The Future of Money and Giving Every Child the Chance at a Successful Future

By Jonathan Butcher
John Makusi Simiyu operates a nondescript real estate and transportation company in Nairobi, Kenya. Yet Simiyu uses what may be the most advanced way to send and receive money in the world: M-PESA. A telecommunications company created M-PESA in 2007, and anyone in Kenya or Tanzania with a cellphone can use the system to deposit money, pay bills, and transfer funds to family and friends. Simiyu also uses M-PESA to pay his employees and transfer money to his customers.

Simiyu explains that when one of his vehicles breaks down, he doesn’t have to run the risk of carrying large amounts of cash to remote areas. “Just call me, tell me your problem and how much you need and I will text it through M-Pesa system,” Simiyu told the BBC. “I don’t need to go the bank when I have the bank in my phone.”

From Forbes to the Economist, from the New York Times to the World Bank and beyond, industry analysts call mobile payment systems such as M-PESA the future of banking (one Forbes’ writer went so far as to say “Cash is trash”).

The United States lags behind other nations in adopting mobile payment technology. Yet smartphone applications and other digital payment methods are available today that policymakers and individuals can use to revolutionize the way parents educate their children. Rapid advances in mobile payment technology are occurring at the same time education savings accounts are spreading around the United States. The two developments are a match for each other.

By the summer of 2015, lawmakers in five states had enacted such accounts. Education savings accounts work like this: the state deposits public funds in a private bank account for parents to use to buy educational products and services for their child. Parents choose from a list of eligible expenses, like online classes, personal tutors, and private school tuition and use a Visa card or are reimbursed to complete a transaction. Today, nearly 840,000 students nationwide are eligible for the accounts across Arizona, Nevada, Florida, Mississippi, and Tennessee.

This paper will explain how examples from states like Arkansas and Missouri and from Kenya demonstrate how mobile devices can be utilized to make person-to-person and person-to-business payments possible for thousands—and in Kenya’s case millions—of individuals and businesses. Such methods would make education savings accounts more accessible to families and transparent to taxpayers and lawmakers. As we consider the future of education in the United States, these payment systems would accelerate the process of bringing the benefits of education savings accounts to more children—delivering more choices, flexible payment options, and better access to learning experiences.

A transition from debit cards and reimbursement to payments using mobile devices will be an adjustment for many. This policy brief will present findings from a March 2015 Federal Reserve survey of how the current generation of parents, employees, and consumers—Millennials—are the most prepared generation of adults for the transition to mobile payments. Access to convenient mobile payment methods can improve the ways parents find quality educational options for their children and lawmakers provide students with the taxpayer money meant for students’ educational success.
PART I: INTRODUCTION

Instead of a labyrinth of state and district funding mechanisms, education savings accounts provide parents with a dedicated source of education resources for their child. In Arizona, where the accounts (called “Empowerment Scholarship Accounts”) have been operating since 2011, participating families have 11 categories of eligible expenses at their disposal including private school tuition, online classes, textbooks and curricular materials such as science kits, educational therapy services, and even college savings plans (for more on eligibility and participation, see “Who benefits?” below).

Arizona parents use the education savings account card just like a prepaid Visa card. The state department of education makes quarterly deposits to each card, and parents use the Visa cards to buy educational products and services. They can swipe their cards at a private school or an educational therapist's credit card terminal or enter their account information in PayPal to make purchases.6

Arizona limits card usage to vendors that fall into certain merchant code categories (MCC) to help prevent misuse. For example, parents cannot use their child’s education savings account card at a gas station because of the station’s MCC code, while they can swipe their child’s card at a participating school’s credit card reader.

Research demonstrates promising results, and studies show parents are highly satisfied. A 2013 survey of participating parents found that all families reported some level of satisfaction, even those that reported being highly satisfied before they left a traditional school to use an education savings account.6 Seventy-one percent of respondents reported being “very satisfied” with their child’s account.4

Families are using the accounts for many products and services, giving them access to multiple educational solutions for their child.4 In 2016, a review of Arizona education savings account parent spending found that 28 percent of families were using an account for multiple products and services, not just private school tuition.5 This figure is consistent with an earlier study that found 34 percent of families were using the cards for multiple purchases.6 In both studies, approximately one-third of account holders used an account for more than one educational service.

Because families are making distinct purchases with an account, policymakers can view transactions and purchases. State officials can follow every dollar meant for a child’s education from the state to a family to the educational provider, making the accounts a transparent way to account for taxpayer money.

Prepaid Visa cards are not the only way to deliver education savings accounts. In Florida, where education savings accounts are called “Gardner Scholarships,” the authorizing agency approves purchases through a web portal. Parents then use their own funds to buy an item or pay for a service. The authorizing agency then reimburses families (in some cases the agency pays a provider directly).7

Families in Mississippi, Tennessee, and Nevada use or will use education accounts similar to those in Arizona and Florida.14 Again, in some cases parents must apply to the state to have personal funds reimbursed for expenses, and Nevada is experimenting with mobile payments (see “Nevada and the next education savings account payment system” below).4

“Arizona parents use the education savings account card just like a prepaid Visa card.”

PART II: WHY DOES PARENTAL CHOICE IN EDUCATION NEED MOBILE PAYMENT SYSTEMS?

While the accounts are helping to deliver a quality education to thousands of students, there is room for improvement.

- **Parents need better information.** A focus group of Arizona parents using education savings accounts found that some families are frustrated by the lack of information about where cards may be used.6 One parent said she was afraid her child would be “missing out” on a valuable item or service because she did not know if her prepaid card would be accepted. Arizona officials have not made a comprehensive list of available vendors available to parents.

- **Nevada policymakers have improved on the Arizona account model, but Nevada’s program is still in its early phases of development.** Groups that oppose parents’ freedom to make choices for their child’s education have filed a lawsuit and prevented the state from disbursing funds.15 As a result, students and families are left waiting to see the effects of Nevada’s new education savings account payment methods.

- **Parents should be able to transfer money electronically.** In addition, some states with education savings accounts allow families to save for their child’s college education using Coverdell Savings Accounts or prepaid college savings plans. However, these plans require electronic fund transfers (EFTs), and Arizona’s prepaid cards do not facilitate such transactions. Families have had to convince financial firms to adjust their deposit process to accommodate education savings accounts. Such efforts are frustrating, unconventional, and not always successful, according to parents.16

- **Nearly a million students are eligible.** Better methods are badly needed now that education savings accounts are available to nearly a half-million students in Nevada and some 250,000 in Arizona.
As mentioned above, 840,000 children are eligible for education savings accounts across five states (Figure 1). Policymakers and participants should integrate mobile payment systems with education savings accounts now, while participation is modest in Arizona, Mississippi, and Florida to allow the programs to scale up. In Arizona, education savings account participation has doubled in size every year beginning in 2011. Many other states are considering the accounts (in 2015 and 2016, lawmakers in more than a dozen states introduced legislation to create education savings accounts). While existing programs are modest in size now, participation is growing and has room to grow.

Better transparency and fraud prevention. Finally, education savings accounts need to be paired with mobile payment platforms to continue to be the most transparent way to provide students with a quality education. In Arizona, where the accounts have been available to parents the longest, the state department of education reports that “there were fewer than five instances of criminal misspending of ESA funds” between 2011 and 2015. During this same period, $55 million had been awarded to some 3,000 accounts (Table 1).

Table 1: Arizona Empowerment Scholarship Account Awards

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Empowerment Scholarship Account Awards</th>
<th>Total Funds Disbursed to Empowerment Scholarship Accounts</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011-12</td>
<td>150</td>
<td>$1.5 million</td>
</tr>
<tr>
<td>2012-13</td>
<td>302</td>
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</tr>
<tr>
<td>2013-14</td>
<td>761</td>
<td>$10.2 million</td>
</tr>
<tr>
<td>2014-15</td>
<td>1311</td>
<td>$17.3 million</td>
</tr>
<tr>
<td>2015-16</td>
<td>2502</td>
<td>$21.2 million</td>
</tr>
</tbody>
</table>


In 2015, an Arizona Department of Education spokesperson said, “Our top priority is protecting taxpayer money and we do that by using real time financial transaction information that comes from the banks…. We can track that and see exactly what type of of things people are buying.” Preventing all fraud is impossible, though the Arizona Attorney General reports that parents misused just 0.4 percent of the total money deposited in the accounts. When participants misuse the accounts, state agencies can identify the problem and intervene to prevent widespread fraudulence.

Even with this admirable level of transparency and, to date, small amount of fraud, misspending still happens. In 2015, a parent was charged with using her child’s account to buy a TV from Walmart and using the card to pay for medical services that were not approved educational expenses. The activity made headlines because the abuse of funds meant for a child’s education was so brazen and at odds with who these accounts are meant to be used for.

Such activity happens in district schools, too, but since these accounts are new to the education landscape and a new way to approach learning, the accounts are targets for negative publicity.

To protect students and taxpayers, education savings accounts need a more effective delivery mechanism than is being used today. Mobile and e-payment systems can allow policymakers to validate a parents’ purchases prior to spending the money, allowing lawmakers to block misuse before it happens. It is not speculation to think mobile payments have the potential to deliver these improvements to the administration of education savings accounts—millions of people across the world are banking this way today.
PART III: MOBILE AND E-PAYMENT SYSTEMS

Mobile and e-payment systems take on a variety of forms, but the uniting feature is they replace the exchange of cash for an electronic transfer of funds. The first type of such solutions involves storing credit or debit card information on a cellular phone, which users then access via a mobile application to pay for goods and services.

Uber is an example of such a mobile phone application.28 The Uber app, used to request transportation, is a unique advancement over the taxi industry in that any individual with a car who registers as an Uber driver can provide services. The mobile application for smart phones is an advancement in mobile payments because Uber passengers store credit card or other bank card information in the Uber application on their phones. The application facilitates payment automatically—there is no need to tap “pay” on your phone. The passenger and rider do not even exchange cash for a tip.

Uber is one of the few mobile payment solutions in the United States to be widely adopted (in 2014, Uber reported 140 million rides).29 “Millennials hate cars and love convenience,” says CNN Money writer Sarah Ashley O’Brien. “And Uber is tapping into both of those trends.”30

ApplePay and e-payment on Samsung smartphones have similar functionality:31 Users of the smartphones store bank account and credit card information on an application in their phones. Yet inconsistent availability of payment machines across retailers has stunted the widespread adoption of these applications, as has the sheer size of the U.S. consumer market. (For more reasons why mobile payment technology has been slow to develop in the United States, see “Why aren’t we there yet?” below).

Despite the fits and starts in the United States of large companies like Apple and Samsung with mobile payments, there are isolated examples of success. Venmo allows individuals to send money to one another using a mobile application.32 You can add money to your Venmo account or link a bank card (some fees apply). You can even deposit money from your Venmo account to your bank. Dwolla offers similar services, and Dwolla allows financial institutions to use its technical platform to create money transfer and payment services.33

Another type of mobile payment is distinguished by the vendor’s side of a transaction, instead of the customer’s side. PayAnywhere and Square provide vendors with small hardware to attach to mobile devices in order to receive payments via credit or debit cards.34 The customer’s payment information is automatically processed and stored in the vendor’s receipt-management service.

Customer’s pay with a credit or debit card (as opposed to a phone), but vendor’s receive payment via hardware attached to a mobile device.

A third type of mobile payment allows both the customer and the vendor to use a mobile device to complete a transaction—no paper or plastic required. Such services are possible in the United States (Square’s “Square Cash” service allows you to send money to someone else without knowing your bank number or the recipient’s, and Venmo and Dwolla systems allow similar services) but commonplace on the other side of the world in Kenya.35

The most notable success of a mobile payment system is Kenya’s M-PESA. Vodafone and its Kenyan affiliate Safaricom, telecommunications companies, launched M-PESA in 2007.36 Safaricom was a natural choice for Vodafone because it operates Kenya’s largest cellphone network.37 M-PESA developers Nick Hughes and Susie Lonie explain:

The product concept is very simple: an M-PESA customer can use his or her mobile phone to move money quickly, securely, and across great distances, directly to another mobile phone user. The customer does not need to have a bank account, but registers with Safaricom for an M-PESA account. Customers turn cash into e-money at Safaricom dealers, and then follow simple instructions on their phones to make payments through their M-PESA accounts; the system provides money transfers as banks do in the developed world. The account is very secure, PIN-protected, and supported with a 24/7 service provided by Safaricom and Vodafone Group.38

![Figure 2: How to get started with M-PESA](image-url)

<table>
<thead>
<tr>
<th>HOW TO GET STARTED WITH M-PESA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1: Visit any authorized M-PESA agent and get registered</td>
</tr>
<tr>
<td>Step 2: You will receive an SMS confirming your registration</td>
</tr>
<tr>
<td>Step 3: Now you can</td>
</tr>
<tr>
<td>• Send and receive money</td>
</tr>
<tr>
<td>• Receive cash through Western Union</td>
</tr>
<tr>
<td>• Pay all your bills</td>
</tr>
<tr>
<td>• Purchase airtime</td>
</tr>
</tbody>
</table>

M-PESA had 20,000 users shortly after its launch in March 2007.39 By November of that year, 1 million users signed up for the service. Today, some 20 million Kenyans use the service.40 Eighty-five thousand vendors operate across the country as Safaricom agents, what 60 Minutes calls “a giant grid of human ATMs.”41 M-PESA “processes more transactions domestically than Western Union does globally,” say Ignacio Mas and Dan Radcliffe in a report for the Bill and Melinda Gates Foundation.42
M-PESA has proved remarkably scalable and able to add new users and merchants easily. For example, the Economist reports that nearly a quarter of Kenya’s GDP “flows through [M-PESA].”43 M-PESA began as a solution for Kenyans working in urban areas to send money to family members living in rural locations, but it has developed into a comprehensive payment platform that allows for bill payment. Researchers write, “Since the launch of the bill pay function in March 2009, there are 75 companies using M-PESA to collect payments from their customers. The biggest user is the electric utility company, which now has roughly 20 percent of their one million customers paying through M-PESA.”44

NERA research finds “several hospitals, insurance companies, schools, and grocery stores now accept M-Pesa payments ... [T]hese partnerships are part of M-Pesa’s evolution from a pure money transfer system into a payment platform and a formal (regulated) financial service.”45

In late 2015, M-PESA made it easier for other e-payment entrepreneurs to follow in their success by opening the code behind the system to the public.46 “Essentially, what this means is that a developer can seamlessly plug a given application ‘X’ onto the core M-PESA technical platform to facilitate mobile money transactions,” writes Eva Adongo of FSD Kenya, a research and advocacy organization. This code could be especially valuable to states with education savings accounts.

Americans are some of the best equipped in the world to adapt to mobile payment technologies like M-PESA. The FDIC reports that more than 87 percent of Americans have a mobile phone “and more than half of these mobile phones are smartphones.”47 Furthermore, in 2012, approximately one-third of those with a mobile phone used their devices to buy something.48 Some $20 billion was transacted using mobile devices in 2012.49 Devices using near field communications (NFC)—the technology that allows for mobile payments—is projected to increase from 18.2 percent (in 2013) to 64 percent in 2018.50

In fact, Visa reports that “Americans are twice as likely to carry a phone as cash; those between 18 and 34 are four times more likely ... [And] mobile payments doubled between 2012 and 2013 to $1 billion.”51

Even with private companies creating and adopting mobile payment platforms and isolated state governments experimenting with such applications, we in the United States find ourselves trailing the adoption of mobile payments available elsewhere in the world (Figure 3).

Figure 3: Mobile Phone Used to Send Money (% ages 15+)

<table>
<thead>
<tr>
<th>Country</th>
<th>Use of Mobile Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kenya</td>
<td>60.5</td>
</tr>
<tr>
<td>Sudan</td>
<td>30.5</td>
</tr>
<tr>
<td>Tanzania</td>
<td>14.0</td>
</tr>
<tr>
<td>Philippines</td>
<td>7.3</td>
</tr>
<tr>
<td>Afghanistan</td>
<td>3.0</td>
</tr>
<tr>
<td>India</td>
<td>0.6</td>
</tr>
<tr>
<td>China</td>
<td>0.6</td>
</tr>
</tbody>
</table>


“In Kenya, making payments via M-PESA is like clockwork,” says Adongo (see Figure 2 on page 9). “That’s why Kenyans say ‘can I M-PESA you?’ instead of ‘can I send you by M-PESA?’”52

Such reflexive reliance on effective mobile payments is needed in the United States to accommodate education savings accounts that can be used for a wide range of learning experiences, as well as by educational therapists and other health professionals. These advancements will move states further away from outdated and inefficient district-focused payment methods.

Why aren’t we there yet?

With the breakout success of M-PESA in Kenya and the mobile application success of Uber, why hasn’t mobile payment already become commonplace in the United States?

Analysts offer four key reasons. First, the number of payment terminals (like credit card readers) using point-of-service technology to accept mobile payments is just one per every 600 U.S. residents, while in Japan there is one for every 130 residents, and in Korea, one per 100 residents.53 Not enough merchants have adopted the technology.

Second, banks are skeptical of the operational changes required to adjust the way they do business. Financial institutions conduct cost-benefit analyses of performing certain functions. Gates Foundation researchers report:

Because banks make most of their money by collecting and reinvesting deposits, they tend to distinguish between profitable and unprofitable customers based on the likely size of their account balances and their ability to absorb credit. Banks thus find it difficult to serve poor customers because the revenue from reinvesting small-value deposits is unlikely to offset the cost of serving these customers.54

Banks will not turn a profit from such services until mobile payment reaches a sizeable threshold of users. Until enough customers change their financial habits, banks will not rush to use mobile payment systems.

Next, U.S. residents are a highly banked population. Until recently, Americans have not needed an alternative solution to storing and transferring money.55 U.S. residents, compared to those in third-world nations, have a reliable system of storing and accessing their money. M-PESA was developed in a country where residents were largely unbanked and needed effective ways to move money between persons and make payments.

Finally, the U.S. economy is the largest in the world. Writing for the New York Times, Chad Bray and Reuben Kyama report “it is the size of the American market that is a major reason for the delay [in the adoption of mobile money]. The costs of outfitting retailers with new equipment are much higher. And there have been disagreements among technology providers over what standard to use for mobile payments.”56

Who benefits?

Despite these challenges, mobile money has benefits for students, educational providers and parents.

Students. The ultimate goal of education savings accounts is to give every child the chance at a high quality education and a better life. What we know about Arizona’s accounts and similar programs in other states is that students can choose the learning experiences that meet their needs. To make such possibilities available to more students, lawmakers should learn from and repair the administrative glitches and lapses in fraud prevention in existing account programs like Arizona’s. Students stand to benefit from more effective ways to purchase educational products and services and make sure that funds meant for their education are used exclusively for that purpose.

Students should have a secure system parents and families can use to make choices about what is best for their education.
Educational Providers. While some mobile payment solutions like M-PESA and Square are not even 10 years old, a growing body of research on M-PESA and similar systems indicates that M-PESA causes more money to circulate in communities where the payment service is available.27 This activity promotes the growth of small businesses. The education marketplace is populated with small businesses such as personal tutors and education therapists. As explained above, existing education savings account research demonstrates that approximately one-third of parents already using their child’s accounts for multiple products and services.58 We should make payment easier so that more high quality educators can make services available to students. Such advancements are not foreign to the savings account movement. Already, education savings account vendors in Arizona are using Square to receive payments in some instances. Furthermore, the Economist reports that M-PESA “has spawned a host of start-ups in Nairobi.”60 According to the newspaper, Nairobi is the “Silicon Savannah,” with exports of “technology-related services” having increased from $16 million to $360 million between 2002 and 2012.61 Any nation would welcome this level of growth. The current and future generation of parents: Millennials. Individuals aged 18 to 34, otherwise known as Millennials, are the current and next generation of employees and parents to enter the workplace and PTA meetings. Pew Research Center data find that this generation is most likely to “use their cellphones in public places for a variety of reasons,” while Nielson reports that Millennials “are the largest segment of smartphone owners” (for more, see “March 2015 Federal Reserve Questionnaire Results”).62 This generation, born just before Apple’s resurgence culminating with the iPhone, is the generation most familiar with computer and mobile technology. These individuals will have the easiest time adapting to changes in how we pay for goods and services, including schools, curriculum, personal tutors, and other educational material. Millennials use mobile devices as tools to avoid what they don’t like and embrace more of what they do like. These individuals and their children will benefit from updated mobile payment methods in education.4

PART IV: MILLENNIALS AND MOBILE MONEY: MARCH 2015 FEDERAL RESERVE QUESTIONNAIRE RESULTS

In March 2015, the Federal Reserve conducted the fourth installment of a survey of Americans and how they use mobile devices for their banking and consumer activities.63 Because the survey sample included previous respondents and a random sample of new ones, the final survey population is representative of the United States (for table results, see Appendix A).64 More Millennial adults (here considered to be the age groups 18-29 and 30-44) reported having a smartphone than those in other generations (Figure 4). The percent of those aged 18-29 with a smartphone was almost 18 percentage points greater than those aged 45-59, while those aged 30-44 with a smartphone was nearly 20 percentage points higher than the 45-59 age group. More Millennial adults than older individuals used mobile banking in the past year (Figure 5). Those aged 18-29 were 21 percentage points more likely to say they had done so than those aged 45-59.
As expected, based on existing analyses of U.S. mobile payment activity, the percentage of respondents using mobile payment systems (the use of a mobile device to purchase something) is lower than that of those who reported using mobile banking (using a mobile device to check account balances, for example) (Figure 6). Here again, though, Millennials are more likely than other generations to have used a mobile device to make a payment in the past year. Respondents aged 18-29 were nearly 17 percentage points more likely to have made a mobile payment in the past year than were those aged 45-59. Those in the 30-44 age group were nearly 14 percentage points likelier.

Figure 6: Use of Mobile Payments in the Past 12 Months

These data and figures strongly indicate that younger individuals are more likely to use current technology. More important for the purposes of today’s K-12 students, the Millennial generation—who are today’s parents of school-aged children—would uniquely benefit from the advancement of mobile payment technology in education, especially in private school choice programs such as education savings accounts.

Nevada and the next education savings account payment system

Nevada policymakers have taken an important step in improving education savings account technology by engaging the private sector. Nevada’s treasurer, Dan Schwartz, and his staff contracted with BenefitWallet to manage education savings account financing. BenefitWallet is a health savings account (HSA) administrator serving some 2 million HSAs and $1.74 billion in assets.

In an interview for this report, the Nevada treasurer’s staff explains that their state’s education savings accounts (EWA) are “the best elements of fraud protection from Arizona, Nevada, and Florida. First, as mentioned above, state policymakers have taken an important step in improving education savings account technology by engaging the private sector.”

Parents report their expenses to the state department of education at the end of each fiscal quarter after making purchases. Arizona can effectively identify fraudulent transactions after they occur and stop them from proliferating, but this method does not prevent such transactions from happening. Arizona’s agency conducts audits after parents and students use an account to make purchases.

In Nevada, however, educational vendors must first register with the state treasurer and BenefitWallet. Participating families will be able to initiate a purchase via a mobile application or by visiting a learning provider. In order for an education savings account purchase to be completed, BenefitWallet checks to make sure the merchant has registered to participate. BenefitWallet then requests funding directly from the state to complete the transaction. While this process sounds like more steps than Arizona’s education savings accounts, once merchants have registered with the state, payment is intended to be nearly automatic.

Furthermore, Nevada’s multistep process is meant to prevent some forms of fraudulent transactions from occurring while also expediting the payment portion of a transaction. This is potentially an improvement over Arizona’s method, which is effective at identifying fraud after it has occurred through an audit of account receipts but does not prevent account holders from using an account for an unauthorized expense in the first place.

While Nevada is just beginning to implement the partnership with BenefitWallet, the potential for seamless mobile payment systems in education is noticeably closer.

Policy Recommendations: The Education Savings Accounts of Tomorrow

Federal, state, and local governments should carefully consider how rules and regulations have already stalled mobile payment platforms and could continue to do so. Prudent rules will be critical to such systems’ effectiveness. The Economist writes that “the regulator’s initial decision to allow the scheme to proceed on an experimental basis, without formal approval” was one of the reasons M-PESA succeeded in Kenya.

For the future of education savings accounts in the U.S. and mobile payment, these four components are essential:

- Inform parents of available educational vendors and purchasing options. Parents and students using education savings accounts should know what educational vendors are available to them. Families should not have to routinely inquire with the state department of education whether a purchase would be approved or rejected. Agencies should make a list of available vendors readily available online and send the list to families each school year when the state makes the first deposits in the accounts.
- Then, families should be able to make purchases using an application on a digital, preferably mobile, device (as with M-PESA). States should take advantage of available technology to integrate education savings accounts with mobile applications so that parents and students can send money electronically to teachers, tutors, schools, therapists, and any other lawful educational providers.
- Communication between three sides of each transaction. Policymakers should combine the best elements of fraud protection from Arizona, Nevada, and Florida. First, as mentioned above, state
When Safaricom and its partners wanted to make it easier for Kenyans to transfer money, they had no choice but to be creative. “We had no roadmap, but created solutions as we went and persevered when a pilot slated to take several months took almost two years,” say founders Nick Hughes and Susie Lonie. State lawmakers that have enacted or are considering education savings accounts have taken similar ambitious steps. Such courage has benefitted thousands of students across the country.

Now, policymakers should integrate mobile payment solutions into payment platforms for education savings accounts. Lawmakers should take advantage of existing relationships with financial institutions and mobile application companies to expedite the availability of mobile payment systems like M-PESA and Square to consumers and parents of school-aged children. The effects of such policies will multiply. As the Economist explains, “Having established a base of initial users, M-PESA then benefitted from network effects: the more people who used it, the more it made sense for others to sign up for it.”

Education savings account participants and educational service providers can benefit from the same “network effects” that helped Kenya’s program to grow so quickly. The more students and families use education savings accounts, the more vendors will accept such payments.

Mobile payment technology holds promise not only for consumers and merchants but for students as well.

## CONCLUSION

**APPENDIX**

**Appendix A: Results from Board of Governors of the Federal Reserve System Consumers and Mobile Financial Services, March 2015**

<table>
<thead>
<tr>
<th>Age categories</th>
<th>Refused</th>
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<th>Number of respondents</th>
<th>Percentage of users in category</th>
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## C.78.b. Cross-tabulations for consumer use of mobile payments by age: Smartphone users

<table>
<thead>
<tr>
<th>Age categories</th>
<th>Refused</th>
<th>No</th>
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<th>Total</th>
<th>Number of respondents in category</th>
<th>Percentage of users in category</th>
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<td>59.8</td>
<td>100</td>
<td>437</td>
<td>36.9</td>
</tr>
<tr>
<td>45-59</td>
<td>1</td>
<td>53.5</td>
<td>45.5</td>
<td>100</td>
<td>518</td>
<td>23.4</td>
</tr>
<tr>
<td>60+</td>
<td>1.1</td>
<td>73.1</td>
<td>25.7</td>
<td>100</td>
<td>457</td>
<td>8.5</td>
</tr>
<tr>
<td><strong>Number of respondents</strong></td>
<td><strong>15</strong></td>
<td><strong>859</strong></td>
<td><strong>798</strong></td>
<td><strong>1,672</strong></td>
<td><strong>100</strong></td>
<td></td>
</tr>
</tbody>
</table>


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## C.78.a. Cross-tabulations for consumer use of mobile banking by age, race, gender, education, and income: Smartphone users (Percent, except as noted)

### Use of mobile banking in past 12 months:

<table>
<thead>
<tr>
<th>Age categories</th>
<th>Refused</th>
<th>No</th>
<th>Yes</th>
<th>Total</th>
<th>Number of respondents in category</th>
<th>Percentage of users in category</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-29</td>
<td>0.6</td>
<td>61.8</td>
<td>37.6</td>
<td>100</td>
<td>303</td>
<td>35.1</td>
</tr>
<tr>
<td>30-44</td>
<td>1.4</td>
<td>64</td>
<td>34.6</td>
<td>100</td>
<td>469</td>
<td>39.3</td>
</tr>
<tr>
<td>45-59</td>
<td>0.4</td>
<td>78.8</td>
<td>20.8</td>
<td>100</td>
<td>536</td>
<td>18.5</td>
</tr>
<tr>
<td>60+</td>
<td>0.1</td>
<td>87.3</td>
<td>12.6</td>
<td>100</td>
<td>467</td>
<td>7.1</td>
</tr>
<tr>
<td><strong>Number of respondents</strong></td>
<td><strong>7</strong></td>
<td><strong>1,340</strong></td>
<td><strong>428</strong></td>
<td><strong>1,775</strong></td>
<td><strong>100</strong></td>
<td></td>
</tr>
</tbody>
</table>


---

## ENDNOTES

2. Ibid.
9. Ibid.
11. Butcher and Burke, “The Education Debit Card II.”
14. Approximately 260 families used Mississippi’s accounts in 2015-16. Tennessee families can apply to use education savings accounts in 2017. Nevada’s accounts are stalled due to a lawsuit the American Civil Liberties Union filed.
17. Email with Kathy Visser (education savings account parent), August 22, 2015.
20. Nevada Legislature, 2015 Session, SB 302; Alabama Legislature, HB 84; Delaware General Assembly, HB 161; Georgia General Assembly, HB 243; Iowa Legislature, HF 313; Illinois General Assembly, HB 427; Indiana General Assembly, SB 93; Kentucky Legislature, HB 273; Minnesota Legislature, SF 1313; Missouri Legislature, SB 609; New Hampshire General Court, HB 1371; New Jersey Legislature, A1476; Oklahoma Legislature, HB 2949; Virginia...
General Assembly, HB 389.


23 E-mail correspondence with the Arizona Attorney General’s Office, February 17, 2016.


25 E-mail correspondence with the Arizona Attorney General’s Office, February 17, 2016.


27 Resnik, “Mother charged with ripping off state-paid tuition money.”

28 See Uber’s home page for more information at www.uber.com.


32 See https://venmo.com/.

33 See https://www.dwolla.com/.


38 Hughes and Lonie, “M-PESA: Mobile Money for the ‘Unbanked.’”

39 Safaricom, M-PESA timeline.


42 Mas and Radcliffe, “Mobile Payments Go Viral: M-PESA in Kenya.”


45 Mas and Radcliffe, “Mobile Payments Go Viral.”


49 Federal Deposit Insurance Corporation, “Mobile Payments: An Evolving Landscape.”

50 ibid.


52 Rommann, “Cash is Trash.”

53 Adongo, “Why Fintech Developers Should Pay Attention to the Opening of M-PESA’s API.”


55 Mas and Radcliffe, “Mobile Payments Go Viral.”


58 Mbiti and Weil, “Mobile Banking: The Impact of M-PESA in Kenya.”

59 Mas and Radcliffe, “Mobile Payments Go Viral.”


65 Phone conversation with Grant Hewitt, Nevada treasury chief of staff, December 30, 2015. On January 11, 2016, a Nevada district court enjoined the program. This ruling delays the program until further court proceedings are complete. For more information, see Jonathan Butcher, “Nevada Education Savings Accounts Delayed,” Goldwater Institute, January 12, 2016, http://bit.ly/164UHa.

66 See BenefitWallet, “About Us,”

67 Phone conversation with Grant Hewitt.


71 Hughes and Lonie, “M-PESA: Mobile Money for the ‘Unbanked.’”
