Issues in
Technology Innovation

May 2013

Alleviating Poverty: Mobile Communications, Microfinance and Small Business Development Around the World

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Poverty is one of the most pressing problems around the world. According to statistics from the World Bank, nearly one-quarter of the global population lives at or below the poverty line of $1.25 per day.[1] With so many people struggling for basic subsistence, it is hard for those affected to get out of poverty, gain access to capital, or develop small firms or businesses that help them build a better life.

Yet with the growth of mobile technology, there are new opportunities for individuals and small businesses to lift themselves up. People can use handheld devices to make monetary transfers, arrange for microfinance loans, establish small enterprises, and improve their economic circumstances. This helps them alleviate poverty and create a better situation for themselves and their families.

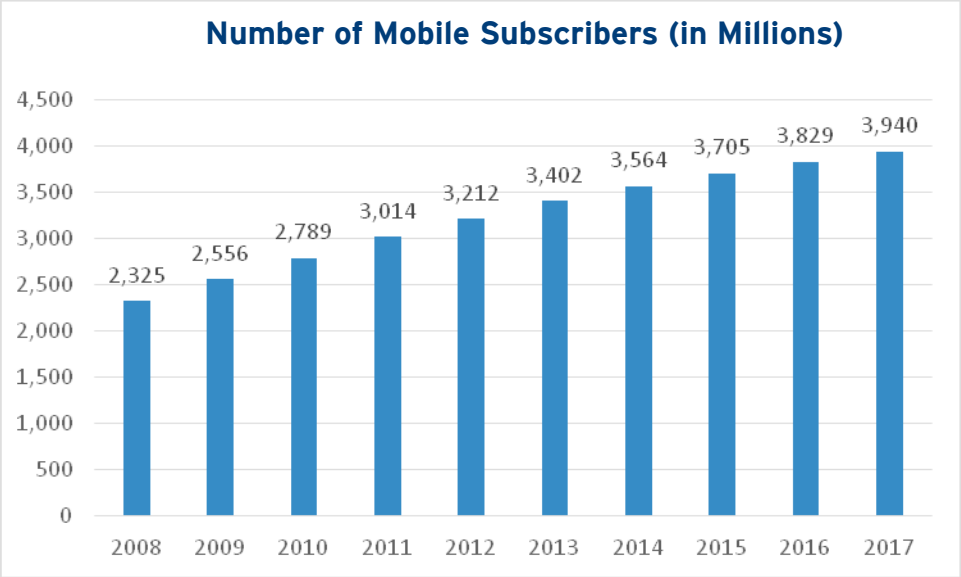
Jeffrey Sachs, director of Columbia University's Earth Institute, said that wireless communication is a breakthrough technology that helps to solve the worst problems associated with health care, poverty, and educational access. "Now in every village where I go, someone's got a cell phone, somebody can make an emergency call, someone can find out the price on the market, someone can start a business empowered by the fact that they can reach a customer or a supplier, someone can drive a taxi or a truck for that reason as well. Everything is changing," said Sachs.[2]

In this Mobile Economy Project report, I look at the growth of handheld devices and investigate the barriers to doing business in the developing world. In particular, I explore how mobile devices enable individual entrepreneurship and

small business development. Despite the presence of barriers such as corruption, lack of transparency and capital, and poor infrastructure in many parts of the developing world, there are successful ventures enabled by mobile technology. Several notable cases below illustrate emerging possibilities for alleviating poverty in different countries.

The Growth of Mobile Devices

According to a GSMA Wireless Intelligence report, the number of mobile subscribers around the globe has risen dramatically.[3] It has gone from 2.3 billion in 2008 to 3.4 billion this year and is expected to rise to over 3.9 billion by 2017.

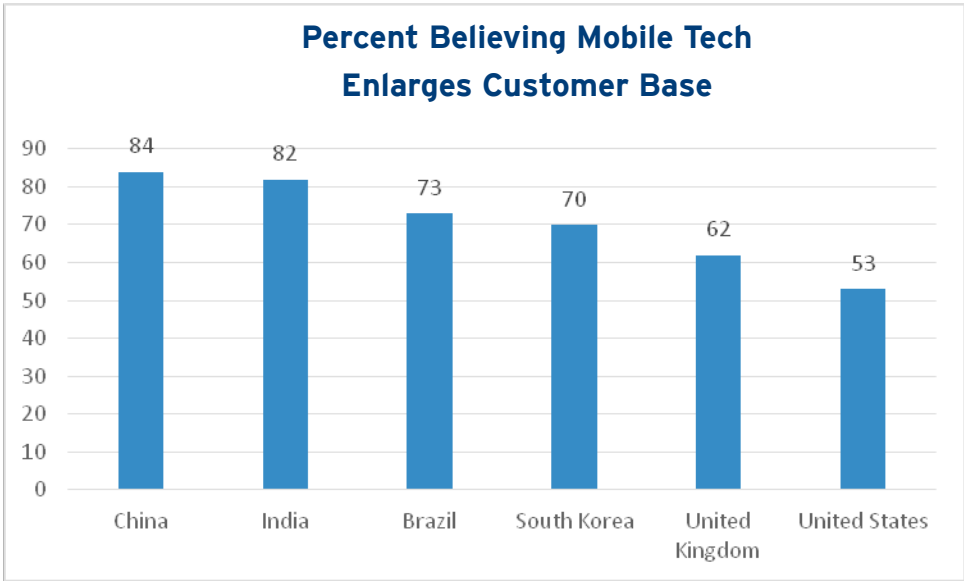


Mobile is the fastest growing technology platform in history. The total number of cellular connections has been estimated at over 6.6 billion as of late 2012.[4] At current growth rates, it will take only two and one-half years for the next billion mobile connections to be made. As discussed later, this creates many opportunities for entrepreneurs and business people.

High growth is especially the case in the developing world. Mobile usage there has skyrocketed as users have skipped the desktop and laptop phases of information technology and shifted directly to handheld devices. People are using cell phones, smart phones, and tablets for communications, commerce, and trade.[5] According to Jenny Aker of Tufts University, mobile devices represent a significant enabler of economic development.[6]

The rise of mobile technology has created particular opportunities for

entrepreneurs. A recent survey found that many people believe that mobile technology has enlarged their customer base. A TIME Mobility Poll, in cooperation with Qualcomm, was undertaken June 29 to July 28, 2012 with 4,700 respondents in several different countries. Among other questions, it asked whether people believed that mobile technology has provided access to a larger group of potential customers. It found that 84 percent of Chinese thought that mobile devices had done so, compared to 82 percent in India, 73 percent in Brazil, 70 percent in South Korea, 62 percent in the United Kingdom, and 53 percent in the United States. These numbers demonstrate the power of mobile technology to transform economic development.



Business Barriers in the Developing World

Despite the opportunities noted above, there are many barriers to economic progress in the developing world. This includes factors such as corruption, poor infrastructure, limited transparency, and weak financial institutions. Each of these challenges imposes unnecessary constraints on individuals and businesses, and makes it more difficult for them to take advantage of economic opportunities.

Corruption represents a severe problem in many parts of the world. It imposes additional costs on individual transactions and makes it difficult for those without connections to build companies. Businesses never can be sure where or when problems are going to rise or how demands for bribes or special payments will affect delivery schedules. An analysis by the World Economic Forum found that of 183 countries, 134 are considered "corrupt to a significant degree".[7]

A United Nations Global Compact report found that corruption costs about five

percent of global Gross Domestic Product, or around $2.6 trillion each year.[8] A study by the British EPPI-Centre found that "a one-unit increase in the perceived corruption index is associated with 0.59 percentage-point decrease in the growth rate of per capita income."[9]

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A number of countries have poor infrastructure that slow economic development. This includes poor roads, bridges, inadequate water supplies, and unreliable electric grids. These problems represent a huge challenge because most developing nations lack funds for infrastructure enhancement and don't have the means to borrow money to pay for capital improvements. The World Bank calculates that developing countries need $1.1 trillion in annual expenditures to fix their failing infrastructure. For low-income nations, this comes to 12.5 percent of their overall Gross Domestic Product.[10]

Limited transparency is a problem in many places. According to the latest Transparency International Corruption Perceptions Index, "70% of countries score less than 50 out of 100." Ninety-five percent of the nations in Eastern Europe and Central Asia, 90 percent of sub-Saharan Africa, and 78 percent of the Middle East and North Africa have poor ratings.[11]

Displaying little openness creates opportunities for bribery and corruption and makes it difficult for countries to address their infrastructure and other problems. Research has shown that there is very little transparency in real estate transactions, market fundamentals, or financial performance in a significant number of countries.[12] This makes it hard to know how to do business when basic financial and political decision-making is obscured by murky processes.

Weak financial institutions stymie development for countries as a whole. In many places, there is limited access to capital, low capitalization of lending organizations, and a lack of physical banking branches. These barriers constrain the opportunities for economic development and make it difficult for people to break out of poverty.

Mobile Money Transfer Services

Mobile money refers to payment services performed on a handheld device. It represents a way for consumers and businesses to access financial services without paying cash or checks, or using credit cards. Devices such as electronic wallet applications enable people to withdraw cash, transfer money, bank by phone, or shop online. This is particularly valuable in rural areas that often lack bank branches or other types of financial institutions. It is estimated that 2.5 billion people do not have access to financial

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Mobile applications are popular because of the widespread prevalence of these devices in the developing world. According to McKinsey & Company, high-poverty locations are more likely to have mobile devices (50 percent penetration) than banks (37 percent access).[14] Handheld devices reduce costs and make it possible to offer financial services in under-served areas. Small retailers have difficulty justifying the cost of credit card readers when mobile devices can send or receive money.

This is particularly the case in East Africa, where 80 percent of global mobile money transfers take place. The M-Pesa service in Kenya has attracted widespread support and enables consumers to complete financial transactions outside of traditional banks. The mobile money platform has grown rapidly and been a boon to those without bank accounts or customary financial services.[15]

In spite of the prevalence of these barriers to economic development, there are examples of successful entrepreneurship enabled by expanding access to mobile technology. The Indian company Eko is an example of a low-cost platform that enables instant financial transactions. It leverages existing retail shops, mobile networks, and banks to extend branchless banking services to ordinary people. It partners with institutions to offer payment, cash collection, and disbursal services. According to its site at http://eko.co.in, customers can walk into any Eko retail outlet and open a savings account, deposit and withdraw cash, send or receive money to any part of the country, buy mobile talk-time, or pay for a host of services.

The only equipment required for these services is a low cost mobile phone. Users employ handheld devices to open accounts and send money to people and places around the country. Founder Abhishek Sinha launched the company "with a vision to promote mobile phones as a financial identity for people at the bottom of the pyramid."[16] Eko has 470 outlets across the country serving more than 70,000 customers. The service works on all handsets and people make transactions by dialing a number and getting confirmation via a short message service. The site has received several awards for technology innovation and won major grants to support its work. It won the Tech Award from the Tech Museum, the mBillioneth Award South Asia, the PC Quest – Best IT Implementation Award for Maximum Social Impact, and the World Summit Award from UNGAID.

Another example comes with the Accredited Social Health Activist (ASHA) program developed by the Norway India Partnership Initiative. It relies on mobile phones to transfer money as well as identify health care facilities in Bihar's Sheikhpura district.

Each activist is embedded in the local community and connects patients with the public health system. The ASHAs carry "first-contact" kits for health care and promote immunization and family medicine.

ASHAs can open savings accounts, pay transactions, update bank balances, and withdraw money. Certified providers supply mobile money transfer services to pay for medical services and financial transactions. The program saves time and money by providing easy-to-use mobile payment systems that enable people to get health care and pay for vital services.[17]

Mobile Tools for Small Businesses

With the introduction of mobile devices, business people around the world have access to the tools many businesses in the developed world take for granted. These include devices that enable them to market their products and services as well as track usage and provide accounting for their customers. Applications are available that link producers and consumers in geographically remote areas, thereby reducing the service gap between urban and rural areas.

The mPedigree program in Ghana partners with the country's telecommunications providers to offer pharmaceutical information. It was developed by Bright Simons and Ashifi Gogo, and it uses basic text messaging to answer questions about drug counterfeits. Fake drugs constitute half of the pharmaceutical trade in Ghana, harming a million people every year.[18] Patients use their cell phones to check the unique code found on each product against a universal database. They also can ask questions regarding how to distinguish fake from real drugs and verify the safety of particular medicines. By 2013, the organization had placed verification codes on 10 million packs of Ghanaian medicine and expanded into four other countries.[19] This has helped to build consumer confidence in the health care system.

Farmerline is a service organized by Alloysius Attah and Emmanuel Addai of Ghana. They were students who got the idea during a Mobile Web Ghana Entrepreneurship program. Their mobile platform provides "improved information access, record keeping services and communication pathways for smallholder farmers and agricultural stakeholders."[20] They use cell phones to connect farmers with market information and agricultural expertise provided by extension agents. This enables food producers to enhance their productivity and sell their products to major marketing centers around the country.

In addition, the company trains women with skills designed to improve agriculture and fishing production. In Ghana, women are actively involved in various aspects of the record keeping, processing, and marketing parts of the food industry. They use Farmerline

to learn about best practices and ways to develop small businesses.[21]

Etisalat represents another example of a useful mobile service. It works in 18 countries throughout the Middle East, Asia, and Africa, and enables users to deploy mobile phones as a payment instrument. Its goal is to help businesses reach new markets and sell products around the world. Rather than having small businesses limited to local or regional markets, it has created global networks for trade and commerce.

A San Francisco-based firm, www.biznessapps.com, markets mobile applications for small businesses. It brings high-end business applications to small firms and helps them with marketing, scheduling, coupons, customer relationships, social media outreach, and customizing specialized tools. It is cheaper than proprietary software and allows new companies to compete effectively with more established firms. So far, it has created over a thousand applications and the company is active in more than 20 different countries.[22]

GoMobiMe.mobi is a mobile development organization that helps small businesses sell goods and services using handheld devices. Founder Joseph Stevens launched the company after finding that more than 70 percent of searches occur through mobile devices and that one-third are seeking information on local organizations. He builds mobile websites for small firms and integrates social media into his service offerings.[23]

The United States Treasury Department has launched http://MyMoneyAppUp.Challenge.gov, in partnership with the D2D Fund and Center for Financial Services Innovation. It is a contest that asks entrepreneurs and software developers to design next-generation mobile tools to help people make decisions regarding their finances. The Challenge provides cash prizes for new mobile apps (an Idea Bank) and designs (an App Design).

Microfinance Applications

Microfinance helps to address global poverty by teaching individuals how to manage their finances and contribute to the overall economy. Firms lend small amounts of money to needy people to help them buy seeds for agriculture or purchase needed equipment. Small loan programs give low-income individuals access to capital that otherwise is hard to arrange. This helps them create companies and lift their families out of poverty.

The Microfinance Information Exchange (MIX) provides qualified and relevant microfinance performance data and analysis. As shown at its website at www.TheMix.org, the Exchange is committed to strengthening financial inclusion and the microfinance sector by promoting transparency. MIX provides performance information on microfinance institutions (MFIs), funders, networks and service providers dedicated to serving the financial sector needs for low-income clients.

KIVA is a non-profit organization that provides microfinance loans throughout the developing world. Its President Premal Shah, launched the enterprise in 2004 along with Matt Flannery of TiVo after taking a leave of absence from PayPal to develop the concept. The organization raises over $1 million each week for the working poor in more than 60 countries around the world and makes loans as small as $25. It has lent over $419 million to nearly 1.4 million people. Its average loan size is about $400 and 99 percent of the loans are successfully repaid.[24] Beyond microloans, the organization has partnered with the Plasticos Foundation to provide loans for surgery for low income people who can't afford medical treatment. Overall, that partnership has treated over 3,000 individuals in 10 different countries.

Research suggests that these programs work well. According to the Consultative Group to Assist the Poor (CGAP), "poor people with access to savings, credit, insurance, and other financial services, are more resilient and better able to cope with the everyday crises they face. Even the most rigorous econometric studies have proven that microfinance can smooth consumption levels and significantly reduce the need to sell assets to meet basic needs. With access to microinsurance, poor people can cope with sudden increased expenses associated with death, serious illness, and loss of assets."[25]

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Empirical evidence from the Bangladesh Rural Advancement Committee shows that "those participating in microfinance programs who had access to financial services were able to improve their well-being both at the individual and household level much more than those who did not have access to financial services." In that country, for example, "clients increased household expenditures by 28% and assets by 112%. The incomes of Grameen members were 43% higher than incomes in non-program villages."[26]

These types of programs are especially helpful to women. In many places in the developing world, females have difficulty getting loans from traditional financial institutions. A combination of social norms, cultural values, and religious practices make it challenging for them to obtain the resources to form companies or launch businesses.

Researchers have found that "access to financial services has improved the status of women within the family and the community. Women have become more assertive and confident. In regions where women's mobility is strictly regulated, women have become more visible and are better able to negotiate the public sphere. Women own assets, including land and housing, and play a stronger role in decision making."[27]

Ways To Enable Business Development and Alleviate Poverty

To summarize, there are a number of major barriers to doing business in the developing world, but mobile devices represent a way to enable individual entrepreneurship and small business development. In this analysis, I show examples of successful ventures enabled by mobile technology. There are numerous cases of mobile services that help producers, consumers, and market thrive in the developing world.

But several actions are needed to alleviate poverty, develop businesses, and encourage local organizations to make microfinance loans. They include reducing corruption, building infrastructure, improving transparency in politics and finance, empowering women, and strengthening financial institutions.

Corruption imposes a de facto tax in many nations. It is so ubiquitous that it reduces incentives for business development and undermines public confidence in business and government. Improving transparency both in the world of politics and finance would help economies grow more quickly and move people out of poverty. There are mobile websites now that enable those asked to pay bribes to report the official's name, date, and bribe amount. Sites such as www.IPaidABribe.com anonymously publicize illegal solicitations and thereby bring public attention to bear on these practices. An India affiliate has received over 400,000 reports from ordinary citizens through this site.[28]

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Building infrastructure also is necessary to improve the environment for development. As Jenny Aker has argued, having effective mobile networks for commerce and trade will not help unless there are functioning roads, schools, irrigation systems, and power generation facilities.[29] Entrepreneurs and business leaders require these types of provisions in order to create jobs and transact basic services.

Women are major beneficiaries of mobile entrepreneurship and microfinance loans. Shut out of many traditional capital sources, they often become a major source of new ideas and new energy when they find alternative ways of funding projects and launching new enterprises. Empowering the half of the population that often faces major barriers can unleash tremendous innovation in the developing world.

Despite the growth of handheld devices, many women in the developing world have not gained the benefits of this technology. According to the GSMA report, "Women & Mobile: A Global Opportunity," females in the developing world are "21 percent less likely to own a mobile phone than a man."[30] Yet in developing markets, they often manage

family finances. As mobile usage among women rises, they will benefit enormously from mobile money and greater access to financial capital. This offers them the potential for lower interest rates, greater loan access, and opportunities for entrepreneurship and business development.

Through its Wireless Reach initiative, Qualcomm has been working on the many ways mobile technology can provide the tools, access and services necessary to enable women's leadership and empowerment. From female business owners being mentored on their mobile phones to women selling airtime minutes and application services in their communities, they have designed programs to accelerate women's ownership of mobile phones and provide life-changing services for women in the developing world. In Malaysia, and in collaboration with the Cherie Blair Foundation for Women, they are working to support women entrepreneurs. The project uses smartphones to provide training and mentoring to build ICT and English language skills. E-mentoring provides them with access to technology training and a platform to network and share information with other like-minded entrepreneurs, as well as access to information and dedicated mentors who have the business, marketing and technical skills to advise them on their business goals.[31]

Strengthening financial institutions would expand the opportunities for economic development among women and other groups. Right now, many countries suffer from poorly capitalized banks, few branches of national financial institutions, and limited access to capital. This makes it very difficult for entrepreneurs to implement their ideas and build better lives for their families. Without basic financing, most small businesses will fail and this discourages others from launching new firms.

Many nations need to streamline company formation and registration procedures. There are major barriers in numerous places to launching businesses. Making it easier to register companies and attract capital would propel business formation in many places around the world. Combining proper access to capital and mobile technology to break down barriers, entrepreneurs and established businesses will find new ways to enhance global economic growth.

Endnotes

Note: I would like to thank Elizabeth Valentini for outstanding research assistance on this paper.

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Governance Studies
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Editing, Production & Layout
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