who are unemployed and earn no personal income seem to believe that they do not need banking services, cannot afford them, or are ineligible to have them. With a clearer understanding of this unemployed and unbanked segment, m-banking providers may discover better results in branding their service as a safer, more convenient payment mechanism—rather than as a better bank account.

Ultimately, all poor people need financial services to increase household incomes, build assets, and become less vulnerable to crises. With millions of mobile phones already in poor people's hands, CGAP, UNF, and VGF see tremendous potential in the power of network operators, banks, and new entrants to deliver financial services through this channel.

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Annex A: Cost to Operate WIZZIT, Big 4 Savings, and Mzansi Accounts

Table 2 compared the cost of using WIZZIT to the cost of conducting the same basket of transactions through the cheapest, full-service accounts offered by South Africa's Big Four banks or Mzansi accounts. This annex describes how we calculated these figures.

Where did we get information on bank fees? WIZZIT provided a fee schedule for its services. We relied on a forthcoming FinMark Trust survey of bank fees at the Big Four banks, which we then average for both the full-service and Mzansi accounts. By "full-service," we mean an account that offers debit orders and electronic payments to third parties. Post Bank was not included because its accounts do not offer the same capabilities.

Why didn't we just ask WIZZIT? The most accurate method would have been using the 215 WIZZIT users' actual transaction and balance records. However, the identity of survey respondents was not available. Members of the South African Market Research Association (SAMRA) follow strict confidentiality standards that vouchsafe that respondents' personal details will remain undisclosed. Calculations were thus made with information collected from the survey, under the following conditions:

1. When in doubt about which transactions are conducted via WIZZIT or another bank, we assigned one-half of the transactions to WIZZIT and one-half to a Big 4 bank account. We were even more conservative with choices between lower or higher fees for the same transaction, assigning 75 percent to the cheaper channel.

2. Bank fees for deposits and withdrawals are indexed to the value of the transaction. For average deposit size, we assume one-half of WIZZIT users' average monthly income is deposited: reasonable for individuals who live in cash economies. For average withdrawal size, we assumed two-thirds of the monthly deposit is withdrawn via ATM, the remaining one-third split between cash-back transactions or left as balance.

3. When calculating the full-service and Mzansi account costs, some transactions need to be reassigned from mobile to other channels. In doing so, we selected channels that maintain some or all of the convenience of using a mobile phone channel and, subsequently, selected the cheapest channel available. This usually resulted in transactions via mobile phones being reassigned as debit orders. Because Mzansi accounts have relatively high fees for this transaction, this partially explains why the cost of Mzansi accounts is closer to that of full-service accounts than WIZZIT accounts.

4. For airtime costs with WIZZIT, we assumed an average of USD 0.04 per transaction, although WIZZIT informs us that most transactions can be conducted for USD 0.03 or less, if the user is familiar with the transaction and keypad commands.

5. Transport costs were calculated by multiplying the average amount respondents spend on transport to the bank (USD 2.32) by the number of visits to the bank (twice per month), discounted by the percent who said they make special trips (i.e., the bank is not close to where they live, work, or buy groceries). With full-service and Mzansi accounts, we conservatively assume users will not replace all mobile phone transactions with extra trips to the bank, but instead make one additional trip per month.

6. We elected not to include interest earned in the calculation. Only one of the Big 4 banks pays interest on the full-service accounts we considered, and Mzansi accounts are not interest bearing. WIZZIT pays interest only on balances over USD 682.

Annex B: Perceptions of Banking Channels

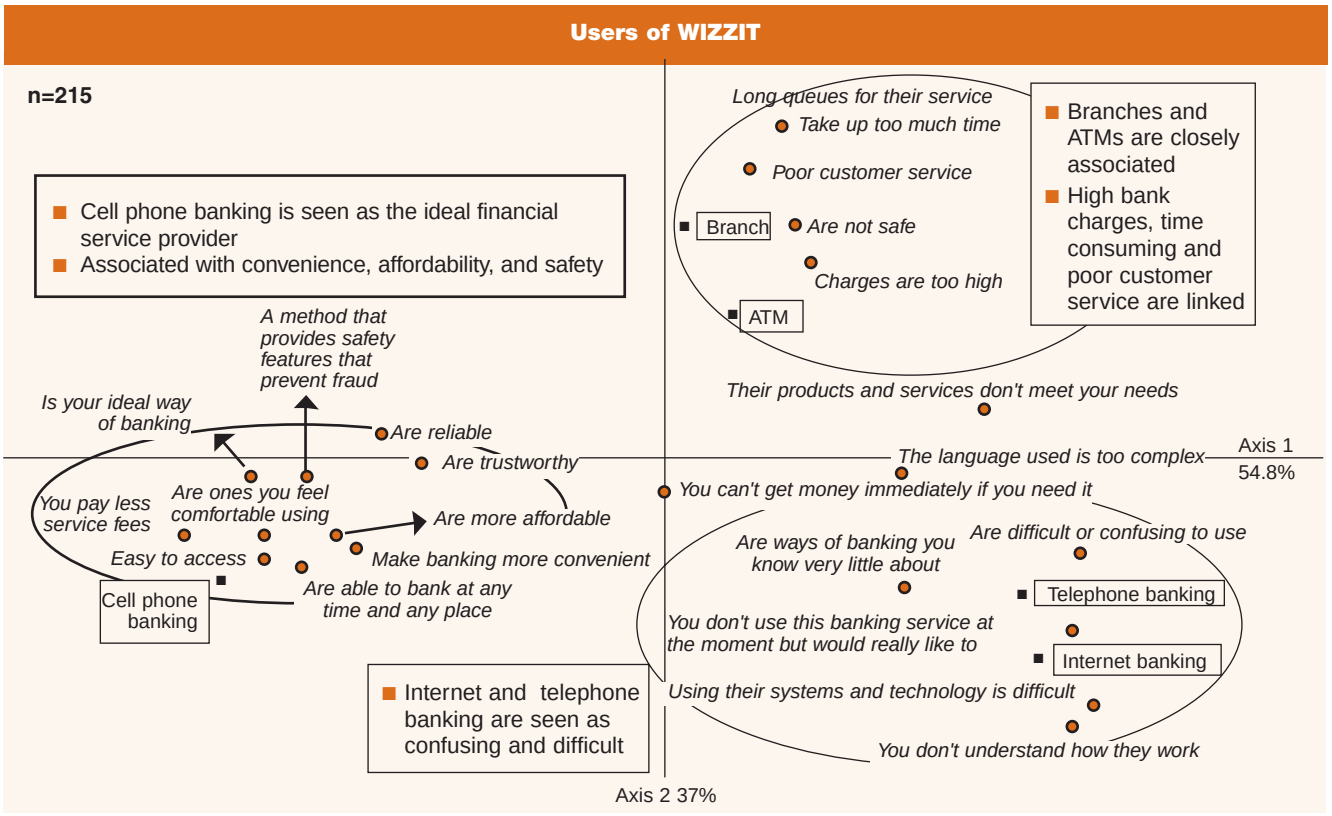
The correspondence maps on page 12 illustrate how respondents feel about the banking channels available to them in South Africa: bank branches, ATMs, m-banking, Internet banking, and telephone banking (which uses interactive voice response technology to speak to a caller and guide them through menus to complete a transaction). They show not only the attributes respondents associate with different banking channels, but how strong the associations are.

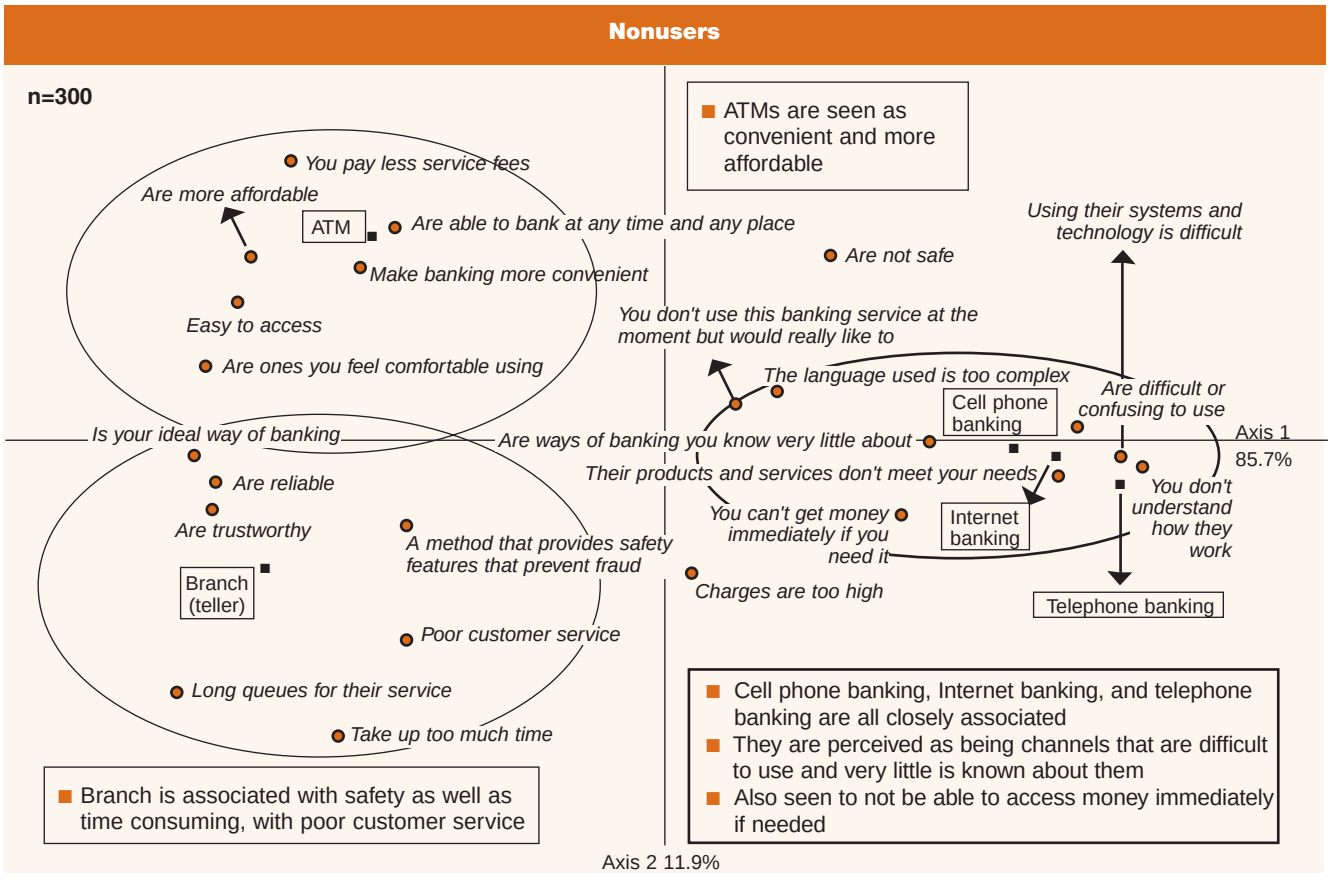
The closer an attribute lies to a particular channel, the stronger the association. For example, in the user map, "charges are too high" is situated much closer to bank branches and ATMs than it is to cell phone, Internet, or telephone banking. This means most WIZZIT users said branches and ATMs are the channels that have high charges that are too high, but few believe this to be true about cell phone, Internet, or telephone banking. The circles provide a visual aid to show which attributes are associated most strongly with each channel.

Comparing the two maps also shows how users' and nonusers' perceptions of banking channels differ. On the user map, the three attributes situated closest to cell phone banking are "you pay less service fees," "easy to access," and "are able to bank any time and any place." This means most WIZZIT users associate m-banking with lower fees, ease of access, and convenience. However, the second map shows nonusers' strongest association with cell phone banking is as a channel they "know very little about."

The survey also asked respondents which channel they believe is their "ideal way of doing banking." For users, cell phone banking was the channel most often mentioned. For nonusers, this attribute lies roughly equidistant between branches and ATMs, which suggests there are attributes nonusers like about branches that they cannot get with ATMs, and vice versa. For example, nonusers associated branches with being "trustworthy" and providing "safety features that prevent fraud," but the map shows these attributes are not strongly associated with ATMs (as indicated by the distance of the attributes to ATMs on the map). ATMs were more strongly associated with "make banking more convenient," "are able to bank any time and any place," and "you pay less service fees." This suggests that nonusers' "ideal banking channel" would offer all of these traits: security, convenience, and affordability.

Finally, the percentage figures on the axes indicate the amount of variation in the data that is explained by the attributes that fall along the particular axis. For example, in the nonuser map, the attributes closest to the horizontal axis explain 85.7 percent of respondents' perceptions of the channels on the map. By contrast, the attributes closest to the vertical axis explain only 11.9 percent. Several other attributes explain the remaining 2.4 percent of variation in data: they were not included in the map.


Users of WIZZIT
n=215
Cell phone banking is seen as the ideal financial service provider
Associated with convenience, affordability, and safety
Long queues for their service
Take up too much time
Poor customer service
Branch
Are not safe
Charges are too high
ATM
Branches and ATMs are closely associated
High bank charges, time consuming and poor customer service are linked
A method that provides safety features that prevent fraud
Is your ideal way of banking
Are reliable
Are trustworthy
Their products and services don't meet your needs
The language used is too complex
Axis 1
54.8%
You can't get money immediately if you need it
You pay less service fees
Are ones you feel comfortable using
Are more affordable
Easy to access
Make banking more convenient
Are able to bank at any time and any place
Cell phone banking
Are ways of banking you know very little about
Are difficult or confusing to use
Telephone banking
You don't use this banking service at the moment but would really like to
Internet banking
Using their systems and technology is difficult
You don't understand how they work
Internet and telephone banking are seen as confusing and difficult
Axis 2 37%


Nonusers
n=300
ATMs are seen as convenient and more affordable
You pay less service fees
Are more affordable
ATM
Are able to bank at any time and any place
Make banking more convenient
Easy to access
Are ones you feel comfortable using
Are not safe
Using their systems and technology is difficult
You don't use this banking service at the moment but would really like to
The language used is too complex
Are difficult or confusing to use
Cell phone banking
Is your ideal way of banking
Are ways of banking you know very little about
Axis 1
85.7%
Are reliable
Their products and services don't meet your needs
You don't understand how they work
Are trustworthy
You can't get money immediately if you need it
Internet banking
A method that provides safety features that prevent fraud
Branch (teller)
Charges are too high
Telephone banking
Poor customer service
Long queues for their service
Take up too much time
Branch is associated with safety as well as time consuming, with poor customer service
Cell phone banking, Internet banking, and telephone banking are all closely associated
They are perceived as being channels that are difficult to use and very little is known about them
Also seen to not be able to access money immediately if needed
Axis 2 11.9%

Annex C: Demographic Characteristics of Low-Income WIZZIT Users and Nonusers

The table below presents additional detail about the user and nonuser samples in this study. The third column presents reference data for the South African population. Readers should bear in mind the differences between the study samples and the South African population. The study samples include only lower income individuals, so demographic characteristics diverge from the average for the country.

	Users (n=215)	Nonusers (n=300)	South Africa*
Ethnicity	%	%	%
Black	99	100	80
Working status	%	%	%
Work—full-time	50	15	41% employed 27% unemployed
Work—part time	22	15	
Housewife	1	4	
Student	6	13	
Self-employed—formal sector	4	2	
Self-employed—informal sector	6	5	
Unemployed—looking for a job	15	43	
Unemployed—not looking for job	0	2	
Pensioner/retired	0	1	
Age	%	%	%
16–24 years	25	33	20
25–29 years	28	19	9
30–39 years	31	32	14
40–49 years	13	11	10
50+ years	3	5	15
LSM	%	%	%
LSM 1–2	6	23	16
LSM 3–4	48	32	28
LSM 5	46	45	29
FSM	%	%	%
FSM 1	0	14	25
FSM 2	28	79	20
FSM 3	59	7	13
FSM 4	13	0	12
Gender	%	%	%
Male	71	50	49
Female	29	50	51
Education	%	%	%
No formal education	0	1	3
Some primary school	4	7	17
Primary school completed	5	11	—
Some high school	28	50	68
Matriculated	35	26	—
University/Post matric	18	4	12
Technical/apprenticeship	10	1	—

	Users (n=215)	Nonusers (n=300)	South Africa*
Personal monthly income	%	%	
No income	8	40	20
R1–R999	22	31	44
R1000–R1999	27	15	10
R2000–R2999	14	6	5
R3000–R4999	13	1	4
R5000–R6999	6	1	4
R7 000+	3	0	5
Refused/uncertain	7	6	8
Household monthly income	%	%	%
No income	5	0	1
R1–R999	14	21	19
R1000–R1999	24	29	19
R2000–R2999	12	23	13
R3000–R4999	18	9	10
R5000–R6999	9	2	6
R7 000+	8	0	11
Refused/uncertain	10	16	21
Physical access to banking	min	min	min
Time to get to nearest bank	32	26	20

*FinMark 2005b, except for *education and gender*: Statistics South Africa 2003; for *employment*: Statistics South Africa 2006. The official unemployment rate is 26.7%. Including the 3.3 million "discouraged work-seekers" in the labor force yields a revised unemployment rate of 38.8%. This may be closer to unemployment rates in low-income, black communities in South Africa.

www.cgap.org

www.unfoundation.org

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