IFC/FT First Annual Essay Competition



"Business & Development: The Private Path to Prosperity"

AWARD WINNING ESSAYS

FT
FINANCIAL TIMES

IFC
International Finance Corporation
World Bank Group

About the Competition

IFC and the Financial Times hosted the competition entitled "Business and Development: The Private Path to Prosperity" for the first time in an effort to encourage new thinking in the ongoing dialog on the role of business in development. The target audiences were economic and financial policy makers, investors and the international and civil society organizations.

The competition was keenly contested and attracted a wide range of submissions in terms of both content and professional and personal diversity of the applicant pool. Some 500 submissions were received, representing over 70 countries.

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Note from the Judges

At the occasion of the 50th anniversary of the International Finance Corporation we conducted the essay competition on "Business and Development: The Private Path to Prosperity". We believe that "ideas out there" are a greater source of wisdom than any research program we could conceive ourselves. The response was overwhelming – especially given the fact that this was the first time we held the competition – with almost 500 submissions from 70 countries. The range of topics was diverse to include subjects running the gamut from dealing with the informal sector, innovations in microfinance, financing investment in infrastructure, PSD in post-conflict environments, private provision of education to improving the enabling environment for foreign direct investments.

Roughly four-fifths of the submissions came from emerging markets nationals, while 21% of these authors were based in the US, 15% in Nigeria and 13% from India. In terms of professions, an overwhelming number of submissions came from universities and think-tanks with business and economics focus. In terms of themes the two most dominant were the critical role the private sector can and should play in development; and, on the need for the private sector to extend its role in emerging market economies, including into sectors traditionally dominated by the public sector.

The winning essays neatly illustrate these two themes. *"Educating Amaretch: Private Schools for the Poor and the New Frontier for Investors"* stands for those who take the "markets at the bottom of the pyramid" seriously. Markets can provide solutions for low income citizens, where standard state or donor-driven approaches may struggle – even in primary education. The two second prize entries dream up ways to help people move out of informality and provide them with new opportunity. The ideas: new market-based approaches that may solve contracting and financing problems. The three third-prize essays variously discuss attitudes towards development. One discusses how the creation of property rights for poor people gives them a new perspective on markets and initiative. Another emphasizes the challenge to firms not just to fear and complain about government actions but to help structure approaches that are politically sustainable. The advent of modern communication technology argues another essay provides opportunities to think about institutional approaches more adapted to the realities of Africa than simple imitation of "modern" economic systems.

Clearly, the ideas of Hernando de Soto about helping people out of informality and the ideas of C.K. Prahalad about the "bottom of the pyramid" have inspired many essays as has the practical success of entrepreneurs. At the same time there were only few essays that discussed issues of corporate social responsibility in an original way. There were very few essays that dealt with environmental topics. Hardly any essay tried to provide interesting portrayals of inequalities and individual insecurity arising from growth in the absence of supportive social policies or questioned the prevailing economic orthodoxy.

While we at the IFC believe in market solutions, we also search to understand resulting problems and what may be done about them and encourage thinking on this for any future essays.

Michael Klein
Vice President, Financial and Private Sector Development
World Bank and the IFC
Chief Economist, IFC

Note from the Judges

I commend the IFC and the *Financial Times* for sponsoring an international research competition on private sector development. Several of the winning essays document promising new empirical findings; others articulate provocative new ideas. The top prize-winner describes how parents in the world's poorest communities are choosing to pay for private education for their children. Another writer takes advantage of a natural experiment to illuminate the effect of secure property rights on beliefs about capitalism. A third questions the relevance of the prevailing paradigm for infrastructure development for telecommunications in Africa. The competition thus succeeded in stimulating welcome challenges to conventional wisdom.

But the success of the research competition is only partial. Perhaps due to the topic's framing as "The Private Path to Prosperity", the submissions were strongly skewed toward upbeat perspectives on the role of business in development. The short list of papers presented to the judges as finalists were said to be broadly representative of the full set of submissions in terms of thematic content and tone. Several of the short-listed papers went out of their way to celebrate the virtues of the unfettered free market. None provided a critique of private-sector led approaches to development. And ironically for a competition co-sponsored by a public international financial institution, the papers' most consistent policy message was that governments should simply get out of the way and let markets work their magic.

We know that while there is great potential for business to contribute to development – indeed, illustrations of that potential are highlighted in the award-winning papers – we also know that business can undermine development. The free market does not automatically serve public interest values such as equity and environmental sustainability. We have experience with privatized service provision that does not meet the needs of consumers. We continue to witness corporate exploitation of natural resources that damages fragile ecological and human communities. And we know that innovations in governance – mechanisms for increased transparency, independent regulation, and public accountability – are necessary to ensure that the private provision of goods and services also serves development objectives.

It was thus disappointing that the research competition did not generate more papers that spoke to such concerns, nor essays that addressed key problems most in need of innovative ideas. I asked for a review of the higher-scoring essays, and the resulting expanded short list changed only slightly. For example, despite our desperate need for new thinking on how to harness market forces to address the causes and consequences of catastrophic climate change, no short-listed essays focused on that topic. Indeed, no short-listed essays focused on any aspect of environmental sustainability.

Perhaps next year's competition could be framed in such a way as to more explicitly encourage submissions that highlight the roles of government and civil society in ensuring that market-based approaches to development are aligned with poverty reduction, environmental protection, and public accountability. Surely "the best thinking on the role of business and development" – the objective that the competition was designed to promote – must also include thought on what to do when the private path does *not* lead to prosperity.

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Gold Award Winner

ABSTRACT

The accepted wisdom says that the poor need billions of dollars more in donor aid for public education. But this ignores the reality that poor parents are abandoning public schools to send their children to "budget" private schools that charge very low fees, affordable to parents on minimum wages.

Recent research has found a large majority of schoolchildren in selected poor urban and periurban areas of India and Sub-Saharan Africa using private schools, while in rural India, half of all schoolchildren are privately enrolled. Even in impoverished rural China large numbers of private schools exist off the official radar. The research showed that private schools for the poor are superior to government schoolteachers are more committed, the provision of important inputs better, and education outcomes better even after controlling for background variables. All this is accomplished for a fraction of the per-pupil teacher cost of government schools.

Extending access to private schools through targeted vouchers is one way in which the development community can assist the poor. However, the fact that the budget private schools are businesses, able to return a viable surplus, means they offer a creative new frontier for international and domestic investors because educational entrepreneurs, operating in a competitive market, are eager to invest in school improvements. Three ways for investors to get involved are explored. Budget private school infrastructure could be improved through the provision of microfinance-type loans. Investment in improved curriculum and pedagogy could be undertaken, to find opportunities that can be rolled out on a commercial basis. Finally, investing in a brand of budget private schools, either through a dedicated educational investment fund or through joint ventures with educational entrepreneurs, could provide an innovative way to solve the information problem for poor parents and improve even further the educational opportunities offered to their children.

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Educating Amaretch: Private Schools for the Poor and the New Frontier for Investors

JAMES TOOLEY

William Easterly begins and ends his latest book, *The White Man's Burden,* with the heart-rending story of 10-year-old Amaretch, an Ethiopian girl whose name means "beautiful one." "Driving out of Addis Ababa," he passes an "endless line of women and girls . . . marching . . . into the city" (2006, p. 1). Amaretch's day is spent collecting eucalyptus branches to sell for a pittance in the city market. But she would prefer to go to school if only her parents could afford to send her. Easterly dedicates the book to her "and to the millions of children like her." He returns to Amaretch in his concluding sentence (p. 384): "Could one of you Searchers discover a way to put a firewood-laden Ethiopian preteen girl named Amaretch in school?"

There are "Searchers"—Easterly's word for entrepreneurs of all kinds—across the developing world who are already finding the way, in places not dissimilar to where Amaretch finds herself. The accepted wisdom is that children like Amaretch need billions more dollars in donor aid for public education before they can gain an education—and the poor "should be patient" (World Bank 2003, p. 1), because public education needs to be reformed to rid it of corruption and horrendous inefficiencies before the needs of the poor can be met.

The accepted wisdom appears misguided. It ignores the fact that vast numbers of parents have already abandoned public education—because of its inadequacies and lack of accountability—and are using private schools instead. This remarkable fact has huge implications for the investment community.

The revolution of private schools for the poor

Recent research investigated education for the poor in selected, officially designated poor areas of China, Ghana, India, Kenya, and Nigeria.[1] Research teams explored informal settlements—slums and shantytowns—in metropolitan cities in these countries and poor areas in the rural hinterlands surrounding these cities (periurban areas). They researched remote villages in impoverished northwest China and rural communities in south India. The teams combed these poor areas, going down every alleyway in the slums, visiting every settlement in the rural areas, asking of people in market stalls and on the streets, to find where the poor were being educated.

They found large numbers of schools—918 in the notified slums of three zones of Hyderabad, India, for example. And when they found schools, public or private, they interviewed school managers and visited, unannounced, primary classrooms to assess the activity of the teacher and to look for selected school inputs. The researchers tested around 24,000 children, taken from a stratified random sample of schools within these poor communities. Children were tested in key curriculum subjects, and questionnaires given to children, their parents, teachers, and school managers, and IQ tests to children and their teachers, to elicit data to control for a wide range of background variables, including peer group variables.

What the research teams found points to an education revolution that is taking place. In the poor urban and periurban areas surveyed, the vast majority of school children were found to

1 The research, conducted by the author was funded by the John Templeton Foundation.

be in "budget" private schools. For instance, in the poor urban and periurban areas of Lagos State, Nigeria, 75 percent of schoolchildren were in private schools. In the periurban district of Ga, Ghana, the figure was 64 percent, while in the slums of Hyderabad, India, 65 percent of schoolchildren were in private, unaided schools (table 1).

These budget private schools are usually established by entrepreneurs from within the poor communities themselves, employing teachers from those communities—unlike in government schools, where teachers are often brought in from the outside. The private schools charge very low fees, affordable to parents on poverty-line and minimum wages. For example, in Hyderabad, mean monthly fees at the fourth grade were Rs 78.17 ($1.74) in unrecognized private schools in the slums and Rs 102.55 ($2.28) in recognized ones—about 4.2 percent and 5.5 percent, respectively, of the monthly wage for a breadwinner on a typical minimum wage of about Rs 78 a day (assuming 24 working days a month; India, Labour Bureau 2005).

Private schools for the poor are not just an urban or periurban phenomenon, either. In the deprived district of Mahbubnagar, in rural Andhra Pradesh, India, roughly half of all schoolchildren were in private unaided schools (see table 1). In the remote villages of rural Gansu, China, official figures showed no private schools at all, but the research found 586, serving 59,958 children. (For further details, see Tooley, 2005; Tooley and Dixon, 2005, 2006a, 2006b; and Tooley, Dixon and Olaniyan, 2005; Tooley, Dixon and Gomathi, 2007; Tooley, Dixon and Amuah, 2007.

Indeed, wherever the study looked to supplement this detailed research, it found similar private schools for the poor—among battle-scarred buildings of Somaliland, in the soon-to-be-bulldozed shantytowns in Zimbabwe, and in the deprived slums of Freetown, Sierra Leone. And private schools for the poor have been reported in Malawi, Tanzania, and Uganda; in other states of India; in Pakistan; and in the Caribbean and elsewhere. Private schools for the poor seem to be occurring throughout the developing world (see, for example, Salmi 2000; Rose 2002; Watkins 2000; Aggarwal 2000; De and others 2002; and Alderman, Kim, and Orazem 2003).

The development experts who are aware of the existence of these schools uniformly worry about their low quality, however. The *Oxfam Education Report*, for example, notes that private schools for the poor are of "inferior quality," offering "a low-quality service" that will "restrict children's future opportunities" (Watkins 2000, p. 230). In Nigeria private schools for the poor are reported to offer "a low cost, low quality substitute" for public education (Adelabu and Rose 2004, p. 74).

The current research findings suggest that such concerns are misplaced – at least in comparison to the quality of public education. In every setting, teacher absenteeism was lower and teacher commitment – the proportion of teachers actually teaching when our researchers called unannounced – higher, in the private schools for the poor than in government schools. Only on *one* input – the provision of playgrounds – were government schools superior to private schools across the range of studies. On all other inputs—such as provision of drinking water, toilets, desks, chairs, libraries, electric fans and lighting, and tape recorders for learning purposes—private schools for the poor were superior to government schools.

Importantly, the research showed that the private schools everywhere were outperforming the government schools in the key curriculum subjects—even after controlling for background variables. In Lagos State, for instance, the mean math score advantage over government schools was about 14 and 19 percentage points respectively in private registered and unregistered

schools, while in English it was 22 and 29 percentage points. And after controlling for background variables, and, given that students were not randomly assigned to the different school management types, the school choice process, we found these differences, although reduced, were still large in favor of private education. In Lagos State, Nigeria, the predicted score in mathematics was 45.1 percent for an average sample child in government school, 53.5 percent for the same average child in an unregistered and 57.6 percent in a registered private school. For English the predicted score for an average sample child in government school was also 45.1 percent, while there was no significant difference between attainment in both types of private school – predicted score for the same child was 64.4 percent.

Significantly, private schools were found to be outperforming government schools for a fraction of the teacher costs likely to be the largest part of recurrent expenditure in schools. Even when the per-pupil teacher cost was computed (to take into account the fact that class sizes were largest in government schools), private schools came out less expensive. In the government schools in Lagos State, for example, per-pupil teacher costs were nearly two and a half times higher in government than in private schools.

The existence of this burgeoning and vibrant private sector provides one way in which Easterly's Amaretch can be reached—through targeted vouchers or scholarships aimed at those like Amaretch whose parents cannot currently afford a place in private school. (These could also have the impact of encouraging education entrepreneurs to set up schools where current provision is patchy, by giving the poorest parents funds to pay for private education.) Indeed, private school owners themselves are already showing the way—offering free or subsidized places to the poorest of the poor, including orphans or those with widowed mothers. In the slums of Hyderabad, for example, the research found that 18 percent of all places in the private schools were provided free or at concessionary rates. Building on this philanthropy could provide a school place for Amaretch where teachers are accountable—unlike in the government schools, where development agencies point to high levels of teacher absenteeism and lack of commitment.

The enterprise of education as investment opportunity

Providing Amaretch with a school place may be one solvable challenge. But what about the quality of schooling where she is provided with that place? Here a creative new frontier for investors is dramatically revealed, one where the investment community can potentially make a huge difference to the lives of poor people. The key relevant finding of the research is that the vast majority of the private schools in the poor areas are businesses, not charities, dependent more or less entirely on fee income and, very importantly, making a reasonable profit. In Ga, Ghana, for example, 82 percent of registered and 93 percent of unregistered private schools were proprietor owned. In Hyderabad, 91 percent unrecognized and 82 percent recognized private schools were entirely dependent on student fee income, receiving no outside funding at all.

To gain a deeper insight into finances, the research explored school surpluses through 10–15 case study schools in each setting. In every case the mean of these schools showed a viable return for the proprietor. For example, in the shantytown of Makoko, Lagos State, a typical case study school had 220 pupils, 13 teachers, and average fees of N 1,800 ($12.41) a term, with 9 percent of students on full scholarships. Teacher salaries averaged N 4,388 ($30.26) a month, with other recurrent expenditure at N 7,450 ($51.38) a month plus the proprietor's monthly salary of N 8,000 ($55.17). Such a school made a surplus of about $1,456 per annum, or about 20 percent of its income (table 2).

Because the private schools for the poor are run as businesses, this provides at least three ways forward for investors to help in improving quality. *First*, to help school proprietors improve their infrastructure, microfinance loans could be provided, through existing or purpose-created microfinance organizations. Two pilot loan schemes were set up during the research in Hyderabad and Lagos, offering loans of $500–2,000, at commercial interest rates, to help private school managers improve their infrastructure. Typical projects included building latrines, refurbishing or building new classrooms and buying land.

The pilot loan schemes revealed a hunger for finance from schools that couldn't usually access other funds because they didn't have formal property rights or were operating semi legally—the kind of small businesses highlighted by Hernando de Soto in *The Mystery of Capital* (2000). These pilots point to the possibility of investment in larger-scale microfinance projects to provide loans to private school proprietors. Technical assistance could supplement this investment, to provide financial advice. The problem of improving private school infrastructure appears relatively easily solvable.

But what about the quality of the education provided? Private schools for the poor generally follow rote learning methods, traditional throughout developing countries, and the state curriculum, crammed with subjects that might not all be relevant for poor children and omitting areas that might be valuable, such as enterprise education. The development community is concerned about the quality of similar educational provision: Current pedagogical methods are "too rigid," reliant on "rote learning, placing students in a passive role" (UNESCO, 2004, p. 17, see Dembélé and Miaro-II 2003). Curricula are "insufficiently sensitive to . . . learners' sociocultural circumstances" (UNESCO 2004, p. 31).

The usual route followed by development agencies to improve educational quality involves millions of dollars of expenditure getting teachers to change their methods and children to rise above passive learning. Large amounts have been spent on high-tech solutions—television, interactive radio, or information technology—to bypass teachers altogether, to train teachers in "modern" methods, or to supplement teaching with these beamed-in add-ons (see, for example, Leach 2005; Rhodes and Rasmussen-Tall 2005; EDC 2001; Murphy and others 2002; and Potter and Silva 2002).

But little impact has been shown for these expensive interventions. Teachers tend to revert to their preferred methods once the aid missions have moved on (see, for example, Murphy and others 2002). Such projects do not manage to harness any incentives for poor people to continue with or invest in the intervention. However, the existence of burgeoning private school markets provides the key to investment opportunities that genuinely harness incentives for quality improvements in education. In the intensely competitive markets of private education, the incentives lacking in traditional aid interventions are everywhere, and paramount.

These incentives were clearly revealed in a small-scale project recently conducted in a private school in the slums of Hyderabad in collaboration with Dr. Sugata Mitra. Director of research at NIIT Ltd., one of India's largest software companies, Mitra has experimented with peer group learning using information technology—dubbed "the hole in the wall" by the media (see Mitra 2005). Hyderabad is flooded with call centers, and many graduates of private schools for the poor seek employment in these—but are stymied by their low standard of English pronunciation. Their teachers can't help because they don't speak English well enough either. The project tried the hole-in-the-wall approach: could children teach themselves to improve their English pronunciation?

The details based on a speech-to-text recognition program (see Mitra and others 2003) need not concern us here. The experiment showed that this method was successful in improving English pronunciation. But what happened after the experiment was completed is most relevant here. Many other private school proprietors, who heard about the experiment, wanted the technology in *their* schools, and were prepared to pay for it. The preferred investment previously, once suitable surpluses had been accrued, was to buy a suite of second-hand computers plus teacher. Now proprietors were saying: 'perhaps we don't need a computer teacher. We need the hole-in-the-wall.'

The school proprietors were hungry for innovation. Why? In part simply because, whatever the critics of private schools for the poor may claim, many care about children's education. On its own this might be enough for some to invest in new technology. But the power of the market means that it's coupled with another major incentive: proprietors know that they are in an increasingly competitive market. They need parents to know that their school is special, to maintain or increase market share. If a method of learning seems to have demonstrably better outcomes, they'll want it for their schools.

This suggests a second way for investors to assist in providing educational improvements that are sustainable. Investors – assisted with donor funds if necessary to help carry initial risks – can back small-scale research and development (R&D), like the experiment in Hyderabad with Mitra, to find out what works to improve desired curriculum and pedagogical outcomes. Investors can then partner with local entrepreneurs to ensure that the improved methods are made available, suitably packaged, at a price acceptable to school entrepreneurs. The problems of sustainability and scalability that so bedevil any aid intervention are solved.

Mitra's "hole in the wall" method of learning, for example, could easily be replicated in private schools. The technology costs around $2,500 to install per "kiosk," with three computers that serve 200 children. A typical school in the shantytown of Makoko, Nigeria, for example, could easily afford to purchase one with surpluses over two or three years – perhaps utilizing a loan to do so (see table 2). In other countries surveyed, it would be even more affordable. The international finance community could assist local entrepreneurs – again supplemented with technical assistance if necessary – to set up the infrastructure to provide these innovations at a suitable price.

The brand-conscious poor

In *The Fortune at the Bottom of the Pyramid* C. K. Prahalad challenges the "dominant assumption" that the poor are not bothered about brand names (2005, p. 13): "On the contrary," his findings suggest, "the poor are very brand-conscious." In private education, brand names could be important to help solve the genuine information problem that exists—and this provides a third major opportunity for investors to enter the education market.

How can poor parents judge if one private school in their community is better than another, and that it is adequately serving the educational needs of their children? The research showed parents using a variety of informal methods, such as visiting several schools to see how committed teachers and the proprietor appear. Or they talk to friends, comparing notes about how frequently exercise books are marked and homework checked. Importantly, the research found that if parents choose one private school, but subsequently discover that another seems better, they have little hesitation in moving their child to where they think they will get a better education. And school proprietors know all of this, so make sure teachers turn up and teach, and invest any surpluses in school improvement, to ensure parental satisfaction. So there *is* an information problem, but there are ways around it.

However, in other markets, brand names provide a safer way of overcoming parallel information asymmetries. Buying into trusted brands would be one way of overcoming the information problem too, for poor parents wanting the best education for their children. Already, small embryonic brands are emerging in the educational markets explored, as educational entrepreneurs expand their own, or take over other, schools, because they are providing what more parents want. Some proprietors have four or five such schools now, and are eager to extend further.

Assisting the market in the creation of educational brand names that will help parents make their judgments in a more informed way is the *third* possible area for investor action – again, supplemented with donor support initially if required to satisfy investors of the viability of the market, or to provide technical assistance on legal and financial matters to educational entrepreneurs. One possibility would be for investors to assist expansion-minded proprietors accessing loan capital, in the way already outlined above. Or it could involve creating a specialized education investment fund, to provide equity to proper, legally-established education companies that run chains of budget private schools. Suitable exit strategies could be worked out for the investment fund, perhaps by giving advice on how to list on local stock markets, or to get other investors on board.

A further possibility could involve investors engaging in a joint venture with local educational entrepreneurs to set up a chain themselves. Investment in initial R&D would be required, to create the standards for a demonstrable and truly replicable model of education for the poor. This might best be accomplished within an existing school that would then demonstrate the efficacy of the model, to parents, investors and potential franchisees – if a franchise model was deemed appropriate – and be used to train new school managers and teachers.

Such R&D would explore the technology, curriculum, pedagogy, and teacher training requirements for the successful educational model, and the quality control, financial, and regulatory requirements for the brand-name chain. For investors, setting up a chain of budget private schools serving poor communities appears to be an extraordinarily exciting and innovative project.

Why would private school owners wish to become part of the chain of schools, as franchise holders or as managers? Competition would be a chief spur. School proprietors realize that a key problem now is the powerful competition from other private schools. From the roof of one school in the slums of Hyderabad seven other private schools are visible, all competing for the same children. School proprietors are eager to differentiate themselves in this market, and one of parents' key concerns is of educational quality. By becoming part of the brand name, managers could show that they emphasize quality above their competitors, and so attract an increasing number of children.

Parents would prefer their children to attend one of the brand name schools, because it solves for them in a neat way the information problem. Children, too, might prefer to be in a brand-name school, benefiting from the improved curriculum, pedagogy, technology and teacher training in their school. They would be part of a much larger organization and benefit from the networks and opportunities this creates. And as the brand name became well-known, future employers and further education institutions will trust where children have been educated, giving the pupils an edge for the future.

What of schools that don't become part of the chain of schools? In the short term, they could suffer, perhaps even go out of business – but only as a result of parents shifting their children to the school where they perceive educational quality to be higher. But in the dynamic market of education, two things are likely to happen: first, individual educational entrepreneurs will seek to improve what they offer, in order to retain children, or win back those who have left. Second, most fundamentally, if the financial and educational viability of an educational brand name is demonstrated, others will soon enter the market, setting up competing brand names that offer quality education at a low cost.

Prahalad observes that the founder of Aravind Eye Care System, which provides cataract surgery for large numbers of the poor in India, was "inspired by the hamburger chain, McDonald's, where a consistent quality of hamburgers and French fries worldwide results from a deeply understood and standardised chemical process" (2005, p. 37). There is every reason to think that a similarly "deeply understood and standardised" learning process could become part of an equally successful model of private school provision, serving huge numbers of the poor.

A solvable problem

Private schools for the poor are burgeoning across the developing world. In urban and peri-urban areas they are serving the majority of poor schoolchildren. Their quality is higher than government schools provided for the poor – perhaps not surprisingly given that they are predominantly businesses dependent on fee income to survive, and hence accountable to parental needs. Those worried – like Easterly – about how to extend access to education for the poor, could usefully look to the private education sector as a way forward. By extending what private schools for the poor already offer through free and subsidized places for the poorest, sensitively-applied targeted vouchers could extend access on a large scale.

Crucially, because the private schools serving the poor are businesses, making a reasonable profit, they provide a pioneering way forward for investors to get involved too. Investment in microfinance-style loan schemes so that private schools can improve their infrastructure is one way forward. Providing investment for innovation in curriculum and learning, which, if successful, could be rolled out on a commercial basis, provides a second possibility. And investing in a chain of schools – either through a dedicated education investment fund or through joint ventures with educational entrepreneurs – could help solve the information problem for poor parents and improve the educational opportunities on offer.

Educating Amaretch is a solvable problem. The Searchers who have created private schools serving the poor are hungry for investment—and investors can assist them in pursuing their central role in providing quality "education for all."

TABLE 1 SCHOOLS AND PUPIL ENROLLMENT BY TYPE OF SCHOOL IN SELECTED LOCATIONS

SCHOOL TYPE	GA, GHANA			LAGOS STATE, NIGERIA			HYDERABAD, INDIA			MAHBUBNAGAR, INDIA		
	Schools	School share (%)	Pupil share (%)	Schools	School share (%)	Pupil share (%)	Schools	School share (%)	Pupil share (%)	Schools	School share (%)	Pupil share (%)
Government	197	25.3	35.6	185	34.3	26.0	320	34.9	24.0	384	62.4	47.8
Private aided	0	0	0	0	0	0	49	5.3	11.4	13	2.1	4.3
Private unaided, unrecognized or unregistered	177	22.7	15.3	233	43.1	33.0	335	36.5	23.1	77	12.5	6.6
Private unaided, recognized or registered	405	52.0	49.1	122	22.6	42.0	214	23.3	41.5	141	22.9	41.2
Total	779	100	100	540	100	100	918	100	100	615	100	100

Source: Survey of schools (2004-5) in Tooley and Dixon 2006b

TABLE 2 INCOME AND EXPENDITURE OF A TYPICAL PRIVATE SCHOOL FOR THE POOR IN MAKOKO, LAGOS STATE, NIGERIA

ITEM	AMOUNT IN NAIRA	AMOUNT IN USD
Term fees	1,800	12.41
Monthly teacher salaries	4,388	30.26
Recurrent monthly spending	7,450	51.38
School owner's monthly salary	8,000	55.17
Annual income	1,081,080	7,455.72
Annual expenditure	869,928	5,999.50
Annual surplus	211,152	1,456.22
Annual surplus as a percentage of income	20	20

Note: The school is assumed to have 220 students and 13 teachers
Source: Author's estimates

References

Adelabu, Modupe, and Pauline Rose. 2004. "Non-State Provision of Basic Education in Nigeria." In George Larbi, Modupe Adelabu, Pauline Rose, Dawda Jawara, Obioma Nwaorgu, and Seema Vyas, Nigeria: Study of Non-State Providers of Basic Services. Commissioned by UK Department for International Development, Policy Division, London; and University of Birmingham, International Development Department.

Aggarwal, Yash. 2000. "Public and Private Partnership in Primary Education in India: A Study of Unrecognised Schools in Haryana, New Delhi." National Institute of Educational Planning and Administration, New Delhi.

Alderman, Harold, Jooseop Kim, and Peter F. Orazem. 2003. "Design, Evaluation, and Sustainability of Private Schools for the Poor: The Pakistan Urban and Rural Fellowship School Experiments." Economics of Education Review 22: 265–74.

Author, 2005 – Tooley 2005, Author and Colleague, Tooley and Dixon, (2005. 2006a, 2006b)., Author et al, (2007a, b, c), to be inserted after refereeing. De, Anuradha, Manabi Majumdar, Meera Samson, and Claire Noronha. 2002. "Private Schools and Universal Elementary Education." In R. Govinda, ed., India Education Report: A Profile of Basic Education. Oxford and New Delhi: Oxford University Press.

Dembélé, Martial, and Bé-Rammaj Miaro-II. 2003. "Pedagogical Renewal and Teacher Development in Sub-Saharan Africa: A Thematic Synthesis." Background paper for the Biennial Meeting of the Association for the Development of Education in Africa, Grand Baie, Mauritius, December 3–6.

de Soto, Hernando. 2000. The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else. London: Bantam.

Easterly, William. 2006. The White Man's Burden: Why the West's Efforts to Aid the Rest Have Done So Much Ill and So Little Good. New York: Penguin.

Education Development Center (2001), Multichannel Learning Maximises Scarce Resources in Developing Countries: A theory evolves from years of practical experience. http://main.edc.org/newswoom/Features/mcl2001.asp, accessed May 06.

India, Labour Bureau. 2005. "Statistics: Minimum Wages. http://labourbureau.nic.in/wagetab.htm, accessed October 10, 2005.

Leach, Jenny. 2005. "DEEP Impact: An Investigation of the Use of Information and Communication Technologies for Teacher Education in the Global South." UK Department for International Development, London. http://www.dfid.gov.uk/pubs/files/ict-teacher-education-no58.asp, accessed May 2006.

Mitra, Sugata. 2005. "Self-Organising Systems for Mass Computer Literacy: Findings from the 'Hole in the Wall' Experiments." International Journal of Development Issues 4 (1): 71–81.

Mitra, Sugata, James Tooley, Parimala Inamdar, and Pauline Dixon, (2003), "Improving English Pronunciation: An automated instructional approach", Information Technologies and International Development, 1.1.75-84

Murphy, Paud, Stephen Anzalone, Andrea Bosch, and Jeanne Moulton. 2002. "Enhancing Learning Opportunities in Africa: Distance Education and Information and Communication Technologies for Learning." World Bank, Africa Region, Human Development Department, Washington, D.C

Potter, Charles, and Adilia S. F. Silva, eds. 2002. Teachers in Action: Case Studies of Radio Learning in South African Primary Schools. Johannesburg: Open Learning Systems Education Trust.

Prahalad, C. K. 2005. The Fortune at the Bottom of the Pyramid. Upper Saddle River, NJ: Wharton School Publishing.

Rhodes, Rebecca, and Sara Rasmussen-Tall. 2005. "Teacher Training via Radio Is Launched in Mali." US Agency for International Development, Washington, DC http://www.usaidmali.org/article.php?id=0079_EN, accessed May 2006.

Rose, Pauline. 2002. "Is the Non-State Education Sector Serving the Needs of the Poor? Evidence from East and Southern Africa." Paper presented at UK Department for International Development seminar in preparation for World Bank's World Development Report 2004, Oxford, 2-4 November, 2002.

Salmi, Jamil. 2000. "Equity and Quality in Private Education: The Haitian Paradox." Compare 30 (2): 163–78.

Tooley, James (2005) Private schools for the poor, Education Next: A Journal of Opinion and Research, 5 (4): 22-32.

Tooley, James, and Dixon, Pauline (2005) Private education is good for the poor: A study of private schools serving the poor in low-income countries, Washington, DC: Cato Institute.

Tooley, James and Dixon, Pauline, (2006a), The Failures of State Schooling in Developing Countries and the People's Response, in Miles, M., Homes, K.R., and O'Grady, M.A. (eds), 2006 Index of Economic Freedom, Chapter 2, 27-37, Washington, DC: The Heritage Foundation and Wall Street Journal.

Tooley, James and Dixon, Pauline, (2006b) 'De Facto' Privatisation of Education and the Poor: Implications of a Study from sub-Saharan Africa and India, Compare 36(4) [no page numbers yet, forthcoming]

Tooley, James, Pauline Dixon, and Olanrewaju Olaniyan (2005). Private and public schooling in low-income areas of Lagos State, Nigeria: A census and comparative survey. International Journal of Educational Research 2006, 43(3): 125-46.

Tooley, James, Pauline Dixon, and S.V. Gomathi, (forthcoming 2007), Private Schools and the Millennium Development Goal of Universal Primary Education: A census and comparative survey in Hyderabad, India.. Oxford Review of Education, 33(4).

Tooley, James, Pauline Dixon, and Isaac Amuah. (forthcoming, 2007) Private and Public Schooling in Ga, Ghana: A census and comparative survey, International Review of Education, 53(3-4).

UNESCO (United Nations Educational, Scientific, and Cultural Organization). 2004. Education for All Global Monitoring Report 2005: The Quality Imperative. Paris.

Watkins, Kevin. 2000. The Oxfam Education Report. Oxford: Oxfam Great Britain.

World Bank. 2003. World Development Report 2004: Making Services Work for Poor People. New York: Oxford University Press.

Silver Award Winner

ABSTRACT

Currently, investors and policy makers search for economic development solutions either through top-down intervention, which targets existing legal companies, or through bottom-up reform, which changes the legal rules of the game in order to create a more incorporative economic system. Both are necessary, though the latter *ex ante* legal reform has proven the most promising. However, as discovered during fieldwork in Peru's Gamarra, Latin America's largest textile cluster, a new challenge has emerged in the wake of that country's successful property rights reform. The leading obstacle to firm growth has shifted from one of *ex ante* property rights in the 1980s to *ex post* contract enforcement today. This new industry environment creates "play of the game" problems both between and within firms, which forces businesses to "rationally" stay small, thus preventing them from specializing in order to export and capture gains from trade, the cornerstone to Adam Smith's The Wealth of Nations.

But there is a solution — investors and policy makers just need to continue down the other path opened up by Hernando De Soto in order to see the trail. Throughout the developing world, organic reputation mechanisms enforce contracts. But they have limited efficiency. This is why many argue for the importance of effective third-party states. Yet endemic corruption hinders their creation. A third way exists in the creation of novel private-sector enterprises which tap into local enforcement strategies. In many cases, these organizations substituted for the state as with the case of the Amsterdam Bourse in the 17th century. These solutions continue to exist in the form of brokerages and credit rating companies, and it is time to apply them to the developing world. Yet for this to happen, financiers and policy makers need to see extra-legality not as an obstacle but as a major investment opportunity.

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Traveling Down the Other Path: Learning to See Extra-Legality as an Investment Opportunity

MATTHEW BIRD

One cannot take enforcement for granted. It is (and always has been) the critical obstacle to increasing specialization and division of labor.

Douglass North 1990: 33

Ramiro Alarcón didn't think he'd stumbled onto an alternative way to address business extralegality, one of Peru's as well as the developing world's most persistent problems. He just implemented what made sense to him. The thousands of small businesses in Gamarra, Latin America's largest textile cluster, had trouble joining forces to take advantage of new export opportunities because of the low levels of trust in the industry. His solution? To kill two birds with one stone by creating an online brokerage mechanism that distributed international orders while giving the firms a forum for airing complaints, building reputations, and finding partners.

There was just one problem. Ramiro Alarcón doesn't exist, nor does his brokerage business. But Gamarra does, as do its contract enforcement problems and the potential solutions that await it and many other developing economies. The conditions are ripe. What is needed is to continue down the "other path"— to complement ex ante property rights reform with ex post contract enforcement assistance that can be supplied by novel private sector enterprises. What is needed is for financiers and policy makers to see extralegality not as an obstacle but as a major investment opportunity.

Blazing the trail

To recognize this opportunity you must first appreciate the integral role extralegality plays in the world's developing economies. After all, we're not talking about marginal markets. Extralegal activity, despite the small size of its actors, can account for upwards of one-half to two-thirds of a country's economy, and valorization of its unrecognized assets would dwarf the amount of aid now offered to developing economies.

Appreciation of this hidden sector began when Keith Hart coined the term "informality" in a 1970 article on small-scale entrepreneurs in Ghana. He and later the International Labour Organization (ILO 1970, 1972) were the first to argue that the survival strategies used by the poor migrants who flooded into many a "third world" city were not a marginal but an *integral* economic activity. Yet informality had its limits. The ILO then believed that it was caused by excess labor supply, undercapitalization, and a lack of skills and technology. Address these conditions by providing financial, technological, and educational resources, it reasoned, and growth would ensue, causing unemployment to drop. The prescription appears so clear, it almost seems silly to question it.

But that's what the next major appraisal of extralegality did. The problem isn't so much the lack of resources as it is the legal system's inability to define and guarantee the assets the poor already possess. Not only was the sector hidden, as Hart and the ILO first recognized, but so was its capital. The poor already have gobs of it, Hernando de Soto asserts in *The Mystery of Capital* (2000); the trick is to "convert it" by introducing legal reform that incorporates people into the economic system.

De Soto's reframing of the problem began earlier, with the publication of *El Otro Sendero* (1986)—"the other path"—a study of Peru's extralegal sector. Starting in the 1950s Andean migrants flooded into Lima, invaded land on the city's outskirts, and clogged public streets to hawk their goods. A stagnant global economy and unsustainable state-led development led to four-digit inflation. Add a bloody guerrilla insurgency, and the country represented all that plagued the developing world. Lima's migrants, like those in other developing countries, created their own order amid this seeming chaos by creating an extralegal sector that met their employment, housing, transportation, and consumption demands. But excess labor was not to blame; extralegality emerged from exorbitant transaction costs. The high costs of business formalization—of obtaining the proper licenses and registrations—outweighed the costs of staying informal.

But extralegality, while more efficient in the short run, exacted a greater price. When you're not legal, the costs of detection lead you to disperse activities, shun publicity, and spend on sanction-dodging bribes. When you're not legal, you're forced to deal exclusively in cash within an inflationary environment and choose to save in tangible goods rather than in cash with financial institutions. When you're not legal, you may benefit from avoiding taxes and labor laws, but this forces you to hire less qualified workers and become more labor, rather than capital, intensive. When you're not legal, you have no guarantee of your ability to use an asset, appropriate returns from it, or change its form or substance. You thus lack the incentive to invest in your own property and cannot use it as collateral for credit. When you're not legal, you have trouble enforcing your contracts. Many of your exchanges rest on oral agreements, and when a dispute occurs you cannot easily resolve it through a judicial court mechanism.

The transaction cost analysis of extralegality has seeped into most major development programs, from the World Bank to the ILO, from nongovernmental organizations to state-led initiatives. De Soto (The Mystery of Capital 2000) has since defined a major lead trail stemming from this approach, the ex ante problem of reforming legal property rights systems. If these and other rules aren't set, the system will only continue to disenfranchise. But the many small business owners in Gamarra who have benefited from Peru's property rights reform in the 1990s continue to confront obstacles in the system's operation, in the ex post play of the game, as seen in the cluster's difficulty in forming alliances to meet export demands. Why?

A natural experiment

To answer this question, fieldwork was done in Gamarra. Surprisingly, it found both a classic economic dilemma and an ideal natural experiment.

The dilemma? To ask why Gamarra's firms cannot either grow or create alliances in order to meet export demands is akin to asking what explains firm size, the million-dollar question upon which transaction cost economics was built.

De Soto (1986) provides several hypotheses. When he and his colleagues took to the streets of Lima (much as Ronald Coase, the founder of transaction cost theory, did when he visited US factories in the 1930s), they discovered three major factors that limited firm size:

- *Fear of detection.* In order to avoid sanctions for illegal operations, extralegal businesses dispersed production activities and refrained from publicity. This resulted in an inability to achieve economies of scale and increase sales.

- *Lack of property rights.* The high cost of obtaining formal property rights cut Lima's small entrepreneurs off from formal credit and created disincentives for investing in their own assets because of lack of guarantees.

- *Weak contract enforcement.* The inability to force parties to commit to an exchange agreement created obstacles to increased specialization because many businesses chose to do more activities in-house rather than through the market. To compensate, they sunk costs into limited informal enforcement mechanisms.

And the natural experiment? The Peruvian state addressed two of these factors in the late 1980s and early 1990s when it introduced legal reform, first with the help of de Soto's Institute of Liberty and Democracy and later with the assistance of the World Bank. The results were astonishing. In the early 1980s the Institute of Liberty and Democracy found that it took 289 days and $1,231 paid in either registration fees or bribes to formalize a business. After reform in the 1990s the World Bank estimated that it took 100 days and $510 to complete the process. And in 2003 research carried out by a Peruvian think tank (, Grupo de Análisis para el Desarrollo or GRADE), with the aid of the Center for International Private Enterprise and the Ronald Coase Institute, discovered that Gamarra's formalization costs had fallen to 61 days and $163 (Jaramillo 2004).

Gamarra today is Latin America's largest textile cluster, home to more than 15,000 businesses, with annual sales of $1 billion. When interviewed in 2006, owners did not identify business formalization as a major obstacle. They have less of a fear of detection, though many worry about the state tax agency, and they have greater access to credit, though some complained of high interest rates. Instead, the entrepreneurs spoke most about fierce market competition, shrinking profit margins, underutilized capacity, and the lack of trust that exists between firms.

Prompyme, the state's promotional arm for small and medium-size enterprises (SMEs), has attempted two projects to address these concerns—the filling of an enormous order for sweat suits and a business networks initiative, the latter supported by funding from the Inter-American Development Bank. However, the disappointing results witnessed during the fieldwork simply reaffirmed the textile cluster's greatest challenge—the difficulty in joining forces that results from contract enforcement issues. Why can't these businesses either grow or team up and specialize to cut costs and improve productivity? Or better, what explains Garmarra's contract enforcement problems?

A vicious cycle

The answer lies in the vicious cycle the cluster now finds itself in: a pernicious SME multiplier effect has weakened the limited informal enforcement mechanisms already in place, which in turn prevents firms from specializing in order to capture gains from trade, the cornerstone of Adam Smith's *The Wealth of Nations.*

The cycle emerged innocently. The majority of Gamarra's business owners began either as poor Andean migrants or as their sons and daughters. Most started as street vendors, with nothing more than the small amount of capital they scraped together and a ferocious drive to improve their situation.

Whether they were founders or latecomers, Gamarra's entrepreneurs adhere to the holy trinity of capital's logic—work, save, reinvest. They labor 60–70 hours per week. Unlike many of Peru's white-collar employees, these small business owners are frugal with their earnings, conceptualizing spending decisions as a choice between "business" and "home." Home expenses are limited to basics—food, clothes, and, most important, education for their children. Many avoid investing in additional goods or home repairs because, as one daughter of a Gamarra businessman who now runs her own firm said, "to invest in the home is dead capital." It does not offer you any return. This woman, like many in Gamarra, possesses an insightful understanding of what capital is—an asset that must be thrown back into circulation repeatedly in order to self-valorize.

Gamarra's founders benefited from first-mover advantage and now speak nostalgically about the 1960s and 1970s. "Anything you made was sold," one pioneer said. "You couldn't manufacture fast enough." Although firms had formalization problems and thus little access to formal credit, they offset this by extending credit to one another.

Today this practice has become the exception rather than the rule. Most businesses pay suppliers up front, and offer credit only to those with whom they've traded for years. With formalization, the appearance of microfinance, and the willingness of larger banks to extend loans, a plethora of credit has become available. Despite this, many owners express an ambivalent attitude toward external financing, shunning it because of either high interest rates or a general aversion to debt.

But the most striking characteristic of Gamarra's entrepreneurs is neither their work ethic nor their capacity to save and reinvest. It is their drive for independence. More than a motif, it appears as a low and consistent bass line in nearly every conversation. The goal of hired workers, street vendors, and the sons and daughters of entrepreneurs is to "be independent," to establish their own income stream by starting their own business.

What explains this drive? It may be due to a combination of economic and sociocultural factors. First, Gamarra has relatively low entry barriers. Second, worker salaries often don't meet income needs. And third, the ideal of becoming a business owner offers many pride and self-respect. Regardless of the explanation, the drive to be independent initiates a business multiplier effect that leads to fierce industry rivalry and greater anonymity.

Both create a series of problems. First, low entry barriers and set-up costs, resulting from improved formalization procedures and the labor-intensive nature of the industry, crowd the industry and erode profit margins. Competitor rivalry turns Gamarra into a buyer's market. Second, lower purchasing and production costs could offset this, but the needed economies of scale can't be achieved. Smaller firms don't have bargaining leverage with their suppliers, and low levels of technology and limited market size result in excess capacity. And finally, greater anonymity increases opportunistic or shirking behavior that, because of Gamarra's size, cannot be checked by informal contract enforcement mechanisms.

This industry environment creates ex post enforcement problems both between and within firms, which squeezes businesses and forces them to "rationally" stay small.

Experience has taught Gamarra's business owners that each transaction they enter into presents a risk of loss. A couple walks up to your stand and places an order for 500 T-shirts. They leave a small down payment, but when they return they renege on the deal and refuse to pay. Because agreements are oral you can't demand payment, and because of Peru's high court enforcement costs you never bothered to sign a contract. Owners combat these problems with the same informal solutions de Soto identified in the 1980s—reputation, investment in information, social networks, collective organizations, and even violence. But these solutions have limited efficiency because of Gamarra's growth and anonymity. Combine this problem with a fiercely competitive market, and owners jealously guard their goods and services. Every day owners extend less credit as businesses come to depend more on formal financing, and demand more up-front cash payments in order to reduce risk of loss. Most owners can tell you a story of how a prosperous business went under because of one bad deal. So high are these risks, entrepreneurs opt to reduce them by eliminating more market activities and integrating them into their firm.

Attempts at joint production accentuate these between-firm obstacles. When several firms come together to fill an export order, they must set the conditions of their association by specifying liability, property rights divisions, and quality control procedures. The challenge is twofold: to specify rights and operational protocol ex ante and to enforce the agreement ex post should a firm not fulfill its obligation. But again, anonymity in the absence of effective enforcement (either because courts are inefficient or because informal strategies are limited) creates problems. Since businesses use joint production to fill short-term orders, the risk of partners' "stealing" designs and taking advantage of supplier contacts after the contract ends impedes full development of trust. In light of such costs, owners again rationally choose to integrate activities into their firm.

Given this, you'd think Gamarra's firms would have extra incentive to grow. But they're squeezed. The push to integrate runs up against internal agency costs. Owners find it difficult to enforce employer-employee and owner-manager contracts. How can a firm provide incentives for employees to work in the firm's or the owner's best interest when many employees also rationally seek to become independent and start their own business once the opportunity arrives?

Gamarra's owners resort to four strategies. First, many rely heavily on piece-rate labor, since workers respond to production incentives. Second, most prefer to hire only those who are recommended by friends or family. Third, owners delegate major responsibilities in the firm only to "trustworthy people" such as family members or close friends who constitute its inner circle. And fourth, some firms have begun to subcontract activities, an option that has grown given the excess capacity of some businesses. But piece-rate and service contracting just brings us back full circle to between-firm enforcement issues.

In sum, the leading cause of firm size has shifted from one of ex ante property rights in the 1980s to ex post contract enforcement today. Gamarra's firms stay small because they are squeezed. On the one hand, they're pushed to integrate activities within the firm. On the other, they avoid internal agency costs by returning to the market. In the end owners decide to do the work themselves—sewing, accounting, purchasing, and marketing. Productivity growth suffers, since they can't achieve gains from the division of labor. Capital must be defined and protected, but it also must be allowed to circulate and self-valorize through specialization.

If you calculate that there are roughly 15,000 firms in Gamarra and that 70 percent employ four people or fewer, then there are 10,500 microfirms. The remaining small to medium-size companies complain of excess capacity. Meanwhile, larger firms in East Lima—which have secured contracts with Timberland, Lacoste, Calvin Klein, and the like—are the only ones taking full advantage of export potential. What is the way out of this cycle?

A trail less traveled

As the many Ramiro Alarcóns in Gamarra would say, you have to find a way to make people realize that if we work together we'll all make more money. It seems like a simple notion, but the best ideas usually are. It is the central concept behind the potential solution that awaits Gamarra.

The textile cluster currently relies on two types of contract enforcement—organic private and designed public order mechanisms. Both have proved inadequate.

Organic private order enforcement refers to both bilateral and multilateral reputation strategies. Bilateral enforcement, as the name implies, occurs when two parties enter into an exchange in which the credible threat of the "cheated" punishing the "cheater" discourages breach. This usually happens in small communities, where markets are thin and information about buyers and sellers is more available. Such conditions exist in Andean villages, where local reciprocity practices prevail, and were used upon arrival in Lima. However, Gamarra's growth and increasing market anonymity make the formation of these relationships more difficult. They require high initial investments of time in order to build trust.

Given this, many firms also rely on a multilateral reputation mechanism, which occurs when several parties share information and are responsible for sanctioning cheaters even if they were not directly hurt. In Gamarra this emerged organically through gallery cooperatives. For example, firms may share a retail space and pay a joint fee for shared services, such as fixing a stairwell. When people don't pay, the cooperative posts a list of names and amounts owed, which damages reputations. But once again Gamarra's growth limits this mechanism's efficiency, since its effectiveness depends on how quickly information can be processed and shared. Firms move from gallery to gallery and easily get lost in Gamarra's sea of anonymity.

For these reasons some theorists trumpet the importance of designed public order mechanisms for supporting impersonal exchange. This refers to the creation of third-party state legal mechanisms that collect and process information in order to enforce contracts. The upside is that once the system is set up it has lower marginal costs, meaning that the cost of enforcing additional contracts is less than with organic reputation mechanisms. But there is a major drawback. The state monitors contracts, but who monitors the state? Peru's high level of government corruption, especially in its judicial system, makes third-party court enforcement mechanisms almost completely inaccessible. Firms in Gamarra are left to fend for themselves as best they can through elaborate social network and reputation mechanisms.

But there may be a third way—designed private order solutions. They resemble public order enforcement because they operate with formalized rules and procedures, but are similar to organic mechanisms because private agents impose sanctions. As Avner Greif (2005) points out, history is rife with examples of these solutions, from medieval guild associations to private third-party stock exchanges, and in many cases they have substituted for ineffective state institutions. This mechanism is more efficient than organic private and public order enforcement because it:

- *Restructures exchange.* Instead of many buyers and sellers searching for one another, they exchange with an intermediary, which minimizes the total number of transactions needed to do business.

- *Reduces information costs.* As an intermediary, the mechanism reduces the cost of collecting and processing information on an economic actor, such as past behavior and prior sanctions.

- *Minimizes agency costs.* Self-enforcing exchange gets created because the private intermediary has an economic incentive to be transparent and perform the service well, unlike in government, where corruption is more difficult to monitor and sanction.

- *Lowers marginal costs.* Formalized rules and procedures for information collection and punishment, while requiring high initial fixed costs, are capable of incorporating additional parties and exchanges at a low relative cost because of economies of scale.

Each of these characteristics meets Gamarra's contract enforcement needs. Small and medium-size enterprises need to form alliances in order to export. They can't compete with Asian, especially Chinese, volume, and thus know that they must adopt two types of strategies: produce for high-quality niche markets using Peruvian pima cotton and serve low-volume niche markets such as standardized clothing such as for security guards, school uniforms, or uniforms for youth sports leagues. But to do this, they must join forces to cut costs and standardize production. Or, according to Ramiro Alarcón, they must realize that they'll make more money together than separately.

A designed private order enforcement mechanism would help Gamarra's firms realize their export dreams by creating a brokerage network that offers incentives to all parties. On one end the brokerage would create a space for textile buyers, such as school districts or youth sports teams, to place cost-cutting orders. Allied Gamarra firms would bid for the job on the other end. The brokerage would also capture the information resulting from these transactions—customer ratings, firm and alliance behavior—in order to tap into and formalize existing reputation strategies. Firms would have a greater incentive to ally successfully because if they didn't they would lose access to export markets. The brokerage would have an incentive to fight against agency costs because if it didn't firms would stop participating. The use of information technology would help firms realize gains from technology and enable economies of scale.

The advantages are many: Gamarra's firms would expand markets, they'd begin to specialize in order to capture gains from trade, textile buyers would be able to cut costs, contracts and shipping would be standardized, the state would become more marginal to the system, and Gamarra's alliance flexibility would become a competitive advantage. But perhaps the greatest benefit is that the endeavor could be created at a low cost compared with what is now spent to support the sector. The brokerage would pay for itself through commission profits. In other words, the pieces are there for Gamarra to address its contract enforcement difficulties—the trail is marked.

Taking the first steps

What is needed now is a shift in mind-set. Currently, investors and policy makers search for economic development solutions either through top-down intervention that targets existing legal companies or through bottom-up reform that changes the legal rules of the game in order to create a more incorporative economic system. Both are necessary, especially the bottom-up ex ante legal reform. However, another approach may be around the bend. You just need to continue to travel down the other path de Soto opened up in order to see the trail. As history has shown, private companies can provide the ex post contract enforcement needed to increase specialization and division of labor. Look at late-medieval guilds. Think of the 17th-century Amsterdam Bourse. Both were essential to the emergence of modern capitalism. These solutions continue to exist in the form of brokerages and credit rating companies. It's time to apply them to the developing world.

To the untrained eye Gamarra doesn't look like a bastion of wealth, and it's not surprising that major investors are "afraid" of extralegality. People accept that it is an obstacle that needs to be overcome, which is true. But extralegality is also an investment opportunity for new firms to add value by lowering transaction costs. In the case of Gamarra there's a billion-dollar industry yearning to export. It is ripe for the investor's taking. And Gamarra's not the only one. There are "gobs" of opportunities throughout the developing world. What is needed is the right combination of capital, foresight, and local knowledge. What is needed is a Ramiro Alarcón.

References

de Soto, Hernando. 1986. El Otro Sendero. Lima: Editorial El Barranco. . Translated by June Abbot as The Other Path: The Invisible Revolution in the Third World. (New York: Harper & Row, 1989).

———. 2000. The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else. New York: Basic Books.

Greif, Avner. 2005. "Commitment, Coercion, and Markets: The Nature and Dynamics of Institutions Supporting Exchange." In Claude Menard and Mary M. Shirley, eds., The Handbook for New Institutional Economics. Norwell, Mass.: Kluwer Academic.

Hart, Keith J. 1970. "Small-Scale Entrepreneurs in Ghana and Development Planning." Journal of Development Studies 6: 104–20.

ILO (International Labour Organization). 1970. Towards Full Employment: A Programme for Colombia. Geneva.

———. 1972. Employment, Income and Equality: A Strategy for Increasing Productive Employment in Kenya. Geneva.

Jaramillo, Miguel. 2004. "Starting a Garment Manufacturing Firm in Peru: Background and Case Study." Research Report 1. Ronald Coase Institute, St. Louis, Mo.

North, Douglass. 1990. Institutions, Institutional Change, and Economic Performance. Cambridge: Cambridge University Press.

Silver Award Winner

ABSTRACT

Microfinance is a powerful development tool with which to eradicate poverty by providing financial services to the poor. The microfinance industry has been growing more than 25% a year during the last decade. Nonetheless, only a small fraction of the demand has been met to date. Domestic capital markets have been inaccessible to Microfinance Institutions (MFIs), and the funding gap with what the non-governmental organizations (NGOs) and multilateral institutions (e.g. World Bank) can provide will only broaden. The International Finance Corporation (IFC) and private investors (i.e. institutional and individual) have an important role to play in filling the market gap through commercial investments in microfinance. However, many foreign sources of potential funding for MFIs remain untapped due to the high risks of currency devaluation faced by international investor capital. Specifically, debt capital is available for MFIs but "foreign exchange risk" (FXR) is a major deterrent.

Recent financial economics research has focused on the market risk (i.e. interest and exchange rate volatility) associated with foreign currency borrowing by developing countries. These studies propose that adequate diversification through unhedged local currency lending could remedy the problem. This essay explores how private investors could pool capital to establish a **Global Local Currency Microfinance Fund,** allowing MFIs to tap into financial markets through a variety of transaction structures (e.g. direct loans, securitizations, commercial paper and bond issues etc.) while managing FXR to the MFIs and the investment Fund.

The unique nature of this concept is that fund assets would be diversified enough across countries and regions to guard against the foreign exchange rate losses. Also, the investments in emerging markets would allow investors the opportunity to earn a premium on the local currency MFI assets. In contrast, many existing microfinance funds provide capital in hard currencies (e.g. major currencies such as the US Dollar, Euros etc) while passing on the FXR to the MFI, utilize expensive hedging techniques or completely ignore the problem.

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The Role of Private Investors in Microfinance Development: Innovation of a Global Local Currency Microfinance Fund

MAHESHAN FERNANDO

The primary target of the United Nations Millennium Development Goals is to cut extreme poverty, defined as people living on less than a dollar a day, in half by 2015.[2] Microfinance is a powerful development tool with which to eradicate poverty by providing financial services to the poor. However, microfinance institutions (MFIs) fulfill only a fraction of the total demand, estimated at more than $300 billion, while market supply is just a meager $4 billion, (Meehan 2005). First, the general lack of access to local currency financing means that MFIs have not been able to obtain financing in domestic markets. Second, international donors that contributed initial capital to many existing MFIs cannot individually or collectively supply all the resources needed for scaling up services to satisfy demand. Therefore, private investors (that is, international commercial investments) will have to step in to close the steadily widening funding and access gaps so that the growth of MFIs is not slowed.

During the past decade commercial banks in most countries have been unwilling to lend to MFIs. Further, domestic capital markets have been inaccessible to unknown MFI issuers, and only a handful of MFIs have been authorized to accept deposits. The International Finance Corporation (IFC), institutional investor networks (that is, mutual and pension funds, insurance companies, global banks), commercial microfinance funds, university endowments (such as the Tufts microfinance fund), consortiums (such as the global commercial microfinance initiative), and privately managed international investors have an important role to play in filling the market gap through commercial investments in microfinance. However, MFIs generally are unequipped to deal with the foreign exchange risk borne by accepting most commercial funding or are unwilling to absorb the extra costs associated with hedging the risk (for example, use of options, currency swaps, forward contracts, and other derivative instruments). Therefore, unhedged hard currency borrowing will remain a substantial problem facing the microfinance industry over the next 10 years.

Recognition of a problem

Most investments in MFIs made by international funds are generally denominated in hard currencies such as the US dollar and the euro. Approximately 70 percent of the estimated $1.2 billion of private capital invested in microfinance to date is in hard currency debt (SEEP Network 2005). However, the MFIs generally extend loans to their clients in the local currency. This situation results in a foreign exchange risk for the MFIs because of the heightened risk of local currency devaluation in developing countries. Therefore, the repayment of the debt in hard currency–denominated capital could be significantly more expensive for the MFIs. For instance, a hard currency debt to an MFI at 8 percent or local currency debt at 13 percent effectively costs an MFI approximately 20 percent when accounting for an average inflation of 12 percent. This scenario places extra risk on the borrower and threatens the ability to repay the investor.

2 United Nations (http://www.un.org/millenniumgoals).

Unfortunately, it is generally cost-prohibitive for a fund to offer local currency capital by hedging deals on an investment-by-investment basis (that is, currency-by-currency basis), particularly for emerging market currencies. From the perspective of the investment fund, not having local currencies to offer also restricts the number of deals the fund can consider.

Potential demand for a local currency microfinance fund

Recent capital market transactions have evolved in the microfinance industry that reveal tremendous potential for capital access, but the foreign exchange challenges have created a bottleneck. Accordingly, in addition to the moral reasons for supplying local currency capital, there is ample demand and financial incentive for commercial funds to figure out how to do so on a cost-effective basis.

International capital markets and commercialization of microfinance would have to play a significant role to close the funding gap. The expectation is that 1 percent of the stock and bond portfolios held by the investing public will be invested in microfinance as a certified asset class in order to eradicate poverty by creating wealth.[3] Many sources of potential funding for MFIs remain untapped because of the high risks of currency devaluation faced by these funding sources. Specifically, debt capital is available for MFIs, but foreign exchange risk is a potential deterrent. Debt capital allows even the youngest MFIs to leverage funds. Assisted by direct local currency loans and guarantees, MFIs could borrow from a local bank at 12–13 percent and leverage funds at 2–3 to 1. MFIs may leverage in excess of 12 to 1 with more flexible financial instruments like long-term debt issuances.

Furthermore, most of the commercial investments to date are denominated exclusively in hard currencies. The MFIs applying for capital would prefer funding in local currency, and the existing funds are forced to defer other prospective candidates that could not accept US dollar–denominated loans. In fact, the legal frameworks of governments in certain countries (Colombia, República Bolivariana de Venezuela) actually prohibit certain types of financial institutions from acquiring foreign currency–denominated loans. To reverse this trend, private investors should focus on investments in local currencies in MFIs.

Developing a global local currency microfinance fund (the "Fund")

Capital markets hold great promise for turning private investors to microfinance but as yet have not realized their potential in this area. Microfinance, as an asset class, could provide a double bottom-line return to investors while reducing Third World poverty. The benefits for investors are twofold: they could invest in the alleviation of poverty while at the same time obtaining a financial return.

There are ongoing debates in microfinance that describe potential areas of foreign exchange risk management. These discussions also explain that hedging foreign currency exposure across local currencies is very expensive and that there are minimal hedging instruments for emerging market currencies where MFIs operate. Furthermore, the industry is slow to respond, while the largest international microfinance donors do not appear prepared to develop a risk mitigation vehicle to resolve the foreign currency exposure. Recently several capital market transactions have launched in the microfinance industry, but with nothing substantial to address foreign currency risks. The solution is not a simple one, but the possibility exists within capital markets with the emergence of commercial microfinance initiatives (such as the Blue Orchard bond issue managed by Morgan Stanley) and IFC's unprecedented role in bringing

3 Prisma Microfinance (http://www.prismamicrofinance.com/AboutPrisma.html).

local currency financing to MFIs on a country basis (for example, Fundación WWB Colombia, Uganda Microfinance Limited, FONDEP Morocco, and the Russian Women's Microfinance Network).

Application of economics research on foreign exchange risk management

Recent financial economics research that is presented in this section discusses the potential to greatly improve the ability of developing countries to reduce their exposure to other countries' interest rate and exchange rate volatility and to lower their cost of raising capital abroad by borrowing in their own local currency.

According to one study, "Up from Sin: A Portfolio Approach to Financial Salvation" (Dodd and Spiegel 2004), the key to achieving the foreign exchange risk management goals is for emerging economies to borrow in their own currencies and for investors to lend by creating portfolios of local currency government debt securities that employ the risk management technique of diversification to generate a return-to-risk that competes favorably with those of other major capital market securities indices.

The study found that historically there is not a high degree of correlation between local currency securities, which illustrates the power of diversification to lower risk. Also, most developing countries are more highly rated for debt obligations in their own currencies than for those in foreign currencies. Therefore, the financial economics conclusion to be drawn from this comparison is that there are greater potential reductions in domestic market risk (interest rate and exchange rate uncertainty) through diversification than reductions in credit risk through diversification. Based on data analyzed for 1994 through 2003, a portfolio of emerging market local currency debt can generate rates of return relative to risk that compete favorably with those of major securities indices in international capital markets.

The appendix provides a detailed analysis of the Dodd and Spiegel study illustrating the application of research to structure a local currency debt fund and the track record of an emerging market local currency debt fund.

Another study, "Foreign Exchange Risk Management Practices of Microfinance Institutions" (Crabb 2004), proposes that debt capital that diversifies across the sources of funds and allocates these funds among many different currencies could be a possible solution for mitigating exchange rate risks. Therefore, if the microfinance network (Opportunity International) incurs debt in three major currencies, such as the US dollar, the euro, and the yen, and then distributes these funds across many different currencies, a reduction in the risk of exchange rate changes is possible. Although it is possible that each of the emerging market currencies would move against all three hard currencies in the same manner, any high debt service costs in one hard currency can be offset against lower costs in another.

Rationale for developing the "Fund"

This section incorporates the financial economics research and the application of capital market strategies to justify the concept of the "Fund."

The economics studies imply that diversification through local currencies (which do not require using hedging techniques to mitigate the currency risk) could be a feasible and less expensive solution for foreign exchange risk management, with substantial benefits for the microfinance industry. The creation of a global local currency microfinance fund (the "Fund") capitalized

with a combination of hard currencies (such as the US dollar, euro, Australian dollar, and yen) and lending across a diversified basket of emerging market currencies in the form of debt financing to MFIs could reduce foreign exchange risk exposure and provide a higher yield per unit of risk. The MFIs could borrow in the local currency, and the interest rate charged to an MFI would include a risk premium (similar to any corporate bond) to compensate for the credit spread relative to a local currency sovereign bond.

A diversified fund portfolio comprising microfinance investments capturing emerging market premiums offered in local rates, and risk reduction through low correlations between currency exchange rates, could perform as well as a hard currency–denominated debt portfolio. Once sufficiently diversified, and provided with an equity cushion to cover foreign exchange losses, the Fund should be able to provide a competitive risk-adjusted return to the investors.

The recent trend of investing in emerging market economies (government and corporate debt securities denominated in local currencies) has become increasingly popular. This has resulted in fund managers taking calculated risk-reward approaches by compensating with higher yields in local currencies than those offered on debt of the same maturity in dollars. In effect, fund managers are expecting that with a diversified portfolio, the currency devaluations will be more than offset by the additional yields.

The strategy has paid off in a number of countries, reflecting broad improvements made in some emerging market economies. For example, JP Morgan Chase & Co.'s newly launched Government Bond Index-Emerging Markets (GBI-EM), which measures the performance of local currency bonds for 16 developing countries, has produced a total return of 59 percent since 2001, when converted to dollars.[4] The local bond index returns are competitive with the dollar-denominated emerging market index returns for that period while offering less volatility and a significantly higher credit quality. The performance of other local currency bond indices (such as ELMI and S&P IFCI/IFCG) also has been very attractive in recent years.

Applying capital market strategies to microfinance, the Fund could select the country, currency, and MFI composition based on its evaluation of relative interest rates, inflation rates, exchange rates, monetary and fiscal policies, trade and current account balances, strength of MFIs, and other specific factors the Fund believed to be relevant. The Fund would likely concentrate its MFI investments in Asia, Africa, the Middle East, Latin America and the Caribbean, and the emerging markets of Eastern Europe. For instance, microfinance investments in Brazil, the Russian Federation, India, and China (BRIC), the four biggest emerging market economies, with a huge unmet demand, would allow investors to get exposure to these economies through a diversified local currency fund. The Fund would also mobilize capital to raise funding from other sources such as local banks or the capital markets through securitizations and bond issues. Furthermore, the Fund would expect to earn a premium over local currency bonds or treasuries on exposure to MFI assets.

While on the surface the added local currency risk may flag additional risk, the reality is rather different. The reason is that the volatility of the whole is less than the sum of its parts. Emerging market bonds have a low correlation with US Treasury bonds because they essentially provide a credit spread. Investing in emerging market securities (such as MFI assets) would add diversification to the portfolio and some protection against changes in US markets. However, most of the diversification that foreign bonds provide to investors comes from taking on currency exposure. The historically low correlations between emerging market currency fluctuations could be used as a unique, cost-effective self-hedge strategy to mitigate currency

4 Craig Karmin, "Bold Bet: Local Currency Bonds," Wall Street Journal, Money & Investing section, June 17, 2005.

risk through diversification across different countries' local currency MFI debt. The emerging market local currency debt universe can offer investors lower risk than dollar-denominated emerging debt, but also high returns in an environment of rising emerging currencies or generalized dollar weakness.

Overall, the higher nominal rates in local currencies (compared with US rates) could offset devaluations in such currencies, creating a partial insurance in dollar terms for the international investor. The depreciation of a currency in a country or region can also be offset by the appreciation in another country or region. Furthermore, analyzing the historical local currency exchange rates relative to a hard currency could determine the risk factor of devaluation. The expected premiums to compensate for the market risk (interest and exchange rate uncertainty) during the investment horizon could be forecasted based on these exchange rate relationships. Medium- to long-term lending, tracking interest and exchange rate relationships, and rebalancing the currency exposure in the portfolio could further mitigate unexpected events (Fernando 2005).

The role of IFC in catalyzing the Fund

Private sector lending in developing countries has often been in the form of loans denominated in foreign currency such as the dollar or euro. Recent empirical evidence has shown "currency mismatches" as a major determinant of financial crises during the 1990s in emerging markets (Hoschka 2005). In general, borrowers in many emerging economies face this situation whenever they finance their local currency transactions with foreign currency-denominated debt. Therefore, any fluctuation in the exchange rate that results in depreciation of the local currency would negatively affect their net worth. However, borrowers in developing countries usually tap international financial markets because of lack of local financial resources available and the lower nominal international interest rates. But the ability of these borrowers to hedge against foreign currency risk is limited or nonexistent. Therefore, any random shocks to the emerging economy could lead into a downward spiral of financial crisis. Establishing adequate mechanisms to hedge against currency risk in developing countries would increase the flow of foreign capital.

In this context IFC can play a major role in strengthening the local financial systems, reducing the need to borrow in hard currency, and therefore reducing investors' exposure to currency mismatches. Specifically, one of the most effective roles of IFC is to "lead by example" by actively engaging in providing suitable policy advice and working with the local and international financial sector in finding local currency financial solutions for global MFIs. This would open emerging bond markets for international investors by raising capital for the microfinance sector in local rather than foreign currency.

Advantages for the MFI sector

The loan portfolios of MFIs are growing rapidly while the delinquency rates of microfinance clients and the number of bad loans written off are low and declining. The quality and transparency of financial information in the microfinance sector have improved, as has the potential to affiliate with international networks to lower the overall transaction cost of assessing and monitoring the creditworthiness of MFIs. Therefore, the access to mainstream capital markets in the form of local currency funding is essential to maintain the strong growth rates in the microfinance industry. The direct advantages for the MFI sector include these:

- The local currency Fund would ultimately assist MFIs in tapping into domestic capital markets, allowing the microfinance sector to leverage resources in multiples while avoiding foreign exchange risk and increasing the flow of information about MFIs to potential lenders.

- The focus on market-based approaches to access local currency financing would pioneer in the development of emerging capital markets, credit ratings, derivatives markets, and credibility with the banking sector, resulting in the promotion of microfinance as an openly tradable and liquid asset class.

- The MFIs would be able to build a credit history and ultimately access funds on their own, thereby building the credibility of the domestic financial sector.

- Commercial financing could be used for a broader range of financial instruments, such as direct loans, guarantees, fixed income instruments (including certificates of deposit), commercial paper, notes, bond issues, and securitization.

Major economic benefits of the Fund

There are major economic benefits from extending local currency financing to MFIs in emerging economies. These benefits far outweigh the potential risks and costs to these countries. These micro- and macroeconomic benefits include:

- Creating an international financial markets benchmark, which would price the market risk (inflation, interest, and exchange rate risks) as opposed to the credit risk.

- Establishing the price of "systematic" risk by eliminating the individual risk associated with each security.

- Formulating the local currency interest rates and exchange rates will have the excess risk premiums priced out of them.

- Attracting more international and stable capital because the returns and risks would be more akin to those found in advanced economies' capital markets.

- Increasing demand for local currency government securities and, by association, other local currency securities (MFI assets), which would lower the cost of capital in those markets.

- Promoting improvements in local financial markets, including clearing, settlements, and secondary market trading.

- Stimulating investment and growth by lowering local currency interest rates and increasing the maturity and depth of local credit markets.

- Increasing the seigniorage (net revenue derived from the issuing of currency) of governments by increasing the use of local currency for trading and servicing local currency–denominated assets. This would result in lower borrowing costs and improved fiscal positions for these developing country governments.

- Developing local bond markets and thus allowing the creation of derivatives markets. This would enable international investors to hedge currency risk. If emerging economies are able to borrow internationally in their local currency, these countries can better avoid the pitfall of a currency mismatch and thus further stabilize their macroeconomic performance.

Conclusion

This paper has argued that there is significant potential demand for local currency financing solutions to be provided by international private investors in the microfinance industry. Loans denominated in hard currencies and existing foreign exchange risk management practices are prohibitively expensive—to the MFI, the microfinance client, or the existing investment funds. The implementation of a global local currency microfinance fund (the "Fund") that employs the risk management technique of currency diversification could be a feasible and less expensive solution, with substantial benefits for the microfinance industry.

It would be important to monitor the investment pool and to match the Fund's MFI investments in emerging markets in the long term. This strategy would allow management to protect the Fund's investments from exchange rate risk on local currency assets and interest rate risk by adequately balancing the portfolios and constantly monitoring investment positions. Therefore, the appointment of an advisory committee would be prudent to track the Fund's overall performance.

The ultimate goal of this paper is to address the foreign exchange risk at the industry level so that MFIs may receive their funding proceeds in local currency at a lower cost of funds than is currently available. Ideally, the solution would be executed in a transparent form so as to promote industrywide replication.

The United Nations designated 2005 as the International Year of Microcredit to draw attention to major issues in the industry and to encourage international action to address concerns that have global importance and ramifications.[5] One of its major goals is to encourage innovation—through thinking outside the box—in finding ways for poor people to live better lives. This is the best opportunity for capital markets experts along with people and organizations currently involved in the microfinance sector to experiment with strategies that would lead to a ground-breaking solution. An innovation resulting in lower costs to poor clients and increased access to international commercial investments in local currencies would be a winning combination. After all, foreign exchange risk remains a significant problem in microfinance that cannot be further ignored.

The analysis of this paper is not conclusive, but it does lay some groundwork that may lead to an effective foreign exchange risk management tool. Comments and suggestions are most welcome.

5 Microcredit Summit Campaign (http://www.microcreditsummit.org).

Appendix

The body of the paper is supported by analyzing the financial economics research study "Up from Sin: A Portfolio Approach to Financial Salvation," by Randall Dodd and Shari Spiegel (2004), which takes up the challenge of building a diversified local currency debt portfolio and providing a policy analysis of what can be expected will prove to be a major new financial innovation to finance development.

Application of research to structure a local currency debt fund

The Dodd and Spiegel approach is based on establishing an emerging market local currency debt (LCD) portfolio. The core idea of the LCD approach is to apply the insight of portfolio theory described by William Sharpe (Sharpe 1970). The insight offered by portfolio theory is that a portfolio consisting of different securities whose returns are sufficiently independent (and especially so if they are negatively correlated) can yield higher risk-adjusted rates of return than the individual securities. In other words, the volatility of the whole is less than the sum of its parts.

The LCD portfolio would work by buying local currency government debt instruments—and, by implication, private assets such as debt issues or loans to MFIs—from many different developing countries and combining them so as to produce a portfolio whose return and variance (that is, a risk-return profile measured in US dollars) are competitive with those of major US and European securities indices in international capital markets.

The portfolio risk of local currency debt can be substantially reduced through diversification
The market risk, which consists of the uncertainty of domestic local currency interest rates and exchange rates for each local currency security, is often significant for any one local currency asset. From 1994 to 2003 the average volatility of individual country returns on local currency debt instruments was nearly 16 percent. At the same time yields on local currency debt were also high, at 13.7 percent on average, but not high enough to compensate for the risk. (Yield and volatility data are taken from average yields published by JP Morgan as part of the ELMI+ index—that is, local currency–denominated debt securities—for 1994–2003.) Hence, investing in any one local currency market was not attractive.

Combining individual country securities into a portfolio, however, does produce desirable results. Based on the Dodd and Spiegel study, returns on a diversified portfolio range from 8 to 10 percent annually, while the risk of a diversified portfolio drops substantially, to approximately 5.5 percent (which is in line with US investment-grade bonds).

Note that this approach does not involve hedging the currency risk. It is very expensive to reduce this market risk by hedging with derivatives because the cost of hedging is equivalent to the differential between foreign and local interest rates and, as discussed above, local interest rates tend to be very high. Another reason that hedging may be expensive is that there are a disproportionate number of short hedgers in the market and a relative shortage of speculators willing to speculate on long positions in local currencies.

In other words, the costs of the hedge overwhelm the benefit of cross-border borrowing or investing. In this context the most cost-effective method of mitigating risk exposure is achieved through diversification across different countries' local currency debt. It is the unique aspect of this currency risk that can be substantially reduced through diversification. The reason for this is that, historically, currency fluctuations have had extremely low correlations.

To illustrate low correlations across currencies, the Dodd and Spiegel study analyzed the exchange rates of developing countries based on data available for 1980–2004.

- The annual rate of change in 46 countries' exchange rates between January 1995 and March 2004 was 9.8 percent.
- The annual rate of change in 37 of those countries' exchange rates over the longer 14-year period between January 1990 and March 2004 was 10.2 percent (with highs reaching –78.4 percent and –43 percent annually for Brazil and Romania, respectively).
- The monthly rate of change for 47 country currencies from January 1980 and March 2004 derived that the average correlation between the rates of change for the period was 0.0713 (table A.1).

The research found that *there is not a high degree of correlation between local currency securities.*

TABLE A.1 AVERAGE CORRELATION COEFFICIENTS FOR 47 DEVELOPING ECONOMY EXCHANGE RATES, 1980-2004

ECONOMY	CORRELATION COEFFICIENT	ECONOMY	CORRELATION COEFFICIENT
Argentina	0.013	Lithuania	0.060
Bangladesh	0.040	Malaysia	0.073
Botswana	0.123	Mauritius	0.144
Brazil	0.059	Mexico	–0.020
Bulgaria	0.025	Morocco	0.190
Chile	0.033	Namibia	0.109
Colombia	0.040	Nigeria	0.022
Côte d'Ivoire	0.087	Pakistan	0.061
Croatia	0.150	Peru	0.042
Czech Republic	0.180	Philippines	0.045
Ecuador	0.022	Poland	0.082
Egypt, Arab Rep. of	-0.012	Romania	0.041
Estonia	0.217	Russian Federation	0.021
Ghana	0.042	Slovak Republic	0.205
Hungary	0.153	Slovenia	0.206
India	0.063	South Africa	0.110
Indonesia	0.038	Sri Lanka	–0.017
Israel	0.085	Thailand	0.086
Jamaica	0.027	Trinidad and Tobago	0.008
Jordan	0.097	Tunisia	0.169
Kenya	0.077	Turkey	0.054
Korea, Rep. of	0.028	Ukraine	0.006
Latvia	0.078	Venezuela, RB de	–0.014
Lebanon	0.003		
		AVERAGE CORRELATION	0.0713

Source: Dodd and Spiegel 2004, based on data from International Monetary Fund, International Financial Statistics

Local currency debt offers higher credit quality than foreign currency debt

Diversification is also a means of reducing credit risk. The primary risk to investing in local currency government debt is the domestic market risk (interest and exchange rate uncertainty) and not credit risk. Most developing countries are more highly rated for debt obligations in their own currencies than for those in foreign currencies (table A.2).

TABLE A.2 DEBT RATINGS FOR LONG-TERM MATURITIES, FEBRUARY 2004

ECONOMY	FOREIGN CURRENCY DEBT	LOCAL CURRENCY DEBT
Brazil	B+	B+
Chile	A–	A+
Colombia	BB	BBB–
Costa Rica	BB	BB+
Egypt, Arab Republic of	BB+	BBB
Estonia	A–	A+
Korea, Republic of	A	AA–
Malaysia	BBB+	A
Mexico	BBB–	BBB
Mozambique	B	B+
Peru	BB–	BB+
Philippines	BB	BB+
Poland	BBB+	A+
South Africa	BBB	A–
Thailand	BBB	A–

Source: Fitch Ratings

The market risk of local currency debt is less than the credit risk of US dollar debt

The market risk of local currency–denominated securities is lower than the credit risk of dollar-denominated securities. These risks are captured by the average correlation coefficients for the ELMI+ (local currency–denominated debt) and EMBI+ (US dollar–denominated debt) indices calculated by JP Morgan (monthly series, May 1993–May 2004).

The comparison of market risk (interest and exchange rate risks) on local currency-denominated securities and credit risk on dollar-denominated securities produced the following results (table A.3).

- *Market risk:* The ELMI+ index measures the rate of return (changes in price plus interest payments) on local currency debt securities in each of the 25 listed economies.

- *Credit risk:* The EMBI+ index measures the rate of return on US dollar–denominated debt securities in the 20 listed economies.

There are 13 economies for which there are both ELMI+ and EMBI+ data.

The correlation coefficients in the ELMI+ column in table A.3 measure the average correlation between the economy and the other 24 economies for which there are data. The average correlation coefficient is 0.120.

The coefficients in the EMBI+ column are the same measures, but for dollar-denominated foreign debt, between the economy and the other 19 economies. The average correlation coefficient is 0.445.

The EMBI+ correlation coefficients on average are substantially higher than those for local currency debt securities in ELMI+. For the 13 economies for which there are common data, the average correlation coefficient is 0.312 higher for the credit risk reflected in the EMBI+ series than for the market risk reflected in the ELMI+ series.

TABLE A.3 AVERAGE CORRELATION COEFFICIENTS FOR ELMI+ AND EMBI+, MONTHLY SERIES MAY 1993–MAY 2004

ECONOMY	ELMI+ (MARKET RISK)	EMBI+ (CREDIT RISK)	DIFFERENCE
Argentina	–0.011	0.396	0.407
Brazil	0.115	0.495	0.380
Bulgaria		0.469	
Chile	0.165		
China	0.129		
Colombia	0.059	0.419	0.360
Czech Republic	0.103		
Ecuador		0.454	
Egypt, Arab Rep. of	0.044	0.487	0.444
Hong Kong (China)	0.110		
Hungary	0.092		
India	0.170		
Indonesia	0.131		
Israel	0.002		
Korea, Rep. of	0.159	0.405	0.246
Malaysia	0.151	0.390	0.239
Mexico	0.135	0.553	0.418
Morocco		0.533	
Nigeria		0.525	
Panama		0.539	
Peru		0.533	
Philippines	0.133	0.466	0.333
Poland	0.174	0.514	0.339
Russian Federation	0.202	0.431	0.228
Singapore	0.187		
Slovak Republic	0.078		
South Africa	0.065	0.126	0.061
Taiwan (China)	0.186		
Thailand	0.230		
Turkey	0.074	0.334	0.260
Ukraine		0.360	
Venezuela, RB de	0.121	0.465	0.344
AVERAGE	0.120	0.445	0.312

Source: Dodd and Spiegel 2004, based on data from ELMI+ and EMBI+ Indices calculated by JP Morgan

The financial economics conclusion to be drawn from this comparison is that there are greater potential reductions in market risk through diversification than reductions in credit risk through diversification.

Track record of an emerging market local currency debt fund

In order to better illustrate the market risk of investing in local markets, Dodd and Spiegel created a sample LCD portfolio using JP Morgan ELMI+ data. For simplicity, the sample portfolio equally weights the countries in the index. The ELMI+ weights were not used because the ELMI+ is highly concentrated in Asia and thus is not optimal diversification. In addition, ELMI+ includes major currency risks implicit in emerging market currencies tied to the euro or yen.

The ELMI+ data set starts in 1994, so the analysis began in that year. The LCD portfolio consisted of local treasury notes that provided returns (adjusted for foreign exchange fluctuations and variable local rates) that exceeded the ELMI+ and EMBI+ indices during the 10-year period 1994–2003. A negative return was generated in only one calendar year, 1997 (the year of the East Asian crisis), when the LCD portfolio was down –0.78 percent. In 1994 (the year of the Mexican crisis), 1998 (the year of the Russian crisis), and 2001 (the year of the Argentine crisis) returns were all positive at 3.2 percent, 17.8 percent, and 5.3 percent. In contrast, the EMBI+ generated negative returns for those years of –18.9 percent, –14.4 percent, and –0.8 percent.

The average risk of the LCD portfolio was only 5.5 percent in 1994–2003, significantly lower than the EMBI+ risk of 19.3 percent over the same period.

Table A.4 provides a comparison of the risk-return profiles of the LCD, ELMI+, EMBI+, S&P 500, and MSCI Emerging Market Free Index of equities.

TABLE A.4 RISK-RETURN PROFILE, 1994-2003 (PERCENT)

INDEX	RETURN	RISK
LCD	8.7	5.5
ELMI+	8.1	7.6
EMBI+	9.6	19.3
S&P 500	7.3	21.4
MSCI EM-Free	–6.6	27.6

Source: Dodd and Spiegel 2004, based on data from JP Morgan

It is important to note that the start date of 1994 has a significant effect on measured returns on all asset classes. If the data were to start a year earlier, or a year later, returns would be higher for all emerging market indices. The results are stated in Table A.5.

TABLE A.5 RISK-RETURN PROFILE, 1994-2004 (PERCENT)

INDEX	RETURN	RISK
LCD	9.3	5.5
ELMI+	8.3	8.0
EMBI+	13.9	16.8

Source: Dodd and Spiegel 2004, based on data from JP Morgan

Another important point that is not shown in Table A.5 is that the volatility of the LCD portfolio (measured as the standard deviation) is remarkably consistent over time. Dodd and Spiegel tested the data for different start dates and found that the volatility of the LCD portfolio never goes above 6%. This further illustrates the power of diversification at lowering risk in this asset class. In contrast, the volatility of the EMBI+ jumps from slightly over 9% to nearly 20%, depending on whether the start date is before or after a crisis year.

Another comparison—and indeed, contrast—that illustrates this point is one with the dollar returns on the FTSE, a sterling-denominated equity index. This portfolio is diversified across the 100 securities that make up the FTSE index, but it is not diversified with regard to foreign currencies because the US dollar exchange rate with the UK sterling introduces additional risk to the FTSE equity index. The average annual returns over a similar period (January 1995–January 2003) were 7.52 percent and the standard deviation was 17.73 percent. This represents a lower yield and higher risk than the LCD portfolio, and a lower yield for about the same level of risk as for the S&P 500—or alternatively about the same yield but a much higher risk than a portfolio of US AAA corporate bonds (Dodd and Spiegel 2004).

References

Crabb, Peter R. 2004. "Foreign Exchange Risk Management Practices of Microfinance Institutions." *Journal of Microfinance* 6 (2).

Dodd, Randall, and Shari Spiegel. 2004. "Up from Sin: A Portfolio Approach to Financial Salvation." Financial Policy Forum, Derivatives Study Center, Washington, DC

Fernando, Maheshan. 2005. "Managing Foreign Exchange Risk: The Search for an Innovation to Lower Costs to Poor People." *Microfinance Matters Newsletter* (May). United Nations Capital Development Fund, New York.Hoschka, Tobias C. 2005. "Local Currency Financing: The Next Frontier for MDBs?" ERD Working Paper 68. Asian Development Bank, Manila.

Meehan, Jennifer. 2005. "Tapping Financial Markets for Microfinance." Grameen Foundation USA, Washington, DC

SEEP Network. 2005. "Five Strategies to Minimize Foreign Exchange Risk for Microfinance Institutions." Progress Note 13. (Washington, DC)

Sharpe, William. 1970. "Portfolio Theory and Capital Markets." McGraw-Hill Book Company, New York.

Bronze Award Winner

ABSTRACT

This paper posits that African entrepreneurs, in both the formal and the informal economy, are creatively destroying modern information and communications technologies (ICTs)—turning them into products and services that are more appropriate to the capabilities (factor endowments) and needs of a majority of the African poor. The paper argues that this raises key questions about whether the core question of development in Africa has been rightly posed. It posits that the fundamental question of development in Africa, one that precedes questions about how to incorporate the poor into the "modern economy," is that of creating an "appropriate economy."

To support this claim, the paper focuses on the innovative utilization of mobile telephony in Africa as a development tool. Agents in both the formal and the informal economy in Africa are coming together to develop innovative products and services by employing mobile telephony—most notably as an infrastructure service; a financial sector service (virtual currency, electronic accounts or banking); a market, weather, and health information exchange mechanism; and an investment sector service.

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ICT's as Appropriate Technologies For African Development

KRISTIN DAVIS AND COSMOS OCHIENG

A vast literature on the informal or traditional economy in developing countries identifies key characteristics of the poor as rational, efficient, entrepreneurial, technologically adaptive, creative, and brand and value conscious (Schultz 1964; Portes, Castells, and Benton 1989; de Soto 2000; Prahalad 2005). Why then does poverty persist among these same populations?

E. F. Schumacher's *Small Is Beautiful* (1973) gave rise to the concept of inappropriate technology as a partial explanation for the problem of underdevelopment. It was posited that advanced technologies (transferred to developing countries from developed ones) tended to have a "pro-rich bias" or developed country bias (James 2002). Consequently, it was argued that for faster and more equitable development, developing country technology needed to be "appropriate" as far as production and consumption were concerned. That is, technological production needed to be tailored or adapted to the skills and consumption needs of poor people, who constitute a majority of developing country populations. "Appropriate technology" needed to be labor and skills intensive and responsive to poor people's needs, many of which were not adequately catered to by the market.

This paper posits that African entrepreneurs, in both the formal and the informal economy, are creatively destroying modern information and communications technologies (ICTs)—turning them into products and services that are more appropriate to the capabilities (factor endowments) and needs of a majority of the African poor. The paper focuses on the innovative utilization of mobile telephony in Africa as a development tool to support this claim. Agents in both the formal and the informal economy in Africa are coming together to develop innovative products and services by employing mobile telephony—most notably as an infrastructure service; a financial sector service (virtual currency, electronic accounts or banking); a market, weather, and health information exchange mechanism; and an investment sector service. Other ICTs that are undergoing similar creative destruction in Africa, especially the Internet and email, are not covered here.

Creative destruction in the mobile telephone sector by African entrepreneurs

Explaining the rise of many relatively resource-poor Japanese firms in the 1980s (against their resource-rich American and European competitors), Prahalad and Hamel (1990) demonstrate that these firms were able to turn resource disadvantage into competitive advantage by leveraging internal and external resources through resource recombination or combinative capability. Resource recombination is defined as the process of combining either existing products into new products or existing technologies into new technologies with new functionalities. Combinative capability refers to a firm's ability to make efficient use of its resources by combining either internal resources or internal and external resources to create new products and services that are valuable, nonsubstitutable, and difficult to imitate (Koruna 2004, p. 508).

Resource scarcity, increasingly competitive world markets, demographic pressures, urbanization, changing consumer preferences, globalization, and economic liberalization are stimulating combinative capability and resource recombination processes in Africa—or creative destruction of mobile telephony into more appropriate products and services for a majority of the African poor.

Despite its extensive poverty, Africa has been the fastest growing mobile market in the world over the past five years [2000-2005] (Coyle 2005, p. 3). Modern telecom systems in Africa are largely mobile systems (Scott and others 2004; Waverman, Meschi, and Fuss 2005, p. 12). By 2003 there were 6.1 mobile subscribers for every 100 persons in Africa, as compared with 3 fixed line subscribers (Coyle 2005, p. 3). In 2005 there were 52 million mobile subscribers (about 7 percent of the African population) compared with 25 million for fixed lines, with the mobile accounting for at least three-quarters of all telephones in 19 African countries (Scott and others 2004, p. 1; Coyle 2005, p. 3). Scott and others (2004, p. 1) estimates that the number of mobile subscribers in Africa will continue to expand at the rate of 35 percent a year over the next few years. These numbers are conservative; teledensity figures mask the extent of mobile access because people in Africa, especially the poor, tend to share mobile phones (McKemey and others 2003).

If the uptake of mobile telephony in Africa, especially among low-income populations, has been faster and more widespread than many expected (Scott and others 2004, p. 2), the innovative uses to which it has been put are even more surprising. These uses expose the limitations of both the old and the modern economy to the needs, conditions, and capabilities of the poor in Africa. The mobile telephone in Africa has morphed to serve uniquely African development needs in addition to performing the conventional telecom function it has served in the developed world. McKemey and others (2003) estimate that in typical rural districts of Africa, up to 80 percent of households make regular use of phones in a number of ways besides as an infrastructure service (see below).

The rapid spread of the mobile in Africa is partly due to the economic and political liberalization of the late 1980s through the 1990s and partly due to inherent features of mobile telephony that make it more appropriate to poorer and marginal conditions and areas and to capabilities of poor or low-income customers than either fixed telephony or other ICTs:

- A shorter payback period on investment compared with fixed telephony. Mobiles involve lower installation costs and faster rollout than fixed lines. "The cost advantages of mobile phones as a development tool consist not only of the lower costs per subscriber but also the smaller scale economies and greater modularity of mobile systems" (Waverman, Meschi, and Fuss 2005, p. 12).

- Complementarities with lower levels of skills than needed for the Internet (Coyle 2005, p. 6), making it more readily accessible to the poor and the less educated.

- Lower income and social entry barriers than both fixed telephony and the Internet due to a combination of lower up-front expenditure and the mobile's suitability for communal or shared usage (Coyle 2005, p. 6).

- Innovative business models such as the MTN mobile village pay phones in Uganda, Vodafone's community phone shops in South Africa, services allowing airtime credit swapping between subscribers such as "sambasa me" in Kenya, and lower denomination prepaid cards.

- Network effects that generate greater momentum once critical mass is reached (Coyle 2005, p. 6).

6 Waverman, Meschi, and Fuss (2005) estimate that a mobile network costs 50 percent less per connection than fixed lines.

- Innovative uses to which the mobile can be put besides its telecom functions—for example, as virtual currency (see the following section).

That mobile telephony has been adapted to serve uniquely African development needs was not by design or as a result of official policy, at least initially. Rather, mobile operators have been forced to learn and adapt to the innovative ways in which Africans, especially the poor and low income earners, use their mobiles, and policy makers are yet to catch up, if regulations facing the sector are anything to judge by (Scott and others 2004; Coyle 2005).

> *The nature of the demand for mobiles in Africa has forced some operating companies to change their thinking about profitably serving low income customers . . . some innovative operating companies have learnt from the marketplace by observing how customers (both individuals and small scale entrepreneurs) informally bulk up (or aggregate) demand by on-selling single account services to other customers and have adapted their own services accordingly, such as through Vodafone's Community Services in South Africa. (Scott and others 2004, p. 2)*

The creative destruction of mobile telephony into more appropriate products and services in African economies is highlighted below.

Telecommunications and economic development: the mobile as an infrastructure service

Economic research suggests a positive correlation between the spread of telecommunications and economic growth (Hardy 1980; Norton 1992; Sridhar and Sridhar 2004; Waverman and Roller 2001; Waverman, Meschi, and Fuss 2005). Waverman and Roller (2001) claim, for instance, that the spread of telecom networks was responsible for one-third of output growth between 1970 and 1990 in OECD countries, and that the spread of modern telecom infrastructure in the OECD over the same period generated economic growth over and above the investment in the telecom infrastructure. Saunders, Warford, and Wellenius (1994) posit that telecommunications was an integral part of the development strategies of the newly industrialized economies: Hong Kong (China), the Republic of Korea, and Singapore.

Waverman, Meschi, and Fuss (2005) find that in developing countries mobile phones play the same crucial role that fixed telephony played in developed countries in the 1970s and 1980s. They show that mobile phones have a stronger growth impact in developing countries because while they complement fixed lines in developed countries, they substitute for fixed telephony in developing countries: "Mobile telephony has a positive and significant impact on economic growth, and this impact may be twice as large in developing countries compared to developed countries" (p. 11). The value of mobile phones to individuals in Africa is greater because other means of communication—such as postal systems, fixed line telephony, and roads—are often poor and inaccessible or expensive for a majority of the population.

The spread of telecommunications infrastructure generates a growth dividend by reducing the costs of interaction and expanding information flows and market boundaries (Waverman, Meschi, and Fuss 2005, p. 10). As a corollary, countries with limited telecommunications infrastructure, such as many in Africa, face increased costs of interaction, limited information flows, reduced market opportunities, and, ultimately, low incomes. As shown in the rest of this section, mobile telephony is emerging to address these problems through a range of innovative pro-poor services, making its economic and social returns highest in rural areas

(Gough 2005, p. 7) and exposing the limitations of the old economy for African development needs, conditions, and capabilities.

The mobile phone and the exchange of market information: case studies from West, East, and southern Africa

In developed countries markets function efficiently because the prices of goods and services are known or can be accessed cheaply, widely, and readily (Eggleston, Jensen, and Zeckhauser 2002, p. 4). In contrast, smallholder farmers in rural Africa are constrained by poor access to reliable market information because of a combination of lack of cheap, timely, and readily accessible information, poor information delivery mechanisms and infrastructure, and a private sector attitude that typically views smallholders as commercially unattractive (Eggleston, Jensen, and Zeckhauser 2002, p. 1; KBDS 2004, p. 1). As Geertz (1978, p. 29) powerfully summed up, in many rural areas in the developing world "information is poor, scarce, maldistributed, inefficiently communicated, and intensely valued."

The result is inefficiency, characterized by farmers producing the wrong mixture of crops and using inefficient technologies, consumers not receiving the goods they want or are willing to pay for, and dispersions of agricultural prices or deviations from the law of one price.[7] As Bell (1980, p. 11) has argued, "In a price and market economy, the condition for efficiency, or optimal use of resources, is complete information among buyers and sellers, so that one obtains the 'best' price for one's goods or services."

Making information readily and cheaply available can enhance production by enabling farmers to plant and harvest at appropriate times (weather information), improve the functioning of credit markets (by facilitating social capital as farmers develop and gain trust and reputations through increased communications), facilitate access to more efficient technologies (through finance obtained through improved credit ratings and creditworthiness), and in the long run transform production processes through more rapid and diffuse spread of technological innovations among a broader range of interacting agents—consumers (with different tastes and preferences leading to product differentiation or new product development), sellers (of inputs, products, and services), traders, processors, and so on (Eggleston, Jensen, and Zeckhauser 2002, p. 14).

A functioning or efficient market information system is thus critical to farmer productivity, bargaining power, incomes, and, ultimately, poverty reduction and economic development. Eggleston, Jensen, and Zeckhauser (2002, p. 10) highlight four important reasons that market (price) information is important to farmers: relative prices allow them to make informed decisions on the crop or mixture of crops to produce, price information facilitates the use of efficient and cost-effective technologies, market information enables producers to know where to sell their produce, and it enables them to know what prices to accept.

Although these are still early days and data remain scarce, utilization of mobile telephony in Africa as a market information exchange system bears out many of these claims. In Senegal, Manobi-Senegal, a mobile and Internet service company jointly owned by Manobi (France) and Senegal's mobile operator, Sonatel, is offering subscribers a multichannel service platform that collects and delivers real-time price information and location-specific availability of a range of agricultural products through daily text messages, voice mail, WAP (wireless application

7 See Stigler (1961, p. 214); Delgado (1986); Ravallion (1986); Fafchamps and Gavian (1997); Crowe and others (1997) Badiane and Shively (1998); and Eggleston, Jensen, and Zeckhauser (2002, p. 4). The law of one price holds that prices for homogeneous goods sold at different locations should be equal, net of transportation costs (Eggleston, Jensen, and Zeckhauser 2002, pp. 4–5).

protocol), and the Internet (IDRC 2003; Manobi 2006 ; Stockholm Challenge Forum 2004). The International Development Research Centre (IDRC 2003) estimates that as a result of these services, farmer subscribers have on average secured 15 percent higher profits from their farms after net costs, including the cost of the mobile service. Others claim that in fruit and vegetable regions such as Niayes information on market prices has strengthened the bargaining power of farmers to the extent that they now receive prices 50 percent higher than before the service (Manobi 2006).

Typically, smallholders in Senegal, as in other parts of Africa, have tended to transport their produce themselves to the nearest markets or to sell to middlemen, who often extracted lower prices from them as a result of asymmetric information. With real-time price information services offered by Manobi, smallholders have strengthened their bargaining power (Manobi 2006). The Manobi project also claims virtuous-cycle benefits. By facilitating easy access to market information by rural producers, it enables them to increase their productivity, bargaining power, and incomes, which in turn enhances their ability to pay for services such as Manobi's, which in turn attracts more mobile and Internet service providers to rural areas (Stockholm Challenge Forum 2004).

In Kenya, in order to strengthen farmer bargaining power and increase transparency in commodity value chains, the Kenya Business Development Services Program (KBDS) contracted the Kenya Agricultural Commodity Exchange in 2003, through a partnership with the mobile operator Safaricom, to develop a service, known as "SMS sokoni," that gives smallholders access to daily agricultural commodity prices, extension messages, and opportunities to sell or bid through text messages (KBDS 2004). Farmers, especially those who are illiterate or have problems with text messages, can also access market information through voice mail by calling a hotline telephone number. The commodity exchange has also developed a number of rural-based market information points (MIPs), which are essentially trading floors linked through an electronic information system that allows farmers to link with buyers in different urban centers (KBDS 2004, p. 1). The KBDS records that between May and October 2004 more than 24,000 farmers accessed commodity information on the MIPs in three districts alone.

In Mozambique CTA (The Technical Centre for Agricultural and Rural Cooperation, ACP-EU) (2004) and Jenson, Myers, and Southwood (2004, pp. 13–14) have shown that farmers with access to market information have seen improvements in farm prices and have increased the value of their sales. The Mozambique Agricultural Marketing Service collects and disseminates nationwide and provincial data on market prices and product processing and availability through a variety of media, including text messages, email, the Internet, national and rural radio, television, and newspapers.

The foregoing suggests that increased access to market and other information is having a positive socioeconomic impact on the poor in Africa. This is consistent with empirical evidence and historical experiences of other developing countries and some of the now developed ones. A growing literature indicates that better access to telephony in general and the mobile in particular, by facilitating greater access to market information, improves producer prices by reducing monopsony power in agricultural markets and farm price dispersion (Hudson 1995; Bruns, Robert, and Tiam-Tong 1996; Forestier and others 2002). Studying the impact of the Grameen Village Pay Phone Project, von Braun, Akhter, and Bayes (1999) found that the average prices of agricultural commodities were higher in villages with phones than in those without, and that the phones helped farmers to negotiate better rates in foreign exchange transactions, strengthen their bargaining power, make better production decisions, and handle medical emergencies and natural calamities better. Garbade and Silber (1978) and

Du Boff (1980) posit that the telegraph and the trans-Atlantic cable played significant roles in rapidly narrowing intermarket price differentials in the United States in the 19th century, when a majority of the US labor force was still engaged in agriculture.

Eggleston, Jensen, and Zeckhauser (2002, p. 16) go further than this to argue that information and communications technologies did not simply improve prices for producers but changed the whole nature of economic transactions in the United States and that they could significantly improve the living standards of the world's rural poor today by enhancing the functioning of relevant markets. "When markets function well, trade is abundant, and farmers reap the rewards of specialization . . . Additional gains from specialization include developing product-particular skills and knowledge, purchasing inputs in bulk, or reaching economies of scale. A whole region or economy benefits when improved information leads to more integrated markets that widely disseminate new techniques, fertilizers and other inputs to agricultural production" (p. 15).

The mobile as a financial sector service

The mobile telephone has been put to innovative uses in the financial services sector in Africa, most significantly as virtual currency and an electronic payment system. The practice of people buying a prepaid scratch card and texting to one another (texting the card's voucher number to another person) as a means of making cashless transactions or transfers has forced mobile operators in Kenya (Safaricom) and Mozambique (MCel) to introduce mobile airtime credit swapping services (known as "sambasa me" in Kenya), which allow subscribers to transfer credits to one another. Even where mobile operators have not responded by offering this service, as in Uganda, airtime has long been used as virtual currency in the manner described (Scott and others 2004, p. 8).

Scott and others (2004) reports a significant use of phones is for making financial arrangements, especially cash transfers both within and between countries. Remittances are the second largest financial flow into developing countries after foreign direct investment, while within-country cash transfers can contribute up to 40 percent of household income (Scott and others 2004). Scott and others (2004) estimate (conservatively, as unrecorded remittances could be greater) that in 2003 remittances stood at $93 billion, of which Africa accounted for about $12 billion. As remittances involve high transaction costs (with charges on remittances to Africa on the order of $1.5 billion per year), there is potential benefit to the poor in introducing cheaper systems, a fact recognized by world leaders during the G8 summit of 2004 (Scott and others 2004).

That mobile telephony in Africa has been innovatively employed in the financial services sector attests to the limitations or inappropriateness of the existing financial structure for African development needs. It reflects the inability of traditional commercial banks to reach low-income populations or to develop products and services that suit their needs and conditions (cash transfers and temporary electronic payment systems rather than savings and credit or permanent paper accounts). This has significant implications.

Despite long-running controversy in economics, the importance of the financial system to economic growth is increasingly recognized (King and Levine 1993; Levine 1997). Bagehot (1873) and Hicks (1969) posited that the financial system stimulated industrial revolution in England by facilitating mobilization of capital, a view theoretically supported by Schumpeter's (1934) argument that efficient banks aid technological innovation by identifying and financing innovative entrepreneurs and profitable technologies or production processes. Robinson (1952) and Lucas (1988) counter, respectively, that it is economic development that creates

demands for certain kinds of financial arrangements and that the role of the financial system in economic growth is overrated.

Writing more recently, Levine (1997) contends that a growing body of evidence suggests that the development of financial markets and institutions is an inextricable part of the growth process, that financial development or the lack thereof affects the speed and pattern of economic development, and that the level of financial development is a good indicator of future rates of economic growth, technological change, and capital accumulation: "The preponderance of theoretical reasoning and empirical evidence suggests a positive first-order relationship between financial development and economic growth" (p. 688).

The financial system can facilitate economic growth through five basic functions: enhancing the trading, hedging, diversification, and pooling of risk; mobilizing savings; allocating resources; facilitating corporate control; and facilitating the exchange of goods and services (King and Levine 1993; Levine 1997). While it is not yet clear to economists why financial structures emerge or change, it is increasingly recognized that the financial structure or the "mix of financial contracts, markets and institutions . . . varies across countries and changes as countries develop" (Levine 1997, p. 703). This means that, as the use of mobile telephony as virtual currency and an electronic payment system in Africa verifies, there is no compelling reason why the financial structure of developed countries should work for African countries. As Johnson (2004) has shown, financial markets are embedded in social relations, culture, and politics. The organizational form of financial intermediaries matters, and African countries should worry less about imposing developed country financial structures on their economies and concentrate more on developing financial structures that respond to the needs and capabilities of a majority of their populations.

That mobile telephony should have an impact on the African financial system should not be surprising. As many have shown, the financial system is shaped by nonfinancial developments, including telecommunications, technological innovations, institutions, economic growth, legal systems, political conditions, and monetary, fiscal, and nonfinancial sector policies (Levine 1997).

Mobile telephony and entrepreneurship

Mobile telephony in Africa has had a positive impact on entrepreneurship by fostering the efficiency, profitability, and competitiveness of small-scale businesses (Samuel, Shah, and Hadingham 2005) and giving rise to many innovative small-scale enterprises (Jenson, Myers, and Southwood 2004). In a survey of small businesses in South Africa and the Arab Republic of Egypt, Vodafone found that many small businesses use mobiles as their only means of communication, with the proportion being highest among black-owned businesses in South Africa (85 percent) and informal sector businesses in Egypt (90 percent; Samuel, Shah, and Hadingham 2005). The survey also found that mobiles played a critical role in business start-ups and enabled small-scale businesses to operate 24-hour call-out services, resulting in increased profits, despite the call and labor costs.

Jenson, Myers, and Southwood (2004) and others document cases of innovative small businesses springing up all over Africa as a result of mobile telephony and the Internet. For instance, CAFÉ Informatique in Togo has developed a call center business using voice-over technologies and a satellite link that allows it to provide low-cost outgoing call services, community or village mobile pay phone services, and other informal businesses centered on the mobile. Gough (2005) found that in rural communities in South Africa the ratio of inbound text messages to outbound ones was 8 to 1 as a result of "the entrepreneurial ability of some of the more

literate individuals with cell phones who, for a marginal fee, receive and relay text messages to those without cell phones or those who cannot read or write" (2005, p. 2). The *New York Times* reports that despite the political and security problems in the Democratic Republic of Congo, Vodacom Congo has 1.1 million subscribers. The large numbers are partly due to the entrepreneurial activities of individuals like some villagers in two jungle provinces who were so eager for the mobile that "they have built a 50-foot-high treehouse to catch signals from distant cellphone towers . . . one man uses it as a public pay phone . . . Those who want to climb to his platform and use his phone, pay him for the privilege."[8]

Conclusion

De Soto (2000) contends that it is lack of an integrated system of property rights, as opposed to lack of entrepreneurship, that constrains the ability of the poor to convert their resources into productive capital. Lack of formal property rights in the informal economy makes it hard for the poor to enter into contracts and to access credit, banking, insurance, and other services. Thus the solution lies in formalization or integration of property rights systems.

Prahalad (2005) sees the problem as emanating from the power of a dominant but flawed logic (especially in the private sector) that holds that the poor do not constitute a viable market, cannot afford many private sector–based products and services, and either do not appreciate or are incapable of paying for technological innovations. Consequently, the solution lies in altering this (private sector) logic—seeing the poor as resilient, creative entrepreneurs and brand- and value-conscious consumers, a perspective that would open up a whole range of new (private sector) opportunities, leading to poverty alleviation through profits (rather than aid or charity).

Initial conceptions of the "dual economy" held that an inappropriate mix of policies and resources (labor and capital) kept the informal or traditional economy (and hence the poor) from being integrated into the formal economy, implying that a "right" mix of policies and resources would solve both the dual economy and the underdevelopment problems. More recent versions of the debate hold that there are benefits and costs to participating in both the formal and the informal economy. As the informal sector is here to stay, part of the solution lies in decreasing the costs of working in it (Chen 2005). The appropriate technology literature blames the problem, at least in part, on inappropriate technologies.

This paper supports the above arguments [all the arguments discussed in the conclusion]—individually and collectively—by suggesting that the predominant economic model in many African countries (the set of technologies, institutions, capital, and policies used to produce and distribute goods and services) is inappropriate to African development needs, conditions, and capabilities. The core question of development in Africa, especially for economic and financial policy makers, thus lies in the creation of an "appropriate African economy," based on the dynamic needs, conditions, and capabilities of a majority of the African population.

8 *New York Times*, "Cell Phones Catapult Rural Africa to 21st Century" (August 25, 2005).

References

Badiane, Ousmane, and Gerald E. Shively. 1998. "Spatial Integration, Transport Costs, and the Response of Local Prices to Policy Changes in Ghana." *Journal of Development Economics* 56: 411–31.

Bagehot, Walter. 1873. *Lombard Street: A Description of the Money Market.* Homewood, Ill.: Richard D. Irwin.

Bell, Daniel.1980. "The Social Framework of Information Society" in Forester, Tom (ed.), *The Microelectronics Revolution: the Complete Guide to the New Technology*. Cambridge, MA.: MIT. p. 500.

Bruns, Bryan, G. Lamar Robert, and Chongchit Sripun Tiam-Tong. 1996. "Village Telephones: Socioeconomic Impacts and Implications for Rural Futures." Paper presented at Sixth International Conference on Thai Studies, Chiang Mai, Thailand, October 14–17.

Chen, Martha A. 2005. "Rethinking the Informal Economy: Linkages with the Formal Economy and the Formal Regulatory Environment." Research Paper 2005/10. United Nations University–World Institute for Development Economics Research, Helsinki.

Coyle, Diane. 2005. "Overview." In Vodafone, "Africa: The Impact of Mobile Phones." Vodafone Policy Paper 2. London

Crowe, Trevor., Harriss-White, Barbara., and Palaskas, T.B. 1997. "The Evolution of Local Market Commodity Price Behavior in South India, 1972-92." *Journal of International Development,* 9, (1): 101-115.

CTA (The Technical Centre for Agricultural and Rural Cooperation, ACP-EU). 2004. 'Role of Information Tools in Food and Nutrition Security in ACP Countries,' ICT Seminar, November, 8-12, Maputo, Mozambique.

Delgado, Christopher L. 1986. "A Variance Components Approach to Food Grain Market Integration in Northern Nigeria." *American Journal of Agricultural Economics* 68 (4): 970–79.

de Soto, Hernando. 2000. *The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else.* New York: Basic Books.

Du Boff, Richard B. 1980. "Business Demand and the Development of the Telegraph in the United States, 1844–1860." *Business History Review* 54: 459–79.

Eggleston, Karen, Robert Jensen, and Richard Zeckhauser. 2002. "Information and Communication Technologies, Markets, and Economic Development." Working paper. Tufts University, Department of Economics, Medford, Mass.

Fafchamps, Marcel, and Sarah Gavian. 1997. "The Determinants of Livestock Prices in Niger." *Journal of African Economies* 6 (2): 255–95.

Forestier, Emmanuel., Jeremy, Grace., and Charles, Kenny. 2002. 'Can Information and Communication Technologies be Pro-Poor?' *Telecommunications Policy* 26, 623 - 646.

Garbade, Kenneth D., and William L. Silber. 1978. "Technology, Communication and the Performance of Financial Markets: 1840–1975." *Journal of Finance* 33 (3): 819–31.

Geertz, Clifford. 1978. "The Bazaar Economy: Information and Search in Peasant Marketing." *American Economic Review* 68 (2): 28–32.

Gough, Neil. 2005 'Introduction' In Vodafone, 'Africa: The Impact of Mobile Phones' Vodafone Policy Paper Series No. 2.

Hardy, Andrew P. 1980. "The Role of the Telephone in Economic Development." *Telecommunications Policy* 4 (4): 278–86.

Hicks, John. 1969. *A Theory of Economic History.* Oxford: Clarendon Press.

Hudson, Heather. 1995. "Economic and Social Benefits of Rural Telecommunications", A Report to the World Bank, Washington, DC

IDRC (International Development Research Centre). 2003. *Information and Communication Technologies for Development (Acacia): A Comparative Synthesis of Cases from Mozambique, Senegal, Uganda, and South Africa.* A Synthesis Report. Ottawa.

James, Jeffrey. 2002. *Technology, Globalization and Poverty.* London: Edward Elgar.

Jenson, Mike, Mary Myers, and Russell Southwood. 2004. "The Impact of ICD in Africa." Paper prepared for the Commission for Africa, London.

Johnson, Susan. 2004. "Milking the Elephant: Financial Markets as Real Markets in Kenya." *Development and Change* 35 (2): 247–74.

KBDS (Kenya Business Development Services Program). 2004. *Monthly Newsletter* (November). Nairobi

King, Robert G., and Ross Levine. 1993. "Financing, Entrepreneurship, and Growth: Theory and Evidence." *Journal of Monetary Economics* 32 (3): 513–42.

Koruna, Stefan. 2004. "Leveraging Knowledge Assets: Combinative Capabilities—Theory and Practice." *R&D Management* 34 (5): 505–16.

Levine, Ross. 1997. "Financial Development and Economic Growth: Views and Agenda." *Journal of Economic Literature* 35: 688–726.

Lucas, Robert E., Jr. 1988. "On the Mechanics of Economic Development." *Journal of Monetary Economics* 22 (1): 3–42.

Manobi. 2006. www.manobi.sn

McKemey, Kevin, Nigel Scott, David Souter, Thomas Afullo, Richard Kibombo, and O. Sakyi-Dawson. 2003. "Innovative Demand Models for Telecommunications Services." Technical report. UK Department for International Development, London. http://www.teleafrica.org.

Norton, Seth W. 1992. "Transaction Costs, Telecommunications, and the Microeconomics of Macroeconomic Growth." *Economic Development and Cultural Change* 4 (1): 175–96.

Portes, Alejandro, Manuel Castells, and Lauren A. Benton, eds. 1989. *The Informal Economy: Studies in Advanced and Less Developed Countries.* Baltimore, Md.: Johns Hopkins University Press.

Prahalad, C. K. 2005. *The Fortune at the Bottom of the Pyramid.* Upper Saddle River, NJ: Wharton School Publishing.

Prahalad, C. K., and Gary Hamel. 1990. "The Core Competence of the Corporation." *Harvard Business Review* 68 (3): 79–91.

Ravallion, Martin. 1986. "Testing Market Integration." *American Journal of Agricultural Economics* 68 (1): 102–09.

Robinson, Joan. 1952. 'The Generalization of the General theory', In *The Rate of Interest and Other Essays,* London: Macmillan pp 67-142.

Samuel, Jonathan, Niraj Shah, and Wenona Hadingham. 2005. "Mobile Communications in South Africa, Tanzania and Egypt: Results from Community and Business Surveys." In Vodafone, "Africa: The Impact of Mobile Phones." Vodafone Policy Paper 2. London.

Saunders, Robert J., Jeremy J. Warford, and Björn Wellenius. 1994. *Telecommunications and Economic Development.* Baltimore, Md.: Johns Hopkins University Press.

Schultz, Theodore. W. 1964. *Transforming Traditional Agriculture.* New Haven, Conn.: Yale University Press.

Schumacher, Ernest. F. 1973. *Small Is Beautiful: A Study of Economics as if People Mattered.* London: Sphere Books.

Schumpeter, Joseph. A. 1934. *The Theory of Economic Development.* Cambridge, Mass.: Harvard University Press.

Scott, Nigel, Simon Batchelor, Jonathon Ridley, and Britt Jorgensen. 2004. "The Impact of Mobile Phones in Africa." Paper prepared for the Commission for Africa, London.

Sridhar, Kala Seetharam, and Varadharajan Sridhar. 2004. "Telecommunications Infrastructure and Economic Growth: Evidence from Developing Countries." Working Paper 14. National Institute of Public Finance and Policy, New Delhi.

Stigler, George J. 1961. "The Economics of Information." *Journal of Political Economy* 69 (3): 213–25.

Stockholm Challenge Forum. 2004. http://www.stockholmchallenge.se/default.asp?id=1

von Braun, Joachim, Rasheda Akhter, and Abdul Bayes. 1999. "Village Pay Phones and Poverty Reduction: Insights from a Grameen Bank Initiative in Bangladesh." Zentrum für Entwicklungsforschung, Bonn.

Waverman, Leonard, and Lars-Hendrik Roller. 2001. "Telecommunications Infrastructure and Economic Development: A Simultaneous Approach." *American Economic Review* 91 (4): 909–23.

Waverman, Leonard, Meloria Meschi, and Melvyn Fuss. 2005. "The Impact of Telecoms on Economic Growth in Developing Countries." In Vodafone, "Africa: The Impact of Mobile Phones." Vodafone Policy Paper 2. London.

Bronze Award Winner

ABSTRACT

Economists have increasingly emphasized the benefits of secure property rights. One possible channel is that property increases access to credit and the incentives to invest. An unexplored alternative is that property changes people's beliefs. This paper exploits a rare natural experiment in which a random chain of events during a land occupation in a poor neighborhood on the outskirts of Buenos Aires resulted in two comparable groups of squatters, one with legal titles and one with insecure property rights.

A survey of these two groups, finds significant differences in the beliefs declared by squatters with land titles and those without. The squatters who end up with legal titles report beliefs closer to those that favor the workings of a free market. Examples include materialist and individualist beliefs (such as the belief that money is important for happiness or the belief that one can be successful without the support of a large group).

The effects appear to be large. The value of an index of 'pro-market' beliefs is 20 percent higher for titled squatters than for untitled squatters, in spite of their leading otherwise similar lives. Moreover, the effect is sufficiently large so as to make the beliefs of the squatters with legal titles broadly comparable to those of the general Buenos Aires population, in spite of the remarkable differences in the lives they lead. These results indicate that the protection of property causes changes in a class of beliefs (or 'shared mental models') that are the basis for the institutional foundations of a capitalist society. In other words, the paper's hypothesis suggests a new channel through which policies on property rights affect development.

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Pro-Market Beliefs Among Argentine Squatters

RAFAEL DI TELLA, SEBASTIAN GALIANI AND ERNESTO SCHARGRODSKY

Capitalism is not very popular around the world. The notable exceptions of the United States and China obscure what by now should be a recognizable trend. To begin with we have the Europeans, who regulate and tax far beyond what would be justified by a true believer in the virtues of free markets. In the former Soviet bloc the popularity of parties associated with the former Communists was one of the first surprises we were faced with in the 1990s. More recently the backlash against free markets in Latin America has reached epidemic proportions. Public opinion surveys reveal that in nearly all countries in the region support for free markets is limited to a small part of the population (see Latinobarómetro, 2004). Even with respect to privatizations, a policy popular with well over half the population in the early part of the 1990s, support in 2003 was limited to less than 25 percent of the population.

This lack of support for free markets has puzzled economists and other observers: if capitalism is the best way to organize an economic system, then why is it that so many people reject it?

Property rights and beliefs

A natural starting point is the realization that some beliefs, but not others, support capitalist institutions. For example, if people believe that effort pays, they are less likely to support intrusive taxation, both because it is unfair and because it would distort the behavior of otherwise productive people. If, on the other hand, voters believe that luck rather than effort determines what people get, they will likely support high taxes and the regulation of these giant casinos that go by the name of "markets." At least since Alexis de Tocqueville, social observers have emphasized that the differences in the form of economic organization between the United States and Europe originate in the differences in beliefs between the two places (that is, in the differences in the extent to which citizens believe in the "American dream"). Of course, this "explanation" just moves us one step back, as we now need to explain what drives the beliefs that support such anti-market sentiment.

The question of what determines these fundamental beliefs is a hard one. But casual observation of the economic environment where people form these "mental models" in Latin America gives us an important hint, as these economies are overwhelmingly marked by weak law enforcement, corruption, crime, and arbitrariness of government and policies.[9] Following the work of Hernando de Soto, economists have increasingly emphasized the deleterious effects that weak property rights have on the creation of markets and the unleashing of private initiative. The impressive cross-country correlation between weak property rights and bad growth performance has generated intense speculation on the possible channels that explain it. For example, it has been argued by de Soto (2000) that weak property rights reduce people's access to credit. An even more basic possibility is that without security in their claims on property, people might be reluctant to invest for fear that others would expropriate them when it is time to harvest.

A different possible channel is that property affects people's beliefs. One hint is provided by the fact that conservative politicians make higher levels of property ownership an explicit

9 For evidence on how corruption undermines capitalism, see Di Tella and MacCulloch (2002).

objective of government. For example, in the United Kingdom the government of Margaret Thatcher made the distribution of property among the population an explicit government policy following the privatizations of the 1980s. Anthony Eden, the former British prime minister, had a name for it: a property-owning democracy.[10] Mrs. Thatcher described these ideas as follows:

> *We also pioneered two radical policies for wider ownership. The sale of public sector houses at large discounts to their tenants turned hundreds of thousands of families into property owners. Alongside this, the privatisation of industries with special preference for workers and for small buyers began to turn Britain into a nation of shareholders. Of course, ownership of assets brings risks as well as rewards. But the transformation it effects on a society is wholly positive, because it gives people a stake in prosperity and trains them to take control of their own lives (Thatcher, 2000).*

The implied hypothesis, namely that owning property changes people's minds, is worth studying for at least two reasons. First, it suggests that there is an important unexplored channel through which property rights may affect development. Property rights in this view are important not because they directly increase people's ability to take on credit or invest, but because owning property changes people's mental attitudes in a manner that is more conducive to the workings of free markets. Second, it provides an explanation for why it is that voters in the Third World tend to reject markets. In an economic environment where property rights violations are commonplace, it is not surprising that people find it hard to believe that effort pays. In other words, when expropriation makes it difficult for individuals "to take control of their own lives" and to hold onto the fruit of their labor, it is not surprising that they find it hard to believe in the progress brought by the free working of markets.

The problem with the hypothesis that property changes people's minds is that it is terribly hard to test. Note that merely documenting that people who actually own property also tend to be more self-reliant and to believe in markets does not prove anything of interest to us. Motivated individuals who naturally hold beliefs most consistent with free market ideas are more likely to make efforts geared toward making material progress, including obtaining property rights. Thus, causality between property rights and beliefs can also run in the opposite direction.

More generally, the allocation of property rights across households in a society is usually not random but based on wealth, individual effort, income, or other mechanisms built on differences between the groups that acquire property rights and the groups that do not. Thus property rights and beliefs are most likely simultaneously determined in the general population. This endogeneity problem interferes with the identification of a potential causal effect of property rights on what, for simplicity, can be called pro-market beliefs. In order to resolve this issue, this paper exploits a rare natural experiment that took place on the poor outskirts of Buenos Aires over the past 25 years.[11]

10 Owners of property are more inclined to be politically active. In the 2000 U.S. election the proportion of home owners voting was 20 percentage points higher than the proportion of renters voting (see Jamieson, Shin, and Day 2002).

11 Work on the effects of property rights on investment, access to credit, and other measures of economic performance includes Besley (1995), Alston, Libecap, and Schneider (1996), de Soto (2000), Lanjouw and Levy (2002), Field (2002), and Galiani and Schargrodsky (2006).

A natural experiment to evaluate the effect of property rights

The analysis seeks to identify the effect of a "treatment" on an "outcome" variable. To answer such questions, an ideal laboratory experiment would randomly assign a certain treatment to a fraction of test participants and compare the outcomes for that group with those for an untreated ("control") group. This ideal design is typically impossible to implement in the social sciences, particularly when the effects under study take a long time to develop. Nevertheless, the central properties of the ideal design can be preserved when Nature allocates the treatment and the control groups through some historical accident.

This is the case in a rare natural experiment that started in 1981, when about 1,800 landless families organized by a Catholic chaplain occupied a wasteland in the San Francisco Solano area, on the outskirts of Buenos Aires. At the time of the occupation the squatters thought the land belonged to the state, but they later found out that it was private property.[12] The occupied area turned out to be made up of 13 tracts of land belonging to different private owners, which were partitioned by the squatters into small, urban-shaped parcels for each household. The squatters resisted several eviction attempts during the military government. After Argentina's return to democracy in 1984 the Congress of the Province of Buenos Aires passed a law expropriating the land from the former owners, in exchange for monetary compensation to be paid by the government, and allocating it to the squatters.

The resulting titling process, however, was incomplete and asynchronous. The government made a compensation offer to each original owner calculated in proportion to the official tax valuation of each tract of land, which had been set by the fiscal authority to calculate property taxes before the land occupation. The government offers were very similar (in per-square-meter terms) for the 13 land tracts. Each of the original owners had to decide whether to accept the expropriation compensation proposed by the government or to start a legal dispute with the aim of obtaining higher compensation. In 1986 eight former owners accepted the compensation offered by the government. The formal land titles that secured the property rights to the parcels were then transferred by the state to the squatters in 1989. However, five former owners did not accept the compensation offered by the government and disputed the expropriation payment in the slow Argentine courts. Thus the process of expropriation was incomplete. One of these five trials ended in 1998, and this tract of land was transferred to the squatters. The other four lawsuits were still pending at the time of writing.

A result of this episode is that today there are two groups of squatters living in very close proximity to each other, one of which has formal property rights (because its members live on parcels of land that used to belong to the former owners who accepted the expropriation or whose lawsuit ended) and the other of which remains untitled (because its members occupied parcels of land belonging to the challenging owners). This allocation of land titles was unrelated (more precisely, exogenous) to the squatters' characteristics. At the time of the occupation the squatters did not know that the land had private owners, nor that an expropriation law was going to be passed, nor which parcels of land had owners who would accept (or dispute) the compensation offer, nor which eventual lawsuits could end first. Titled and untitled households arrived at the same time and were similar at the time of their arrival.

A statistical comparison of the household characteristics of these two groups prior to receiving the treatment (that is, prior to one group receiving titles) shows that the hypothesis

12 On the land occupation process, see CEUR (1984), Izaguirre and Aristizabal (1988), and Fara (1989). For a full description of the data reported here, see Di Tella, Galiani, and Schargrodsky (2007).

of random assignment of land titles during this natural experiment cannot be rejected. There are no significant differences between the treatment and control groups in the age, gender, years of education, and other characteristics of the family member who was the household head at the time of the occupation. Moreover, the squatters had no participation in the legal process between the government and the former owners, and the values of the dwellings they constructed were explicitly excluded from the calculation of the expropriation compensation.[13]

Obtaining property rights depended on the decision of the original owners to challenge the expropriation as well as on the resolution of these legal processes. Given that these factors were exogenous to the squatters, it is possible to study the effect of the intervention "to give property rights" by comparing individuals who received and did not receive land titles, but who live in very close proximity, had similar pretreatment characteristics, and have been exposed to similar life experiences (with the exception of the treatment).

Data description

Precise information was obtained on the legal status of each individual parcel in the area affected by the expropriation law. As explained, land titles were awarded in two phases. Property titles were available to 41 percent of the squatter households in 1989, after the former owners of these lands accepted the expropriation offer and surrendered the land to the state, and to an additional 21 percent in 1998, after one of the lawsuits was resolved. Property rights have not been offered to the other 38 percent of the squatter families, which live on the tracts of land still under judicial processes, although these parcels were occupied under the same conditions and during the very same days of 1981.

In 2003 a survey was administered to a randomly selected sample of households. In some cases it was found that the family that was currently living on a parcel arrived after the original owners made the decision to surrender the land or sue. As it is possible that families arriving after the former owners' decisions could have known the different legal status of the parcels, in order to maintain treatment exogeneity the statistical analysis excludes these latecomer families.[14] A short survey was also conducted among a random sample of residents of the Buenos Aires metropolitan area to have a benchmark to evaluate the results from the natural experiment.[15]

Following a large body of work in economics and other social sciences that argues that individualism, materialism, and meritocratic inclinations are conducive to the functioning of markets, the survey included a series of questions to capture these dimensions in the sample of squatters. The questions were borrowed from questionnaires routinely administered by political scientists and sociologists who attempt to measure values and beliefs around the world. More recent work has insisted that trust and social capital also belong to this category. Accordingly, the survey also included a question designed to capture aspects of social trust.

13 Finally, a remaining issue is that the former owners' decisions to surrender or sue could be related to land quality and, indirectly, to squatter characteristics. This should suggest that untitled squatters are the ones on better-quality land, as the government offers were similar across land tracts. A comparison of parcel characteristics, however, shows no significant differences between titled and untitled parcels in distance to a nearby creek, distance to the nearest nonsquatted area, parcel size, and an indicator of whether is in a corner of a block.

14 The families that arrived after the former owners' decisions could have replaced some original squatters who had left before the survey in 2003. The econometric analysis addresses this potential attrition problem.

15 Relative to the general Buenos Aires population, the squatters in the sample show low levels of income and education, ranking in the lowest (14th) percentile of the distribution for both income per capita and years of education of the household head.

Results

The survey results for titled and untitled Solano squatters and for the general Buenos Aires population are presented in table 1. In addition to the percentages presented in the table, the asterisks indicate the statistical significance of the difference in question.

Column 1 focuses on individualist beliefs. The analysis attempts to capture them with the answer to the question, "Do you believe that it is possible to be successful on your own or that a large group that supports each other is necessary?" The possible answers are "It is possible to be successful on your own" and "A large group is necessary to be successful." The proportion of squatters giving the individualist answer in the untitled group is 33.0 percent, while the proportion giving that answer in the group that has titles is 43.3 percent. In other words, giving property rights increases the proportion of people giving the "pro-market" response by 10 percentage points. This represents a statistically significant increase of 31 percent relative to the level for the squatters without titles. Column 1 also shows that 44.0 percent of the respondents in the general population of Buenos Aires report individualist beliefs.

Thus, property rights appear to be remarkably powerful in making individualist beliefs in this very poor neighborhood resemble those of the general population. This result is particularly interesting because it is well understood in these neighborhoods that the occupation was a coordinated, cooperative enterprise and that they would have failed if there were only a few isolated squatters (see Céspedes 1984).

Columns 2–4 move to three other beliefs (materialist, meritocratic, and social capital). Materialist beliefs are captured by the answer to the question, "Do you believe that having money is important to be happy?" with the possible answers being "Important to be happy" and "Not important to be happy." Again the results show a big positive effect of property rights on beliefs: those with titles are more likely to hold materialist views. The effect is so big that the percentage answering that money is important that is observed for titled squatters is similar to that observed in the general Buenos Aires population, in spite of the remarkable differences in the lives they lead. Again this suggests a large role for property rights in closing the belief gap between a group of very poor squatters and the general population.

The results for meritocratic beliefs in column 3 focus on the answer to the question, "In general, do people who put in an effort working end up better or worse off than those who do not put in an effort?" There do not seem to be differences in the answers provided by squatters with and without titles, or at least the differences are not more than just the usual amount of "statistical noise." The plausible reason for this noneffect of property rights is that, for this particular question, the answers of squatters without titles are already quite similar to those provided by individuals in the general population. Given that untitled squatters "start out" with meritocratic beliefs that are already high and similar to those of the general population, it is perhaps unsurprising that the "treatment" has little effect.

In column 4 the analysis studies social capital by focusing on the answer to the question, "In general, in our country, would you say that one can trust other people or that people cannot be trusted?" The proportion of people in the group without property rights choosing the answer "You can trust others" (that is, the answer most conducive to high levels of social capital) is 33.5 percent, while that proportion for the group that has titles is 39.3 percent. This difference is statistically significant. In the general Buenos Aires population 47.6 percent of the respondents provide the pro-market answer. Again these results suggest a important role for property rights in closing the belief gap between a group of very poor squatters and the general population.

In summary, there is evidence that when individuals exogenously receive property rights, they tend to report different beliefs in three of the four categories studied. The sign of the effect on these three variables is always in the direction of making the beliefs more compatible with free markets. This is so because a person who believes in individual achievement, and that money is important for happiness, is more likely to be successful in a free market. It has also been argued that trusting behavior fosters cooperation, something that is valuable in a market when complete contracts are difficult to write. These findings are summarized in column 5, which shows an index of pro-market beliefs as the average of the dummy variables for the four previous questions. There is a large, positive effect of property rights on the aggregate index of beliefs. The average of this index for the general Buenos Aires population is indistinguishable from the average observed for the titled squatters. Thus the provision of property rights completely closes the belief gap between the general population and the squatters, as there are no significant differences in the beliefs that the two groups hold in spite of the remarkable differences in the lives they lead.

Conclusion

Capitalism is a hard sell with voters around the world. In Latin America, for example, rejection of markets has reached epidemic proportions. This is a puzzle for economists and other believers in the virtues of free markets.

This paper argues that the answer is linked to a policy that is in excess supply in the developing world: weak property rights. Insecurity of claims to property changes people's minds in a direction that is hostile to markets. A number of economists have argued that the protection of property rights brings about significant benefits in terms of higher levels of investment and better access to credit. The influential work of de Soto (2000) has proved the appeal of these ideas in the policy world. But this paper asserts that the protection of property also causes changes in beliefs, the "shared mental models" that form the institutional basis of society in the work of authors such as Douglass North (2005) and Avner Greif (2006). In other words, this hypothesis suggests a new channel through which policies on property rights foster development.

To study this hypothesis, the paper exploits a natural experiment in a squatter settlement on the outskirts of Buenos Aires, where, for reasons exogenous to the characteristics of otherwise identical squatters, one group of them obtained property rights whereas another remained untitled. It finds evidence that squatters who obtained property rights report beliefs that are more conducive to the workings of a free market. The size of the effects appears to be large: almost all of the difference in beliefs between squatters without titles and the general population of Buenos Aires is eliminated by giving property rights to the squatters. In spite of the remarkable differences in their life circumstances, squatters have beliefs similar to those of the overall population as long as they are given property rights. While the interpretation of the exact psychological mechanism through which titles affect beliefs is hard to pin down, there is clear causal evidence in support of the hypothesis that giving property rights changes people's beliefs in the direction that, for simplicity, we call pro-market.

16 For the five variables, the effects estimated for the households titled in 1989 are similar to those estimated for the families that received titles in 1998.

17 As beliefs may depend on variables that are in turn affected by property rights, an additional question is whether the estimated effects represent a direct effect of property rights on beliefs or whether they represent an indirect effect of property rights through other variables, such as education, income, and wealth. The estimated econometric effects, however, are largely unaffected by the inclusion of these variables as controls, leading to a conclusion that the effect of land titling is direct.

De Soto (2000) has argued forcefully that property rights may allow the poor to access large amounts of capital and generate new wealth. This paper suggests that giving the poor property rights may also change their beliefs in a pro-market direction.

TABLE 1 SHARE OF PEOPLE HOLDING BELIEFS AMONG SOLANO SQUATTERS AND THE GENERAL POPULATION (PERCENT)

GROUP	(1) INDIVIDUALIST BELIEFS	(2) MATERIALISTIC BELIEFS	(3) MERITOCRATIC BELIEFS	(4) TRUSTING BELIEFS	(5) PRO-MARKET BELIEFS
Solano squatters without property rights	33.0	50.3	73.5	33.5	47.6
Solano squatters with property rights	43.3[1]	67.6[2]	79.1	39.3[1]	57.3[2]
General Buenos Aires population	44.0	67.1	72.6	47.6	58.5

Source: Author's calculations

1 Significant at the 5 percent level
2 Significant at the 1 percent level

Note: For example, column 1 indicates that 33 percent of the untitled squatters report that one can be successful without the support of a large group (individualist beliefs), as compared with 43.3 percent of squatters with titles and 44 percent of the general Buenos Aires population. The asterisks indicate statistical significance for the difference between titled and untitled Solano squatters estimated in two-stage least squares regressions controlling for parcel and household characteristics. The former include size of the parcel, distance to creek, distance to nearest nonsquatted area, and a corner dummy variable. The latter include the age, gender, nationality, and years of education of the original household head and the nationality and years of education of his or her parents.

References

Alston, Lee, Gary Libecap, and Robert Schneider. 1996. "The Determinants and Impact of Property Rights: Land Titles on the Brazilian Frontier." *Journal of Law, Economics & Organization* 12: 25–61.

Besley, Tim. 1995. "Property Rights and Investment Incentives: Theory and Evidence from Ghana." *Journal of Political Economy* 103: 903–37.

Céspedes, Marcelo. 1984. *Por una tierra nuestra.* Documentary movie. Buenos Aires: Cine Ojo (http://www.cineojo.com.ar/catalogo.htm).

CEUR (Centro de Estudios Urbanos y Regionales). 1984. *Condiciones de Habitat y Salud de los Sectores Populares. Un Estudio Piloto en el Asentamiento San Martín de Quilmes.* Buenos Aires.

de Soto, Hernando. 2000. The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else. New York: Basic Books.

Di Tella, Rafael, Sebastian Galiani, and Ernesto Schargrodsky. 2007. "The Formation of Beliefs: Evidence from the Allocation of Land Titles to Squatters," forthcoming, *Quarterly Journal of Economics*, Vol. 122 (1).

Di Tella, Rafael and Robert MacCulloch. 2002. "Why Doesn't Capitalism flow to Poor Countries?", mimeo, Harvard Business School.

Fara, Luis. 1989. "Luchas Reivindicativas Urbanas en un Contexto Autoritario. Los Asentamientos de San Francisco Solano." In Elizabeth Jelin, ed., Los Nuevos Movimientos Sociales. Buenos Aires: Centro Editor de América Latina.

Field, Erica. 2002. "Entitled to Work: Urban Property Rights and Labor Supply in Peru." Princeton University, Industrial Relations Section, Firestone Library, Princeton, NJ

Galiani, Sebastian and Ernesto Schargrodsky. 2006. "Property Rights for the Poor: Effects of Land Titling", mimeo, UTDT.

Greif, Avner. 2006. Institutions and the Path to the Modern Economy. Cambridge: Cambridge University Press.

Izaguirre, Ines, and Zulema Aristizabal. 1988. *Las Tomas de Tierras en la Zona Sur del Gran Buenos Aires. Un Ejercicio de Formación de Poder en el Campo Popular.* Buenos Aires: Centro Editor de América Latina.

Jamieson, Amie, Hyon Shin, and Jennifer Day. 2002. "Voting and Registration in the Election of 2000." Current Population Report, I902, P20-542. US Census Bureau, Washington, DC

Lanjouw, Jean, and Philip Levy. 2002. "Untitled: A Study of Formal and Informal Property Rights in Urban Ecuador." *Economic Journal* 112: 986–1019.

Latinobarómetro. 2004. "Informe – Resumen. Latinobarómetro 2004. Una década de mediciones. Santiago de Chile: Corporación Latinobarómetro.

North, Douglass. 2005. *Understanding the Process of Economic Change.* Princeton, NJ: Princeton University Press.

Thatcher, Margaret. 2000. Convocation Address by Lady Thatcher at Hofstra University, New York, Monday, March 27.

Bronze Award Winner

ABSTRACT

When firms from developed nations rich in capital and technology invest in developing countries, the shareholders and citizens both stand to benefit. However, no matter how good the apparent fit between what a foreign firm has to offer and a new host needs, successful ventures are far from guaranteed. Rather, investors in developing countries must often overcome hazards if they—and the consumers they seek to serve—are to move together down the path to mutual prosperity.

Perhaps the greatest hazard takes the form of "policy risk": the risk that a government will discriminatorily change the laws, regulations or contracts governing an investment—or fail to enforce such covenants—in a way that reduces investors' financial returns. Policy risk is a problem for consumers as well as investors because when firms feel they cannot manage it, they may withhold their sought-after capital and technology, depriving developing-country consumers of the substantial benefits that these may bring.

Anecdotal evidence suggests that policy risk is an increasing concern for investors. However, the financial and contractual mechanisms that firms use to mitigate other types of risk are of limited utility in this domain. Instead, investors must develop proactive government and public affairs strategies that alter government officials' incentives to divert investors' returns.

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Managing Policy Risk

WITOLD HENISZ AND BENNET ZELNER

Increasing trend of policy risk exposure and losses

In the 1950s and 1960s foreign investors in developing countries with immature or volatile political systems were concerned largely with the risk that host country governments would seize their assets. Since that time the advent of insurance for such "direct expropriation," the strengthening of international law, and the symbiotic nature of growth in emerging and developed economies have led to a drastic reduction in outright asset seizures, as illustrated in Figure 1.

During this same period policy risk has increased as investor interest in emerging markets has soared and as governments "have learned that more value can be extracted from foreign enterprises through the more subtle instrument of regulatory control" (to borrow the words of George Chifor of the London School of Economics) (Chifor 2002, 185). Although there do not exist data on policy risk comparable to the data on direct expropriations used to construct figure 1, figure 2 provides a conservative indication of the trend by tracking press mentions of key terms related to policy risk using news feeds from Reuters and other sources. Several recent studies provide further support.

> *According to a World Bank report, in a sample of over 1,000 concessions granted in the Latin American and Caribbean region during the period 1985 – 2000, 30 percent were subject to government-initiated renegotiations or disputes (Guasch 2004, 12).*
>
> *A Merchant International Group report (1999) claims that the mishandling of nonconventional risks cost multinational companies more than $24 billion in 1998 alone, and that in 1995–98, 84 percent of operations in emerging markets failed to meet their financial targets. This amounts to an average erosion of 8–10 percent of investors' total expected returns.*
>
> *A PriceWaterhouseCoopers study (2001) concluded that doing business in a country whose policy making environment was one standard deviation more "opaque" than the global average resulted in additional costs equivalent to a 33–46 percent increase in taxation.*

The difficulty of hedging policy risk

Firms engaged in international business often use some combination of legal contracts, insurance, and other financial instruments to hedge "conventional" risks, such as exchange rate risk, market risk, and capital repatriation risk. However, hedges such as these are of limited use in combating policy risk because, as one investor explained, "I could write the contract and surround it with steel, but you're never going to be able to enforce it."[18] Two characteristics of policy risk further reduce its susceptibility to financial hedging.

18 This and all subsequent quotations from investors, government officials and industry observers were collected by the authors through interviews.

First, unlike for many conventional investment risks, it is difficult to identify in advance exactly what the undesirable contingencies associated with policy risk are, because the myriad channels through which government action (or inaction) can affect the value of an asset or income stream are too numerous to list comprehensively. Compounding this problem is the inventiveness of politicians, who can devise new means of redirecting investors' returns even when written laws, regulations, or contracts explicitly prohibit specific government actions to redirect investors' returns. One investor summarized the challenge: "You can hedge currency and interest rate risk, but you can't hedge the risk of rioters burning down your store, the government seizing your assets, or consumers thinking you want to poison them."

Second, while firms have little control over many conventional risks, a firm's exposure to policy risk depends largely on the measures that its managers take to mitigate such risk, such as adapting business practices to local norms and lobbying key policy makers. Insurance providers and the financial markets are unable to assess the adequacy of a firm's risk-mitigating measures—and thus the firm's level of risk exposure—because the appropriate measures are specific to a firm's situation, which underwriters can never know as well as the firm's managers do. In the words of one insurer, "There is no such thing as abstract political risk in my opinion; political risk very much depends on who you are and what you are doing in a country."

To quote another: "I prefer to focus on what my assured can bring to a risk. My reasoning is that if you back the right assured, you can usually keep problems from occurring in the first place—and if they do happen, you have an excellent chance of mitigating your loss." Yet it is very difficult for insurers to know who the "right assured" is, especially because the firms that have the highest risk exposure are the ones that are most likely to seek insurance in the first place. As a result, underwriters price their products extremely high, offer extremely short term lengths, or fail to offer any sort of cover at all.

Managing policy risk

Given the difficulty of constructing hedges against policy risk, foreign investors in developing countries must strategically manage such risk by anticipating the potential negative political consequences of their business practices, shaping relevant public discourse, and utilizing channels of influence.

Anticipating political consequences

Business practices intended to increase a firm's success in the marketplace, such as laying off surplus or unproductive workers, may have negative political consequences. How will the mayor or town council react to such cost-cutting measures the next time the firm requires a permit? How will parliament receive the firm's next request for a tax credit?

Consider the blackout that occurred in São Paulo, Brazil, during the 1997 Christmas holiday. The recently privatized electric utility there faced record outdoor temperatures that week and was already struggling with equipment that had deteriorated as a result of poor maintenance prior to privatization. However, the press and the public focused on the 40 percent reduction in personnel (some of whom had to be rehired to teach existing workers how to repair jury-rigged transformers), combined with the utility's record profits, to paint a picture of an exploitative foreign investor.

In contrast, responding to adverse economic conditions by "doubling down" may seem economically or financially foolhardy, but it can bring substantial benefits in terms of political capital. Demonstrating the long-term nature of your investment horizon and helping a

partner—particularly one that is politically controlled or influenced—can generate political benefits in the future, which may in turn generate economic returns. For example, after the 1998 devaluation of the Brazilian real, many companies put their investment plans on hold or even exited the country. One firm that bucked this trend was Italian state-owned oil company Eni. Its CEO at the time, Franco Bernabe, visited Rio de Janeiro and explained that it was important to keep up investments in moments of crisis: "It's important, even though the price of oil is low. Now is the time to show that Petrobras [the Brazilian state-owned oil company] has long-term friends."

Even strategies explicitly intended to shield a firm from policy risk may have negative political consequences later on, particularly if they constitute a "special deal." Private investors should shun policies and contracts that appear to provide too much "special treatment," which may serve as a lightning rod for public criticism and political action, especially in the wake of a crisis.

Consider the case of Southeast Asia, where many governments wooing private power investors in the early and mid-1990s offered contracts providing insulation from commercial risk, fuel supply risk, exchange rate risk, currency conversion risk, regulatory risk, and the risk of political force majeure. When the East Asian financial crisis occurred in 1997, it brought private power investors' favorable treatment into sharp relief as currency values, share prices, and electricity demand all plummeted.

The obligations that the governments of the struggling countries had previously undertaken to attract private investors now had little apparent near-term benefit, and political officials were left in the tenuous position of having to choose between honoring the contracts, at the risk of compromising their own popular support, and renegotiating the contracts in order to maintain support. One investor summarized the public sentiment that prevailed after the crisis: "Who pays for 40 percent overcapacity? The consumer . . . The problem is the [contracts] guarantee a return." In the end career-minded public officials in much of Southeast Asia ended up responding to such anger by renegotiating or canceling many private electricity investment contracts.

Shaping public discourse

Investors should not merely anticipate the political consequences of their strategy and adopt a politically correct business model; they should also shape popular opinion by framing their business practices and desired policies as consistent with broader principles that have already been established in society.

Framing practices and policies as "fair," "equitable," or "growth enhancing"—labels that are widely understood and accepted by members of society—is often a simpler and more powerful means of securing political support than debating the pros and cons of the various details. Similarly, framing an opponent's position as "unfair," "inequitable," or "growth destroying" is often more effective than engaging in academic debates.

Investors' precise definition of "fair" may well differ. For example, firms lacking a dominant market share may try to persuade political actors to support policies that favor them at the expense of dominant firms by invoking entrenched societal concerns about the abuse of monopoly power. In fact, in many countries, such as the Republic of Korea and the Czech Republic, the third wireless competitor—the one trailing the two major players—initiates a large portion of the regulatory and policy disputes, often invoking this principle.

In Korea, LG Telecom made repeated calls for "asymmetric" government regulation of the market leaders in order to "level the playing field." A manager at another Korean firm explained:

> *Of course we have pushed for [regulatory] asymmetry. Our concept is for a level playing field. If one firm starts with a huge lead, you are not going to get competition by treating everyone equally. Unless you tilt the market so that the dominant firm cannot abuse its market power, you will never have true competition. Just as the dominant firm will play the dominant role, the entrant [smaller competitor] will also play its role demanding asymmetry.*

LG's lobbying efforts ultimately prevailed. As the wireless telecommunications industry grew in size and political importance, and a consumer movement to reduce rates gained strength, LG intensified its efforts to persuade policy makers of SK Telecom's monopolistic advantage. These efforts were successful: in May 2001 the Korean government announced that it would "guarantee a market share of at least 20 percent for a third major telecom operator [LG Telecom] through asymmetric regulation on Korea Telecom [the state-owned provider] and SK Telecom." (*Korea Herald* 2001).

Dominant firms appeal to fairness by questioning private entrants' economic viability in the first place, suggesting that the entrants survive only with the government's helping hand. One investor in the Czech Republic noted that the third wireless carrier, which requested asymmetric regulation, "knew the fixed prices when they bid." An industry observer, commenting on a parallel situation elsewhere, concurred: "The late entrant applications were not conditional on asymmetry. They didn't even mention it. Now they give all these reasons." In Korea one operator was alleged to have "priced its service below cost and so ran into serious financial problems . . . Now, they are asking for asymmetric regulation."

Another powerful "frame" is that of national identity. Here multinational corporations are at an inherent disadvantage, but they can still portray themselves as domestic actors or contributors to the local economy and culture.

Eni's strategy in the Kazakhstan oil market, where the company has achieved its greatest success, provides an example. Through its subsidiary AGIP KCO, Eni has adopted a business model that responds to the underdeveloped former Soviet republic's pressing economic and social needs. The company favors Kazakhstani suppliers that meet its minimum quality and cost criteria over non-Kazakhstani ones, and runs knowledge transfer and training and development programs intended to help local suppliers come into line with international quality and cost standards. AGIP KCO also trains and employs Kazakhstani citizens for skilled labor positions; at least 60 percent of its employees are Kazakhstani citizens, and the company has stated its intention to replace foreign personnel with Kazakhstanis when possible.

The company has further sought to appear local by funding the construction of various public works, including the national library, the prime minister's residence, schools, computer labs, and multifamily housing units for poor families; it has also purchased ambulances, medical equipment, and water trucks for regional governments. As a result, Kazakhstani political officials now have a stake in AGIP KCO's success. Additionally, all of AGIP's efforts help to create favorable public opinion toward the company, which it furthers by sponsoring various Kazakhstani cultural and language initiatives, including museums, theaters, and language training seminars and the publication of books and plays.

Utilizing channels of influence

The network of relationships in a society plays an important role in determining policy outcomes, especially in countries in which contracts and other formal arrangements carry relatively little weight as a result of a weak legal system. International investors may create direct channels of influence over policy makers by lobbying them and making campaign contributions to them. Investors may also create indirect channels of influence by catering to politicians' constituents, either in the marketplace or by providing constituents with jobs. Various forms of business alliances—with a national champion or with multiple firms through a business association—can provide effective channels of influence as well. At a broader level an international investor's home country government can serve as a powerful channel of influence over a host country government, as can multilateral organizations with which the investor has ties.

Malaysia is an especially good example of the importance of informal domestic channels of influence. As one investor explained, "Malaysia is a difficult place to understand. The electricity sector is closely interwoven with the political process. You can only try to get the tightest kind of contractual arrangements, then you have to work on relationships." Another explained that, "Here, outlawyering is a waste of money. Ultimately it doesn't protect you anyway. The key component is finding the right local partner."

The complex relationships that private electricity investors in Malaysia formed helped them considerably following the 1997 East Asian financial crisis, when government officials in several countries in the region overturned or altered existing long-term contracts with private power investors.

Economic relationships with politically favored constituents may also provide private infrastructure investors with influence over policy. In the Korean wireless telecommunications industry, for example, LG Telecom benefited at the expense of its more established rivals because of upstream suppliers that shared its interests. The major Korean wireless carriers wanted to shift to the globally compatible W-CDMA standard for the newest generation of cellular service, but domestic equipment producer Samsung, a national champion, had developed a global leadership position in the competing CDMA-2000 technology. As a result, the government insisted that one of the new "3G" licenses be awarded to LG Telecom in return for its promise to adopt CDMA-2000.

Just as private investors should seek relationships that provide them with direct or indirect political influence, they should also beware of politically influential relationships that their competitors may have. For example, an investor in the Czech electricity industry, commenting on a government-determined charge for access to transmission facilities owned by the incumbent utility CEZ—which had previously been owned exclusively by the government and whose management still maintained close ties to the government—explained that, "The formula and the data are cooked to help CEZ. This makes us afraid for our future as a company."

Private wireless telecommunications investors in many countries encountered similar problems. A manager at one explained that, "All the rules are right. The problem is the execution. The outcome, the execution, they always favor [the incumbent fixed line carrier]." Another explained that the fixed line incumbent "takes advantage of its relationship with [the government]. They postpone deadlines and cooperate reluctantly . . . they lobby to reduce the budget of the [regulator], which reduces its ability to hire professional experts to inspect and monitor them."

The economic relationship between a state-owned incumbent and the government creates special risks for private infrastructure investors: "100 percent of [their] revenue goes to the government while we pay only tax. Tell me what is the choice that [the government] will make?" Another investor lamented that it is "hard to fight a player and a referee that are on the same team."

Even in the absence of influence over domestic political authorities through relationships with the politically influential players and firms in a country, private infrastructure investors may still employ their home country's political leverage to influence recalcitrant policy makers. One ex-regulator provided a typical example, explaining that "when I assessed a $4 million penalty on the companies from [country x] and [country y], they claimed force majeure and put their embassies to work to lobby our government." Investors in Poland (speaking of the 1989–92 period) and Taiwan (China) spoke of their own governments' susceptibility to US government lobbying pressure on wireless telecommunications policy as a result of their countries' economic and military dependence on the United States. Similarly, several observers in Central Europe highlighted the recent lobbying success of the French and German governments on behalf of national champions France Telecom and Deutsche Telekom, in light of their governments' desire for accession to the European Union at the earliest possible date.

Conclusion

In the face of policy risk some investors have questioned the wisdom of sinking capital in fluid environments:

> *Our parent company and our banks all had the expectation that agreements struck here would stand the test of time given [country x's] self-professed reputation for sticking with its deals . . . Our illusion was backed by comfort letters supporting our contracts . . . Then we had a bucket of water thrown in our faces . . . I don't understand why anyone invests in electricity anymore. Who perpetuates the myth that this model can work?*

To be sure, there are indeed places in which the risks attending private investment may simply be too great to justify entry. However, in many cases investors that explicitly recognize the fluidity of the environment and implement appropriate strategies can reap substantial rewards over the long term:

> *I try to treat the problem [that we are having with government officials] as one that needs to be managed. I am still objecting to the new price and trying to put it up, but I know that the contracts are likely to be changed. If there is a regulated price, the price will be used for political purposes. If anyone assumes that there will be no changes, it is naïve. It is more than naïve, it is stupid. Any kind of regulation should contain fundamental elements and changing elements. In any pattern of change, you have waves. Now, we are in a transient period. There will be times with disputes and discussions, and times to focus on the market. It is possible, in such a system, to have investment.*

Foreign investors seeking to create prosperity for consumers in developing countries, along with shareholders, should expand their focus beyond constructing hedges—trying to write ironclad contracts and employing clever financial devices—to actively managing policy risk from the boardroom and the executive suite. Strategies to mitigate policy risk have as their goal the maintenance or expansion of a firm's political influence over the life of an investment.

The components of such strategies—investing in political capital, shaping public opinion, and using allies—all reflect the fluid nature of the international investment environment.

One international business investor described the following principles for succeeding in any environment characterized by policy risk:

> *[Policy risk] has to be actively managed. You can minimize it, but never fully eliminate it, even under the best regulatory design. You have to dance with the shadows. You have to go beyond what you see on the surface. A lot of it is relationships, not picking the right people, but rather articulating your views and cultivating ties with people who share your goals.*

The mitigation of policy risk has indeed traditionally lain more in the domain of art than in that of science. Yet given multinational corporations' growing exposure to such risk, as well as the development of new frameworks and methodologies for policy risk's measurement and management, it is time to begin the journey forward from a "tummy test" approach to a more analytically oriented, defensible policy risk management system. At its heart this system will always retain elements of tacit knowledge and experience. Not all managers or all firms will be able to master its intricacies. But for those that do, the potential rewards are high.

References

Chifor, George (2002). "Caveat Emptor: Developing International Disciplines for Deterring Third Party Investment in Unlawfully Expropriated Property." *Law and Policy in International Business* 33: 179 – 281.

Guasch, J. Luis (2004). "Granting and Renegotiating Infrastructure Concessions: Doing it Right." Washington, DC: The World Bank.

Kobrin, Stephen J. (1980). "Foreign Enterprise and Forced Divestment in LDCs." International Organization 34: 65-88.

The Korea Herald, "Plan Guarantees 20% share for third telecom group", 5/19/2001.

Merchant International Group (1999). "The Intelligence Gap." London: Merchant International Group.

Minor, M. S. (1994). "The Demise of Expropriation as an Instrument of LDC Policy, 1980-1992." Journal of International Business Studies 25: 177-188.

Wei, S. J. and T. W. Hall (2001). "Investigating the Costs of Opacity: Deterred Foreign Direct Investment." PriceWaterhouseCoopers.

Panel of Judges

The winners of the competition were determined after an extensive review of all submissions and were graded on quality, originality, and level of research. The essays were reviewed and scored in their entirety by a distinguished panel of seven judges.

Hernando de Soto
Founder, President and CEO
Institute of Liberty and Democracy

Samuel Esson Jonah, KBE, OSG
Non-Executive Director
Anglogold Ashanti, Ltd.

Michael Klein
Vice President for Financial and Private Sector Development
World Bank and International Finance Corporation
Chief Economist of IFC

Nadan Nilekani
Chief Executive Officer
Infosys

C.K. Prahalad
Professor at the Stephen M. Ross School of Business
University of Michigan

Frances Seymour
Director General
Center for International Forestry Research (CIFOR) in Indonesia

Martin Wolf
Associate Editor and Chief Economics Commentator
Financial Times

About the Winners

GOLD WINNER: "EDUCATING AMARETCH: PRIVATE SCHOOLS FOR THE POOR AND THE NEW FRONTIER FOR INVESTORS"

James Tooley is the Director of E.G. West Centre. He is also the Head of the Education Section and Associate Director of the School of Education, Communication and Language Sciences at the University of Newcastle. His works explore the role of the private sector in serving the educational needs of the poor.

SILVER WINNER: "TRAVELING DOWN THE OTHER PATH LEARNING TO SEE THE EXTRA-LEGALITY AS AN INVESTMENT OPPORTUNITY"

Matthew Bird is a Ph.D. candidate from University of Chicago.

SILVER WINNER: "THE ROLE OF PRIVATE INVESTORS IN MICROFINANCE DEVELOPMENT: INNOVATION OF A GLOBAL LOCAL CURRENCY MICROFINANCE FUND"

Maheshan Fernando is an independent consultant and a recent graduate of Kogod School of Business in Master of Science in Finance, American University.

BRONZE WINNERS: "MANAGING POLICY RISK"

Witold Henisz is an associate professor at the Wharton School of Business, University of Pennsylvania.

Bennet Zelner is an assistant professor of Management at the Fuqua School of Business, Duke University.

BRONZE WINNERS: "PRO-MARKET BELIEFS AMONGST ARGENTINE SQUATTERS"

Rafael di Tella is a professor at Harvard Business School.

Sebastian Galiani is an associate professor at Universidad de San Andes.

Ernesto Schargrodsky is a professor at the Universidad Torcuato Di Tella.

BRONZE WINNERS: "ICTS AS APPROPRIATE TECHNOLOGIES FOR AFRICAN DEVELOPMENT"

Kristin Davis is a researcher for the International Food Policy Research Institute.

Cosmas Ochieng is also a researcher for the International Food Policy Research Institute.

About the Competition

The first essay competition that aimed at encouraging the latest thinking on the role that the private sector can play in development was jointly conducted by the IFC and the Financial Times.

Some 500 submissions were received from over 70 countries. The competition drew from a wide range of interests and ideas from diverse personal and professional backgrounds.

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