

The Role of Markets in Addressing Social Problems

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Abstract

For-profit markets and market-based mechanisms were historically considered of little use in addressing social problems, and there was widely believed to be a conflict between making a profit and simultaneously having a social objective. Fortunately, in the past two decades market practitioners have demonstrated success in using market mechanisms to reduce pollution (via emissions trading), decrease poverty and improve living standards (microfinance), and direct capital to social issues (socially responsible investing or “SRI”). Today, we know that markets are powerful mechanisms for allocating finite economic resources towards social objectives, but these financial tools are complex and have limitations. In US business schools there has been a rapid change among MBA students, with increasing awareness of market based tools for social enterprise, and increasing demand for knowledge in this area. At Columbia Business School, students pursuing a career with not-for profit institutions and NGOs have become very interested in learning how financial markets and financial tools can be used to help them achieve their social objectives. Similarly, students pursuing a career with for-profit businesses, especially those planning to work in the financial sector, are very interested in understanding the impact of their activities on social issues. In the future we can expect challenges to market based initiatives given the recent upheaval in global markets, but the expectation is for increasing use of these powerful financial tools. My paper will address the history of market based mechanisms in addressing social problems, review areas of success, describe my experience teaching this subject at Columbia Business School, and assess expectations of the future role of markets and social enterprise.

Thank you for the kind invitation to speak at the first International Conference on Social Enterprise. The invitation to this conference begins with the words “Social enterprises seek social goals and create profits at the same time”. In most cases, the mechanism that links ‘social goals’ and ‘profits’ is the market, and the objective of my speech today is to describe how market mechanisms can be used to make this happen.

I wish to cover four subject areas in my brief speech –

- first, provide a brief history of market based mechanisms used to address social problems,
- second, discuss several examples in which market mechanisms have been used successfully to attain social goals
- third, describe my experience teaching this subject at Columbia Business School
- Lastly, assess expectations for the future role of markets and social enterprise

Before I begin, allow me to tell you a few words about my background, so you understand my perspective on markets

- I spent the first 15 years of my career working in the financial markets, in Tokyo and New York, in investment banking and capital markets
- Seven years ago, I began work on climate change, focusing on the use of market mechanisms, specifically the Clean Development Mechanism of the Kyoto Protocol, and I built the world’s largest company focused exclusively on climate change and

market based mechanisms, with 265 employees in 20 countries.

- Concurrent with my financial work, in 2001 I joined Columbia University as an Adjunct Professor at the Business School, and in 2004 I developed a course titled “Finance & Sustainability”, which I have taught each year for the past 5 years. I had the pleasure of having Professor Hun-Joon Park of Yonsei University join my Finance & Sustainability class at Columbia Business School last year

In summary, I am unashamedly pro-markets and perhaps biased in my perspective, but my experience as both a businessman and as a professor at Columbia Business School have shown me that market mechanisms can, and do help address many social problems.

I. What is the history of markets in solving social problems?

If, forty years ago, the following question was asked – what is the role of markets in solving social problems? – the answer would almost certainly be that markets have no role in solving social problems, for that is the role of government and the non-profit sector. In 1970, Milton Friedman, the Nobel prize winning economist from the University of Chicago, wrote an article in the New York Times titled ‘The Social Responsibility of Business is to Increase its Profits’, in which he stated that social responsibility is a “fundamentally subversive doctrine” for a business to follow.

In the 1980’s several forward thinking academics, NGOs, and businesspeople began suggesting that markets could and should play a role in addressing social issues.

- Specifically, in 1988 Fred Krupp of the Environmental Defense Fund published an op-ed in the Wall Street Journal describing how emissions trading could address the environmental problem of acid rain while reducing the economic cost to society;
- During the 1980's social activists seeking to end apartheid in South Africa began to use socially responsible investing to pressure institutional investors in the US to divest their holdings of companies doing business in South Africa; and
- By the end of the 1980s, Muhammed Yunus's Grameen Bank had demonstrated on a large scale that microfinance offered a way to use financial capital to reverse the vicious cycle of poverty.

By the 1990's, the concept of using markets to solve social problems had gained wide support among academics, government and the business community, as evidenced by the Kyoto Protocol, negotiated in 1997, in which not just one but *three* market mechanisms were included to address climate change.

Today, twelve years after the Kyoto Protocol was negotiated and ratified by 184 countries, the idea that markets are infallible has come under severe criticism. This has come about for many reasons, not least of which are:

- The rapid and severe downturn in global markets and economies has led to suggestions that markets can't be trusted to solve social problems. In the US, often considered the global leader in support for free

markets, the concept of a market to trade carbon credits to reduce emissions of greenhouse gases has come under severe criticism, with significant support for a carbon tax.

- Experiences with market mechanisms that have generated less than hoped for results. For example, the EU Emissions Trading System has failed to generate significant reductions in greenhouse gas emissions in the EU. This is due primarily to the short term of the policy, but the blame for the lack of infrastructure change has been put on the market mechanism itself.
- Unrealistic expectations. In many cases, stakeholders have created expectations for the impact of market mechanisms on social problems that simply cannot be met. For example, the impact of SRI divestment campaigns on the government of Sudan has been ineffective.

Today, we know that markets are powerful mechanisms for allocating finite economic resources and, despite their limitations, markets have proven extremely successful in addressing various social problems. Allow me to review a few specific examples.

II. Where have markets been successfully applied to social problems?

Market mechanisms have been used to address many environmental issues. The first, and perhaps greatest success, was Title IV of the Clean Air Act of 1990 in the United States, which introduced a cap and trade market with the objective of reducing emissions of SO₂ from coal-fired utilities, the primary cause of acid rain in America.

The SO₂ cap and trade program was initially met with skepticism from government officials, environmentalists, and the utilities themselves. Nevertheless, the program came into force and was an immediate success. Emissions of SO₂ declined by 40% from 1990-2001, during a period of rapid economic growth, while the economic cost of meeting the cap was nearly 80% lower than forecast. In fact, in the nearly twenty years since the acid rain cap and trade program started in 1990, not a single US based electric utility has missed their SO₂ emissions cap.

A second area of environmental success has been the use of market mechanisms to promote the growth of renewable energy. In the US, this has taken the form of a Renewable Portfolio Standard (or "RPS"), in which electric utilities are required to generate a percentage of their electricity from renewable sources, but the utilities have the flexibility to trade the output, termed Renewable Energy Certificates. In Texas, a state known more for oil than renewable energy, an RPS program was started in 1999 and it has been an enormous success. Generation of electricity from wind turbines has increased from 180 MW to 4,296 MW in a mere eight years, and Texas has become the state with the largest generation of wind energy in the country.

A third area in which market mechanisms have been applied to address environmental problems is in the attempt to reduce emissions of greenhouse gases and avert catastrophic climate change. There are several market systems already in place, including the EU ETS, and state and regional programs in the US and Australia.

The program I would like to showcase as an example of a market based solution is the Clean Development Mechanism of the Kyoto Protocol (also known as the CDM). The CDM was designed to encourage the reduction of greenhouse gas emissions in developing countries, where the cost of emissions abatement is often significantly lower than the cost in developed countries. The CDM also has the additional goal of promoting sustainable development in developing countries. The CDM has resulted in the construction of 4,600 projects in more than 50 countries. Those projects are capable of reducing 5.2 billion tons of carbon dioxide equivalent, and will do so at a fraction of the cost of reductions in developed countries. Furthermore, the CDM has resulted in significant transfer of capital, technology, and expertise from developed to developing countries.

The CDM is not without controversy, particularly in relation to the slow and cumbersome process by which projects are vetted by the United Nations. However, I have little doubt that the CDM demonstrates the power of market mechanisms to effect change in developing countries on a large scale.

Markets have also proven effective at addressing other social issues in developing countries, especially the objective of reducing poverty. Microfinance is not technically a “market mechanism” but I include it as such because microfinance is, like all markets, a financial tool designed to allocate capital in an effective manner. The success of microfinance in addressing poverty is now well known, with some 10,000 microfinance institutions in existence today having significantly raised the living standards of an estimated 100 million poor people, primarily women, in developing countries. Microfinance has also contributed to social benefits that include the empowerment of women and the freedom that comes with financial independence. I won’t go into any more detail on microfinance, as we will shortly hear from Molly Alexander of the Acumen Fund.

Suffice it to say that market mechanisms, in the form of microfinance, can have a dramatic impact on poverty in developing countries.

The last example I wish to use is in the area of social justice. The use of Socially Responsible Investing, or SRI, as a market based tool, has gained widespread attention since it was first used in the 1980s. Since then, the use of SRI tools has grown to the extent that approximately 10% of all mutual funds in the US, representing some \$2.7 trillion in assets, have some form of SRI policy in place. In fact, Columbia University has an SRI policy on the school's endowment, with a specific focus on divesting from companies that do business with the government of Sudan.

A clear example of success in using SRI is the shareholder advocacy campaign by the Rainforest Action Network, a US based NGO, against Citibank in 2000. Rainforest Action Network used shareholder and consumer pressure to force Citibank to review the bank's policies in relation to project finance loans in developing countries, resulting in the creation of the Equator Principles. Today, the Equator Principles include 65 banks dedicated to making project finance loans in a sustainable manner, and it is estimated that 80% of all new project finance loans in the world today adhere to the Equator Principles

To what can we attribute the success of market mechanisms when they are applied to social issues? Each and every social problem has a unique context and presents individual challenges, but I believe we can attribute the success of market mechanisms to the following facts:

- Markets force participants to internalize social costs;
- Once these costs are internalized, participants change their behavior;
- Markets provide an incentive to outperform, not just meet a target. The mentality of compliance is

changed from meeting the minimum required mandate of a command and control system, to maximizing the potential profit in a market system;

- In a market based system, different alternatives are forced to compete with one another, resulting in lower cost to society;
- Markets create flexibility for participants, allowing them to make decisions that are best for their individual situation;
- Markets do not discriminate;
- Markets allocate scarce capital and scale quickly.

In summary, markets alone cannot solve social problems. But it is foolish to tackle many social problems without market mechanisms, because markets effectively allocate scarce capital.

III. What has been my experience teaching at Columbia Business School?

I have been an adjunct professor at Columbia Business School since 2001, initially teaching a finance course given my experience working in the financial markets in Tokyo and New York. Five years ago, I developed a course with the assistance of Ray Horton and Sandra Navalli, titled “Finance & Sustainability”. My idea was to develop a finance course that would teach students how financial tools could be used to address social issues. Since it is a finance course, all students are required to complete a pre-requisite course on capital markets. The Finance & Sustainability course is designed to be useful to two groups of students; (i) students who are planning a career in the financial industry and who want to understand how their work can have an impact on social issues, and (ii) students who are

planning a career in the not for profit or public sectors and who want to learn how to use financial tools to improve their effectiveness in solving social problems.

In the first class, I put a quote on the blackboard from Woodrow Wilson, who was President of the United States from 1912 to 1920. In addition to being President, Wilson is remembered as the founder of the League of Nations, the predecessor to the United Nations. Quote “You are not here merely to make a living. You are here in order to enable the world to live more amply, with greater vision, with a finer spirit of hope and achievement. You are here to enrich the world, and you impoverish yourself if you forget the errand.” I then tell the students that if they agree with the quote then they should take the Finance & Sustainability course.

The Finance & Sustainability course has now been offered annually for five years, and has become very popular among the students at Columbia Business School. In the five years since I first developed the course, I have noticed a number of interesting changes among the students:

- First, the concept of using financial markets to address social issues is no longer viewed with suspicion by the students;
- Second, the arguments in the classroom have moved from *whether* to use financial markets, to *how* to use them most effectively;
- Third, the sophistication and expertise of the students has grown dramatically, to the point where

many of them have already worked with these financial tools in their previous jobs;

- Fourth, and most importantly, there is a growing commitment by the students to the idea that they can and will change the world. In other words, the students at Columbia Business School are increasingly in agreement with the Woodrow Wilson quote.

In summary, I have witnessed growth in the Finance & Sustainability course that has paralleled the rise in social enterprise globally. Today, when I speak with CEO's of companies, I tell them that there is a bottoms-up revolution going on in business schools, in which the students are leading the growth of this new and vibrant sector.

IV. What is the future role of markets in solving social problems?

Looking ahead, it is clear to me and many market practitioners that the role of markets has been firmly established as a powerful and often effective financial tool for solving social problems. However, I foresee significant challenges to broader acceptance of market based mechanisms.

The primary challenge can be summed up by Muhammed Yunus, the founder of Grameen Bank and winner of the Nobel Peace Prize, who has said that when the concept of microfinance was first developed, those on the 'left' thought it was a plan by capitalists to enslave poor people, and those on the 'right' thought it was a communist plot to increase the power of the poor and overthrow the government! In other words, the introduction of new financial tools

has always been, and always will be viewed with suspicion by outsiders.

Furthermore, financial markets globally have been severely tarnished by the recent economic slowdown and the dramatic decline in liquidity and value in equity and fixed income markets. Financial tools like securitization have been castigated for their role in causing economic loss, and the process of financial innovation has not only stopped, but to a certain extent reversed itself. While social enterprise has played no part in this debacle, it cannot help suffering some blowback from the turmoil in the financial markets.

But despite the recent upheaval in the financial markets, I do foresee increasing acceptance and use of market mechanisms to address social problems. Specifically, to give just a few examples;

- Climate change – in the United States, the Obama administration has recently announced plans for a national greenhouse gas cap & trade program. The proposed program uses markets to trade emissions rights, and also uses the market to auction allowances rather than through an allocation process as currently used in the EU ETS.

- Fisheries – the dramatic collapse in many fisheries is spurring the development of “catch shares”, in which fishermen become owners of a share of the catch as if it were stock in a company. A recent study in the journal Science showed that catch shares can prevent the collapse of global fisheries.

- Social Entrepreneurship – the enormous success of microfinance is encouraging the development of innovative

financial tools for social entrepreneurs, including private equity and venture capital targeted at entrepreneurs in developing countries.

Market based mechanisms are, despite controversy surrounding their use, here to stay. Or to put it another way, the genie is out of the bottle – an increasing number of participants in the social sector are recognizing that markets can be used as powerful tools to quickly and efficiently allocate capital to social and environmental needs. At the same time, many participants in the financial sector are recognizing that they can have an enormously positive impact on social issues through their work. It is clear to me that the use of market mechanisms to address social problems is real, is growing, and is irreversible.

Thank you again for the opportunity to speak to you this afternoon. It has been a pleasure attending this conference, learning from other speakers and participants. I look forward to further opportunities to work together in the future.

KDI Social Enterprise Conference
March 12, 2009

Patient Capital for an Impatient World

Molly Alexander, Acumen Fund



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Ambulance

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The innovation

Too many people die in Mumbai
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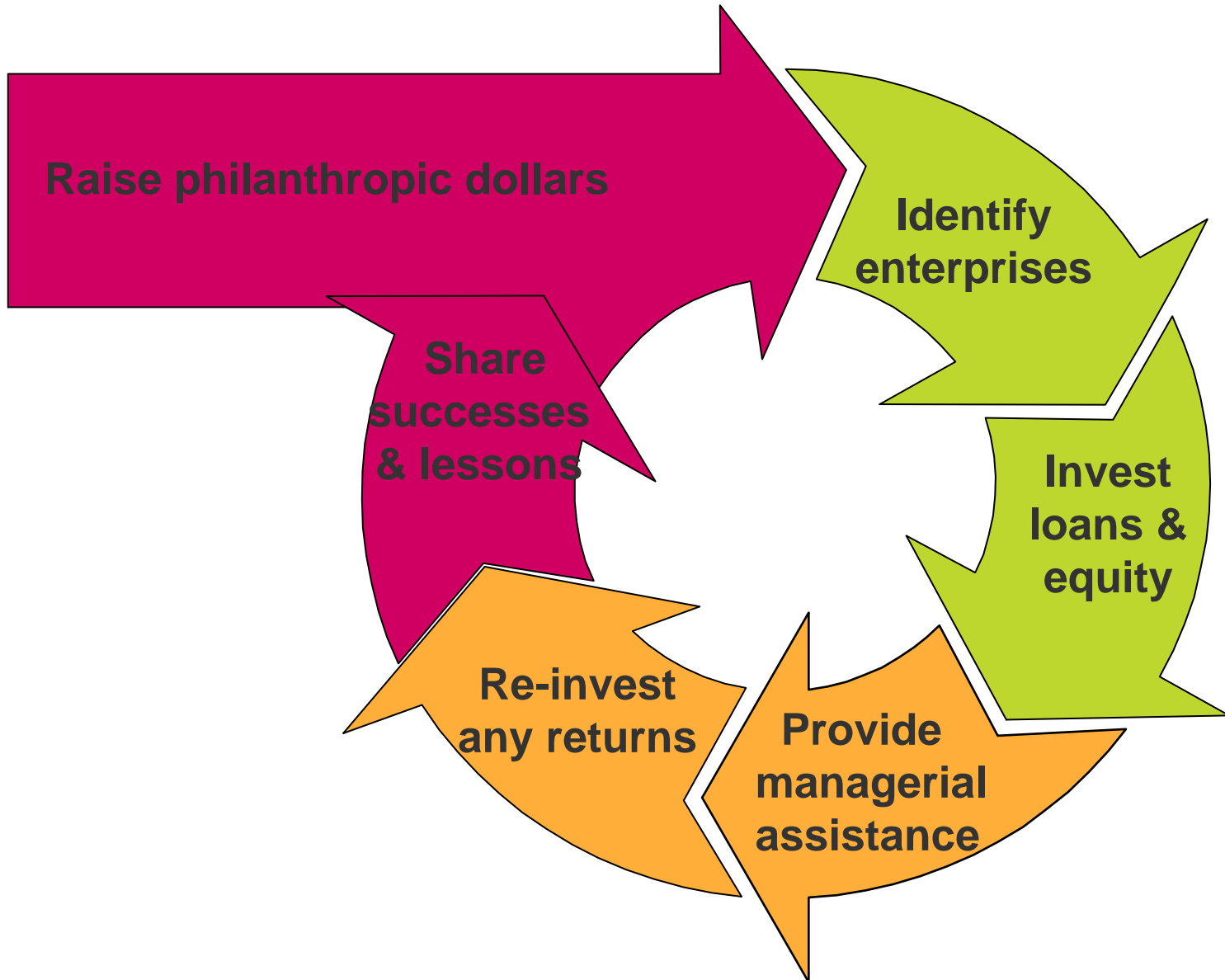
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Acumen Fund is a social investment fund



Acumen Fund in 2008

Revenues

- Raised \$80M since May 2007 in multi-year commitments against a \$100M capital campaign

Capital

- \$36.4M of approved and closed investments as of Feb 09
- 20,000 jobs created, 19 million services delivered
- Metrics platform for tracking investments in beta testing

Knowledge

- Built a knowledge platform that includes an informative website and blog
- High quality media exposure (Business Week, NYT, FT)
- University Partnerships (Stanford, Harvard, Michigan)

Talent

- Fourth class of fellows selected
- Innovations around talent in the sector
- Raised the bar on internal talent practices and systems

Investment Criteria

- **Financial Sustainability**

- Are they in good financial health?
- Can they return our capital?
- Have they been able to tap into commercial capital markets?

- **Social Impact**

- How many lives have been affected; and how?

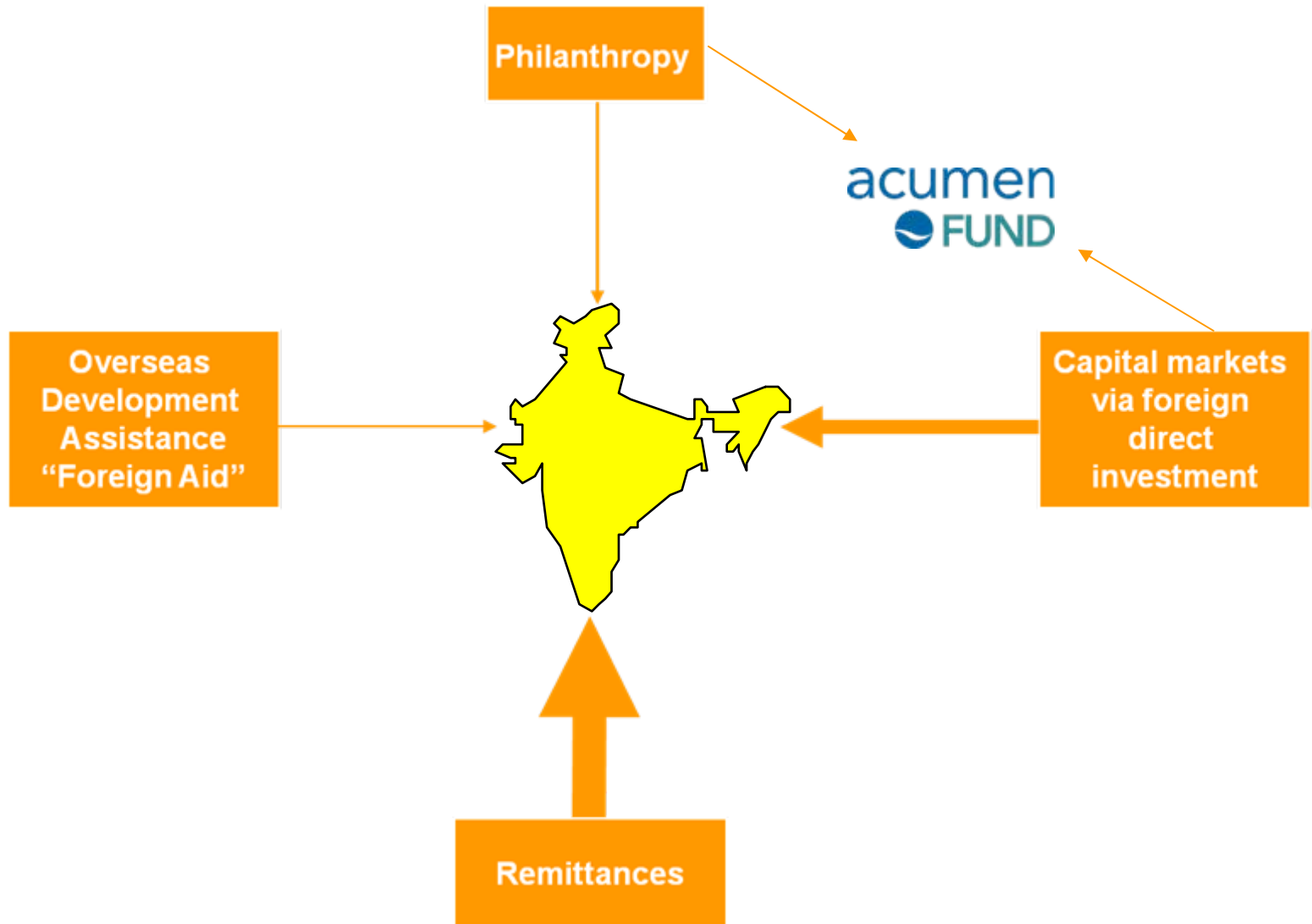
- **Scale**

- What vision is there to scale this business?
- What progress has been made towards this goal?
- How is that scale helping to address critical social issues?

- **Cost effectiveness**

- Can another funder/investor deliver the same product or service more cost effectively?
- Best Available Charitable Option (BACO)

Acumen Fund fills a gap in capital markets





Health



Agriculture



Water



Housing



Energy

Deploying capital, what we've learned...

Local presence

+

The right capital

=

An effective model

- The best entrepreneurs are found through local networks
 - Understanding local issues (customer behaviour, dynamics of distribution, regulations) is critical to investment success
 - Management assistance is most affordably delivered locally
-
- Flexibility and creativity is as important as availability
 - Potential commercial capital is significant but mindset is still far away
 - Investment rigor essential in building bridge from philanthropy to commercial capital
-
- Acumen investing model allows investment in the poor without causing mission creep
 - Taking this to scale means expanding our sweet spot: early bets on innovation; scale-up of real winners

Building information transparency for the sector

The screenshot shows the Acumen Fund portfolio data management system interface. At the top, there are navigation tabs for 'Investments', 'Organizations', 'Reports', 'Users', and 'Settings'. Below the tabs, the page title is 'Active investments'. The table below lists various investment entries with columns for Organization, Portfolio, Country, Committed, Disbursed, F.R., Process, and Health. The Health column uses colored circles (red, yellow, green) to indicate performance relative to targets.

Organization	Portfolio	Country	Committed	Disbursed	F.R.	Process	Health
Clean Enterprise	-	-	\$1,741,000	\$1,741,000	4	-	-
Quick and Safe Health services	Health	India	\$1,500,000	\$0	19	Monthly reports	Yellow
Lexico Round I	Health	Kenya	\$1,442,366	\$1,442,366	13	Monthly reports	Yellow
The Microfinance Company	-	-	\$1,430,234	\$766,000	9	-	-
XYZ Enterprises Round I	Health	India	\$1,400,000	\$775,000	11	Metrics, Monthly reports	Yellow
ZZZ Group	-	-	\$970,435	\$132,235	2	-	-
Simple Plan Round I	Health	South Africa	\$730,000	\$320,000	10	Monthly reports	Yellow
Seeing Health Round I	Health	India	\$534,000	\$134,000	8	Monthly reports	Yellow
ABC Company Round I	Health	South Africa	\$519,000	\$519,000	1	✓	Red
Power1 Round I	Housing	Tanzania	\$360,834	\$234,027	14	Metrics, Monthly reports	Yellow
Building Blocks	-	-	\$357,156	\$307,156	9	-	-
Affordable Housing Corp. Guarantee	Housing	Egypt	\$345,000	\$0	7	Metrics, Monthly reports	Yellow
Helping Hands Round I	Housing	India	\$338,000	\$338,000	16	Metrics, Monthly reports	Yellow
Text100 Health Clinics	Health	Kenya	\$324,001	\$324,001	6	Monthly reports	Red
SuperFoods Round I	Housing	India	\$260,000	\$260,000	17	Metrics, Monthly reports	Yellow
MoveIn Land Corp Round I	Housing	Kenya	\$250,000	\$0	18	Monthly reports	Yellow
Health4All Round I	Health	Tanzania	\$245,059	\$245,059	5	Monthly reports	Yellow
Water Company X Deal I	Water	Kenya	\$92,000	\$92,000	12	Metrics, Monthly reports	Green
Give Me Health Home care	Health	India	\$90,000	\$90,000	15	Metrics, Monthly reports	Green

- Co-developed with Google
- Summary view of all Acumen investments
- Sorted by program area and geography
- Financial details
- Bi-annual subjective forced ranking of investments based on:
 - Potential for social impact
 - Financial sustainability
 - Potential for breakthrough insights about serving the poor
- Red/yellow/green “health” light to monitor performance relative to targets

What else can you do?

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Spread the movement

Write on our blog

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Our work by raising awareness and funds

Start a Young Professionals Group here in Seoul!

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**Traditional charity and aid alone
will not solve the problems of poverty**

**The markets alone will not solve
the problems of poverty**

**Dignity is more important
to the human spirit than wealth**

Molly Alexander, Business Development Manager, Acumen Fund
For Korean Development Institute

The past 20 years have seen an unprecedented rise in wealth, with new technologies changing the economic landscape. But globalization has also increased the divide between rich and poor, creating a growing sense that something must be done to extend the benefits of the global economy to the three billion people – or half the total population - on earth who live on less than three dollars a day. This glaring inequality is a concern not only for ethical reasons, but also because of the implied economic and security risks associated with such an imbalance. Indeed, the future of capitalism must continue to fuel innovation and productivity while also ensuring opportunity for those at the bottom of the economic pyramid.

While the need to address global inequality becomes clearer, philanthropy is also rapidly changing. Foundations like Gates, Google.org; Skoll, Rockefeller and Cisco increasingly are exploring not only how to interact more effectively with markets, but also ways to harness private sector initiative and resources to solve tough, public problems. Moreover, foundations are not alone in this exploration: corporations and individuals are also considering how best to think about their philanthropy as a means of leveraging real change by working across the private, public and citizen sectors, and promoting market-oriented solutions to solve social problems.

Acumen Fund, a nonprofit venture capital fund for the poor established in 2001, reflects the growing interest in using markets to solve tough problems of poverty. The organization received seed financing from Rockefeller Foundation, Cisco Foundation and three Silicon Valley individuals, including Cate Muther, the former senior marketing executive at Cisco and founder of the Three Guineas Fund and Stuart Davidson, a managing partner for Labrador Ventures – representing from the start a collaboration among a traditional foundation, a high-tech corporate foundation and individuals. Today, the organization is supported by over 200 individuals, foundations and corporations from around the world who are looking for higher social returns (including the recycling and leveraging of capital) on their philanthropic funding.

Acumen Fund raises charitable funds and then turns around and invests equity and loans in both for-profit and non-profit enterprises that deliver affordable healthcare, water, housing and energy to the poor. Acumen Fund is active in Pakistan, India, Kenya, Tanzania and South Africa and manages \$20 million in investments. It aims to be repaid its capital plus modest interest; and any returns to Acumen Fund are then reinvested into other enterprises working to solve problems in these key areas.

With this combination of goals, Acumen Fund sits at the center of the “blended value” discussion. It is a non-profit seeking charitable donations that it invests in private enterprises from which it expects a reasonable but often below-market financial return on the capital invested. It partners with corporations, foundations, individuals and government. In addition to providing capital, Acumen Fund supports investees with talent (management assistance, strategic planning and providing Acumen Fund fellows for on-ground support) and knowledge (bringing best practices and lessons to bear on specific business models, metrics, etc). It measures success both by its social impact on target markets as well as its own ability to be repaid on obligations outstanding (thus far, all investees are current on debt; and all equity is held at book value). The financial returns that Acumen Fund measures are also meant to be indicators of the potential for these enterprises to attract private capital, which is ultimately much more plentiful than aid or philanthropic funding and perhaps better suited to addressing the needs of the majority of the global population.

The organization builds its pipeline primarily through creating and nurturing networks, which are strengthened by its on-ground presence in Hyderabad, India, Karachi, Pakistan and Nairobi, Kenya. Acumen Fund invests in enterprises with strong leaders that also promise long-term financial sustainability (revenues covering costs) and scale (the aspiration to reach a million

customers over time). Given its track record and need to raise additional capital to meet pipeline opportunities, Acumen Fund is currently exploring a “high-risk-low-return fund” for its longstanding partners in which investors would actually be repaid principal and modest interest (approximately 3%) after 8-10 years provided additional grants are injected to cover the costs of providing essential management assistance.

Since inception, Acumen Fund’s investment activities have resulted in significant growth among most of its twenty-one investee organizations. These enterprises have transferred needed technologies effectively, created more than 16,000 jobs, and delivered basic services to millions of individuals who previously had limited or no access to markets. An approach that recognizes the need for patient capital and the critical role for management assistance is key to this early track record.

This article will look at several case studies that provide examples of how socially oriented enterprises are using market-mechanisms and innovative financing instruments to deliver affordable, basic goods and services to half the world who have been excluded from the opportunities of globalization. These include:

- **Drishtee.com: Low-cost technology, credit and a powerful distribution network:** Drishtee is establishing information centers for the rural poor across India, with a growing network of telekiosk franchises that are part of a sustainable network for distributing goods and services to rural areas. Drishtee is providing loans and training to women who have no access to bank credit to support their ability to become telekiosk franchisees.
- **WaterHealth International: Low-cost rural business model for delivering clean water sustainably:** WaterHealth International is building water treatment systems in rural communities and slums in India and the Philippines that provide safe affordable drinking water to communities on a financially sustainable basis. They have developed a credit facility with Acumen Fund and ICICI Bank to finance systems so that more communities can access these systems and cover the capital cost over time.
- **1298 “Service for All”:** Innovative pricing and a well-managed, ethical business model: 1298 is rolling out a network of ambulance services to fill the vacuum for emergency medical services that currently exists in the cities of India, beginning in Mumbai. An innovative pricing structure will allow free or subsidized rates for the poor, providing an opportunity to extend quality healthcare to a significant portion of urban population in India who live in poverty.
- **IDE-India: Product design and credit to make agricultural inputs accessible and affordable:** IDEI’s drip irrigation technology is designed – and priced – to meet the needs of poor farmers, and can double or triple a farmer’s income in a single crop season. To help increase affordability, the company partnered with ICICI Bank to extend credit as part of its retail strategy, allowing IDEI to increase outreach, the bank to develop its customer base, dealers to significantly increase sales, and farmers to access credit matched to their needs – and to cash flow from their crops.

Over the past five years, Acumen Fund has worked with models for building businesses that serve the poor, which share common themes around product design, pricing structures, marketing and, especially distribution. All of these businesses focus on designing solutions from the perspectives of the poor as *consumers* and not as passive recipients of charity. This is their fundamental difference with more traditional organizations focused on delivering basic services and it is fundamental to success, regardless of whether nonprofits, private sector corporations or governments are focused on addressing market failures regarding the poor with innovative

solutions for change. Following are more detailed discussions of the above four in hopes of provoking discussion and new models for change.

Drishtee.com: Low-cost technology, credit and the creation of a powerful distribution network for the rural poor

Satyan Mishra, founded Drishtee.com in Delhi, India in 2000 to build information centers for the rural poor across India. He believed that a lack of access to information would perpetually hinder the rural poor from taking advantage of the opportunities of globalization. His business model depends on finding rural entrepreneurs who will invest in a small kiosk consisting of a computer, a phone and a camera. Drishtee.com not only trains the franchisees but creates a supply chain to deliver not only information products like technology education, matrimonial services, e-governance and the like, but also, increasingly, physical product like low-cost eye glasses, seeds and fertilizers.

Today, Drishtee.com has a rural network of more than 1,500 kiosks in India employing nearly 3,000 individuals. The company is the fastest growing technology enterprise in India achieving a revenue growth of 1,187 percent over the last three years. By identifying the right local franchisees and providing viable systems with affordable products, Drishtee.com is creating a powerful, sustainable network through which unlimited goods and services can be distributed to underserved – and too often, invisible - rural populations.

Acumen Fund approved \$600,000 in debt and \$1,000,000 in equity to Drishtee in 2006 of which the full equity portion has been disbursed. Bank debt initially was not available to the company due primarily to the company's start-up nature and lack of collateral. Acumen's financing was structured first as equity to give Drishtee.com the maximum flexibility to experiment in the early years and build a system that could scale and last. The debt portion is partially a guarantee facility to leverage financing so that women entrepreneurs might be more easily integrated into the system.

Acumen Fund worked with Nike Foundation who provided a \$250,000 grant to this end to help solve the problem of too few women entrepreneurs. The initial capital will enable Drishtee.com to prove the "bankability of its women entrepreneurs so that ultimately, much of the lending to franchisees will come directly by local banks as part of the building of a new capital markets structure needed by the world.

This example is key to underscoring the various kinds of capital needed to help scale important entrepreneurial efforts to reach the poor. Acumen Fund used its philanthropic capital to provide initial equity and help give Satyan stability so that he could bring additional, more traditional investors into the company, including an Indian venture fund, funded by institutional investors such as IFC and KfW, with which they are now in discussions. Nike offered a grant to use to leverage an individual philanthropist's "social investment". Over time, the banks ideally will lend their own capital with a decreasing need for a guarantee structure as women prove themselves as bankable. Ultimately, it is this collaboration among different players with diverse appetites for risk and return that allow for a workable capital structure for this highly innovative enterprise.

As Drishtee.com has become more complex, its need for management talent has grown. Drishtee.com hired a new CEO to oversee the company's day-to-day operations; and Acumen Fund provided a full-time fellow with a degree in engineering and strong background in technology and operations to support new initiatives. Acumen Fund's India Director sits on the board of the company as well. Importantly, the learning has been mutual. Satyan Mishra is a highly innovative entrepreneur with a vision to bring sustainable change to the part of India that has been left out of the opportunities of globalization. He thus is willing to share both successes and failures in a real partnership so that the different parties involved can become smarter and more capable at building and supporting business models that reach the poor. It is this continual

dialog that is also essential to affirm when identifying the kinds of entrepreneurs with which Acumen Fund seeks to work – entrepreneurs who possess both the will to reach the very poor with critical services and the skill to do so effectively.

Drishtee.com builds management capacity and leadership, income for its kiosk operators and staff, and delivers critical goods and services to remote areas that never see affordable goods and services like health insurance, eyeglasses, and e-governance. What excites rural villagers is that the prices are low and don't even take into account the time saved from the fact that people don't have to travel, for the first time in their lives, to purchase what they need. What excites Drishtee is the building of a model that will hopefully reach over 10,000 villages in the next three years. What excites Acumen Fund is the development of a business model that demonstrates the power of creating a sustainable distribution system started for knowledge that has expanded to delivering physical products and services that significantly enhance lives as well.

WaterHealth International: Low-cost rural business model for delivering clean water sustainably

Access and quality of water are two of the world's most pressing issues. One in five people on earth have never had a glass of clean water. Too often debates around water are polarized between those who assert that water is a human right and should be made free to all people and those who believe it should be privatized. This is the wrong debate, and one that ends in politicians promising free water that never arrives on one hand; and urban water sellers pricing water in slums in Delhi and Mumbai at 30-40 times what their middle class counterparts pay.

Tralance Addy, the entrepreneur who founded Water Health International, focused on a private sector solution that would start with the assumption that affordable safe water was better than free contaminated water. Water Health International is a for-profit company headquartered in Los Angeles with subsidiaries in the Philippines and India. Its business model brings comprehensive water treatment facilities to rural communities with a 20% down payment covered by the local village government (often through a philanthropist or government funding). The rest of the funding comes from a low-cost loan that is repaid from user fees. The company offers water at minimal cost – about \$0.02 cents for 15 liters.

Acumen Fund invested \$600,000 in equity into WHI in 2004 alongside the International Finance Corporation. In addition to capital, Acumen Fund also supported the company with talent and knowledge. Acumen placed a Fellow with a background in architecture and consulting who worked with WHI on a new design for their water filtration plants that would streamline aspects of the construction process. Acumen Fund also held a board seat in this company. In 2006, the company raised an additional \$12 million through a Series C round and it now operates in fifty villages, serving over 100,000 customers and providing significant insights into how to deliver affordable, safe water in ways that are sustainable and can ultimately reach tens if not hundreds of millions.

WHI is an example of a private-public partnership that uses a private sector approach to solve tough problems of poverty. The for-profit company partners with Naandi, a local non-governmental organization (NGO) that provides outreach and support to the villages in which WHI works. Acumen Fund and WHI negotiated a loan guarantee with India's second largest commercial bank, ICICI, which provides a line of credit to WHI based on that guarantee. The IFC and Gates Foundation have also brought capital and expertise to bear on the company's success.

The outcomes associated with WHI should be viewed on several levels. In terms of lives changed directly, 100,000 individuals now have access to safe drinking water. Second, the value of Acumen Fund's original investment remains strong and WHI has demonstrated an ability to attract additional capital to fuel its growth. From a financial and social returns perspective, then, this is a meaningful and impactful investment for the future of clean water delivery.

At the same time, Acumen Fund recognizes that WHI has a long way to go from 100,000 customers to the 480 million Indians in need of clean water. In order to scale this approach, a better understanding is needed of the long term social and economic impacts of WHI's water treatment systems. Though Acumen Fund has not typically had the financial resources to measure the primary and secondary health impact of delivering clean water to the poor, the Gates Foundation is supporting us to conduct in-depth research on the social and health impacts that are arising from WHI's involvement at the local community level. Again, different types of capital are required to effect real change through market-oriented approaches.

With Gates' support, researchers are also exploring demand for water as well as gender issues associated with the water delivery. Since establishing the water kiosks, men and not women – the traditional water carriers – are the ones who purchase the water. In villages where WHI operates, local men also have enabled delivery services to start – and they are willing to pay as much to have the water delivered as they are for the water itself. There is clearly much to learn. The WHI example provides important insights into at least one business model that can achieve sustainability while serving some of the world's poorest people by starting with their needs, bringing local talent to bear on organizational and managerial issues, and pricing and distributing correctly given the local context.

1298: “Service for All”: Innovative Pricing Structures and a well-managed, ethical business model

Bombay is a city of 18 million people, a crowded and unruly maze of streets with few ambulances that are working and fitted to properly serve emergency needs. Emergency medical services are in the early stages of development in India, and ambulance service is extremely fragmented, informal and highly unorganized. Shaffi Mather, Ravi Krishna, Manish Sacheti, and Naresh Jain, four well-heeled businessmen working in top Indian corporations, decided there had to be a better way to provide services than to rely simply on charities and government, both of which provided well-intentioned but ineffective services in an industry that was growing increasingly corrupt.

In 2002, Shaffi and his partners established 1298 with a mission of becoming India's first world class ambulance company with an ethos of “service for all” and a focus on the highest level of professionalism. The company would focus on profitability but it would *not* maximize profits as their paramount objective. Instead, it would measure its success based on the number of people served, the quality of services and their ability to turn a profit as well. The latter goal was critical to a plan to grow the company to reach all corners of the country, and eventually, other countries as well.

The business model is constructed according to a sliding scale pricing model based on the level of hospital to which one is taken. Those who go to free public hospitals for the poor don't pay. Those who are driven to the more expensive hospitals pay accordingly. In other words, there is a cross-subsidy pricing model inherent in the business itself.

No one is asked to pay up-front and there are no negotiations on price. The company covers its costs through a combination of the premium payments made by half their clients and by their lower capital costs for ambulances. As city residents learned of the greater effectiveness of this for-profit model, they began to donate new vehicles to 1298 rather than giving them to a standard charity. Finally, the company is operated efficiently with a constant push to lower costs while maintaining high quality service.

The straightforward ethos of “service for all” requires 1298 to balance vigilantly their social and financial aims. It also requires establishing a clear set of principles by which to operate, including not charging for services until someone has been taken to the hospital and by avoiding any hint of

corruption or kickback schemes so common to this industry across India (and many other countries as well). Given the importance of lowering all capital costs, where possible, to make free services available, 1298 is also using a mix of grants, equity and loans to capitalize their business. The company is creating a local nonprofit trust and is currently approaching the Indian diaspora for contributions to purchase additional ambulances. Understanding these hybrid models and the varied financial instruments that drive them is critical to accessing new channels of capital open to institutions involved in social change.

Operating as a for-profit concern and not as a public charity requires that 1298 know its customer and act accordingly. For one thing, though the poor are not charged a fee for services, the company has not seen an instance where the poor haven't paid. Typically, someone from the family will come to 1298 sometime after the patient has been delivered to a hospital and provide some kind of tip or thank you. The wealthy, however, tend to negotiate for reduced prices.

Second, 1298 originally thought they could staff each ambulance with a driver and a doctor only; however, doctors are accorded high status in India and are therefore expected to behave in a certain way. When people saw the doctors lifting patients, they assumed the doctors were of low quality. Until attitudes change, 1298 decided to employ an assistant for each ambulance, primarily to do the lifting of patients with the driver and to support the doctor in his or her needs.

Clearly, there is no better listening device than the market itself. By relying on market mechanisms and holding itself accountable to reliability and profitability, 1298 must understand who the customer is – even those who can't afford to pay. Customers provide feedback and 1298 listens. The government is also taking note. Recently, the government of Maharashtra adopted 1298 as the main call-in number for ambulances. From Acumen Fund's perspective, then, not only have thousands of lives been saved through the company's operations; also, 1298 is creating a blueprint for how better to build an efficient public-oriented company that can effectively serve the needs of all people regardless of ability to pay.

IDE India: *Product Design and Credit to make agricultural inputs accessible and affordable to the poor*

In India today, there are nearly a quarter *billion* farmers, most of whom live hardscrabble lives eeking out a dollar or two a day from small plots of land on which they live and depend. One of their biggest challenges is getting water to the crops they are desperately trying to grow. Historically, they've had few options. With water scarcity on the rise in India, the need for affordable water management tools has never been greater.

Amitabha Sadangi of IDE India is another extraordinary entrepreneur who focused on solving problems of poverty by using the marketplace. Amitabha created a nonprofit and then a company that would make agricultural technologies accessible to poor farmers at prices they could afford and in ways that would enable them to increase their income significantly over time. After more than two decades of working in development, he concluded that creating affordable technologies for farmers that would enhance their income and productivity was indeed one of the only truly sustainable ways of tackling tough problems of poverty in the agricultural areas where he worked.

One of the company's main products is drip irrigation, a system that enables farmers in water-poor areas to bring the scarce resource directly to the roots of crops and therefore enable plants to grow even in drought conditions. Drip irrigation, perfected in Israel, has typically been designed for commercial farms, but the overwhelming majority of Indian farmers cultivate less than 2 hectares; and so a different kind of product was needed.

At heart, Amitabha is a true designer and like all good designers, he started not with his own assumptions of what worked, but with the needs and aspirations of the farmers he wanted to serve. His design principles were clear: products must be as inexpensive as possible, pay a quick

return on investment and be infinitely expandable. In other words, in addition to being affordable, the farmer would need to see that the money invested in the drip system would lead to quick improvements in yields and profits. With his additional profits, he could then invest in another system to extend the amount of land irrigated. This way farmers could mitigate their own risks, use a small amount of capital and then grow their own businesses over time.

IDE India uses a flexible pipe rather than the rigid, more expensive plastic pipes used in the market. More recently, it expanded its overall product range so that farmers could start with a four dollar investment for a 20 sqm. plot, and move to larger systems typically costing USD 200 per acre, four times less than pre-existing products. Thanks to IDEI, poor farmers could thus gain access to a technology that increases water efficiency by 50% and increases yields by 30% or more.

Early growth for the organization came through direct sales with local farmers; however, Amitabha's ambitions were international in scope. With Acumen Fund's support, IDEI created a for-profit wholesale distribution company called Global Easy Water Products (GEWP). The nonprofit continued to focus on research as well as advocacy; and the company, on building a scalable business model that serves the very poor. In its first five years of operations, IDEI has sold over 150,000 systems in 6 Indian states, impacting the lives of 750,000 people by improving their income levels and their nutrition.

Despite the relatively low investment needed by a farmer to purchase and utilize a drip irrigation system, ability to pay continues to be a key constraint. IDEI, therefore, has explored microfinance options to enable farmers to access the cash needed to purchase essential irrigation equipment. In 2006, GEWP established a partnership with ICICI, India's second largest bank, to extend credit to GEWP dealers that could offer to customers.

In this case, GEWP *dealers*, of which there are now close to 300, could become bankers – as ICICI franchisees. ICICI would train them in lending principles and practices – not unlike a car dealer would serve the same function with local financing institutions. The GEWP dealer would provide a deposit to ICICI to receive a line of credit for ten times that amount. The dealer would then provide the equipment to the farmer and take responsibility for ensuring repayment. The rate would be lower than rates available from private lenders.

This system design offers a great value to all partners focused on using a private delivery mechanism to scale a public solution. GEWP increases outreach by improving the affordability of its products and reducing its working capital needs. ICICI develops its customer base in rural areas with limited risks - it has a target of delivering 20% of its loans to rural customers. Dealers significantly increase their sales while also earning a percentage of the loan interest. They also increase their credibility and status in their local community. Most importantly, farmers gain access to credit with a simple procedure and very rapid disbursement – unmatched by any other market player. The credit is matched to their needs – and to the cashflow from their crops – and they are able to make the decision to invest in an affordable technology that enables them to see three or four times returns on their investments in a single harvest.

In January 2007, ICICI and GEWP initiated five pilots to validate this design and prepare a large scale roll-out. The company's operations are growing and GEWP is raising capital to support its growth. Through innovative products, organizational designs, and financing mechanisms, they are making it possible for affordable drip irrigation technologies to spread quickly among small farmers.

In addition to working with IDE India in its home country, Acumen Fund has also been working with Unilever Pakistan and the Thar Regional Development Program to transfer the drip irrigation successfully to the Sindh desert which is one of the most barren places in Pakistan. Dr. Sono, a social entrepreneur by all measures, founded and has led this organization since 1998 and has a strong knowledge of the needs of local farmers. With support from members of the Acumen Fund

teams in India and Pakistan, he has worked closely with Amitabha and has hosted team members from IDE India to gain hands-on knowledge and drive the change process in Pakistan. There are currently more than 200 extremely poor farmers who are piloting IDE India's drip irrigation technology in Pakistan with hopes of scaling it to a national and international level.

Understanding the Big Picture: Different forms of capital for different private and public needs

While it is thrilling that more traditional forms of capital are seeking financial opportunities in markets serving the poor, there is also one major concern: there can be no cookie-cutter approach to bringing capital to solutions of poverty. It is too tempting to think that markets alone will eventually solve big problems – and too trite to believe that businesses who “do well by doing good” have all the answers. Indeed, what is needed is *more* nuance, not less. The demands of increasingly complex problems should drive institutions to use capital – and support it with grant-backed technical assistance and knowledge – in creative ways that are tailored to the problem at hand.

As is the case everywhere, healthy economies in the developing world benefit from both private *and* public goods. Private goods – where individuals themselves benefit from making an investment (for instance, drip irrigation) can be supported eventually by the market alone. On the other hand, public goods like clean water and preventive healthcare, will not be provided solely by the market, and yet, they are extremely valuable to society as a whole. In these cases, solutions may require a combination of high risk philanthropic capital at the onset to test new innovations (as in the case of WHI and water); and increasing levels of higher-return capital to enable the enterprise to scale effectively. Philanthropy or aid are also needed in many cases both to subsidize the overall cost of the village-servicing plants (a 20% deposit is required for WHI to install a plant; and this amount often comes from philanthropists or local government) and to bring the kind of management expertise that will enable the venture to succeed. In all cases, a combination of different kinds of capital along with talent and knowledge are critical to long-term success.

Conclusion

This is an astounding time in history. Not only are banks being more innovative about extending their services to low-income markets, but so are corporations and nonprofits and small businesses. The world is more connected and people across the globe have a better sense of the conditions in which others. We have an unprecedented opportunity to take the tools of capitalism and extend a sense of hope and possibility to billions of people who want to make their own decisions and solve their own problems. We can start with seeing poor people not as passive recipients of charity but as possible artists and entrepreneurs, teachers and doctors, community leaders and consumers, all with their own aspirations. We lose a mindboggling amount of productivity and innovation to poverty; and we can do something dramatic about that.

Part of the solution is to identify and support entrepreneurial efforts that use the tools of business to listen to what poor people want and to deliver affordable, useful goods and services to them. Part of the solution is to structure capital investments – especially loans, equity and near-equity – and invest in sustainable enterprises run by leaders with both the will to serve the very poor and the skill to grow viable, large-scale businesses. Part is to support talent and knowledge, to catalyze new thinking and to celebrate successes.

We have only one chance on earth and if the last six years have taught us anything, it is that we are not alone, that no person is an island and that we have every opportunity to end big problems of poverty. We have to give up our notions of poor people as passive, needy recipients of charity and give up our paternalistic frameworks for seeing and interacting with the developing world. We

must replace those notions with a focus on the poor as full human beings with the potential to move mountains, provided the link between effort and outcome – that has so often been severed among poor communities – is restored.

And we can do it. The field is witnessing an explosion of new ideas not only in social entrepreneurship but also in the financial sector and in the marketplace at large. There are no easy solutions – capital invested in businesses seeking to deliver basic goods and services to the poor will require long-term patient capital and a lot of management assistance and relationship building. That is where the role -- and flexibility – of philanthropy are so key. Nonetheless, there has been a sea change around the role of capital, of AID, of philanthropy and of the traditional markets; and this sea change has washed across the sectors, across international boundaries and across generations. There is great opportunity ahead provided we all get smarter about the most productive way of deploying capital for the poor; and the way we develop working business models that recognize both constraints and opportunities for enabling people to help themselves and make their own decisions.