Human Capital Development in Villages in Least Developed Countries

An Open Source model for Direct Citizen to Citizen Engagement

Economic development in LDCs [Least Developed Countries] is very hard and, historically, very prone to failure. It rarely fits neatly into corporate time frames, earnings requirements or agendas. To date, nobody has figured out how to do it on a consistently successful basis: Not Corporate Social Responsibility [CSR] programs, not the World Bank, not USAID, not the UN, not NGOs -- or any combination of the above. That is what makes the problem so very interesting and so worthy of all of our efforts to honestly learn from experience and keep on trying.

Further, those programs which have tried to use profits[1] to end poverty have been, in fact, hindered by their profit requirements. The imperative to deliver 15% compounded profit growth rates becomes a harsh limiting factor on CSR programs. It is possibly the case that profits can not be appropriately extracted from a village until it has benefited from sufficient economic development to be able to develop and maintain stores of capital -- ie to move beyond an early stage cash flow based economy.

One thing that is clearly missing from all of our efforts to date is direct and long term citizen to citizen engagement in the development process. A key new development is Information, Communications Technology centers [ICTs] with proper connectivity for real time video conversations between donors on the one hand and micro-credit organizations in LDC villages on the other. With these new video enabled ICTs, we may now have the necessary preconditions to give a C2C project a trial effort.

The secret of the C2C concept outlined below is that it is an end-to-end solution that leverages the power of the citizens at the edges. As we know, the end-to-end principal[2] is one of the key innovations that gives the internet its power. A significant feature of this architecture is that relocates most

---

[1] See “Long Tail vs Bottom of the Pyramid” <http://longtail.typepad.com/the_long_tail/2005/03/long_tail_vs_bo.html>

[2] See <http://www.reed.com/Papers/EndtoEnd.html>

functions from the center to the edges of the network. In the process, the center becomes, by design, ever more empty. Thus we have to rethink how responsibilities and functions both for development and for security change when they are relocates to the edge.

Our failures in economic development and security to date have relied, in general, on the centralized architectural designs associate with the 20th century's dominant and centralized hub and spoke paradigm.

Notably, the centralized hub and spoke paradigm has been unable in over 100 years to deliver electricity to about a third of the citizens of this world. There are, of course, many other examples of delivery failures at the further reaches of the spokes. But in a global economy driven by connections and edge based networks, electricity is a key metric. Without electricity, there can be no modern connection and thus little or no participation in the modern connected economy.

To reach the goals of the Millennium Project to End World Poverty[3] by 2015, we must also find alternatives to traditional patterns of ad hoc, episodic and crisis driven involvement. Clearly, more of the same old same old will get us exactly that: more of the same old same. Success for the effort to end world poverty will require the risk of trying new things. It just may be that a key new approach will be to establish sustainable engagements in long term relationships between citizen partners in the more developed world with citizen partners in self-help groups in least developed villages.

In the West, we have historically not gone often enough beyond short term and episodic engagement, especially at the citizen to citizen level. Imagine the richer view of the world we would all have if we were all engaged in a virtuous feedback cycle with our fellow citizens who happen to live in conditions very unlike our own? Crossing the chasms separating us would stimulate learning about ourselves and each other in the most marvelous and rewarding ways.

---

[3] See <http://www.unmillenniumproject.org/>

With hard work, and some good luck, it should now be possible to pilot this Citizen to Citizen [C2C] concept in one or two places in 2005. If there is sufficient success, the pilots could be extended to 3 or 4 more LDC villages. Thus this approach can be slowly grown in an organic manner to the scale it will have to attain if it is to make a significant contribution to ending world poverty.

One of the prevailing truths is that villagers living on a dollar or two per day in LDCs have daily cash flows, but do not have capital[4]. Thus it has been found that it works in these locations to sell products from soft drinks to pills, to soaps, to many other items useful for daily life, in single use units. In the more fortunate economies, where citizens have both capital in the bank as well as cash flows, sales are said to be in inventory quantities, especially at the big box stores such as WalMart or CostCo. You simply can not buy a bubble pack with two aspirins at a CostCo.

It is time now to go beyond the truth of single unit sales in LDC villages. If these villagers have cash flow, but not capital, let's provide them with regular contributions of seed capital to use for village determined micro-finance investments to drive local development on many fronts.

Citizen to Citizen: The Power of Tiny Money

Imagine starting a 360 Full Circle club with eleven of your peers. Each of you will agree to donate $1 per day [$30/mo = $360/yr] -- less than the cost of a cup of coffee per day. And you will agree to meet together, face to face, at least once per month, as you would in a book club or eating club. Working together, 12 citizens in a more connected economy will create a $360 pool of capital each and every month.

Now imagine a similar circle organized as a women's self help group in a village in an LDC. Or perhaps, in the beginning, we will imagine a group drawn from self help groups in several local villages. In 2003, this is the

[4] See See <http://www.bus.umich.edu/BottomOfThePyramid/xMAP2003.htm>

approach Hewlett Packard took in its Village Photographer program in Kuppam, India.[5]

Further, imagine that working with governments, corporations and NGOs we equip both the citizens in the 360 Full Circle Club and the citizens in the village with media rich ICTs[6]. In addition, we train both groups to be full fledged micro finance / micro-credit practitioners. Further, we introduce both groups to the Permaculture[7] approach to village agriculture.

The ICT with rich communications capabilities, including voice over IP, email, blog, web, and podcasting solutions, is a critical component of the C2C concept. By using full duplex video[8] as the primary conversational tool, we will be able to avoid the literacy barriers created when some of the partners may not know how to use a keyboard and/or may not be able to read or write. Video communications allows the partners in the villages and the partners in the Full Circle Clubs to develop the quality of relationship required to sustain the project over an extended period via very regular and spontaneous conversations. It is essential that the bonds between the women be strong enough to be able to endure difficulties and disappointments that will naturally occur from time to time.

The media rich ICT will also help to create an edge-based system with a full feedback loop open to all. Maximizing the face-to-face communications

---

[5] For the record, I am the consultant who, in 2002, working with Ed Bender of Sundance Solar in NH, developed the solar powered photography kit in a backpack for Hewlett Packard. HP used 5 of these in the first phase of their Village Photographer project in India. I was also charged with running the first training program to teach the first group of village women to become village photographers. The first training program, in the Spring of 2003, lasted one week and meet all of its goals. HP also gave a pack to Kofi Annan.

[6] In the LDC villages, the media rich ICTs will generally, out of necessity, be solar powered.

[7] The word "permaculture" was coined and popularized in the mid 70's by David Holmgren, a young Australian ecologist, and his associate, Bill Mollison. It is a contraction of "permanent agriculture" or "permanent culture." Permaculture is about designing ecological human habitats and food production systems. It is a land use and community building movement which strives for the harmonious integration of human dwellings, microclimate, annual and perennial plants, animals, soils, and water into stable, productive communities. The focus is not on these elements themselves, but rather on the relationships created among them by the way we place them in the landscape. This synergy is further enhanced by mimicking patterns found in nature. <http://www.permacultureactivist.net/intro/PcIntro.htm>

[8] For example, Apple Mac iChat or the new eyeBeam technology from Xten <http://www.xten.com/index.php?menu=products&smenu=eyebeam>,

will also help to engage, leverage and sustain the native innovation capacities of all the partners. The hoped for result should be an increase in both social capital and economic activity.

C2C Microcredit Innovation

Now we can see what the application of each month's $360 of donated capital will be. It will be transfered directly to the new microcredit unit in the women's self help group in the partner village -- a micro-finance bank in every village. The monthly gift of $360 dollars of seed capital goes into the Village Microcredit Bank for as long as the bank is operating prudently and there are the agreed upon tangible results on the ground. Both groups of women will agree to prudent checks and balances with measurable, results-based, outcomes.

Previous and well documented experiences with rural micro finance programs[9] suggest that the Village Microcredit Banks in the partner villages will most likely be run by women who are also members of the local self improvement society. This suggests that the 360 members be limited to women -- at least at first. With no men present, the women are more likely to reveal the real issues and challenges that need to be addressed for strategic advantage. As we have learned, if you really want to discover what is going on in a rural village, get women to interview women -- with no men around.

The goal of the C2C program, as stated above, is to provide seed capital for loans that will leverage the human capital on the ground in the village. Where ever possible, money lenders, distant bankers or other non-resident 3rd parties should be disinter-mediated. The design is for the gift capital to only be invested in projects agreed to by the partnership. Hopefully they will agree upon appropriate technologies -- with the highest possible local inputs of raw materials, labor, and other forms of value.

---

[9] See <http://www.infochangeindia.org/Micro-creditItop.jsp?section_idv=22> and see also <www.yearofmicrocredit.org>

Permaculture[10]

The capital for micro-credit flowing into a village could be use very effectively to introduce/promote/expand "Permaculture". Since the vast majority of these LDC villages have agricultural economies, this may a good way to leverage what they already know and do. Of course the particular form of permaculture[11] would have to be fully localized for each village and culture.

Would this not also engage the men in the village and help avoid conflicts between the women getting outside help and the men being left out?

Sponsoring organizations, including governments, corporations and non-profits, will provide advisors and native language speakers who have training and deep experience with their own programs in economic development, Corporate Social Responsibility and Permaculture. These advisors will be able to help put together a range of "appropriate technology" solution kits for typical problems faced by rural villagers. Common permaculture issues are likely to include:

- Innovative crops
- minimizing expensive agricultural inputs
- sustainable environmental practices
- renewable energy
- lighting
- water resource issues such as purification, waste management &drip irrigation
- literacy in the broadest sense of the word
- ubiquitous communications <http://dl.media.mit.edu/viral/>
- education, training
- health care and health records
- micro industry & micro enterprise [village photographers etc.]
- bloging, podcasting, and video chat solutions [essential for the 360 concept based on partnership and feedback]

---

[10] See: <http://www.permacultureactivist.net/intro/PcIntro.htm> many of the ideas laid right out by the US Government on the topic of permaculture could be of interest and value in LDC villages as well.

[11] See also: Paul Stamets, <http://www.fungi.com/front/stamets/index.html> and <http://www.fungi.com/mycotech/permaculture.html>.

- village center infrastructure
- weather information and warning systems
- electronic marketing
- etc

Of course, the gift capital can also be used in part to make installment payments on the cost of the ICT and its related operational costs. The application of capital for this purpose has two advantages: 1] it gives the women a sense of the value of the ICT as well as a sense of ownership; 2] if the ICT is purchased by the women, some part of funds can be recycled to buy another ICT for another village. This turns the ICT, its solar power and its connectivity from a gift into a product, even if at a very marginal profit level. The point being to first move the village from a cash flow economy to a capital based economy before profits become a natural part of the equation.

Obviously, at some point the seed capital might also help to fund the acquisition of the enabling and infrastructure goods and services created by some sponsors. The real business opportunity for corporations in the more developed countries, however, is on top of the Open Source solutions approach a la IBM's approach to Linux: Profit on top of Free. The objective is an implementation strategy that allows the C2C concept to scale up very rapidly and benefit from the input of the maximum number of creative minds.

Leveraging Voluntary Donations from the Edges

If we assume 12 employees/donors/partners per small rural village, how many villages could citizens from the more developed economies help to jump start into new economic activity?

1,000,000 villages could be supported by just 12 million engaged citizens. The total economic leverage created by 1 million 360 clubs would be over 4.3 billion dollars per year. Imagine the interconnected, global, social network this could form. The cooperative gain from collective behavior at the edges would be enormous.

Conclusion

The C2C concept is about doing what is best for the end points of the global network. It is not about extracting profits from the bottom of the pyramid for distant multi-national corporations. In our new networked world, by getting each end point to be the best it can be, we improve the quality of life and security of the entire network. We are learning now that the edges of the network are where the important developments will be taking place. Thus responsibility for well being and security can no longer be fundamentally a function of "the center". Today, every end point we help in turn helps every other end point as well. In the simplest terms, C2C is about creating a virtuous cycle that enhances the well being and security of all of the peoples of the world. As we are learning, there is no other meaningful choice.

End Notes:

[1] The Economist for the week of March 12, 2005, page 22 of the Reports section: Behind the Digital Divide. The concepts in this paper contrast with the reality of the backlash against the ICT concept in international development.

The Economist goes into some depth on the controversy over ICTs versus other investments and other technologies, such as radios and cell phones. It points out that ICTs were not even mentioned in the list of 17 projects for further investment in the report of the recent Copenhagen Consensus project.

The vision offered in this proposal of a long term and sustainable capital transfer program nurtured by the relation building enabled by the communications in the ICT is novel, and, we hope, powerful.

In fact, in this proposal the capital transferred into the village would exceed the cost of a modest ICT within a about 1 year. The Economist is correct, that today, absent our plan, it is quite difficult to figure out the metrics to properly evaluate the "value proposition" of placing ICTs in locations with lots of illiteracy. The great advantage of an ICT with video capability of at least the Apple Mac iChat level, or the new eyeBeam technology from Xten [<http://www.xten.com/index.php?menu=products&smenu=eyebeam>], is that it allows people to simply be seen and to talk. No key board or reading or writing literacy is required.

[2] It's a Flat World, After All, By THOMAS L. FRIEDMAN Published in the NY Times Sunday Magazine: April 3, 2005 <http://www.nytimes.com/2005/04/03/magazine/03DOMINANCE.html?>

...Globalization 1.0 (1492 to 1800) shrank the world from a size large to a size medium, and the dynamic force in that era was countries globalizing for resources and imperial conquest. Globalization 2.0 (1800 to 2000) shrank the world from a size medium to a size small, and it was spearheaded by companies global-

izing for markets and labor. Globalization 3.0 (which started around 2000) is shrinking the world from a size small to a size tiny and flattening the playing field at the same time. And while the dynamic force in Globalization 1.0 was countries globalizing and the dynamic force in Globalization 2.0 was companies globalizing, **the dynamic force in Globalization 3.0 -- the thing that gives it its unique character -- is individuals and small groups globalizing** ... [Villages all over the world, virtual and real -JPG]

What Friedman does not see is that matters are about to get much “worse” in the sense that everything he is writing about assumes dumb, rule following computers connected over tiny-band via spectrum artificially treated as a scarce resource with very finite capacity to carry bits.

The future belongs to the coming platforms that will be goal seeking [heuristic] cognitive devices communicating with reality bandwidth [40 gigabits] over Open Spectrum that has no known limits to its bit transporting capabilities. In fact, there is reasonable evidence that Open Spectrum’s capacity to carry bits actually increases with the number of users. The West’s legacy business baggage, see the FCC and ITU, is currently preventing us from adopting this more advantageous approach to spectrum management. How long can we afford to sustain this competitive disadvantage?

For more <http://www.greaterdemocracy.org/2003_01_01_gd.html#90139353>