**Societal Wealth Creation via Experimental Entrepreneurial Philanthropy**[1]

Ian C. MacMillan
Experimental Entrepreneurial Philanthropy Program
Snider Entrepreneurial Research Center
The Wharton School
University of Pennsylvania

Phone: 215 898 9472
Fax: 215 898 1299
e-mail: macmillan@wharton.upenn.edu

Governments and philanthropists in the United States and other rich nations spend billions of dollars each year supporting philanthropic causes that attend to the manifold social problems of the world. Some of their efforts – perhaps on the order of hundreds of millions of dollars each year – go toward supporting start-up firms and small entrepreneurial businesses, a strategy linked to the belief that the creation and growth of new enterprises fuels the growth of the economy, particularly through employment. To date, however, few people have considered the role that entrepreneurial activity can play beyond improving employment. Based on our research, we contend that such activity can directly confront social problems and create new societal wealth.

This paper reports on the launch, at the Snider Entrepreneurial Research Center (SERC), of a longitudinal research program of social interventions based on Experimental Entrepreneurial Philanthropy (EEP). EEP is the use of philanthropy to create experimental entrepreneurial firms that attack social problems. Specifically the program focuses on using entrepreneurial experiments to attack health problems in

[1] The concept of Experimental Entrepreneurial Philanthropy originated when the author received the FSF Prize and was thinking about how to best use this windfall. The deployment of funds to seed Societal Wealth Enterprises

Africa, but success of these pilot programs will be the seeds for expansion to other developing economies.

Before discussing the specific Societal Wealth Enterprises we researched, let us first begin with a review of how, other than job creation, entrepreneurship creates societal wealth.

**Productivity enhancement**: Many entrepreneurial efforts result in significant enhancement of productivity, often starting at the regional level and then extending to the national level. The creation of Sun Microsystems for instance, massively increased the productivity of engineers, scientists, project managers and researchers, first in the United States, then globally.

**National competitiveness:** At an aggregate level, the cumulative effects of entrepreneurial activity add to a nation's ability to compete with other nations.

**Quality of life:** Many entrepreneurs, particularly in the US, are seizing upon opportunities to create business ventures that focus on improving consumers' quality of life. This enhancement of quality of life manifests itself in several major forms:

- **Enhanced national health** in the form of better ways to treat, diagnose and prevent illness via products that promote improved wellness and life extension and vastly superior devices for the physically and mentally disadvantaged.
- **Improvements in quality of work life** created by the development of new products and equipment that increase worker safety as well as allow

---

emerged, and the funds were deployed to creating the Experimental Entrepreneurial Philanthropy program at the Wharton School.

employees more flexibility to work out of their homes or from remote locations.

- **Enhanced national education, training and learning** using technologies that dramatically improve the quality of the workforce, with concomitant gains in national productivity.
- **Enhanced efficiency of government services** in which entrepreneurial providers of information and telecommunication systems dramatically increase the quality and availability of services.
- **Personal wealth creation leading to philanthropy .** Entrepreneurial success often positively influences societies by creating philanthropists, whose huge infusions of philanthropic funds into areas like the arts (Guggenheim/Getty museums); medical research (Mayo clinic, Bill and Melinda Gates Foundation); and social welfare (Turner Foundation) provide critical resources that the public sector either cannot provide or cannot adequately support.

**Societal Wealth Creation through Experimental Entrepreneurial Philanthropy**

Coupling this last societal wealth benefit (philanthropy) with the other benefits of entrepreneurial activity creates an opportunity to deploy entrepreneurship research in a radically new way. We can deploy philanthropic seed funds to create entrepreneurial "experiments" to conceive of, plan for and create enterprises that are designed to profitably attack social problems. In doing so, Societal Wealth Enterprises can serve as an alternative to current ineffective and enormously wasteful public sector initiatives.

The basic thesis is that many social problems, if looked at through an entrepreneurial lens, create opportunity for someone to launch a business that generates profits by alleviating the social problem. In essence, it is a shift in activity from the public domain – governments and non-governmental organizations – to the private domain – businesses and private individuals. This sets in motion a virtuous cycle: the entrepreneur is incented to generate more profits and in so doing, the more profits made, the more the problem is alleviated.

Oftentimes this process is obstructed by two major obstacles: low profitability and the resultant lack of seed funding. This is where the entrepreneurial philanthropist comes in. If philanthropists endow the seed funding for Societal Wealth Enterprises, in many economies, particularly developing ones, it should be possible to attract local entrepreneurs who are quite happy to live with the smaller profit streams eschewed by their counterparts in more wealthy economies. A powerful appeal to the philanthropists is that their contributions have a chance to remove problems rather than to simply alleviate them, and the associated recurrent “annual tin cup” dependencies

Ideally, the injection of seed funds into pilot entrepreneurial projects will set in motion the first entrepreneurial business, which, if successful, plants the seed for follow-on entrepreneurial initiatives.

Like all entrepreneurial efforts, however, success is not guaranteed. In fact the cynic might argue that if there were an obvious entrepreneurial solution, an entrepreneur would already have found it! This is where the third component of Experimental Entrepreneurial Philanthropy kicks in. Our position is that we may be able to mobilize the talents of universities and business to undertake a new mode of

research via entrepreneurial experimentation – to conceive of, design and plan Societal Wealth Enterprises and then recruit local entrepreneurs to launch and manage them. The profits they can make, though small by developed economy standards, can be perfectly adequate by the local entrepreneur's standards.

Experimental Entrepreneurial Philanthropy is already being undertaken by the Snider Entrepreneurial Research Center (SERC) at the University of Pennsylvania's Wharton School of Business. Below we describe four major programs at the Experimental Entrepreneurial Philanthropy Program at Wharton. The Program has conceived of possible social entrepreneurial solutions, developed business plans and then seeded the formation of a pilot business to implement the solution as a social experiment, learning and redirecting the pilot business that emerges as reality unfolds the real opportunity.

**Programs in Emerging Economies**

**1. HIV / AIDS Program**

*Goal: Increasing the life span and employment vitality of AIDS-infected workers.* When large percentages of populations are infected by AIDS, this hollows out and debilitates the work force, and when large numbers of skilled workers are debilitated it becomes economically important for employers to be able to put in place treatment programs which identify the treatment regimens for diversely affected worker groups.

Botswana

Botswana is a country of some 600,370 square kilometers with a population of approximately 1,561,973 (2004 estimates). Four decades of uninterrupted civilian leadership, progressive social policies, and significant capital investment have created

one of the most dynamic economies in Africa. However, the nation's impressive economic gains are threatened by one of the world's highest known rates of HIV/AIDS infection. There are an estimated 350,000 people living with the disease, and already 69,000 AIDS orphans; a number that is rapidly climbing. Approximately 5,500 babies will be infected with the virus this year alone. Life expectancy at birth is currently 30.76 years (2004 estimates). Without AIDS it would be an estimated 72.4 years.

*Facing the Epidemic*

Botswana is at the forefront of the fight against HIV/AIDS, with one of Africa's most progressive and comprehensive programs for dealing with the disease. In response to the overwhelming number of infections and the critical shortage of physicians, the Ministry of Health has recently made a decision to develop alternative staffing capabilities in the provision of managing anti-retroviral therapy and monitoring patients. To this end, the Ministry of Health has authorized SERC and the Medical School of the University of Pennsylvania to conduct trials of an HIV-specific patient record monitoring and reporting system with built in decision support tools that in the long run will allow nurses, assisted by the software/database/data mining functionality being introduced by our entrepreneurial software firm, to deliver diagnostic and prescriptive services to vastly more HIV patients. If successful this enterprise will be expanded to the rest of Africa and then the rest of the developing world.

In February 2005 the software was experimentally introduced by SERC into the nation's largest private sector anti-retroviral center, based in Gaberone. As of April 26, 2005 the following progress had been made:

- 3,042 patients records have been entered into the system

- Full electronic laboratory integration is near completion (a first for the country)
- The clinic IT network is robust and stable
- The clinic server is accessible from the US and Europe via broadband radio satellite link
- Two physicians are already entering complete new patient files while using the system
- Reception staff and nurses are entering relevant data as patients flow through the clinic
- The chief physician at the hospital is beginning to identify patients for treatment by two nurses identified as the first non-physician personnel to use the system

The Medical School of the University of Pennsylvania, the chief physician and her staff at Princess Marina Hospital (the largest ARV distribution point in the world) will support the trials with a view to a full implementation at Princess Marina and later into the national program.

It is our intention to assist the entrepreneurial software provider to implement the software at two smaller government sites in Gaberone as soon as additional funds permit.

South Africa

Accounting for 45% of the sub-Saharan GDP[i], South Africa serves as the financial epicenter of Sub-Saharan Africa. Therefore, when the infection rate in South Africa surpassed 11% and the country's life expectancy rate dropped by35 years, HIV went from a mere problem to a civic, social and economic crisis. Worse still, the government, police, military, nursing and teaching communities are among the groups

with the highest rate of HIV prevalence. Given these warning signs, the necessity for collective action has never been more pressing. The loss of human life on such a scale is not only a human tragedy, but also a prospective catalyst for the downward, irreversible spiral of the South African economy into an unsustainable financial state.

Due to restricted resources and the South African government's somewhat controversial views on HIV/AIDS, over the course of the last five years the costs of treatment have largely fallen on South Africa's private sector. Although significant strides in interventions have been made by large multinationals, small and medium sized enterprises (SMEs), which employ approximately 55% of South African labor, have few, if any, programs in place. This is despite the fact that a quarter of all medium-sized enterprises have reported a tangible erosion of profits due to HIV/AIDS infections.[ii] Indeed, studies have calculated the direct costs of an HIV infected employee to a company as high as 60% of the employee's salary.[iii]A number of impediments have limited SMEs' ability to provide HIV/AIDS services to their employees. Boston University's Center for International Health and Development explored why, by interviewing 25 South African SMEs that do not provide HIV/AIDS services. The reasons most commonly listed for not providing an HIV/AIDS intervention program are: a) a lack of information and access to services, b) a low willingness-to-pay, c) a reaction to the stigma, d) a lack of pressure to act from stakeholders, e) unfit delivery models, and f) limited capacity.[iv] Our research validates these factors. Accordingly, the proposed intervention model developed at SERC plans to overcome these obstacles by enabling SMEs to participate in a network of subscribing firms sending their workers to a network of clinics, with an entrepreneurial database manger

acting as the informational hub between multiple firms and clinics. The software and data management systems are to be based on South Africa's most successful, already proven, clinical practices, but modified for SMEs. The necessary partners and test location have been secured.

**2. Livestock Feed Production**

*Goal: Increasing the quality and production of livestock in emerging economies.*

Application of advanced mathematical techniques like linear programming solutions to the optimal feed mix problem is currently inaccessible to small-scale producers of feedstock for animals bred for meat. A consulting service that uses a highly simplified stripped down version of more sophisticated programming, which also incorporates data about locally available feed components has been developed by SERC and launched in Zambia by a local entrepreneurial firm assisted by SERC.

The cost optimization software application was deployed in northern Zambia in November 2003. After a full year of use the beneficiary reported the following:

- Large competitors have been obliged to match the entrepreneur's across-the-board 20% selling price reduction in the region
- Consequentially feeds are now available to a large number of small-scale producers
- The producer has doubled sales
- Net margins have increased by between 7 and 10 percent
- Animal yield and health has increased considerably
- Livestock throughput has accelerated, allowing poultry growers another full production cycle per annum (with the same facilities)

- Quality of the meat has improved, with more protein and less fat.

If current success is continued over the test period SERC will be able to roll this out to other emerging economies.

**3. Peanut Processing Plant**

*Goal: Introducing low-cost, mechanical peanut distribution, collection, and processing plants.*

Peanuts provide about 40% of all the proteins, carbohydrates and fats needed for human nutrition. Supplemented with milk this product can virtually replace meat.

The difficulty is that processing of peanuts by hand is enormously time-consuming, and modern processing plants have thus far required very large capital outlays.

Cheaper, robust processing plants are needed in order to encourage the farming of peanuts in more remote areas of Sub-Saharan Africa, Latin America, and Asia where it feasibly could be done, but is not currently considered feasible for the capital outlay reasons mentioned above.

Such plants would become a viable source of income in rural agricultural communities. Research shows that women in rural agricultural communities can earn higher wages working in such plants than manually cleaning produce, the other main source of work for women in these areas. Evidence suggests that women use this increase in income to school their children, and sometimes themselves. In addition, peanuts are an important source of food in poorer communities.

The Experimental Entrepreneurial Philanthropy team at SERC undertook this research project looking at the peanut industry in South Africa, which has grown at an average Compound Annual Growth Rate of 4% - 6% per annum for the past 10 years to the current level of about $390 million, with the current tonnage of imported and exported material totaling approximately 130,000 tons. SERC then began researching processing plant of different types and found an established entrepreneurial firm that has developed a robust, low-cost model for the purchasing and processing of peanuts - Kalinda Trading Company. Kalinda has developed customized processing machinery that enables the business to compete with substantially lower capital costs than other commercially available, often imported, machinery.

SERC believes that the Kalinda model can be successfully expanded to regions in Sub-Saharan Africa, Latin America and Asia. It is estimated that each plant will initially employ 30 to 50 employees, and once fully operational, 80 full-time staff.

The baseline roll-out model entails three phases:

**Phase 1:** Establish local depots for resale of Kalinda manufactured products.

**Phase 2:** Establish limited selection and manufacturing facilities to sort, clean and pack bulk material and to manufacture bulk volumes of peanut butter for the local/regional markets.

**Phase 3:** Coordinate with local farmers to promote the growing of peanuts for use in the newly established manufacturing plant.

SERC has recruited local entrepreneurs to launch and manage the franchise model. These local entrepreneurs are currently in the process of finalizing the business plan.

**Expansion to other developing economies**

The projects undertaken by the Experimental Entrepreneurial Philanthropy Program at SERC have focused so far on Africa, primarily because of our staff's strong regional knowledge and because problems of AIDS and starvation are worst in that part of the world. Our vision, however, is to take these successes to every part of the world with similar problems – Asia, Latin America, the Caribbean – and wherever else there are populations at risk.

**Experimental Entrepreneurial Philanthropy in Developed Economies**

Lest it be construed that Experimental Entrepreneurial Philanthropy is confined to developing economies only, SERC is monitoring opportunities in advanced economies as well.

**1. IT and Electronic Equipment Productivity**

*Goal: Improving electronic equipment efficiency and reducing costs.*

In most developed economies IT and other electronic equipment costs are skyrocketing. An entrepreneurial experiment is underway with a start up that will allow remote diagnosis and servicing of high-cost capital equipment and operating systems, like mainframes, centralized servers or NMR/CAT Scanning machines. This could result in an overall **national** improvement in the productivity of as much as 2% for these systems, and at much lower costs. In this case the SERC role was confined to the provision of advice, guidance and network connections to the entrepreneur. Once the

key applications have been prototyped it is SERC's intention to assist in the rapid globalization of the business.

**2. Environmental Protection**

***Goal:*** *Finding alternatives to landfills for disposing of plastic refuse.*

SERC has been studying an enterprise that physically combines polystyrene (plastic containers) with polyethylene (plastic bags) in a unique way, creating a very strong, rigid and corrosion less plastic "alloy" material that can be used to build permanent structures. This material can also be reground and used over and over once its original use has been exhausted. The company recently profitably built a small bridge using 200,000 plastic containers – and there are an estimated 40,000 bridges in the US alone that are in need of replacement.

**Summary**

How do we help the world's poor? Handouts seem to have failed. In fact, the 2005 G8 Summit is focused on debt relief, a sign that financial aid has not been as successful as originally hoped. Perhaps the idea behind the proverb -- give a man a fish and he soon goes hungry, teach him to fish and he eats forever -- represents a viable option in today's world. We believe that business, particularly entrepreneurial endeavors, have a clear role in alleviating societal woes, yet the costs involved are often too high for the average entrepreneur to undertake.

In response to this Snider Entrepreneurial Research Center is doing experimental research along the lines of "Experimental Entrepreneurial Philanthropy,"

where philanthropists fund research – conducted by universities like Penn – into companies that in making profits also alleviate social ills.

Once the university researchers have identified potential business opportunities -- like the peanut processing plant -- that can be applied in other countries, the philanthropists will once again help out by funding pilot programs that will eventually pave the way for larger-scale roll-outs. With these foundations in place, local entrepreneurs can pick up the ball and run. Ideally these projects will spark other businesses, starting a cycle that will do more than simply create jobs, but rather help increase the social wealth of a society.

---

[i] "Africa's Engine", The Economist, A survey of sub-Saharan Africa, January 17th, 2004

ii South African Business Coalition on HIV/AIDS: The Impact of HIV/AIDS on Selected Business Sectors in South Africa 2004 (BER – Bureau for Economic Research)

iii Rosen, S. et al., "Care and Treatment to Extend the Working Lives of HIV-Positive Employees: Calculating the Benefits to Business", South African Journal of Science (July 2000) --- article can be found at: http://www.internationalhealth.org/aids_economics/Papers/Business%20benefits%20of%20care%20and%20treatment%20(SAJS).pdf

iv Connelly, Patrick. "Can Small and Medium Sized Enterprises Provide HIV/AIDS Services to Their Employees? Constraints and Opportunities." Center for International Health and Development, Boston University School of Public Health, Presentation for the African-Asian Society, April 21st, 2004