Foreign Assistance in the Digital Age

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Over the past decade, the dramatic proliferation of mobile phones in developing countries has transformed the way in which businesses, consumers, and governments operate and interact. Enhanced access to digital information and services has both empowered individuals and opened new windows for delivering more effective and scalable development interventions. People have gained access to financial services and discovered a wealth of information ranging from advice on health to insights on market prices to channels for interacting directly with governments. In addition, development actors have used digital technologies to expand and accelerate outcomes through improved service delivery at lower costs and with greater scale.

According to one estimate, the "digitization" of developing economies could yield as much as a $4.1 trillion increase in GDP among the 3.9 billion consumers at the base of the pyramid. Imagine a world where marginalized populations are able to access resources, education, local and international markets, and job opportunities from their mobile phones. Imagine health workers in rural communities not only sharing maternal health information videos with their patients, but sending and receiving payments using mobile money and consulting in real-time with medical experts. "Digital development" can be a driver of more inclusive economic growth and is poised to be a critical component of global efforts to end extreme poverty.

As U.S. Secretary of State John Kerry said at Korea University in Seoul in May 2015, "We believe digital policy should seek to fulfill technology's potential as a vehicle for global stability and sustained economic development; as an innovative way to enhance the transparency of governments and hold governments accountable; and also as a means for social empowerment that is also the most democratic form of public expression ever invented."

Realizing the potential of 'digital development'

To enable developing countries to fully embrace and benefit from the digital economy, donors, host governments, the private sector, NGOs, and civil society must coordinate efforts through a holistic "digital development" approach. A sustainable transition cannot be effected through donors alone, but requires collective action. While donors can provide the upfront investment necessary to facilitate the creation of an enabling environment, help stand up core infrastructure, mitigate risk or catalyze adoption, host governments play a key role in creating a conducive policy environment and integrating government systems and programs. Furthermore, the private sector can provide new sources of capital, marketing expertise, consumer relationships, and innovative business models needed to drive sustainable growth. Additionally, NGOs and civil society can drive locally appropriate deployments, cultural change, and awareness. The following are six recommendations for coordinated investment in digital development that are most critical to expand access, increase usage, and promote a productive and innovative digital workforce to ultimately provide opportunities for poor and underserved populations.

1) Catalyze increased connectivity: For individuals, communities, and countries to thrive in the 21st century, development actors need to consider mobile and Internet connectivity as core infrastructure alongside water, roads, ports, and electricity. Multiple studies have shown that increasing a nation's mobile and Internet connectivity correlates with a rise in GDP. Connectivity holds the potential to empower the most disadvantaged through increased access to information and economic opportunities, yet today only 44.6 percent of the population in developing countries are mobile subscribers, only one-third have access to the Internet, and women are 23 percent less likely than men to have access to the Internet. And even though connectivity itself can be a driver of economic growth, it is only part of the solution. Without content that is locally relevant and the digital skills and literacy needed to access and create content, people will find little value in the products and services that new connectivity provides.

Countries that have made the commitment to connectivity and are investing in their digital ecosystem are already showing dividends. For example, in Kenya, where Internet usage increased from 10 percent of the population in 2009 to over 50 percent at the end of 2014, information and communication technologies (ICTs) now account for 14 percent of the country's GDP and have attracted international investors. The country's connection to undersea fiber optic cables along the Kenyan coast and implementation of supporting policies such as the National Optic Fiber Backbone Infrastructure were key drivers of this growth.

Recommendations:

- Prioritize connectivity as core enabling infrastructure for developing countries.

- Promote policies and regulation that encourage healthy market competition and efficiency, working through multi-stakeholder entities such as the Alliance for Affordable Internet.

- Encourage and support government adoption of a comprehensive national broadband strategy in consultation with the full range of stakeholders.

- Develop sustainable public-private partnerships to bridge gaps where commercial incentives are not sufficient, such as for international connectivity to smaller countries and backbone to reach rural areas.

- Invest in local providers to expand locally relevant content and services that help both women and men gain value as both consumers and producers of digital content.

2) Enable a digital workforce: Despite high unemployment rates, many highly skilled positions in both developed and developing countries remain difficult to fill. The shift to the digital economy demands new digital skills, which are necessary for nations and individuals to remain competitive in the 21st century global market. Due to the existing dominance of China and Southeast Asia in the manufacturing sector as well as increased automation, South Asian and sub-Saharan African countries will likely struggle to take this traditional path for growth. Instead, building the skills and ecosystem to participate in the fast-growing digital economy is likely one of the most powerful drivers of future employment and economic prosperity.

When governments and the private sector work together, they can train the workforce for this new era and help match them with job opportunities. For example, the Cisco Networking Academy has helped prepare millions of people in developing countries for the IT workforce. And, HP LIFE e-Learning uses cloud-based technology to help millions of entrepreneurs and students learn essential business and IT skills. Tens of thousands of digital "micro-workers" in developing countries have earned a total of $4.7 million since 2008 through Samasource's digital platform, which offers training in basic digital skills through partners in the business process outsourcing industry. In addition, innovation hubs in developing countries can bring together technology talent, local innovators, entrepreneurs, and experienced mentors. They have sprouted up across Africa, with almost 100 identified by the World Bank as of February 2014. Many provide business advice and mentorship, office facilities, high-speed internet, an uninterrupted power source, and training such as mobile app development—to spark and nurture new startups that will create jobs and drive economic growth.

Recommendations:

- Increase investment in digital skills training and science, technology, engineering, and mathematics at all levels of education in developing countries to better prepare the next generation for jobs in the digital economy.

- Governments and donors should collaborate with the private sector to train people with the necessary digital skills to fill the most pressing and anticipated employment needs.

- Utilize and invest in innovation hubs, incubators, and startup accelerators to build entrepreneurial technology ecosystems as a driver for the digital economy.

- Encourage private sector actors to incorporate digital skills training and consumer awareness into the roles of mobile money agents and in-community vendors.

3) Expand the reach and usage of digital financial services: Globally, around 2 billion adults (disproportionately women) lack access to formal financial services.[1] Instead, they rely on cash, physical assets, and informal financial institutions which are insecure, expensive, and difficult to use. Inclusive financial services such as mobile money have the potential to lift millions out of poverty and enable them to more effectively manage their finances, building resilience against economic shocks. They can also improve governance and development outcomes by reducing costs and increasing transparency.

Digital financial services can enable families to save for school fees and agricultural inputs, small businesses to access credit, agriculture retailers to purchase insurance, and households to access pay-as-you-go services for energy, water, education, and other needs. In Tanzania, 90 percent of the population now has access to digital financial services. Similar services are starting to take hold around the world, with 17 million Bangladeshis using their local equivalent, bKash. For development programs, using digital financial channels can ease disbursement of payments to staff, suppliers, program beneficiaries, and/or clients, while improving security and transparency, reducing leakage, and improving efficiencies. In an effort to promote the use of digital financial services within its own programs, USAID issued guidance in 2014 that made electronic payments the default method of payment under all USAID awards.

Recommendations:

- Encourage and support governments to adopt national financial inclusion strategies, with an emphasis on digital financial services as a key tool, and invest in universal access to national identification systems.

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1 World Bank. 2015. *The Little Data Book on Financial Inclusion 2015*. Washington, DC. World Bank. doi: 10.1596/978-1-4648-0552-3. License: Creative Commons Attribution CC By 3.0 IGO

- Promote regulations and policies that reduce barriers to entry for new businesses and models, foster competition among service providers, protect consumers, and encourage interoperability of payment systems.

- Coordinate and drive action through multi-stakeholder entities such as the Better than Cash Alliance, which was formed by private and public actors to advance governments' shift from cash to electronic payments.

- Invest in modern, open payments architecture that enables efficient, low-cost, and secure transactions and the delivery of other financial services.

4) Rationalize investments in information and communication technologies for development (ICT4D). Despite the incredible potential of digital technologies to accelerate better development outcomes, few interventions have moved out of the pilot stages. One contributing factor has been that donors have primarily focused on immediate, sector-specific deliverables, with no one actor having the incentive to fund common technology "building blocks" or platforms. Contrast that with Silicon Valley, where successful platform and ecosystem players reap the greatest rewards, fueling investments in areas such as mobile operating systems, cloud hosting services, and extensible social networking platforms that have accelerated innovation.

The systems that have achieved the greatest impact at scale are used across projects, and reused across sectors. For example, RapidSMS is a free and open-source platform that enables rapid deployment of SMS-based services for large-scale data collection. In Uganda, a government-led initiative called mTrac used RapidSMS to capture and accelerate the transmission of information related to disease outbreaks, integrating with the Ministry of Health's systems and providing an optimized tool for management and programmatic responses. The same platform also powered eduTrac, which was used by Uganda's Ministry of Education to track a range of indicators such as school attendance, and U-report, which was used by Uganda's Ministry of Agriculture to track an outbreak of banana bacteria wilt disease in the country.

Recommendations:

- Increase relative investments in platforms, infrastructure, tools, standards, and learning that will accelerate both commercial and NGO ICT4D efforts, coordinating through entities such as the Mobile Hub at the U.N. Foundation.

- Adopt and promote best practices that have been proven effective in ICT4D through the Principles for Digital Development.

5) Increase data-driven decision-making. The rise of digital visualization, geographic information systems, and new data tools have opened up new opportunities to dramatically improve development interventions. Governments and development actors now have access to an array of data collection tools, such as sensors, geotagging, mobile surveys, and real-time polling, which were once cost prohibitive. These tools enable governments and the development community to communicate directly with citizens and to gain a better understanding of how their programs are actually performing on the ground, often in real-time, allowing for more agile and adaptive programming.

For example, in Bangladesh the USAID-funded Nobo Jibon program used mobile data and web-based tools to more accurately forecast food demand in the districts in which it worked. Using this analysis to revise food procurements and track expiration dates, the program was able to reduce the amount of food that expired or went unused, saving millions of dollars. Technology for data collection is only the start of the process—adapting programs quickly in response to incoming data is the ultimate goal of responsive development. Once development practitioners and government officials better understand what is actually happening on the ground, they can more quickly respond to and address critical issues in service delivery and hold themselves more accountable to citizens' needs.

Recommendations:

- Acquire frequent, relevant data from key stakeholders of development programs through real-time approaches, using appropriate technologies for the environment.

- Where possible, shift incentives for development programs to be results-oriented, and encourage continuous improvement based on shortened feedback loops.

- Unlock more open data sets that can be analyzed for humanitarian purposes such as livelihood analysis and secure systems for call records.

6) Harness innovation to accelerate development outcomes: When private sector companies do not invest in research and development, they face challenges in staying competitive and continuing to grow. In the same respect, international development actors need to invest in testing and experimentation to discover more effective ways of solving long-standing development challenges. Innovation labs can provide the essential space required to take the risks required to develop transformative solutions.

The Internet was conceived in the 1960s under the U.S. Defense Advanced Research Projects Agency (DARPA) and, in the following decades, DARPA's work grew from a series of government-

funded activities into the commercial sector that formed the Internet we use today. In 1976, the Office of Science and Technology Policy was founded to advise the U.S. President and others on the effects of science and technology on domestic and international affairs. Fast forward a few decades, and USAID, DFAT (formerly AusAID), UNICEF and other donors have created internal development innovation labs, building on the momentum of the digital economy, with a focus on improving lives for the world's poorest and most vulnerable people.

Recommendations:

- Invest in internal innovation labs at donor agencies, NGOs, and other development actors to seek, develop, and test solutions to the most challenging development problems.

- Allow these labs to be a space where failure is a catalyst for learning and creativity.

- Use rigorous evidence to monitor, measure, and learn from innovations, rather than investing in flashy pilots.

How will developing countries break through to the next level of economic gains?

Digital development, or leveraging digital technologies to both empower individuals and accelerate development efforts, is already showing promising signs. The convergence of social, political, and economic factors—a high demand for basic unmet public services, the spread of smartphones and broadband access, and the global growth of the digital economy—is making Africa a center for development innovation. With new business models such as M-Pesa and innovations such as the Ushahidi crowdsourcing platform, African countries are leapfrogging older technologies to create digitally-enabled solutions for local problems.

To harness this potential, individual skills, government policies, and institutions must progress in stride with the changes driven by advancements in technology. We will only capitalize on the potential of digital development if the broad set of development actors can coalesce around creating the necessary basic technology standards, policies, and infrastructure. Greater coordination in building the digital foundation for developing countries will unlock innovation, create new economic opportunities, and transform lives.