

AudienceScapes

Africa Development Research Brief



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This research brief is based on data from the AudienceScapes survey of 2003 Tanzanian adults (age 15+) conducted in July 2010. The survey has a margin of error for the sample of +/- 2.2 percent with a 95 percent confidence interval.

The nationally representative survey is part of a broader project aimed at improving communication programs and assessing needs in media and communication technologies in developing countries.

To access all analytical reports based on the AudienceScapes surveys, as well as other research and information, go to

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Mobile Money for the Unbanked: Lessons from Tanzania

December 2010

In the development field, there is great interest in the use of mobile phones to increase citizens' access to efficient and affordable financial services – a practice commonly referred to as mobile money. The July 2010 AudienceScapes national survey of Tanzania queried respondents on their use and knowledge of mobile money, with a view toward answering two key questions: Who uses these services in Tanzania? Are users mainly those who previously had access to other banking services, or do they include the poorest and largely unbanked Tanzanians at the so-called “bottom of the pyramid” (BOP)?

Key Findings

The AudienceScapes data - gathered roughly two years after M-PESA launched the first mobile money service in Tanzania - show that 11.5 percent of Tanzanian adults (2.75 million out of an estimated 23.9 million) had used an m-money service at some point.ⁱ This compares with a 54.6 percent rate of use among Kenyans two years after M-PESA launched there (based on the results of the April 2009 AudienceScapes survey in Kenya).

The Tanzania survey also points to a recent, sharp increase in the number of people registering for m-money services: 63 percent of those who said they had used m-money also said that they first started using a service in the past 6 months. This points to a m-money market poised for further expansion.ⁱⁱ

More relevant from a development perspective, only 3.9 percent of Tanzania's financially excluded or unbanked adults had used mobile money. The rate was 20 percent in Kenya in July 2009.ⁱⁱⁱ

In other words, at the time of the survey, m-money in Tanzania was primarily a tool for those who were already participating in the financial system. Seventy percent of those who have used m-money said they already had access to formal banking services, while only about 18 percent of those who have used m-money are unbanked (have not used formal or informal banking services in the past year). The remaining respondents had access to informal saving and borrowing services in the past year.

Even so, there is evident demand for m-money services, as nearly 30 percent of Tanzanians surveyed said they either send or receive money transfers, or do both – which are m-money services' bread-and-butter transactions. Some 34 percent of money senders do so at least once a month and 56 percent at least once every three months.

Despite the relative lack of unbanked or lower income m-money users, there is room for optimism for development groups pushing m-money as a tool of financial empowerment for BOP individuals, if only because more lower-income Tanzanians are using mobile phones. The survey defined *recent adopters* of the mobile phone as those who first acquired a mobile phone in the past year, and revealed that this group includes many more lower-income individuals than those who adopted mobile phones earlier (between two and five years ago). Thus, as mobile phone usage reaches further down the income scale, there is a greater chance that BOP individuals will use m-money services. With this, **the AudienceScapes data indicates that mobile phone ownership has been a key determinant of m-money usage. Over 90 percent of those who have used m-money are mobile phone owners.**

The Tanzanian survey also suggests that marketers and promoters of m-money services may be underutilizing word-of-mouth, SMS-text messaging and other information channels beyond mass media that have the potential to reach many more potential users. Combining these channels with mass media campaigns can enhance the effectiveness of raising awareness and use of m-money services. Notably, the survey pointed to "lack of knowledge" as a key impediment to use of mobile money.

Tanzanian M-Money: The Mobile Communications Context

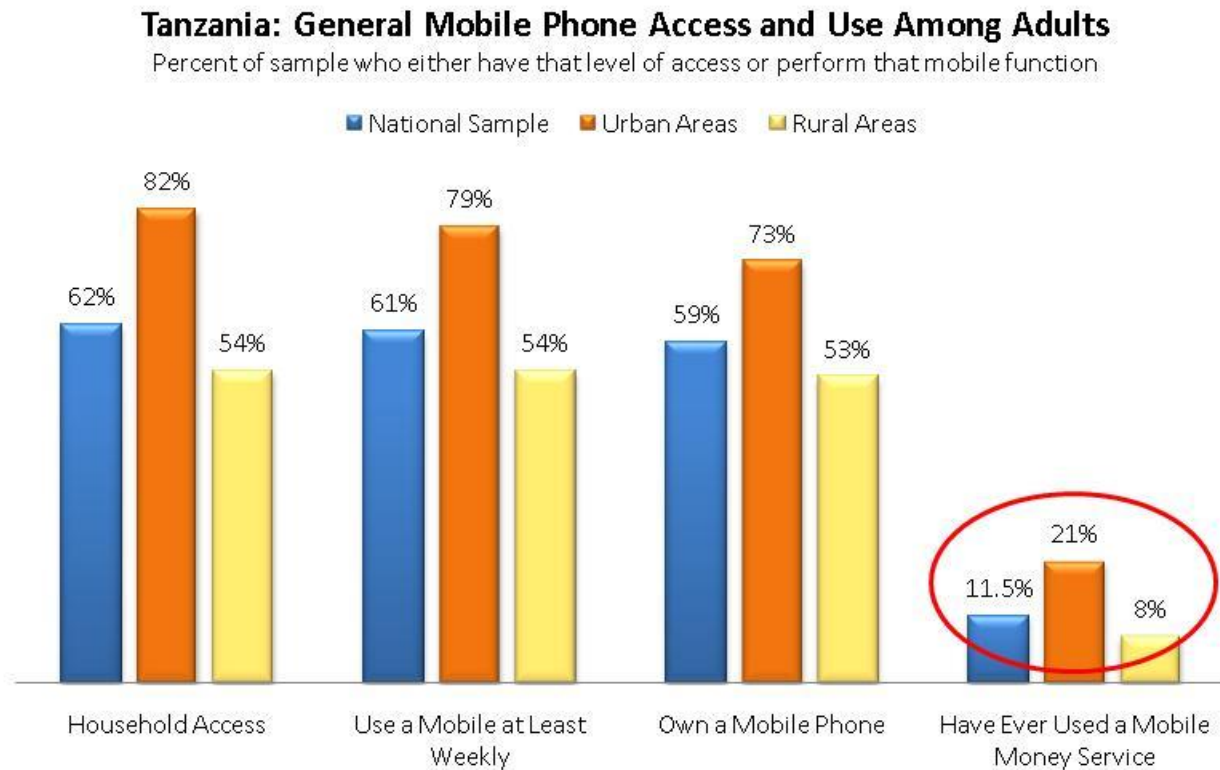
Mobile money in Tanzania is taking shape amid a fast-growing market for mobile communications in general. The International Telecommunications Union (ITU) estimates that the number of mobile subscriptions in Tanzania more than doubled between 2007 and 2009, from 8.3 million (20.2 subscriptions per 100 inhabitants) to 17.5 million (40 subscriptions per 100). The Tanzania Communications Regulatory Authority (TCRA) places the number of mobile subscriptions as of June 2010 at 19.42 million, or 46.35 subscriptions per 100.^{iv} Extrapolating from the AudienceScapes survey's questions about SIM card ownership, the data point to a subscription rate in Tanzania of 45.93 per 100 inhabitants, very close to the TCRA rate.

These numbers do not measure mobile handsets in use; rather, they measure the number of subscriber identity module (SIM) cards in use, which can be acquired either by handset owners or non-owners. What's more, many people own more than one SIM card to take advantage of price and feature variations among service providers, so the subscription rates will overstate how many people actually are using phones.

Figure 1 present a demand-side view of mobile ownership and use (as well as m-money use) based on the AudienceScapes survey. These numbers cover only the adult population. The data indicate fairly high rates of

mobile phone ownership and use (particularly in urban areas), which bode well for the potential m-money market. That said Tanzanians only need a SIM card, not a handset, to use m-money services.

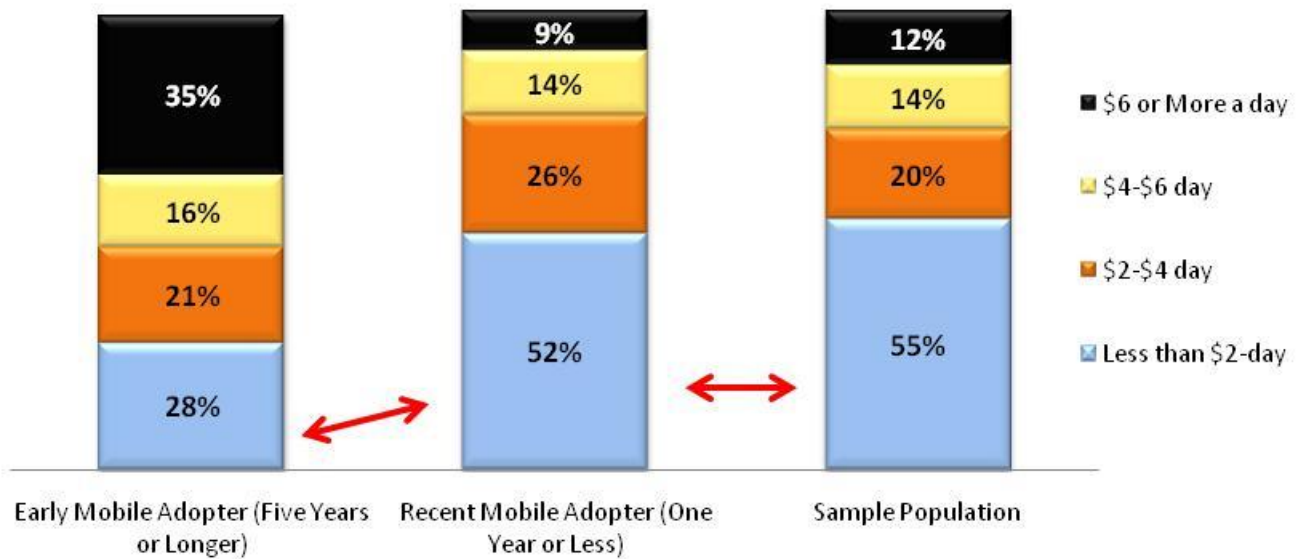
Figure 1



AudienceScapes National Survey of Tanzania 2010: survey of adults (15+) n=2003

Figure 2

Tanzania: Mobile Adoption Shifts Towards the Less Privileged
Daily Income Profile of Mobile Adopters and Sample Population
 Percent of that adoption group with that daily income



AudienceScapes National Survey of Tanzania 2010: survey of adults (15+) n= 2003; Recent Adopter, first acquired mobile phone in past year n=339; Early Adopter first acquired mobile phone five years or longer n=222

The AudienceScapes data also corroborate supply-side statistics showing that Tanzania’s mobile market has seen its strongest growth over the past two years. Twenty-eight percent of mobile phone owners in the survey said they purchased their first phone in just the past year (“recent adopters”). In fact, about 62 percent of owners said they purchased their phone in the past two years.

Parallel to this strong market growth, **there are indications that Tanzania’s disadvantaged populations are increasingly active in the mobile market** (Figure 2). Fifty-two percent of recent mobile adopters reported having a daily household income of less than \$2 (fairly close to this segment's representation in the general population), compared to only 28 percent of early adopters. Recent adopters also were more likely than early adopters to be women, rural dwellers and unbanked.

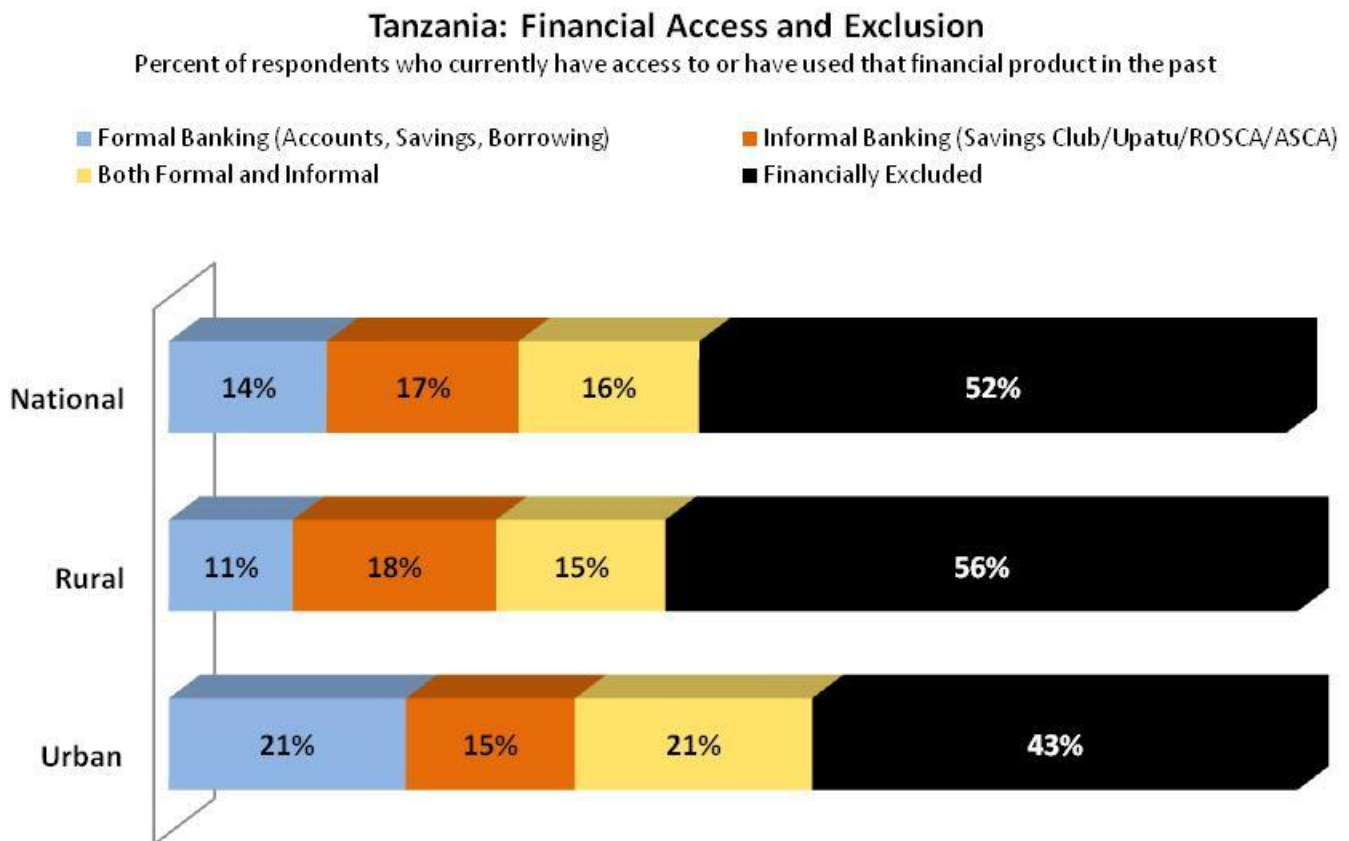
Tanzania M-Money: The Financial Services Access Gap

One of the main arguments for m-money services from a development perspective is that they hold the potential to expand safe and affordable financial instruments (such as for saving, transfers and payments) to BOP individuals. Implicit in this argument is the belief that many people are excluded from the financial services sector.

The AudienceScapes survey tested this hypothesis and found that, while there has been progress in extending some financial services to more people, over half of adults do not have access to saving, borrowing and investing instruments. This is in line with findings from the 2009 FinScope survey, which concludes that progress in extending banking services to more Tanzanians has been slow, especially in rural areas, where brick and mortar banking establishments are scarce.

The AudienceScapes survey indicates that only 11 percent of rural residents had access to formal banking services (Figure 3).^v **Perhaps more interesting for m-money proponents, 43 percent of respondents in the survey who said they are mobile phone owners fell into the unbanked category. Among recent phone adopters (those who acquired a phone less than a year ago), this percentage jumps to 56 percent.**

Figure 3



AudienceScapesNational Survey of Tanzania July 2010: survey of adults (15+) n=2003

Tanzania M-Money: The Need for Money Transfer Services

Money transfers, the first “killer application” for m-money service providers, remain a core feature of such services in many countries; they are marketed as a safer and/or economical alternative to transfers handled by the post office, friends or relatives, bus companies and others. But how many individuals send or receive transfers in a given market? This is useful information for gauging the potential of a m-money market.

Slightly more than 13 percent of respondents in the AudienceScapes survey said they send money to other people, either in Tanzania or in another country. Conversely, nearly 24 percent said they receive money transfers. In aggregate, nearly 30 percent of Tanzanians surveyed said they either send or receive money transfers, or do both. Some 34 percent of money senders do so at least once a month and 56 percent at least once every three months.

When money senders were asked an open ended multiple-response question about what they spend the transferred funds on, 41 percent said it was for “buying food”; that figure was 48 percent among those who live on \$2 or less a day. The second most cited expense was paying for school fees and supplies (21 percent).

These answers emphasize the importance of transfers as a means of sustaining the income of a large number of Tanzanians. Lowering the overall cost of sending money to others is an important undertaking, as the smallest of margins that can be saved will have an impact on both senders’ and receivers’ purchasing power. A recent price study showed how existing m-money services, M-PESA and Airtel, do just this. The average fee for sending money via M-PESA or Zap (now known as Airtel Money) was gauged to be around 1.8 percent of the total amount of money transferred, while the range of fees for other types of transfer services were between 9 and 10 percent. That said the savings by using m-money can vary substantially depending on the amount of money sent and a host of other variables that affect the price of other types of transfer services.^{vi}

Even prior to the launch of formal m-money services, many mobile phone users had developed their own informal version of sending money via mobiles by using phone airtime transfers as a proxy. Users would transfer phone airtime to friends and family, with some having the intention of converting the airtime back to cash. This method of transfer is convenient for users as it does not require registration and there is a large network of airtime sellers and resellers who conduct transactions. However, the resale value of an airtime voucher is between 10 to 40 percent below face value due to a value-added tax imposed at the point of sale and charges placed by retail channels, creating a very high effective transfer fee.^{vii}

Some 40 percent of money senders in the survey reported either using a formal m-money service or the transferring of airtime. When asked which method of transfer they most often used, money senders were split between direct deposit from their bank account, giving it to a friend or family member, and through a mobile phone service.

There is obvious demand for m-money services, even beyond the use of money transfers. Tanzanians who already send and receive transfers may be low-hanging fruit for m-money providers but they are also a key group that is in need of access to more complex financial transactions. Specifically, 31 percent of money transfer receivers and 28 percent of senders indicated that they are unbanked.

The current m-money services being offered in Tanzania may not sufficiently replace an active savings account or involvement in a microfinance program, but they do have the potential to empower Tanzanians with a financial tool that can reduce the cost of conducting services such as money transfers and bill paying. With a strong percentage of transfer receivers and senders already having familiarity with financial services, a case may be made that there is potential for more-sophisticated m-money services than simple money transfers – such as those provided by Kenya’s M-KESHO, which offers savings accounts, micro credit and insurance products.

Tanzania M-Money: Use Growing, but Not at Kenya Levels Yet

In neighboring Kenya, the original M-PESA service has set a standard of success and omnipresence by which other m-money deployments are often measured. The AudienceScapes surveys in Kenya (April 2009) and Tanzania (July 2010) were both conducted roughly two years after the deployment of each country's first m-money service (M-PESA in both countries).

Figure 4

Who has Used Mobile Money in Tanzania?			
Adoption rates of key groups			
Percent who use a m-money service in that group			
Percentage of overall respondents who have used mobile money in the past: 11.5 percent			
Financial Access		Daily Income	
Financially Excluded	4%	\$2 or Less	7%
Formal Financial Access	26%	Between \$2 and \$4	12%
Informal Financial Access	16%	Between \$4 and \$6	15%
Gender	Men: 13% Women: 10%	\$6 or More	32%
Mobile Phone Access		Setting	
Among Owners	Among Non-Owners	In Urban Areas	In Rural Areas
18%	2%	21%	8%
AudienceScapes Tanzania July 2010: survey of adults (15+) n=2003			

Other research reports have highlighted the significant differences in geography, population density, economic development and access to financial services which put Tanzanian m-money service providers at a relative disadvantage.^{viii} Indeed, only 11.5 percent of Tanzanian survey respondents said they had used an m-money service, whereas some 56 percent of Kenyan respondents had used m-money. Figure 4 provides percentages of various demographic groups in Tanzania who have used m-money.

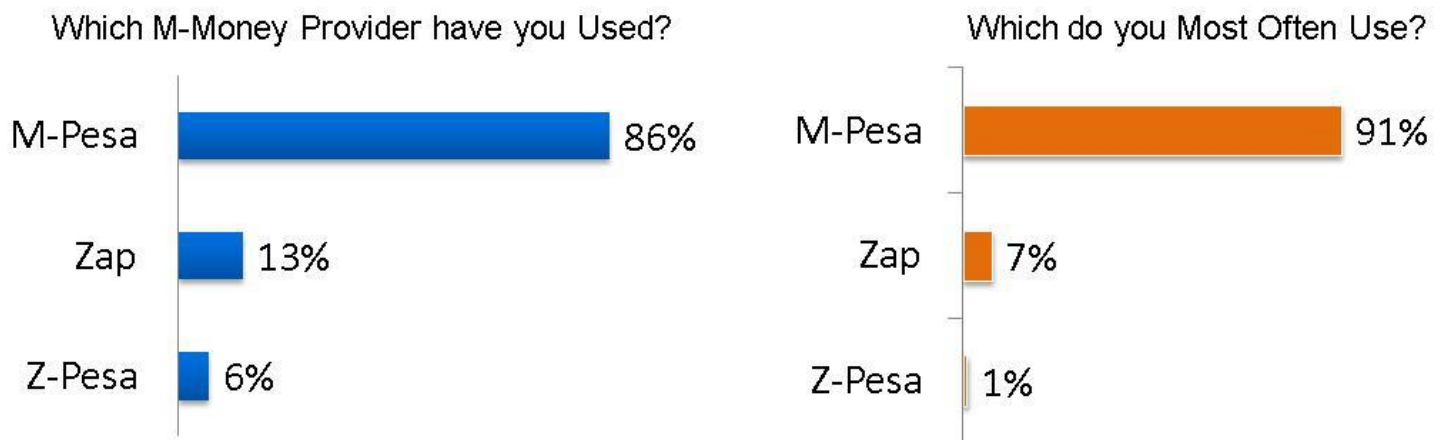
M-money remains primarily a tool for the already banked. Profiling those who have used m-money highlights how seventy percent of those who have used m-money already have access to formal banking services. Only about 18 percent of those who have used m-money are unbanked and as Figure 4 shows the unbanked are one the least likely groups to have used m-money.

Despite the relative disadvantages m-money providers face in the Tanzanian market, each of the country's four major mobile phone service providers now offer m-money services: Vodacom's M-PESA, Airtel Money operated by Bharti Airtel (formerly branded as Zap), Zantel's Z-PESA and Tigo's Tigo Pesa. Vodacom's M-PESA, the m-money market leader, has set out in some ways to mimic the success of the Kenyan M-PESA run by Safaricom, while also becoming an industry leader through agent network innovation. Figure 5 depicts how dominant the M-PESA service is in the m-money market. Not only have most Tanzanians who have used m-money done so with M-PESA but the service is also the most often used.

Figure 5

Tanzania: M-PESA Leading the Way

Percent who have used m-money in the past



AudienceScapes Tanzania 2010 national survey of adults (15+) who use a m-money service n=250;

Vodacom has deployed an innovative new program within its agent network that allows so-called “masteragents” to provide credit to other agents so that they can maintain the proper liquidity to operate effectively.^{ix} The piloting of this program was partially funded by the GSMA’s Mobile Money for the Unbanked Program. Among M-PESA users in the AudienceScapes Tanzania survey, 75 percent said they considered the service to be very trustworthy, and another 17 percent said it is somewhat trustworthy.

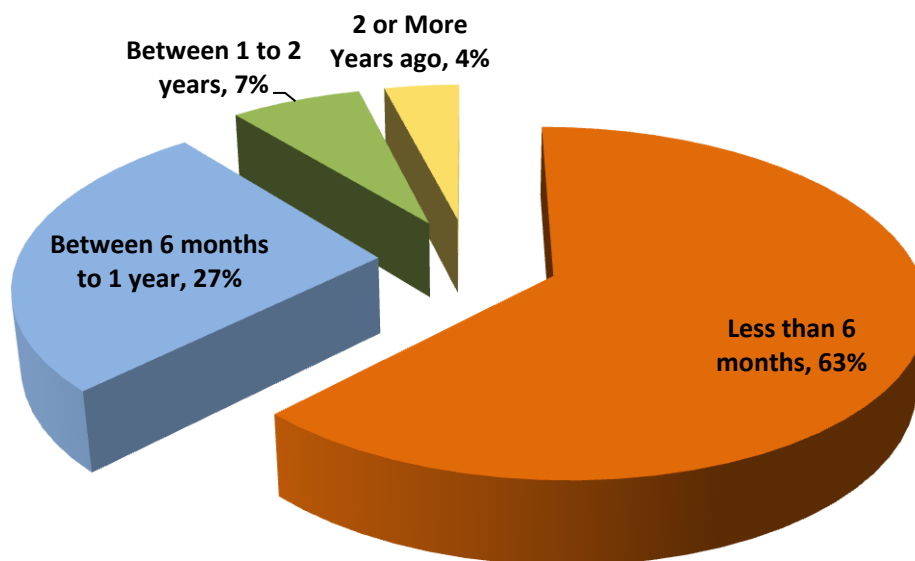
The Zap m-money service (rebranded as Airtel Money in November 2010) has chosen to focus less on customer to customer transactions (C2C) and instead leverage its position in what the company sees as a future cash-free “ecosystem”. This includes enabling users to link their e-wallets to bank accounts, eliminating the need to “cash in or cash out” money transfers or bill payments. This strategy is seen as more complex and expensive compared to the efforts of their competitors, who have focused upon C2C and consumer to business (C2B) transactions.^x From a development perspective, it also may not have the same level of short-term impact among less privileged communities who do not have access to a bank account.

Though mobile money services had been available in Tanzania for about two years when the AudienceScapes survey was conducted in July 2010, close to two thirds of m-money users said they first used such services in the last six months, while another 27 percent began using between six months and a year ago.

Figure 6

Tanzania: How long ago did you first begin using M-Money?

Percent of m-money users who first began using the service in that time period



AudienceScapes National Survey of Tanzania 2010: survey of adults (15+) who have used a mobile money service n=250

This influx of new users likely reflects greater competition in the market and an effort by providers to capitalize on a law requiring mandatory SIM card registration, which came into effect in July 2009. The information required to register a SIM card is similar to that needed to register for an m-money service, so providers used mandatory SIM card registration as an m-money marketing opportunity. Indeed, the period of mandatory registration (July 2009 through June 2010) coincided with exponential growth in m-money registrations for M-PESA and Zap.^{xi}

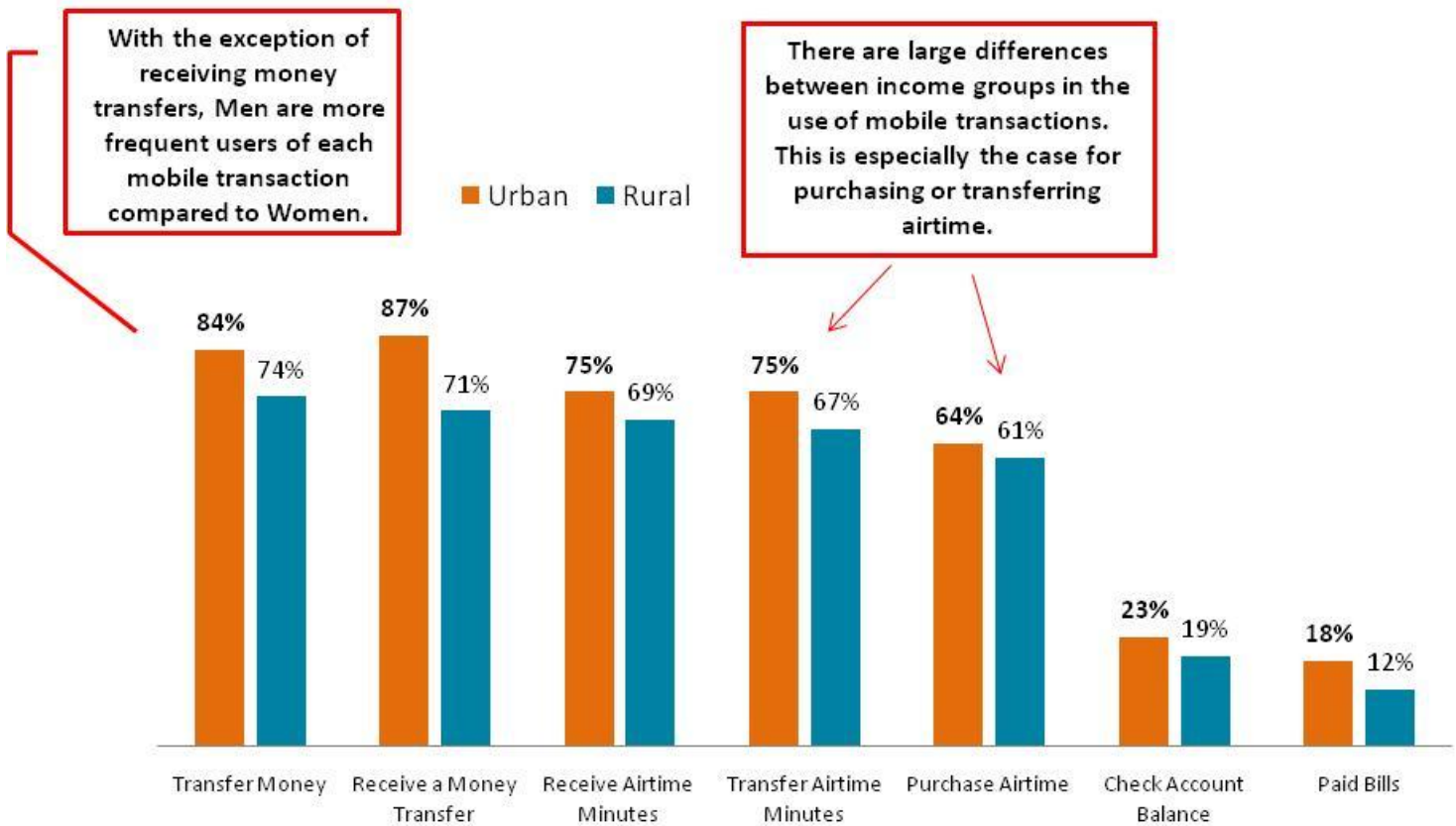
During this period the holders of any active SIM card were required to register their SIM cards, ostensibly giving m-money service providers an opportunity to directly target potential users. After the June 2010 deadline, all unregistered SIM cards were to be “locked” for 90 days until September 30th, when all unregistered SIM cards would be permanently deleted. The continued requirement of new SIM card purchasers to register using an identification card has the potential to continue being a driver for m-money sign up, with the ease of simultaneous registration. However, as the survey results suggest, large numbers of registered subscribers do not necessarily translate into large numbers of active users.

Figure 7 shows how the most basic m-money services such as transferring money and purchasing airtime remain the most used. That said Airtel Money’s focus on a future cash-free ecosystem may in the long run position it to respond to customers’ need for more complex B2B or C2B transactions. Currently, Vodacom also offers bill pay for its customers, allowing them to make payments on utilities, school fees, or bus fares. Just over 60 percent of those who have paid a bill using m-money reside in an urban area, where a user is more likely to be connected to a utility company or to regularly visit a storefront. In addition, the use of functions such as paying bills is almost exclusively conducted by those who are formally or informally banked.

Figure 7

Tanzania: Most Popular Mobile-based Financial Transactions Transferring Money vs. Transferring Airtime

Percent of m-money users who have conducted that type of transaction



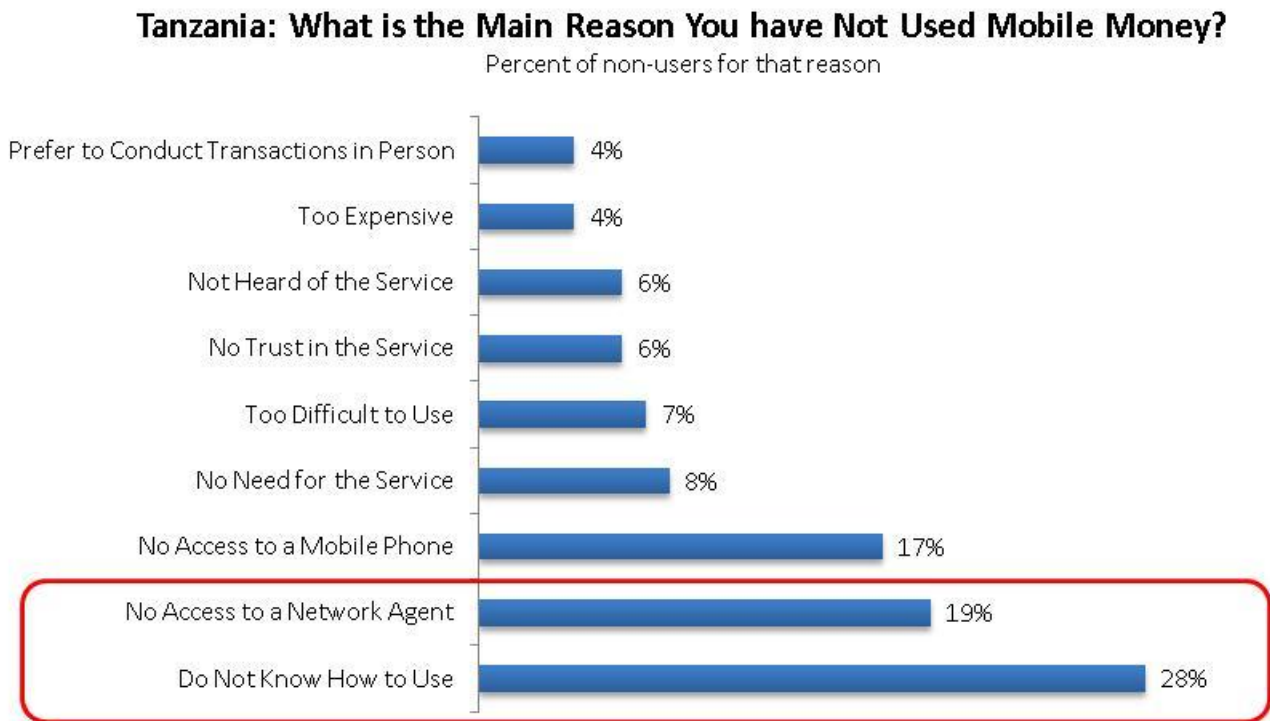
AudienceScapes National Survey of Zambia April 2010: survey of adults (15+) who have used m-money in the past n=250

Conventional thinking regarding m-money transfers is that they are often conducted primarily in one direction, with the sender sharing his or her disposable income with a recipient who is in need. In Kenya, there is a dominant urban-rural remittance corridor where senders typically reside in urban areas and "Send Money Home" (an M-PESA slogan) to a rural friend or relative. In Tanzania, while most money transfers originate in urban areas, more than three quarters of both urban and rural recipients reported receiving a transfer from an urban sender. In addition, 57 percent of urban money senders also receive money transfers from others, primarily from other urban senders.

The complexity of Tanzania's money transfer market has the ability to make marketing m-money products difficult. As a recent GSMA publication highlighted, Vodacom began using M-Pesa Kenya's slogan "Send Money Home" to advertise its services, but with little effect. Reportedly, Tanzanians were aware of the Vodacom M-PESA brand but not how the service could be used. The main difficulty was Vodacom's inability to connect their advertising with the sporadic money transfer habits of Tanzanians. By the second half of 2009, coinciding with the SIM card registration period, Vodacom had shifted its marketing strategy towards the presentation of different use cases, explaining to customers how the service works and how to sign up. Despite this shift in strategy, it seems there is still a lack of knowledge among the general population about how m-money services function.

Tanzania M-Money: Reasons People Don't Use It

Figure 8



AudienceScapes National Survey of Tanzania 2010: survey of adults (15+) who do not use a mobile money service n=1714

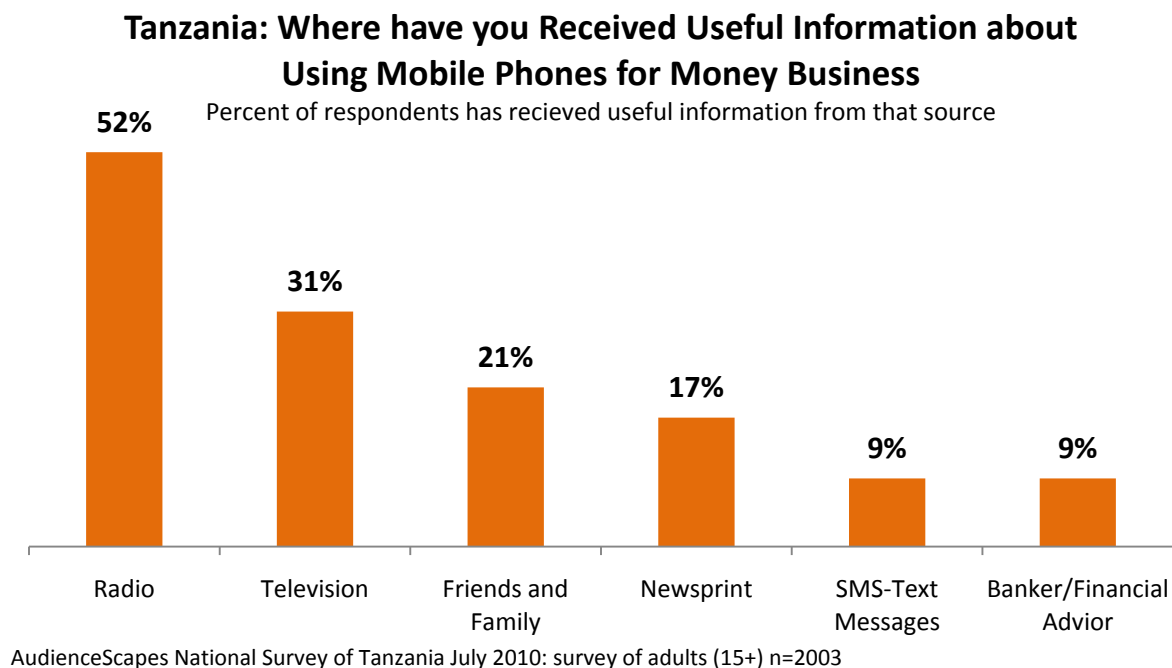
The main reason cited for not using m-money was *a lack of knowledge about how to use m-money*. At the same time, respondents expressed interest in learning more about it.

Interestingly, mobile phone owners who have not used m-money report the same top reasons for not using m-money as all other respondents. This indicates that m-money service providers are not necessarily having difficulty making Tanzanians aware of the services, as other studies have indicated, but have been unable to thoroughly convince citizens that the services can be easily used and are beneficial to them.

In fact, there is a close relationship between the problem of lack of knowledge and the second-most-cited problem of not having access to an m-money agent. Network agents are on-the-ground representatives for service providers. Since many of them are already airtime sellers and kiosk operators, agents are in a position to inform existing and prospective customers about m-money. Understandably, **lacking access to an agent is a substantial problem in rural areas: 93 percent of respondents who said they do not have access to a network agent are rural residents**. Tanzania, in particular, faces this problem as nearly three-quarters of its population reside in rural areas. These regions are often the last to see an agent network roll out due to a lack of prospective storefronts that can support an agent.

In the fall of 2010, Vodacom received a grant totaling \$4.8 million from the Bill and Melinda Gates Foundation aimed at expanding the public's knowledge of M-PESA and the services' benefits, specifically for unbanked individuals. A majority of respondents in the AudienceScapes survey expressed a need for more information on banking services, including m-money. When we asked respondents what types of financial transactions they would like to know more about, 52 and 51 percent, respectively, said they wanted more information about m-money and money transfers. There was an even greater call for information about saving and borrowing of money.

Figure 9



The top source for information on m-money, radio, reflects its popular use as a news and information source for the general population. However, sources like word-of-mouth through friends and family and SMS-text messages have played a lesser role in informing Tanzanians about m-money. These are two potentially powerful mechanisms for sharing information that have otherwise been underutilized. Sixty-six percent of all respondents reported conversing with friends and family at least weekly to gather news and information. Thirty-five percent of respondents reported gathering news and information via SMS at least weekly. This percentage is 27 percent among the unbanked.

The use of these two sources of information may be used in concert with traditional media marketing. For instance, service providers can help spawn word-of-mouth traffic by offering incentives via radio or SMS to those that are already registered for m-money to refer their friends and family to the service.

Tanzania's radio market is not only conducive for a large national campaign but also a regionally based one that would follow an incremental service or agent network deployment. Tanzania possesses a relatively strong national radio market with one state-run radio station and four commercial stations, but it also has growing regional and district level markets. The FM market in particular is continuing to expand within regional cities on the district level. Advertising on these stations may be more productive if agent network rollouts or new information campaigns are deployed on a regional instead of the national level.

While Tanzania's m-money market faces many challenges and has not replicated the success of m-money in neighboring Kenya, there are signs that Tanzania is finally turning a corner. Based on trends in the first half of 2010, take-up rates of m-money services are gaining momentum as agent networks expand and service providers devote more resources to direct marketing. It is important to monitor not only the number of people who are signing up for these services, but also on whether there is greater penetration at the bottom of the pyramid.

The AudienceScapes project (www.audiencescapes.org) is aimed at bridging knowledge gaps about media preferences, personal communication habits and the use of information and communication technologies (ICTs) in Africa and in other developing regions. It is also a tool for identifying needs in media, communication technologies, development information and development policy.

The project's name refers to the benefits for development organizations of understanding the changing communication preferences and needs of their 'audiences'—the target populations and policymakers whom they are trying to support. Launched in April 2009 with support from the Bill & Melinda Gates Foundation*, AudienceScapes comprises four main elements:

- **National quantitative surveys** looking at (1) the general population's access to and use of media, access to and use of information and communication technologies (ICTs), and word-of-mouth communication habits; and (2) how these factors affect people's acquisition of knowledge about key development topics. Pilot projects are taking place in Ghana, Kenya and Zambia.

- ***In-Depth Interviews with policymakers*** to find out how they gather, assess, share and disseminate critical information related to development topics, and find out how global development partners can play a constructive role in this process. The interviews were begun in the same three African countries.
- ***The AudienceScapes website*** which provides access to the program’s analytical reports as well as the quantitative survey data. The website also has detailed “Country Communication Profiles” of several countries in multiple developing regions, plus other resources for development practitioners working in communication, media development, technology development and policy dialogue.
- ***Custom Research and Analysis*** for organizations and companies in need of reports catering to their specific research needs.

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InterMedia (www.intermedia.org) is a nonprofit research, evaluation and consulting company with expertise in media, communications and development. We creatively equip clients to understand audiences, design projects, target communications and gauge project impact in developing and transitional societies worldwide.

**The findings and conclusions of the AudienceScapes research project are those of InterMedia and do not necessarily reflect the positions or policies of the Bill & Melinda Gates Foundation.*

ⁱ “Tanzania: Population”. CIA Factbook. Washington, DC. Est. July 2010. Updated bi-weekly. Accessed December 2010.

<https://www.cia.gov/library/publications/the-world-factbook/geos/tz.html>.

ⁱⁱ According to supply-side statistics from mobile money service providers, more than 9 million Tanzanians have registered for a mobile money service. However, the AudienceScapes survey did not ask respondents whether they had registered for a service, only whether they had used mobile money. Okoegwale, Emmanuel. “M-PESA Service gets U.S\$4.8 million boost in Tanzania”. Mobile Money Africa. 17 November 2010. Accessed December 2010. <http://mobilemoneyafrica.com/?p=2677>. And Leishman, Paul. “A Closer Look at Zap in East Africa”. *Mobile Money for the Unbanked Program*. GSMA. 4 May 2010. Accessed December 2010.

<http://mmublog.org/global/gsma-publish-case-study-on-zain%e2%80%99s-zap/>.

ⁱⁱⁱ Formal banking has been defined by a positive answer to the questions “Have you used a bank or a cooperative to save money in the past 12 months?” and “In the past 12 months, have you borrowed money from a bank or a cooperative?” and “Do you have a bank account?”. Informal banking access is defined by a positive answer to the questions “Have you used a savings club/upatu/ROSCA/ASCA to save money in the past 12 months?” and “In the past 12 months, have you borrowed money from moneylenders, ASCA or ROSCA?”. Those respondents who have been described as financially excluded or unbanked answered in the negative to all the above questions.

^{iv} “Quarterly Telecommunications Statistics : June 2010 Report”. Tanzania Telecommunication Regulatory Authority. Accessed November 2010. <http://www.tcra.go.tz/publications/telecom.html>.

^v Having access to formal banking services is defined within the AudienceScapes survey as currently having a bank account or having used a bank or bank cooperative to save or borrow money in the past year.

^{vi} McKay, Claudia and Mark Pickens. "Branchless Banking Pricing Analysis". Consultative Group for Assisting the Poor. May 2010.

[http://www.cgap.org/gm/document-1.9.43876/Branchless Banking Pricing Analysis May 2010.pdf](http://www.cgap.org/gm/document-1.9.43876/Branchless_Banking_Pricing_Analysis_May_2010.pdf).

^{vii} Camner, Gunnar. Caroline Pulver. And Emil Sjoblom. "What Makes a Successful Mobile Money Implementation? M-Pesa in Kenya and Tanzania." GSMA. Accessed November 2010. http://www.gsmworld.com/documents/m-pesa_case_study.pdf.

^{viii} Ibid.

^{ix} "Annual Report 2010". *Mobile Money for the Unbanked Program*. GSMA. 26 May 2010. Accessed December 2010.

<http://mmublog.org/global/gsma-publish-2010-mobile-money-for-the-unbanked-annual-report-2/>.

^x Leishman, "A Closer Look at Zap in East Africa".

^{xi} "Public Notice: SIMCARD REGISTRATION". Tanzania Communication Regulatory Association. Accessed November 2010.

<http://www.tcra.go.tz/headlines/simcardRegEng.pdf>.