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EDUCATING INDIA'S POOREST: A RADICAL PLAN TO ATTRACT PRIVATE SECTOR INVESTMENT

By Ranjan Sreedharan*

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ABSTRACT

Despite its recent economic successes, India continues to have a vast underclass where children do not go to school or are forced to drop out early. In this paper, I describe a new plan to attract “for profit” private sector investment into the education of our poorest and most vulnerable children who, given current realities, are unlikely to make their way out of the poverty trap anytime soon.

The idea is radical but at its core the plan is simple. Recognising that the private sector can work wonders when there is a profit motive involved, this paper proposes that the Indian government should invite them to set up quality schools for India's poorest with the incentive that as when these children grow up and start earning their livelihood, the income tax they pay to the federal government over their lifetime would go to the entity that nurtured and educated them.

The financial viability of the model under Indian conditions is considered at Appendix A (pp.12-17). Appendix B describes a workable mode—with returns to investors captured from future income tax payments—to attract corporate investment in financing college education for talented, but poor, American students.

Key words: Education, Poverty, Private sector investment, Radical plan, Income tax

JEL Classification: H42, H52, I39, O15

* Contact: ranjan.sreedharan@gmail.com. I record my deep gratitude to Sankar Krishnan, a management consultant based in Trivandrum, and formerly a partner with McKinsey & Co. leading their health care practice in India (2000-2004) and Greater China (2004-2006)¹. His vital contributions to this paper —Appendix A is based entirely on his original work—is perhaps better acknowledged as that of a co-author. Moreover, this paper has benefited from his many suggestions elsewhere.

“Today, just about everything is becoming a commodity, except imagination, except the ability to spark new ideas.”

*Thomas Friedman, “America’s Real Dream Team”,
New York Times, March 20, 2010*

1. Background

There is just no denying that despite India’s recent economic achievements, large sections of its population continue to see little improvement in their day-to-day lives. What is worse, they also have very little hope of a better future. A telling statistic is the continuing and widespread prevalence of malnutrition among children in India. At more than 40 percent (and greater than in sub-Saharan Africa), it is the surest indicator of the blighted future that lies in wait for so many (see Sengupta, 2009). The problem is not just that so much poverty exists, but that given current realities, it is likely to be handed down as a cruel legacy from poor parents to children who remain poor because they would lack the skills to pull themselves up; either they do not go to school or they are forced to drop out early on.

In a paper dealing with education and poor households in India, Pradhan and Subramanian (1999, p.3) put this problem into perspective:

Despite much [sic] initiatives through universalisation of primary education, the number of illiterate persons aged seven and above increased from 350 million in 1981 to 371 million in 1991. According to the MIMAP survey (NCAER, 1998) for the year 1994-95, 49.3 per cent and 16.8 per cent in rural and urban areas, respectively are unable to read and write. One-third of the children aged 6-14 years were out of school. Some obvious explanation for poor enrolment rate and high dropout rate in the literature is attributed to poverty, and child labour supplementing family income is considered to be the cause for such maladies.

In the decade since, a lot of ground has been covered in cutting down on the percentage of children not attending school. The Annual Status of Education Report for 2009 brought out by the NGO Pratham² says that nationally the proportion of 6-14 year-olds not in school is now down to four percent. However, whether this translates into meaningful improvements in learning is a different matter altogether.

2. Why the Private Sector

We know from experience there are limits to what the government can do. The Indian story, in common with many other countries, has been that government efforts have in-built elements of waste, graft and other leakages that compel the use of disproportionate resources

to achieve even modest goals. In early 2008, the New York Times carried a grim story detailing how India's poor are being hard-done by a woefully inept public education system: Sixty years after independence, with 40 percent of its population under 18, India is now confronting the perils of its failure to educate its citizens, notably the poor. More Indian children are in school than ever before, but the quality of public schools [...] has sunk to spectacularly low levels, as government schools have become reserves of children at the very bottom of India's social ladder (Sengupta, 2008).

Referring further to a survey conducted across 16,000 villages in 2007 by Pratham, the article goes on to serve this stark indictment:

While many more children were sitting in class, vast numbers of them could not read, write or perform basic arithmetic, to say nothing of those who were not in school at all. Among children in fifth grade, 4 out of 10 could not read text at the second grade level, and 7 out of 10 could not subtract. The results reflected a slight improvement in reading from 2006 and a slight decline in arithmetic; together they underscored one of the most worrying gaps in India's prospects for continued growth (Sengupta, 2008).

To someone living in India and even cursorily aware of the wider realities, the report would come as no surprise. It is amply clear that after 60 years of trying, government efforts have just not made the headway expected of it. What is more, there is little reason to hope that in the years ahead, anything by way of more of the same can lead to a better outcome. It also follows that for any meaningful change to come about, greater private sector investment and involvement to supplement (even substitute) the efforts of the government is a must.

This is not to suggest that the private sector is now uninvolved in this sector, or, that it is not doing good work already. Indeed, this is a misconception that Tooley (2000) takes pains to dispel: "A common assumption about the private sector in education is that it caters only for the élite, and that its promotion would only serve to exacerbate inequality. On the contrary, recent research points in the opposite direction. If we want to help some of the most disadvantaged groups in society, then encouraging deeper private sector involvement is likely to be the best way forward."

However, it is also true that much of the existing private effort in education for the poor acclaimed by Tooley is directed towards those who, whilst poor, can still afford to pay relatively small amounts towards fees. It leaves out in the cold sizable numbers where parents are too poor to even feed their children properly and where children are often expected to work and contribute to the family income.

What can private enterprise and initiative do for them?

Essentially, this is a question that boils down to: How do you draw the interest of the private sector into ventures that offer no profits and therefore no motives other than charity and the missionary zeal? Without a clear-cut answer, this field will continue to be the preserve of

religious establishments, NGOs and other institutions operating largely as charities. And since there are natural constraints to how much (and how fast) charity can be scaled up, such efforts, commendable in themselves, are doomed to inadequacy in the face of the ever mounting challenges.

3. A radical plan

Here, then, is a new idea. Recognizing that the private sector can work wonders when there is a profit motive at work, this paper proposes that the Indian government should invite them to set up quality schools for the poorest of the poor—or pay for their quality education—with the incentive that as when such children grow up and start earning their livelihood, the income tax paid by them to the federal government over their life-time would go to the entity that nurtured and educated them.

The basic idea—of enlisting the services of a more efficient private sector for an identified national cause by offering them a share of the future gains that accrue from the venture—is actually not very new. For instance, the thought behind getting private entities to build roads (or other physical infrastructure) by allowing them to collect and keep the toll is very similar. The difference now is about extending this concept towards building our human capital. True, it has never been tried before, but there are close parallels to suggest that given a try it can work very well.

Consider, for instance, the example of the petroleum industry. This field has long been dominated by privately owned multi-national oil companies that operate under some of the most strenuous conditions. Petroleum exploration and production is necessarily a high risk business venture due to multiple risks and uncertainties. Very often, the oil-rich countries lack expertise to develop their reserves themselves and fall back on royalty or production-sharing agreements—the capital is brought in by the oil companies in return for a share of revenues once production begins. And typically, the investments required are huge.

According to the Organisation for the Petroleum Exporting Countries (OPEC):

Oil exploration can cost tens or hundreds of billions of dollars. The actual costs depend on such factors as the location of possible oil reserves (i.e. on land or in deep water), how large the oil field is expected to be, how detailed the exploration information must be, and the type and structure of the rock below the ground. [...] It is not easy to determine a typical cost of such activities (OPEC, n.d.).

How long does it take to discover oil and bring it to market? OPEC is categorical that there is no standard answer to this question; depending on where the oil is and how difficult it is to discover and develop, it can take “anywhere from 3 to 10 years” from exploration, discovery, testing and development to the delivery of oil from a new field (OPEC, n.d.).

It is remarkable that an industry routinely up against a staggering array of technical, financial, and political challenges, and where returns get delayed up to a decade and more, has spawned some of the most successful and valuable companies in the world today. And the reason this example finds mention here is that it offers a simple and straightforward moral genuinely relevant to the core idea of this paper: Given the right incentives, trust the private sector to move mountains.

4. The plan in practice

Under this plan, the beneficiaries will bear no formal obligation whatsoever to their benefactors. They will not be made to sign bonds or do anything out of the way; in fact, they would not have any say in the matter whatsoever. Instead, using available, modern-day information technology, the system would maintain a centralised database that would automatically (or with a minimum of bureaucratic intervention) pick up the future series of income tax payments from them, no matter where in India they happen to be, and match it to their benefactors. Indeed, once the government has put in place necessary legal, administrative and information technology frameworks, including the criteria for determining eligible beneficiaries and qualified investors, the system could work pretty much on auto-pilot. Further, with the Indian government already working on a UID project—every Indian citizen will soon get a unique identification number—a major technical obstacle will be overcome soon.

The single-minded focus on the future income tax payments of the beneficiaries has two key advantages. First, it can easily be tracked at a centralised level. Second, it provides a ready and quantifiable measure of the success attained by each individual beneficiary, allowing for proportionate reward to the investor/benefactor, without leeway for subjectivity and controversy.

5. The minutiae of implementation

Yes, once it comes to implementation, there are daunting procedural, logistical and moral concerns that would have to be addressed. Questions to be grappled with would include the tricky, finer details like: Should it be the whole amount of the income tax paid or only a part? Should it really last for a lifetime or for a pre-determined period? How do we ensure that only the genuinely poor benefit? What are the potential loopholes that would allow the unscrupulous to subvert the system?

Here is a sample list, by no means exhaustive, of questions that require clarity before any attempt at implementation:

- a. Should it be the whole amount of the income tax paid or only a part? (Perhaps there can be some gradation based on, say, how long the particular beneficiary was supported.)
- b. Should it be for the lifetime or for a shorter pre-defined period? (The lifetime payment goes a long way in making the idea a viable business proposition. Indeed, considering the risks, the delayed returns, and the gambler's instinct that drives investments into risky ventures, capping the upside potential may well deal a death blow to the plan.)
- c. How do you ensure that only the very poorest benefit? (Actually, there is no real harm even if the less poor were to benefit. Anyone whose future income based on present trends is likely to fall short of the tax-paying band should be made eligible—the government loses nothing, even as large numbers of its poorer citizens gain.)
- d. What about children who do so well that they get jobs abroad and do not pay any tax here? (Every system will have loopholes. Maybe, over time, this can become an international agreement with the U.S. and the European Union governments agreeing to pass on some of the taxes earned from beneficiaries who immigrate to those countries. Should this happen, it would be a powerful, additional incentive in the system.)
- e. How about someone who becomes successful, yet evades taxes? (One hopes the numbers remain small so that the overall outcome is not unduly affected.)
- f. In practice, won't this model end up as an exercise in "cream skimming", where children with intelligence and potential get cherry-picked while the majority are left out? (It would still amount to a worthwhile beginning.)
- g. What about the problem of convincing destitute parents to let go of their children when they are required to contribute to the family income or help out with domestic chores? (Here are two reasons why it may not be serious. First, it is not unreasonable to assume that most parents can be educated about the long term benefits of putting their children through school, and beyond. Second, a family with many children [pretty much the norm among the poor] should have no problems conceding one of them to an initiative under this plan. However, it may be sensible to have some form of binding "guardianship" rights for the investor written into the legal framework around the plan to guard against parents withdrawing their children midway through out of impatience or any other peevishness.)
- h. Considering the timeframes, is not the narrow focus on income tax a major risk? What if the income tax rates are sharply reduced? (The income tax rates will not matter so much as the amounts that are actually collected. A greater risk is the tendency to increase the threshold income up to which no tax is payable. So long as this is done to adjust for inflation, there is no real loss involved.)
- i. Can the unscrupulous possibly abuse or "game" the system in some way or other? (Certainly, there will be loopholes but as long as the gains run well ahead of the costs, there should be no undue worries.)
- j. Isn't the government—whose duty it is to ensure universal education—abdicating its responsibilities? (Social and economic policies can be framed based on how things are

[the reality] or how things should be [the ideal]. There is no doubt which one works better.)

6. Accepting the core idea is the real challenge

Perhaps more than the procedural and logistical challenges, the critical concern is reconciling to the idea of private players motivated not by charity or the goodness of their hearts, but by future profits. Yes, this plan is also about bringing in the element of windfall gains into the education of our poorest children. Much in the way that privately owned companies drill for oil and continue to drill even after some wells turn out dry, private entities would have a powerful incentive to look after some of our most disadvantaged children and their families and lead them out of the vicious circle of poverty. They would know that even if a handful could be nurtured to join the ranks of the wealthy, they would be looking at mega profits.

As for the beneficiaries, every child who emerges with some degree of success would have pulled one family out of this vicious circle of poverty begetting more poverty. For the government, the only sacrifice is the loss of that future income tax revenue that most certainly would not have accrued but for this plan.

However, acceptance of the profit motive in the area of education remains a touchy subject in India. After two decades of economic reforms, India still does not allow “for profit” organisations to invest in education—despite thousands of its finest students flocking to the U.S. every year to study at some of the best colleges and universities of the world that also happen to be run for profit.

7. A compelling rationale

In a recent Op-ed column in the Washington Post, Epstein (2009) lays out an inspiring vision of a corporate sector willingly stepping forward to finance college education for poor American students. He refers to work done by the Nobel Prize winning economist James Heckman suggesting that the potential return on investment in the education of young children can be as high as 17 percent compounded annually and explains, “The return manifests itself in increased future earnings and reduced social costs. Today, that 17 percent compound annual growth rate is inaccessible to investors, but if people could issue shares of their future cash flow, it would unleash that potential, initiating a massive influx of investment in children.”

However, even as the vision inspires, it falls short when it comes to defining a robust and workable method to realize the same. Epstein is focused on tax credits when the fact remains that this is always an unwelcome prospect for a cash-strapped government. He also refers to corporate investors being repaid out of the future income of the beneficiaries. This is

potentially a logistical nightmare: how do you enforce compliance without getting caught up in a tangled web?

The model described in this paper addresses precisely these shortcomings, although in an Indian context. Appendix B describes a model to attract “for profit” investment in providing college education for talented but disadvantaged American students, with returns to investors captured from their income tax payments.

8. The viability aspect

Ultimately, an idea like this can take roots only if it appeals to those who are expected to step forward with their money. We have considered the viability of the model under Indian conditions in some detail, and we have concluded that the plan is workable and worth a try. Our calculations looked at a private corporate entity putting up the money to set up a network of 10 brand new schools dedicated to this purpose. We assume that the venture would operate purely on a “for profit” or commercial basis, with no concessions from the government. And we looked at how the returns would measure up over the long term in relation to the expenses. Our projections indicate that that the venture would break-even by about 17 years and that over the very long term it could generate very good returns with an IRR going up nearly to 18 percent (refer Appendix A).

9. Will the private sector rise to the bait?

Ideally, this plan should be of interest to those players with deep pockets to ride out the initial years. As an investment proposition, it involves spending money on the beneficiaries continuously for 10 to 15 years and thereafter earning an income (from the successful cases) for as long as 35 to 40 years. A critical milestone to reach would be the point where the first paybacks commence. From this point onwards, with more and more beneficiaries cascading into the tax paying band each year, the venture would rapidly acquire the critical mass necessary for sustainable and long-term financial stability.

Also, there should be no underestimating the powerful lure of the potential for windfall gains from the outstandingly successful beneficiaries. Even at lower rates of overall success, investors would likely continue to line up, pulled in by the examples of those handfuls who have chanced to strike gold. As Levitt and Dubner (2006, p.79) point out, “[people] respond to incentives. So if the prize is big enough, they will form a line down the block, just hoping for a chance.”

10. Gains for the government

The government is actually a major beneficiary because:

a) It does not sacrifice current income. The future revenue to be passed on is notional because without this intervention it would not materialise. Also, the government will continue to earn from the indirect taxes and all other positive externalities contributed by (or attributable to) the beneficiaries.

b) People who pull themselves out of poverty through education tend to ensure that their children also get educated. The escape from the poverty-trap becomes permanent with educated parents and educated children all likely to lead lives far better than what was originally in fate for them. Contrast this with the typical government run entitlement programmes targeting the poor where many of the beneficiaries would revert to poverty the moment the programme is discontinued.

c) In India, where affirmative action is practised to benefit those at the bottom of the caste ladder, this plan would result in an increased pool of those qualified to take up “quota” positions. Therefore, it can actually take the edge off the most common criticism against affirmative action, that it ignores merit.

11. Other areas where this model may apply

Here are some examples that come to mind:

a) Adoption and foster care: A similar incentive can be offered to encourage the adoption of children from the foster-care system with the adoptive parents made eligible for some (or even the full) share of the future income tax paid by their adopted children. In the U.S. foster-care system, for instance, about 120,000 kids await adoption every year of whom only about 55,000 or so actually get adopted (U.S. Department of Health and Human Services, n.d.). Moreover, payments from the state to the foster-parents cease when the child attains majority at 18 years of age. As a result, it is estimated that nearly 50% of the children who “age out” of the system become homeless (Wikipedia, n.d.). With an incentive linked to future income tax payments, adoptive parents would have a powerful reason to continue giving care and shelter (and even putting their foster-children through college), if only to better secure their own future prospects.

b) Making NGOs and charities self-sustaining: Even now, a lot of good work in educating the poor is being done by NGOs and charities—despite constrained resources. These institutions can eventually expect to become a self-sustaining model. Initially, they would depend on donors as usual, but later on they would have access to a regular income independent of donations (i.e. the income tax payments of their beneficiaries).

c) Opening up access to elite schools: India has many high-quality, fee-paying private schools that are currently restricted to the elite. Under this plan, these elite schools would have a powerful incentive to award scholarships and take in a certain percentage of poor students. In fact, they would have been at an advantage because they can get started immediately without investing in much of additional infrastructure. Meanwhile, their operating expenses would increase only to the extent of the marginal cost.

12. A word in passing

Someone who went through an earlier draft of this article came back with an account of a disturbing incident he had witnessed. On a cold winter morning, he had once come across a thinly clad boy, perhaps six years old, alone and sifting through garbage piled on a street-corner. Clearly, this was a rag-picker's son getting an early start in the family profession. And this child, as well as all the others like him—destined to grow up and become not what their talent or ambition leads them to, only that what their despair will allow them to—is the one for whom this plan is meant.

13. Conclusion

Elaborating on how the cause of the poor is, in truth, best served by the private education sector, Tooley (2000) asserts:

All this evidence suggests to me that the received wisdom about the role of the private sector in helping the disadvantaged is completely misguided. In developing countries, it is not the state that has the greatest potential to help the poor, but the private sector. Sure, the very poorest may need additional assistance to help them attend these schools, in terms of public or private vouchers (or both). But the state's major role should be to help ensure that the regulatory and investment climate is conducive to the development and nurturing of these schools. And if this is true for India, then it may also be true for the developed world too.

However, international experience with the voucher system that Tooley endorses has been decidedly mixed. While it succeeds very well in improving parental choice and encouraging competition between schools, it has also had an indifferent to negative impact on the very poorest students, precisely the category targeted for improvement (see, for example, Lee & Wong, 2002).

This is where the idea outlined in this paper holds particular promise. Even with a pinpoint focus on the very poorest of the poor, it pulls away decisively from the tried and failed government-led model to one that would co-opt the energy and purpose of the private sector. It seeks to do this with a path-breaking incentive mechanism offering extraordinary rewards for extraordinary success, at next to no cost for the government. In contrast to the voucher system which is all about the government spending its money more effectively, this model is

about the government not spending money in order to let the private sector do all the spending, with likely far better results. Without exaggeration, should the model work (and work well at that), it is potentially a game-changer, capable of transforming the fortunes of those in our midst today leading the bleakest, most hopeless lives.

Finally, even as this paper focuses on India, the model has relevance beyond. To begin with, there are the other similarly placed countries of which South Africa and Brazil come readily to mind. Besides, there are those chronically underprivileged communities in the developed countries too, for example, the children of the Roma in Eastern Europe, or African-American kids in the depressed inner-city ghettos in the U.S.

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Appendix A: The viability aspect

For charities engaged in educating poor children or for private schools that take in poor students free of cost, this model would remain a powerful and welcome incentive irrespective of any other considerations of commercial viability. For the rest, here is a preliminary assessment of the financial viability of this model.

In determining viability, we consider the example of a private corporate entity investing in setting up from scratch a chain of ten brand new schools, and look at how the returns would stack up over the long term vis-à-vis the operating expenses. We assume that the venture would operate purely on a “for profit” basis, with no out-of-the-way concessions from the government. The idea, broadly, is to arrive at what is feasible and how far the model can be stretched.

Our major conclusion is that, on the whole, the concept is economically self-sustainable provided we take a longer term (say, 20 years and more) perspective. Accordingly, in our baseline case, breakeven is achieved by about the 17th year and the long term returns are attractive, with an Internal Rate of Return (IRR) closer to 18 percent.

1. Core assumptions

Scale, facilities, students, teachers

- The baseline case assumes investment in a chain of ten new schools set up from scratch. While this pushes up the investment outlay, it confers benefits of scale and dispersal of risks. The physical infrastructure would be utilitarian—adequate but without frills.
- Students per school at steady state ~ 120/class (with 3 sections) *12classes ~ 1440
- The first class (of 120 students) to pass out from school after completing the 12th standard is 5 years after start of the project (i.e. initially you have classes 1-8 and then keep promoting).
- First pay back after first class passes out ~ 5-6 years afterwards (to account for further studies etc).
- Teacher/student ratio of one teacher for every thirty students (about 50 teachers per school).

Financial indices

- Inflation is assumed at 6%.
- Cost of equity is taken at 16%, in view of the risks and delayed returns.
- The cost of debt is taken at 12%.
- At a project debt/equity ratio of one, the cost of funds is accordingly 14%.

Income projections

- We start with a 2007 study about household incomes in India by the National Council of Applied Economic Research (NCAER) which classifies households into six income categories. For each category we make assumptions, based on the typical occupational profile, about likely earnings at the start of career and where it would reach at the 10th, 20th and the 30th milestone years. In the other years, we assume steady increase by arithmetic progression.
- Income tax on the projected future incomes of the beneficiaries is based on current rates—revision of February 2010.
- Beneficiaries work, and pay tax, till the age of 60 years.

Table 1 below summarises these assumptions:

Table 1

(in constant Rupees)*

<i>Categorisation of Household Incomes in India/ Typical Occupations (NCAER classification)</i>	Annual Income				Average annual income tax
	at start of career	at 10 th year of career	at 20 th year of career	at 30 th year of career	
Destitute India (< Rs.70,000) (Subsistence farmers, landless labourers)	Not projected (Income tax not paid/payable)				
Struggling India (< Rs.160,000) (Service workers, drivers, small farmers)					
Middle India (< Rs.460,000) (Factory workers, small shop owners, bank/government sector clerks)	120,000	250,000	350,000	500,000	19,000
Aspiring India (< Rs.800,000) (Junior corporate employees)	200,000	400,000	600,000	800,000	52,000
Upwardly Mobile India (< Rs.1,600,000) (IT & enabled services, senior government officers)	400,000	800,000	1,500,000	1,800,000	242,000
Global India (> Rs.1,600,000) (Corporate managers, small business entrepreneurs)	600,000	2,500,000	5,000,000	6,000,000	1,069,000

* One US dollar equals about Rs.46 at current exchange rates.

2. The baseline case

Projected earnings and expenses are based on what can realistically be expected, with no special or out-of-the-way efforts either at increasing incomes or reducing costs.

Expenses: The school incurs an operating cost per child of about Rs.10,000 per annum. This is comparable to the fees charged by middle-rung private schools in tier II and tier III cities (about Rs.10,000 to 12,000 per annum).

Revenues: The future incomes of the students are projected conservatively. Roughly a third of the beneficiaries are expected to drop out or land up in low paying jobs without contributing to the project revenues. About half of the beneficiaries make nominal contributions. Only 15 percent are expected to do really well. Table 2 below sums it up.

Table 2

(in constant Rupees)

<i>Household Incomes in India-Categories</i>	Projected Distribution of Beneficiaries (class of 120 students)		Annual income at start of career	Average annual income	Average annual income tax
	%	Nos.			
Dropouts and failures	20.0%	24	-	-	-
Struggling India (< Rs.160,000)	13.3%	16	-	-	-
Middle India (< Rs.460,000)	25.0%	30	120,000	352,000	19,000
Aspiring India (< Rs.800,000)	26.7%	32	200,000	562,000	52,000

Upwardly Mobile India (<Rs.1,600,000)	12.5%	15	400,000	1,273,000	242,000
Global India (> Rs.1,600,000)	2.5%	3	600,000	4,049,000	1,069,000

Viability: With assumptions as above, breakeven is achieved by the 17th year. Returns are quite attractive with projected cash flows indicating an IRR of 17.74 percent and a Net Present Value (NPV) of about Rs.2,245 million.

On the other hand, the first ten years of the project yield no income at all (and this holds true for the alternative scenarios as well). Besides, total outflows up to breakeven can exceed Rs.1,225 million (in today's terms).

3. Sensitivity

a) Income distribution:

Case 1: We reconsider the baseline case on the income side with the assumption that no one makes it to the topmost category of “Global India”—whose contribution to the project income far exceeds the other categories. Accordingly, this two and a half percent of the class is adjusted into the next lower category of “Upwardly Mobile India”. The projected cash flows continue to indicate a fair measure of comfort. Breakeven gets pushed back to 19 years, IRR is at 16.2 percent, NPV is at Rs.1,130 million and the total payouts up to breakeven is at Rs.1,255 million in today's terms. (Note: In this scenario and in Case 2 that follows, the cost structure remains the same.)

Case 2: The major drag in the baseline case is that including the 20 percent dropout rate, one third of the total class does not contribute at all to the project. Therefore, in this scenario the focus is on improving viability by advancing the educational and career outcomes of the beneficiaries. The effort is to minimise dropouts and failures and ensure that most of the class graduate into the higher income bands. Yes, this is essentially cherry-picking, and while there may be different ways to do this, we are not fully convinced it would actually work. For instance, the intelligent and academically bright can be picked out early on, but the link between early academic promise and future earnings is tenuous. Besides, the moral implications may be disturbing to some.

Anyway, if cherry picking can be made to work, it can significantly improve the income side of the venture. In this scenario, the dropout rate comes down to five percent (mainly unforeseen contingencies) and no one languishes in the category of “Struggling India”. Except for the dropouts, everyone else contributes to the project, with 30 percent in “Middle India”, 40 percent in “Aspiring India”, 20 percent are well-to-do in “Upwardly Mobile India” and the remaining five percent doing exceptionally well as “Global India”.

The projected cash flows suggest a compelling business proposition. Breakeven is comfortable at 16 years, IRR exceeds 20 percent, NPV of projected cash flows is at Rs.5,100 million as against total payouts up to breakeven of about Rs.1,165 million in today's terms.

At this point, a word in defence of cherry-picking: If this is what it takes to stir up the investors and drive investments into these ventures, so be it. An imperfect beginning is often preferable to not beginning at all.

b) Increase in cost: When the baseline case is reconsidered with a 30 percent increase in the cost per child per year (say, by way of expenses on providing a free lunch to students), the annual cost of running the school goes up to Rs.18.8 million. However, the projected results continue to indicate viability, with breakeven pushed back to the 19th year, IRR down to 16.5 percent with NPV of Rs.1,700 million and total payout up to breakeven at about Rs.1,620 million (today's terms).

c) Reduced cost of capital: Up to now the cost of funds has been taken at 14 percent. If this can be brought down (see Notes on the assumptions below), the baseline case NPV and total payouts until breakeven would change as given below:

(Rs.million)

Baseline Case	Cost of Capital		
	at 14%	at 12%	at 10%
Net Present Value of Cash Flows	Rs.2,245	Rs.5,900	Rs.14,700
Total payouts up to breakeven (today's terms)	Rs.1,225	Rs.1,380	Rs.1,570

4. Notes on the assumptions

a) Cost of funds: Considering the risks and the extended timeframes for payback, the cost of equity has been considered at 16 percent while debt is pegged at 12 percent (for an overall cost of funds at 14 percent).

In reality, the cost can be lower for two reasons. The project may qualify for long term debt at subsidised rates of interest available in India for infrastructure and “priority sector” lending. Second, it can attract low cost funds from overseas bodies—foreign governments, private philanthropies, even hard-nosed corporate entities keen on elevating their CSR profile.

b) The employment / income aspect: India has affirmative action for those at bottom end of the caste ladder, officially referred to as Scheduled Castes (SC) and Scheduled tribes (ST). There are quotas set apart for them at all levels of recruitment into the public sector and for admissions to publicly funded colleges and universities.

This suggests that employment outcomes for beneficiaries can exceed expectations. Even without an overt caste focus, beneficiaries would be drawn mostly from the SC and ST communities who constitute the bulk of India's poorest. With extra push from the quotas, beneficiaries would compete effectively for all jobs in the public sector. Further, India's higher education sector is mostly state controlled with the best engineering, medical, law and management colleges run by the government and where admissions are subject to the quotas.

Beneficiaries would therefore stand a fair chance of entry into India's best professional colleges, with lifetime impact on their career paths and incomes.

c) Education after the 12th standard: Under this plan, schools take responsibility for educating beneficiaries up to the 12th standard. From this level onwards, it should be possible to pursue higher studies free of cost at the many government run colleges and universities and also be eligible for scholarships and loans based on merit and caste.

d) Tax Rebates: The Indian tax code offers certain rebates to income tax payers based on approved investments, housing loan interest subvention etc. The calculations pertaining to the future income tax do not take this into account.

e) Premature deaths, emigration etc.: No allowance has been made for the possibility of untimely deaths. Similarly, breaks in employment (say, a recession that puts people out of work) and the chances of beneficiaries emigrating have also not been factored in. On the other hand, the assumption that beneficiaries work until the age of 60 applies only to the public sector. With life expectancy steadily going up, perhaps the retirement age will also be extended in future. And in real life, the affluent amongst the retired would continue to pay income tax, albeit at lower rates.

f) Uncertainties with potentially favourable impact: While many uncertainties have an adverse impact on the outcomes, some uncertainties may have a positive impact. For instance, even a handful of exceptionally successful beneficiaries can lead to windfall gains for the project. In a fast growing economy where incomes are continuously increasing, it is reasonable to expect more and more people to enter the tax paying band every year. For example, income tax collections in India doubled in real terms in the decade between 1991 and 2001. This throws up the real possibility that occupations considered low-paying and not paying tax in these estimates may also end up contributing to the venture in the long run.

Appendix B: College for disadvantaged American students financed by “for-profit” private investment

While 2.8 million students enroll in some form of higher education each year, most do not proceed straight through to graduation. Only one in five of those who enroll in two-year institutions earn an associate degree within three years, and only two in five of those who start four-year colleges complete their degrees within six years.

“The conventional wisdom is that students leave school because they aren’t willing to work hard and aren’t really interested in more education,” said Jean Johnson, executive vice president of Public Agenda. “What we found was almost precisely the opposite. Most work and go to school at the same time, and most are not getting financial help from their families or the system itself.”

*Lewin, Tamar, "College Dropouts Cite Low Money and High Stress",
The New York Times, 9 December, 2009*

To many young disadvantaged Americans, a college education represents the surest path to upward mobility in life. Yet, the fact is, college is often expensive and effectively out-of-reach of many deserving American students. To be fair, scholarships are available but the numbers are not sufficient to go around. Student loans are also available but this has had the unwelcome consequence of many young Americans beginning their working lives under the shadow of a crippling debt (for example, Lieber, 2010). College drop-out rates are high because many students hold jobs to pay for their college and find it difficult to manage the pressures of both school and work (Lewin, 2009).

Based on the idea of returns to investors captured from future income tax payments, here is a blueprint of a plan to enable "for profit" private investment in the college education of talented but disadvantaged American students.

At the outset, a word about the differences in the two contexts: For private "for profit" investors putting money into educating India's poorest children, the timeframes and the risks involved are huge, with a gap of up to fifteen years or so before the paybacks begin. Investors in America looking at paying for the college education of talented but deprived students do not run this kind of risk because they would step in only after the potential beneficiaries have revealed evidence of their talent and capabilities. Moreover, the duration of a typical college degree programme—effectively, the period of wait before the returns come through—runs to only about four years. Consequently, there seems no real reason to go anywhere near to the extent of signing away their entire future income tax or even extending the payments to their lifetime contributions.

The two questions that now come up are how much and how far: What percentage of the beneficiary's income tax contributions is to be appropriated in favour of the investor and how long should such appropriations continue? A useful model to consider is the production sharing agreements under which western oil companies operate in the oil exporting countries. The two relevant terms are "cost oil" and "profit oil". Cost oil is defined as "a portion of produced oil that the operator applies on an annual basis to recover defined costs specified by a production sharing contract." Profit oil is "the amount of production, after deducting cost oil production allocated to costs and expenses, which will be divided between the participating parties and the host government under the production sharing contract."³

Proceeding on these lines, the simplest plan would have the government passing on the entire income tax proceeds in the initial years to the sponsoring corporate investor until its 'defined' costs are fully met. Afterwards, a minor share would be passed on for a limited and pre-defined period (Having minimized the risks, the upside can be capped as well.)

The disadvantage here is that the government's income takes an extra hit in the early years, making it a difficult proposition to sell. It therefore makes sense to rework the model by

taking the stand that what the government passes on to investors can only be that portion of tax paid which can justifiably be attributed to their intervention. This would involve defining a particular minimum level of income tax—say the median income tax amount for individuals nationally—up to which no amounts will be passed on to the benefactor since no out-of-the-ordinary success is indicated. In other words, this defined ‘minimum’ would be the amount of income tax the government could reasonably have expected from the beneficiary even without a college degree. Tax proceeds over this defined minimum would be passed on in full measure to the benefactor, though how long this arrangement should hold would have to be decided by expert opinion drawing a line between the interests of the investors and that of the government.

At this point, the cost of the college education to the beneficiary would amount to almost nothing. This has the drawback that anything given away for free soon loses value in the hands of the recipient. To overcome this, and to ensure that beneficiaries remain committed and motivated, it would be reasonable to put in place a requirement for a certain minimum contribution (say, 25 percent) to the total cost to be compulsorily borne by the beneficiary. This minimum share can be in the form of a down payment or a loan (with iron-clad repayment obligations).

Appendix C: A thousand words

Photo 1



A rag picker takes a break from work to spend time with her children on this dusty pavement in the western Indian city of Baroda (Gujarat).

Photo 2



Her daughter is at play and, for now, enjoying herself. Will she ever go to school? In one word: unlikely.

Photographs © by the author, 19 January, 2010

Endnotes

¹ Sankar Krishnan left McKinsey in July 2006, to set up as an independent consultant in the not-for-profit/ development sector in India. In 2001, he was selected by a leading Indian business magazine (Business Today) as one among the Top 25 leading young achievers in India. The report is available online at:

<http://archives.digitaltoday.in/businesses/20020929/cover2.html>

² Established in 1994, Pratham is now said to be the largest NGO in India working (according to its website) “to provide quality education to the underprivileged children of India”. The highlights of the ASER report for 2009 can be accessed at:

<http://www.asercentre.org/asersurvey/aser09/pdfdata/national%20highlights.pdf>

³ Source: Schlumberger, n.d., Oilfield Glossary. [Online] Available at:

<http://www.glossary.oilfield.slb.com/search.cfm> [Accessed 27 January, 2010]