

Entrepreneurship, Technology and Innovation in Poverty Reduction

Toshihiro NAKAMURA

ABSTRACT

In the face of daunting challenges in the developing world, an increasing number of social entrepreneurs are harnessing the power of technology to eradicate poverty. While technology and innovation are significantly changing the landscape of development assistance, more entrepreneurial approaches are urgently needed to accelerate the process of creating a world without poverty.

KEYWORDS: Social Entrepreneurship, Technology, Innovation, Development Assistance, Poverty Reduction

1 INTRODUCTION: TRADITIONAL APPROACH TO POVERTY REDUCTION

Until recently, an aspiring international development practitioner's career choice was rather limited – work for their government's aid agency, join an international organisation such as the United Nations, or a large international Non-Governmental Organisations such as Oxfam or Care. Such institutions make up the 'industry' created around the Official Development Assistance, which has become a \$120 billion market¹ some 60 years after the Marshall Plan. The funds primarily flow from tax payers, through developed country governments, to the recipient governments in the case of bilateral agreements, and via international organisations in the case of multilateral schemes.

This traditional approach to poverty reduction has indeed made significant strides in improving democratic governance systems, raising school enrolment rates, vaccinating children and improving the lives of the poor. At the same time, there is a growing realisation among the donor countries, developing country governments and development practitioners alike that much more could and should be done. Indeed, a number of reform initiatives have been developed to make official aid more effective and sustainable.²

2 TECHNOLOGY AND INNOVATION ARE REAL GAME CHANGERS

While internal ODA reform processes take place, there are a growing number of individuals and institutions that are going beyond the traditional ODA circle, identifying niche areas and coming up with innovative solutions leveraging technology to address poverty and its related challenges in developing countries. These forces are providing alternative approaches to ODA, and creatively disrupting the status quo³.

The author is Co-Founder and CEO of Kopernik. He has spent ten years in Timor-Leste, Indonesia and Sierra Leone working with the United Nations. Prior to joining the UN, he worked at McKinsey and CO. He holds a Bachelor of Laws degree from Kyoto University and Master of Science in Comparative Politics degree from the London School of Economics.

¹ OECD Development Co-operation Directorate (DCD-DAC) "50 years of Official Development Assistance" http://www.oecd.org/document/41/0,3343,en_2649_34447_46195625_1_1_1_1,00.html.

² For example, in response to the concern that there is weak accountability in aid as it lacks clear targets, the Millennium Development Goals were established and adopted in 2000. The progress against these goals is now being tracked. Another example is the Paris Declaration, which addressed the issue of donor driven aid, and laid out a number of principles and targets for all stakeholders in the development assistance will follow to make the aid more effective. Within the United Nations System, which has grown rapidly since its establishment, efforts are being made to minimise duplication and reduce inefficiencies through 'Delivering as One' initiatives, field level UN coordination mechanisms, and establishment of the Multi-Donor Trust funds.

³ Jeffrey Sachs goes as far to say that '[t]he central solution to ending extreme poverty is to empower the poor with

Take ‘*D.Light*’ as an example. *D.Light* is a social enterprise born out of Stanford University, which manufactures and sells affordable solar lanterns in developing countries. The solar lanterns, unlike the traditional means of large scale power plant construction, directly bring light to households in the most remote areas (‘the last mile’), and allow for the conversion from dangerous, expensive and unhealthy kerosene lanterns to clean solar powered ones. To date, *D.Light* has sold hundreds of thousands of lanterns in over 40 countries⁴. Their goal is to improve the lives of 50 million people.



Photo 1: A Timorese woman holding a solar light

Another example is *Solar Ear*, a Brazil-based organisation that produces affordable hearing aid kits for the poor. ‘Normal’ hearing aid kits are often too expensive for the poor to access, and this product with solar rechargeable batteries lowers the barrier in introducing the hearing aid in poor countries. There is more. *Solar Ear* not only produces the innovative product, but also provides job to the deaf in their factory. There are many more examples of innovative technologies that are specifically designed to improve the lives of the poor in the developing world.

In the developing world, nearly 3 billion people are exposed to smoke from traditional cookstoves, causing 1.9 million premature deaths annually and contributing to climate change. To address these challenges, socially conscious entrepreneurs, NGOs and companies have invented fuel efficient cookstoves that require significantly less amount of biomass and produce much less smoke. The introduction of clean cookstoves also improve the livelihood of the poor, as they reduce the expense on purchasing firewood, and the savings could be redirected to more productive activities, such as businesses and children’s education⁵

improved technology’, Common Wealth: Economics for a Crowded Planet, Jeffrey Sachs, 2008.

⁴ D-light Press Release, 16 November 2010.

http://www.dlightdesign.com/mediarelease_TwoMillionImpacted_Nov2010.php.

⁵ From the website of *Global Alliance for Clean Cookstoves*, accessed on 31 December 2010.



Photo 2: A fuel-efficient cookstove in action in Timor-Leste

Thanks to the ever expanding connectivity via the internet and mobile, people who may not be inventing products for the developing world can also actively engage in the efforts to fight against poverty. *GlobalGiving* the first online giving marketplace started by two former World Bank executives in 2001, enabled anyone with an internet connection and a credit card to do just that. *GlobalGiving* collects donations from individuals to support worthy causes in developing countries, and in 2010 alone, *GlobalGiving* received over \$22 million from 53,000 individuals, and financed 17,000 projects around the world⁶. *Kiva*, a rapidly growing peer to peer micro lending platform, has mobilized over \$183 million since its foundation in 2004⁷ to lend to nearly half a million people in 57 countries.

According to *Giving USA*, the individual and corporate charitable giving market in the United States exceeded \$304 billion in 2009⁸, 4 percent (over \$12 billion) of which supports international causes. In Japan, where a culture of charitable donation has been said to be weak, it was recently revealed charitable donations in 2008 to 2009 amounted to approximately \$12 billion⁹, a much larger figure than previously estimated. One can see just how significant these figures are, when comparing with the total

⁶ Figures quoted in the *GlobalGiving*'s year end message, December 2010.

⁷ Website of Kiva. <http://www.kiva.org/about/facts>, accessed on 31 December 2010.

⁸ Website of Giving USA. http://www.givingusa.org/press_releases/releases/20080622.htm.

⁹ *Kihu-Hakusho 2010* (Giving Japan 2010), Japan Fundraising Association, 2010.

global ODA flow in 2009, which has been estimated at \$120 billion¹⁰.

There is a huge shift taking place in the landscape of development assistance, and more innovative and technology driven solutions are constantly emerging.

3 *KOPERNIK*, WHERE INNOVATION MEETS DEVELOPMENT ASSISTANCE

I have been working in the international aid industry for the last 10 years. Seeing these rapid changes in the development assistance landscape, I became more convinced of the potential to do things differently in this area. I wanted to open up a rather ‘closed’ development industry and bring more creative and innovative approaches to solve the daunting challenges in developing countries. This is why I, together with Ewa Wojkowska, co-founded *Kopernik* - an online marketplace that connects life-changing technologies and innovative solutions to people who need them the most.

Kopernik provides a mechanism to making innovative solutions more accessible by the poorest segments of the society, by connecting technology providers, technology seekers and supporters (funders). We showcase a number of proven ‘disruptive’ technologies, that can drastically and directly change the socio-economic productivity of the poor, and bring them to those who need them the most. In addition to the solar lanterns, solar rechargeable hearing aid and clean cookstoves that were touched upon earlier, *Kopernik* also disseminates technologies in the area of water/sanitation, agriculture, education and ICT/Mobile.

Exhibit 1: Kopernik’s model, connecting technology providers, technology seekers and supporters (funders)



Here’s how *Kopernik*’s online technology marketplace works:

- Our website showcases the latest technologies
- Technology seekers/Local groups (NGOs) choose what is most needed in their area and apply online for funding.
- After vetting, we post the project on our website so that you can choose what you want to fund.

¹⁰ OECD. “Development aid rose in 2009 and most donors will meet 2010 aid targets.” Available at WWW: http://www.oecd.org/document/11/0,3746,en_2649_34447_44981579_1_1_1_1,00.html. Accessed on 6 January 2011.

- The technology is shipped directly to the local NGO, avoiding middlemen, so more of your money (in the form of technology) reaches the end-user.
- You get feedback about how your donation has helped people's lives.

Kopernik is creating an eco-system, where innovative solutions more effectively reach those in need, and where the adoption of the life-changing technologies is accelerated, especially in the last mile. Since our official launch on 19 February 2010, *Kopernik* has attracted significant attention and support of socially conscious people and media, which has enabled us to implement 18 projects in Timor-Leste, Indonesia, Kenya, Nigeria, China, Haiti and Vietnam in the first year. Through these projects, fuel efficient cooking stoves, solar lanterns, solar charged hearing aids, obstetric packs and water purification devices have been delivered¹¹.

It is still very early days for *Kopernik*, but we have big plans to make it the go-to-place of technologies for the developing countries, and bring the power of technology and innovation to the last mile.

4 CONCLUDING REMARKS

If recent changes in people's mindsets as well as advances in information technology have widened the schema of career choices for those aspiring to work in development assistance, By 'discovering' and 'defining' problems in unique ways open doors to possible solutions that contribute to poverty reduction in many different ways. The challenge of eradicating poverty is enormous, and cannot be addressed solely through ODA. The entrepreneurial approach is what is urgently needed, and it is hoped that more people join us in bringing more innovative solutions, that know no bounds in effectively creating a world without poverty.

5 REFERENCES

Giving USA, *U.S. charitable giving estimated to be \$306.39 billion in 2007, 2008*, Available at WWW: <http://www.givingusa.org/press_releases/releases/20080622.htm>, [Accessed on 10 January 2011].

Japan Fundraising Association, *Kihu-Hakusho 2010 (Giving Japan 2010)*, 2010.

Organization for Economic Co-operation and Development, *50 Years of Official Development Assistance*, Available at WWW: <http://www.oecd.org/document/41/0,3343,en_2649_34447_46195625_1_1_1_1,00.html>, [Accessed on 10 January 2011].

Organization for Economic Co-operation and Development, *Development aid rose in 2009 and most donors will meet 2010 targets*, Available at WWW: <http://www.oecd.org/document/11/0,3343,en_2649_34487_44981579_1_1_1_1,00.html>, [Accessed on 6 January 2011].

Sachs, Jeffrey, *Common Wealth: Economics for a Crowded Planet*, 2008.

¹¹ Rapid impact assessment conducted in Kenya showed immediate changes in the lives of people.

- The expenditure in kerosene dropped from \$14 to \$4 dollars.
- This gain is reinvested by the household to expend business, pay for health check-ups and educational materials, and purchase more food.