Rockefeller Foundation

Innovation for the Next 100 Years

Digital Jobs

Building Skills for the Future

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Foreword

"The Foundation is launching a seven-year effort that will build on previous work in Impact Sourcing to expand digital jobs opportunities. Working with our partners in select countries in Africa, the initiative will... [impact] one million people."

Africa is emerging as a competitive destination for business. Over the past five years, more than a dozen countries across the continent have posted impressive growth rates.[1] Fueled by local and foreign investors, private-sector companies will drive rapid growth through the next decade and beyond. These include global multinational corporations, as well as "home grown" firms started by local entrepreneurs.

Africa's growth is creating a host of new business opportunities, particularly in the technology sector. For example, people are demanding greater connectivity and the growing middle class has increasing consumer needs that are generating a significant amount of "big data" that, if managed and analyzed, can further contribute to the growth of the economy. Technologies such as mobility, cloud computing, business intelligence and social media are transforming businesses and enabling economic growth.[2]

Maintaining this momentum depends on African nations fostering inclusive growth. One lever for change is the opportunity presented by digital jobs that can enable high potential but disadvantaged people to participate in the digital economy. Young Africans have already demonstrated a zeal for harnessing information and communications technologies (ICT), the backbone of the digital economy. This digital economy presents a dynamic opportunity for African youth to build sustainable careers and livelihoods.

That is why the Rockefeller Foundation, with its partners in the region, is embarking on an exciting new initiative: Digital Jobs Africa. This initiative will support youth with limited employment opportunities in sub-Saharan Africa (SSA) and the Middle and East and North Africa (MENA) to access digital job opportunities, while building and refining transferable skills that make them resilient in the future economy.

Digital jobs can address the youth unemployment challenge and transform lives through earned income, transferable skills and direct and indirect benefits for families and communities.

The Foundation is launching a seven-year effort that will build on previous work in Impact Sourcing to expand digital jobs opportunities. Working with our partners in select countries in Africa, the initiative will advance the following strategies with the goal of impacting one million people:

- Growing the Impact Sourcing sector and identifying other digital job opportunities primed for growth;
- Working with local organizations to provide skills training that prepare youth for digital jobs; and
- Supporting an enabling environment for digital jobs by coordinating leaders in the ICT sector, private sector, public sector and civil society.

This document presents our understanding of digital jobs, a term that can mean different things to different people. We hope that it can contribute to a growing body of literature about the ecosystem of the digital economy, and the opportunities it can create for high potential but disadvantaged youth.

Mamadou Biteye
Managing Director, Africa Regional Office
The Rockefeller Foundation

◀ *Workers lay fiber-optic cable for a major telecom in Rwanda.*

Digital Jobs: Defined

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Digital jobs are created through the application of information and communications technologies (ICT) to a new or existing activity or process. Digital jobs generally include performing information-based tasks that build the individual's capacity for future work.

A digital job can be distinguished from other jobs such as manufacturing because the core product produced by a digital jobs worker (sometimes called an "information worker" or "knowledge worker") is information or knowledge, as opposed to physical objects or services such as a haircut or a meal. The core tools for digital jobs are ICTs, such as computers, databases, smart phones and the internet, which they use to manipulate and manage information.

An important factor that is driving the globalization of digital jobs is the nature of bits vs. atoms. Physical objects are made of atoms, which are difficult to replicate and expensive to transport, whereas bits can be copied freely and sent around the world through global communication networks at extremely low cost.[3] The ability to inexpensively transport perfect copies of information, all over the world, opens up an opportunity for people across the globe to work in digital jobs.

Today, digital jobs exist in almost every sector of the economy, including healthcare, agriculture, education, finance, media, manufacturing, retail, telecommunications, manufacturing, and public services provided through the government. Digital jobs can include:

- Application of ICT to existing processes to make them more efficient, such as through digitization of existing processes and outsourcing of back-office services;
- Creation of new products, services and communities based on the virtual economy including exchanges of virtual goods and currencies, as well as games and online communities;
- Harnessing new and existing information in creative ways, including the potential of "big data" to allow companies, governments, and citizens to use data and information to make decisions; and
- Transactional platforms that enhance access to services and trade, such as eCommerce, eGovernment, and mobile applications.

These digital jobs can be found in large corporations, small and medium enterprises (SMEs), non-governmental organizations (NGOs) and governments that embed ICT in their existing operations to become more effective and efficient.

There are also new businesses that have been created to harness ICT, including purpose-built Information Technology (IT) and IT Enabled Services (ITES) firms. In these ways, the growing digital economy creates new products, services and networks leading to new job opportunities.

Digital Jobs: Fueled by the Growth of ICT

"There have been significant strides in building ICT infrastructure that have enabled an explosion in access and usage across many regions, notably in Africa."

Digital jobs are made possible by ICT infrastructure. ICT infrastructure includes the provision of internet connectivity, broadband networks, wireless networks, as well as computers, tablets, and mobile phones.

A report by Oxford Economics, *The New Digital Economy*, highlights the key factors that are enabling growth in the global digital economy. The report notes that an estimated 1.8 billion of the world population now uses the internet, and that number will grow to almost 2.8 billion by 2015. It also helpfully categorizes the conceptual "clouds" of the internet that provide the infrastructure for the digital economy: the connectivity cloud, for the transfer of information; the resource cloud, for the storage of data; and the social cloud, for networking and collaboration. These clouds create new markets and enable the flow of supply and demand for digital work.[4]

While a global opportunity, digital jobs are growing fast in emerging markets. Gartner estimates that the global public cloud computing market will grow from $68.3 billion in 2010 to $148.8 billion by 2014, with half of those revenues to come from outside the US.[5] A study by the World Economic Forum notes that "effectively leveraging ICTs has been shown to contribute to a 50 percent increase in productivity."[6] In part, this growth is made possible by national and regional ICT policies that have led to massive investment in ICT infrastructure connecting countries to the global market and driving down costs.

There have been significant strides in building ICT infrastructure that have enabled an explosion in access and usage across many regions, notably in Africa. The internet bandwidth available to Africa's one billion citizens grew 20-fold between 2008 and 2012.[7] In Kenya, the connection to the TEAMS, EASSy and SeaCOM fiber optic cables in 2009–2010 led to a wholesale price decrease of the cost of bandwidth of almost 70 percent in one year.[8]

In addition, mobile data consumed in African markets rivals the amounts in most developed markets.[9] The number of mobile subscribers in Africa doubled from 2008 to 2010 to more than 500 million, and the number of social media users on the continent is expected to double from 2011 to 2014.[10]

Growth in ICT infrastructure is primed to yield significant economic and social benefits in the coming decades. The World Economic Forum study notes that "by 2020, an estimated 150 million new jobs could be created in this sector for young Africans".[11]

Digital Jobs: Opportunities for High Potential but Disadvantaged Youth

"Digital jobs have a unique capacity to provide employment to individuals who face barriers to employment. These barriers may include education level, family and income poverty, gender, lack of prior experience, or shortage of employment options in a community."

Digital jobs can be harnessed to address the issue of youth unemployment and to contribute to positive social outcomes for individuals and communities. Indeed, the promise of the "knowledge economy" will depend on how countries and their citizens are able to maximize the opportunities presented by ICT, and in particular in developing individuals that possess digital literacy and a set of technical and soft skills that are transferable across different types of work.

Digital jobs help individuals to build a transferable skill set that makes them resilient in the economy by strengthening their future employment opportunities and enhancing their adaptability to the changing nature of the workplace. For example, gaining and refining communication skills through an entry-level call center role can eventually allow a young person to progress and qualify for a mid-level customer service role in financial services. In this way, digital jobs can serve as a springboard to access jobs with higher pay, new professional development opportunities and enhanced personal development.

Digital jobs have a unique capacity to provide employment to individuals who face barriers to employment. These barriers may include education level, family and income poverty, gender, lack of prior experience, or shortage of employment options in a community. For example, youth can work in entry-level data management roles that don't require advanced expertise. Populations that can face discrimination, such as persons with disabilities and women, can successfully work in digital jobs. This type of work can also reduce geographical bias, as even rural communities with limited employment options can participate.

Digital jobs are characterized by their ability to:

- Harness the opportunities created by the "knowledge economy" to create, organize, utilize, and communicate increasing amounts of data and information;
- Enhance access to work by leveraging a global market of work opportunities and people seeking work; and
- Enhance the employability and resilience of individuals through the development of transferable technical and life skills that prepare them for work in the future economy.

The diagram on the opposite page presents a typology of selected digital jobs based on transferable skills and job type.[12]

Transferable skills refer to cognitive, non-cognitive and specific and technical skills which enable an employee to perform the tasks required for their role. Digital jobs also develop technical skills which vary by industry and position. Examples include basic computer skills, database knowledge, graphic design, and programming knowledge.[13]

It is important to note that job seekers can join the digital economy with basic transferable skills in entry-level positions and, by building their knowledge, skills, and experience, move into positions higher up the value chain adding to their transferable skill sets and increasing their employability for the future.

To be successful in digital jobs, individuals also need a set of essential attributes and personal competencies that are important for effective functioning in the workplace. These skills and competencies are critical to job retention and career progression.

Digital Jobs: Roles and Skills

SCHOOL TO WORK TRANSITION

Youth → Base level skills

TRAINING

Technical Training + Soft Skills Training

DIGITAL JOBS		SKILLS
Data Management	■ Data Management Operator/ Data Processor ■ Digitization Processor ■ Image Tagging Processor ■ Transcription Specialist ■ Researcher ■ Database Administrator ■ Quality Management Assistant ■ Quality Leader ■ Team Leader	+ Data Entry, Sorting and Analysis + Researching + Problem Solving
Human Resources & Customer Service	■ Help Desk Technician ■ Human Resources Support Specialist ■ Telecommunications Specialist ■ Customer Support/Call Center Representative ■ Accounts Payable ■ Billing Specialist	+ Reporting + Records Management + Customer Service
Technical Specialists	■ Applications Developer ■ Network System Administrator ■ Web Developer ■ Web Administrator ■ IT Help Desk Support	+ Application Development and Maintenance + Web Design and Development + IT Maintenance
Digital Entrepreneurs	■ Business Owner	+ Financial Management + Decision Making + Marketing

PERSONAL COMPETENCIES

- Diligence
- Proactivity
- Self-motivation
- Judgement
- Initiative
- Assertiveness
- Confidence
- Teamwork
- Leadership

ESSENTIAL ATTRIBUTES

- Social skills
- Honesty and integrity
- Personal representation
- Reliability
- Willingness to work
- Positive attitude
- Responsibility
- Self-discipline

Case Studies

The following examples demonstrate a range of existing digital jobs in Africa, the skills development process to access those jobs, and the direct impact on individuals.

Data Management/Human Resources
DIGITAL DIVIDE DATA

Organization: Digital Divide Data (DDD) is a hybrid social enterprise with a mission "to create better futures for disadvantaged youth in developing countries, through employment in a financially sustainable business."

DDD's parent entity is a U.S. non-profit organization that owns and operates for-profit businesses in Cambodia, Laos and Kenya. Founded in 2001, DDD differentiates itself by providing quality business services to clients—and using this business, together with support for higher education—as a means to develop youth and empower them to break the cycle of poverty.

DDD offers digital content and data solutions to business and institutions worldwide, including eBook creation, digitization of archives, database content support, data collection and analysis, digital marketing support, and a range of other content conversion services. Graduates of DDD's work/study program are employed in skilled professional jobs. On average, they earn more than four times the regional wage, enabling their families to emerge from poverty. Building on its early success in Cambodia, DDD expanded to Laos in 2003 and Kenya in 2011.

Individual: Growing up in Mukuru, a slum located east of Nairobi, Sheba could only dream of a better life for her family. At a young age, she and her siblings were left to the care of their mother. Surrounded by iron sheet houses, poor and dirty drainage systems, and low-income earning neighbors, Sheba had one wish: "to have a better life than the one I found myself born into." The road to a better life started in late 2011 when a friend told her about DDD. Having very little experience operating a computer, Sheba realized she might not have much of a chance to land a spot to become a Data Management Operator (DMO). So when she got a call and was invited for training, she was ecstatic. For six months, Sheba found herself in front of the computer, perfecting her typing skills and practicing speed and accuracy. In May 2012, she was officially hired to be a DMO and immediately started data entry work. A few months into the job, she has earned both technical and soft skills. She can navigate a range of software, diligently meet deadlines, and communicate confidently with colleagues from different communities.

Sheba is on her way to fulfilling her dream. At DDD, she handles database projects and quality assurance. She also recently applied for a degree in Library and Information Science at Kenyatta University in the hopes of gaining expertise in information architecture, programming and database management—skills she knows will be significant as she works on more complex and highly technical tasks at DDD or in the IT field in the near future. Sheba believes that a quality education will guarantee her the better life she desires for her family. "Working with DDD has enabled me to face life positively unlike before when I was hopeless. I am financially empowered and am able to meet various needs," Sheba shared.

Customer Service
IMPACT SOURCING ACADEMY (ISA)

Organization: Impact Sourcing Academy (ISA), in South Africa, is helping to address the current growing demand for BPO workers and building a new pool of candidates that can respond to the changing needs of the industry. ISA's training is industry demand-driven and focused around building real-world experience in the BPO sector, blending quality education outcomes with positive job performance. ISA's curriculum is aligned to Services SETA accredited call center training, and is therefore recognized nationally for employment opportunities. Through knowledge, technical training and a specialist expertise in holistic development of learners, ISA builds resilience, confidence and soft skills in its learners.

Approach to Recruitment and Training: ISA recruitment is done according to the end-employer's specifications. Every student recruited for training is recruited for an end-job in mind. There are two levels of training: entry-level and management level. ISA begins training entry-level agents with six weeks of in-class study, including an intensive holistic focus, followed by 12 weeks of work experience in-house or at the client site. Training is customized to help students prepare for the roles that they are best suited for, and the specific client's needs. Students'

theoretical and practical work experience is aligned with Level 2 or Level 3 South African National Qualifications Framework—experience comparable to that of a regular BPO job, easing their transition into the workplace.

Management level training couples a Business Degree specializing in BPO from the Maharishi Institute with ISA theoretical training and practical experience in the in-house Impact Sourcing Service Provider, Invincible Outsourcing. After completing this training, students work for four hours per day and study for four hours per day, allowing them to earn an income while developing their skills.

Technical Specialist
NAIROBITS TRUST

Organization: NairoBits is a youth-based organization that uses ICT multimedia creatively to improve the lives of less privileged children and youth from non-formal settlements. Founded in 2000, NairoBits has over 8,000 alumni and trains 500 students per year. NairoBits aims to have 70 percent of youth living in informal settlements able to access ICT skills to improve their chances at employment and entrepreneurship. NairoBits provides ICT multimedia, micro-entrepreneurship, and life skills training to secondary school graduates from informal settlements in Kenya. The average household income of trainees is often less than 10,000 shillings per month.

Approach to Training: In the ICT Multimedia program, students learn basic computers skills, Microsoft office, online research skills, networking, online communication, web design, web development, web publishing, Flash, MYSQL, Illustrator, content management systems, PHP, Photoshop and project management. In the micro-entrepreneurship program, students learn the qualities of an entrepreneur, business activities, business ideas, business plans, research, budgeting, action planning, networking, finance, management, monitoring, evaluation, computer skills, legal issues, communication skills, productivity and creativity. In the life

Impact Sourcing: Digital Jobs for High Potential but Disadvantaged Youth

Over the past two decades, global corporations have leveraged improved technology and global connectivity to outsource not only the manufacturing of physical products, referred to as contract manufacturing outsourcing, but also business processing activities to low-cost markets. Since then, business process outsourcing (BPO)[14]—focused on informational and transactional services—has become a renowned example of our increasingly interconnected world economy and has contributed to the growth of a number of emerging markets.[15] For example, the Business Process Outsourcing (BPO) industry is estimated to have created more than 270,000 jobs in the Philippines between 2005 and 2008.[16] By one estimate, the global BPO and Information Technology Outsourcing (ITO) industries are expected to reach $574B by 2015.[17]

While BPO has been recognized and analyzed as an opportunity for job creation generally, the sector also has the ability to provide employment and higher incomes for those at the base of the pyramid. The income benefit of this booming sector has been undeniable for those who have participated in it, but anecdotal evidence suggests that the majority of employees in this sector have not come from disadvantaged populations. Most outsourcing employees in India, for instance, have college educations. In contrast, most of the growth in South Africa's BPO sector in recent years has come—as a result of significant government investment in training—from high school graduates in low-employment areas.

A handful of outsourcing providers with a social mission to benefit disadvantaged populations and regions have emerged to create the nascent sub-field of Impact Sourcing (IS) which employs individuals who would otherwise not have an opportunity for sustainable employment. "Comparatively in its infancy, IS represents a fraction of the overall amount of work currently flowing through outsourcing processes."[18] But the growth potential of Impact Sourcing is encouraging as it is expected to outpace the growth of the BPO and ITO sector. In 2010, Impact Sourcing represented 4 percent of the market share of global BPO and ITO. According to Accenture Development Partnerships, it is expected to account for 11 percent of the global BPO and ITO markets by 2015 totaling $65B.[19] This is a growth rate of almost 30 percent compared to 4 percent overall growth in the sector. "As it grows, there is an opportunity to create BPO jobs that benefit disadvantaged individuals in low-employment areas"[20] whether they be in more developed countries with pockets of chronic unemployment or in developing countries where unemployment persists.

skills program, students learn emotional control, motivation, ethics, communication, job searching and preparation skills.

After completing training, students are placed in jobs or internships in the private sector. NairoBits has 100 percent success rate in placing trainees in jobs after only one year of training. 60 percent of students find full-time employment through NairoBits, while others start their own business or look for their own opportunities.

Digital Entrepreneur
WOMEN IN TECHNOLOGY

Organization: The Women in Technology Program for the Middle East and North African region was founded by the Middle East Partnership Initiative of the U.S. Department of State, and is managed by the Institute of International Education, with strong support and collaboration from Microsoft. Since its inception in 2005, WIT has trained over 11,000 women and strengthened the capacity of over 60 local women's organizations in the region.

Individual: Forty-four-year-old Aicha Moussaif has an entrepreneurial spirit. A mother of four, Aicha never completed high school, but made and sold knit and embroidered goods to support her family. Fueled by a desire to learn, Aicha enrolled in the Women in Technology program where she learned many skills including word processing, database management, spreadsheet management, presentation development, and blogging. After completing the training, Aicha felt more confident and self-sufficient in her use of computers. Using her new IT and entrepreneurship skills, Aicha created a blog from which she sells her embroidered goods to new markets.

Microwork
SAMASOURCE

Organization: Samasource is a social business that connects women and youth living in poverty to dignified work through the Internet. Using their proprietary technology platform, Samasource breaks down large-scale digital projects secured from corporate contracts into small tasks for workers in impoverished countries to complete. These workers are trained in basic computer skills and paid in accordance with the Fair Wage Guide.

To date, the organization has paid more than $3 million to over 3,500 workers supporting an average of two to three dependents. It intends to scale this impact to reach 120,000 workers and dependents by 2016. Many of the women and youth employed by Samasource more than double their income, allowing them to support their entire households. They additionally build the confidence and skills they need to compete in the struggling job markets of their respective regions. According to Samasource's impact surveys, 75 percent of the organization's workers achieve a promotion within their delivery center, accept a formal work position with another company, or pursue higher education with money saved from completing digital jobs.

Individual: Like many young women in northern Uganda, Jacqueline A. struggled to find work after graduating from Gulu University. The labor market in this sub-Saharan country is dismal; nearly 40 percent of its work-ready women are without jobs, while the unemployment rate of Uganda's youth stands at an astonishing 80 percent. Despite holding a bachelor's degree, Jacqueline wound up volunteering at data entry positions for over a year just to obtain work experience. But when Samasource hired Jacqueline at one of its delivery centers in Uganda, her life changed. The living wage she now earns through digital work has enabled her to support both herself and her sister's family. The computer training she's received has also made her a more competitive candidate in her region's job market. And within two short months of employment, Samasource rewarded Jacqueline's superlative performance with a promotion to a management position, an opportunity that has incalculably affected her self-esteem. "I had never thought I could grow so fast and handle a leadership position at my first job," she admits.

Digital Jobs: The Impact

"Some studies have shown that investments in ICT infrastructure creates 1.4 to 3.6 indirect and induced jobs for every direct job created."

Digital employment generates direct and indirect benefits to individuals, families and communities. For the individual, direct economic benefits through increased income often translate into improved health, education, and other social outcomes. For example, both Samasource and Digital Divide Data have recently carried out social impact studies that show how employees have translated substantial income increases into education for themselves and dependents, and improved their outlook for future work and personal prospects. Additionally, individuals reap direct intangible benefits such as improvements to self-esteem and increased confidence. These factors make important contributions to an individual's resilience and ability to cope with shocks and stresses that may emerge in their lives.

Digital jobs can also benefit families and communities in several ways. With increased incomes, families can more predictably make investments in healthcare and education. They also have greater purchasing power and ability to save. Digital jobs also create indirect jobs because other firms increase the goods and services they provide to, as well as purchase from, digital employers. Some studies have shown that investments in ICT infrastructure creates 1.4 to 3.6 indirect and induced jobs for every direct job created.[21] In India, NASSCOM estimates a multiplier effect of three to four indirect jobs for every direct job created in their BPO and ITES sectors.[22]

1 International Monetary Fund. (2012). World Economic Outlook Database, April 2013. Available at: www.imf.org/external/pubs/ft/weo/2013/01/weodata/index.aspx

2 Oxford Economics. (ND). *The New Digital Economy*. Available at: www.pwc.com/gx/en/technology/publications/assets/the-new-digital-economy.pdf

3 Negroponte, Nicholas. (1996). *Being Digital*.

4 Oxford Economics (ND). *The New Digital Economy*. Available at: www.pwc.com/gx/en/technology/publications/assets/the-new-digital-economy.pdf

5 Oxford Economics (ND). *The New Digital Economy*. Available at: www.pwc.com/gx/en/technology/publications/assets/the-new-digital-economy.pdf

6 World Economic Forum on Africa (2012). *World Economic Forum on Africa: Shaping Africa's Transformation, Addis Ababa, Ethiopia 9-11 May 2012*. Available at: www3.weforum.org/docs/AF12/WEF_AF12_Report.pdf

7 World Bank and African Development Bank (2012). *eTransform Africa: The Transformational Use of Information and Communication Technologies in Africa*. Available at: web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTINFORMATIONANDCOMMUNICATIONANDTECHNOLOGIES/0,,contentMDK:23262578~pagePK:210058~piPK:210062~theSitePK:282823,00.html

8 World Bank and African Development Bank (2012). *eTransform Africa: The Transformational Use of Information and Communication Technologies in Africa.* Available at: web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTINFORMATIONANDCOMMUNICATIONANDTECHNOLOGIES/0,,contentMDK:23262578~pagePK:210058~piPK:210062~theSitePK:282823,00.html

9 Economist Intelligence Unit (2010). *Digital Economy Rankings 2010*. Available at: www.eiu.com/site_info.asp?info_name=digitaleconomy_2010

10 World Economic Forum on Africa (2012). *World Economic Forum on Africa: Shaping Africa's Transformation, Addis Ababa, Ethiopia 9-11 May 2012*. Available at: www3.weforum.org/docs/AF12/WEF_AF12_Report.pdf

11 World Economic Forum on Africa (2012). *World Economic Forum on Africa: Shaping Africa's Transformation, Addis Ababa, Ethiopia 9-11 May 2012*. Available at: www3.weforum.org/docs/AF12/WEF_AF12_Report.pdf

12 Typology and list of essential attributes, transferable skills, and personal competencies adapted from McGrath, S. (2009). What is Employability? Learning to support employability project Paper 1. School of Education, University of Nottingham. Available at: www.nottinghamenterprise.com/educationresearch-projects/documents/educationalpartnershipsafrica/rpg2009epamcgrath1.pdf; Transferable skills deduced from Accenture Development Partnerships (2013). Recruitment, Training and Impact Measurement, a Recommended Approach to Impact Sourcing.

13 Results for Development Institute (2012). *Training Models for Employment in the Digital Economy*. Available at: www.resultsfordevelopment.org/knowledge-center/training-models-employment-digital-economy

14 Business process outsourcing (BPO) is the contracting of a specific business task, such as payroll, to a third-party service provider. BPO is often divided into two categories: back office outsourcing which includes internal business functions such as billing or purchasing, and front office outsourcing which includes customer-related services such as marketing or tech support. Business process outsourcing and off-shoring includes corporates who locate their back office support centers in offshore locations but within the same corporate structure.

15 Monitor Inclusive Markets (2011). Job Creation through Building the Field of Impact Sourcing. Available at: www.rockefellerfoundation.org/news/publications/job-creation-through-building-field

16 Monitor Inclusive Markets (2011). Job Creation through Building the Field of Impact Sourcing. Available at: www.rockefellerfoundation.org/news/publications/job-creation-through-building-field

17 Bulloch, G. and J. Long (2012). Exploring the Value Proposition for Impact Sourcing. Accenture Development Partnership. Available at: www.accenture.com/us-en/Pages/insight-exploring-value-proposition-impact-sourcing.aspx

18 Monitor Inclusive Markets (2011). Job Creation through Building the Field of Impact Sourcing. Available at: www.rockefellerfoundation.org/news/publications/job-creation-through-building-field

19 Bulloch, G. and J. Long (2012). Exploring the Value Proposition for Impact Sourcing. Accenture Development Partnership. Available at: www.accenture.com/us-en/Pages/insight-exploring-value-proposition-impact-sourcing.aspx

20 Monitor Inclusive Markets (2011). Job Creation through Building the Field of Impact Sourcing. Available at: www.rockefellerfoundation.org/news/publications/job-creation-through-building-field

21 World Bank ICT (2012). *Broadband and job creation: Policies promoting broadband deployment and use will enable sustainable ICT-based job creation. Note #1: February 2012.* Available at: www.infodev.org/en/Document.1150.pdf

22 Tholons (2011). *IT-BPO Industry's Direct and Indirect Economic Impact: The Outsourcing Multiplier applied to the Philippines and Indian Economies*. Available at: www.tholons.com/nl_pdf/Tholons_Whitepaper_Outsourcing_Multiplier_2011.pdf

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