

The travelling economist

India Insight – A micro-miracle

March 2011



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This paper expresses the views of James White, Analyst, in our Investment Markets Research team during his travels to India between January 4 and 21, 2011. During this time, James travelled through south Mumbai, Gujarat and Bihar provinces. As well as writing a daily blog during his trip, this paper is a comprehensive view on James' thoughts and findings in India, these do not necessarily express the view of Colonial First State Global Asset Management (CFSGAM).

An introduction to India

Poverty is India. For all the good of India, and I saw a lot, poverty has to be a starting point. Why does it exist? And where does it end? From the moment my car pulls up at an intersection there's a tap on the glass. I am met by a plaintive look. It's a small child carrying a baby, or an elderly woman bent double, or a handless arm, a man missing a leg with a crutch, or missing both legs and riding a homemade skateboard, his hands calloused like feet. What do I do? What can I do? Surely I can't change these people's lives before the lights change. I understand there is an organisation behind these beggars that should not be encouraged. But all the same, I can feel nothing but despair and a little shame. Welcome to India!

Outside of the marble foyers of hotels the poverty is omnipresent. It's unavoidable. It hits you square between the eyes. India, in this way, takes control of all your senses. It's in the city, where the streets are people's homes, that this poverty is most raw. The poverty shines light on private life; the women hunched over, washing their hair at a pump by the side of the road, the mother and son warming themselves with a fire of material off cuts or the mother feeding her children by the road side. It's where chickens are not white meat packaged in plastic containers, but scrawny birds, butchered and diced in open abattoirs, situated down tight, crowded lanes. It's the animals, scavenging crows, dead rats and skeletal dogs that live off the life in India's cities. In this world, the smell of freshly cut coriander is often a remarkable relief.

The statistics that tell of India's poverty are bad. It regularly ranks in the bottom quartile on a number of different metrics including life expectancy, infant mortality rates, literacy and improved urban sanitation. Indeed, of India's 28% urbanised population, only 54% have access to improved sanitation facilities. The lives of India's 15% poorest are particularly limited, economically. There are 70 million people in India with some income and a small amount of assets; there are 80 million with some income but no assets and 30 million with no income or assets.

Perhaps the most difficult aspect of the poverty for me personally was the young men. India's not an easy place to live for young men, in part because in many regions of the country life is short for so many females. Population censuses in India show that the number of girls has been falling steadily for the past 20 years relative to the number of boys. For every 1,000 boys up to the age of six, the number of girls dropped from 962 in 1981 to 945 in 1991, to 927 in 2001. "A report from Bombay in 1984 on abortions after prenatal sex determination stated that 7,999 out of 8,000 of the aborted fetuses were females. Sex determination has become a lucrative business."¹ This is one way in which India mirrors its neighbour China.



Note:

1. Zeng Yi et al., 'Causes and Implications of the Recent Increase in the Reported Sex Ratio at Birth in China' in *Population and Development Review*, 19: 2 (June 1993), p. 297.

An introduction to India

continued

As a result, young men seem to live a tough and lonely life. The images of men huddled under blankets waiting for a bus on a lonely stretch of road or middle aged men hauling bails of tea leaf in Kolkata on the banks of the river. These are men who have left their village home and work as day labourers in the bigger cities. They earn a pittance and live in the most cramped conditions. They do not have the education to expect any different. Their struggles seem overwhelming.

There is seemingly a positive story of India that rejects the poverty. It's the story of a stock market that has risen nearly fivefold between 2004 and 2010 (until an early 2011 correction) and an economy expected to grow at around 9% in 2012, from above 8% in 2011. It is in the gleaming towers of Gurgaon or Mumbai, Bollywood, the Tata Nano car and call centres. But this

is a story of constraints. Of government, companies and individuals constrained by behaviour, capital and labour. As such, it is vulnerable to inflation, a reversal of foreign capital flows and incapable of really changing the lives of the poor.

But there's also a happier story; the micro miracle. A bottom up reform process in India that truly has the ability to change the lives of India's poor, for their own good and the good of the entire nation. In between where conventional government, society and corporations meet are cracks; cracks where politics, corruption and a lack of capital do not constrain growth. It is in these cracks that India is growing, rapidly, and beginning the process of creating a more inclusive economy.

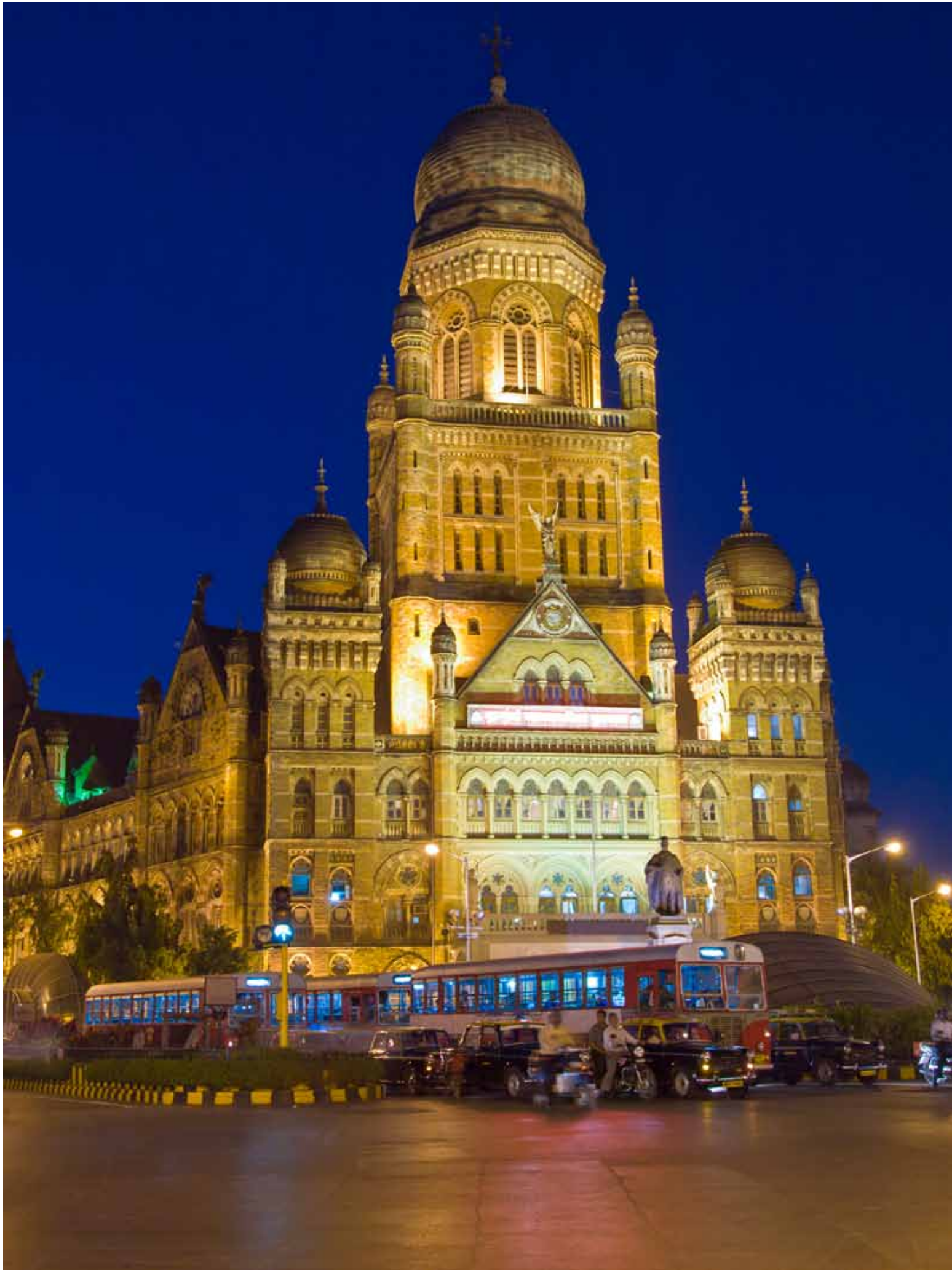


India constrained

Constrained India is similar to other emerging markets at the same stage of development. But, perhaps it's India's scale that makes the constraints seem so daunting. The key constraints are in civil society and effective government, a shortage of capital and a low skilled labour force. It's as though economic growth is incapable of broadening to include more than just a small section of India's society.



Dusk in Delhi.



Mumbai VT station.

As easy as it is to despair about the poverty in India, it is even easier to despair over civil society. The corruption, incompetence and often backward-looking focus of politicians and businessmen places enormous constraints on India's ability to grow.

There clearly is outright corruption. The 2G scandal is perhaps the most heinous recent example of a type of corruption that is nothing short of stealing from the country. The 2G spectrum scam involved officials and ministers of the Government of India illegally undercharging mobile phone companies for frequency allocation licenses for 2G subscriptions for mobile phones. According to a government audit, the loss to the government was US\$38.27 billion (this is the official figure but the market estimates it is probably lower).

Effectively, a government minister had sold the licenses at year 2000 prices despite them being issued in 2008. The scandal was brought to public notice after an investigation by the Income Tax Department investigated a political lobbyist. Two new telecommunication companies made an enormous amount of money on selling the licenses to two foreign telecommunications companies; Telenor of Norway and Etisalat of the United Arab Emirates.

To put the almost A\$40 billion in context, it is broadly equivalent to the Government of India's annual transfers to the country's poor.

The scandal has implicated large parts of the ruling coalition as corrupt, including the previously very well respected Prime Minister Manmohan Singh, who seems to have rejected advice from his Finance Minister to auction the spectrum. A proper parliamentary investigation would endanger the life of the current coalition government and, as a result, policy making has taken a back seat as the ruling coalition utilises stalling and delay tactics.

The 2G scandal is outright corruption; seemingly 'proved' by 300 days of taped conversations. But there is also the incompetence; where assets were sold too cheaply to private investors because government officials and the market lacked the expertise to properly value important infrastructure assets.

Broadly, this incompetence and corruption is reflective of a state incapable of delivering key services. Poor service delivery is a common failing across emerging markets; it's just that relative to China and in a population the size of India, it makes a greater difference.

One study, for instance, found that 25% of teachers in government schools and 40% of medical workers in government health clinics are absent from work each day. In some states, the level of teacher absenteeism was as high as 70%. This is despite government teachers earning substantially more than private school teachers. The same study found that 80% of public school teachers send their children to private schools.

Absentee rates in health care are perhaps higher. The lack of government service delivery means 80% of health clinics in rural India are privately provided, at great cost to poor rural Indians, according to the Asia Development Bank (ADB)¹. The ADB found that the richest 20% of Indians enjoy around 34% of all hospital and primary health care centre service provision. In contrast, the poorest 20% receive about 10% of all services. In effect, government healthcare provision in India is regressive, favouring the rich over the poor.

In part, the failure of the system to deliver services is a failure of politicians to properly align services with the needs of the poor. When I first visited India in the 1990s, I was struck by the sight of statues of local politicians, gleaming white with fresh garlands of flowers. This did not seem a sign of healthy democracy but a kind of benign nepotism. Politicians would deliver constituents guaranteed rice quotas and, in return, they would be delivered electoral victory. Too often, political success has been associated with caste or religious affiliation, rather than what politicians are capable of delivering for their voters.

Another example of this was in power. Power usage fluctuates with electoral cycles; as elections approach power production rises but as elections pass, power production falls. The logic of politicians is that no one is used to full time power so they won't miss the change.

One politician, the Chief Minister of India's most populous state, Uttar Pradesh, represents the Dalit or untouchable caste. While she is very popular, she has achieved very little for her people in raising living standards (Uttar Pradesh is a poor state and not mentioned in the same

Note:

1. India, Rural Governments and Service Delivery, Volume 11: Policy Note June 14, 2006 Agriculture and Rural Development Unit, South Asia Region.

breath as the reformers) and is known for building large statues of herself and other Dalit icons. She has been investigated for having disproportionate assets to her recognised income streams.

The focus on political power for its own sake, rather than to act as an agent of change, leads to poor development outcomes for India. For instance, a number of industrial projects have been rejected or delayed due to concerns over the welfare outcome for rural Indians. Politicians argued that development would not create jobs and leave local share-cropping farmers and farm labourers out of work. Examples include the plans for a Nano car factory (Tata Motors have developed the world's cheapest car in the Nano) in West Bengal, that was relocated to Gujarat, and a South Korean steel mill in Orissa with a total

investment of A\$12 billion that was delayed for seven years. This sort of anti-development rhetoric can be seen in the comments of one politician who stated that India does not need roads because only the rich drive.

This benign neglect stands in direct contrast to the sentiment of the Chinese liberalisation of the 1980s, led by Deng Xiaoping, which implicitly, if not explicitly, worked on the belief that better welfare outcomes would be achieved if some became rich before others. In India, arguably, there exists a belief that a satisfied rather than aspirational electorate will be easier to manage and so development is not promoted. Civil society, whether through corruption, poor service delivery or simply, the Luddites of the political class, constrains India's development.

The nadir of my trip came in a meeting with an Indian infrastructure construction company. The meeting covered all that is wrong with corporate India; summed up as a lack of ambition and civic mindedness. Here was a finance director who saw no need for India to have three lane highways and who was proud in telling us of the constraints placed on foreign construction firms have meant that his company has extreme pricing power in project delivery. Instead, he was happy to milk the system at the expense of the wider economy and, so, I would argue, at the longer-term prospects of his own firm. In the long term, this sort of rent seeking is good for no one.

Too many Indian companies are comfortable in market positions of relative security. They are not agents of change. This can be partly explained by a lack of capital. India has a real shortage of capital. It currently runs a current account deficit of 3.75% of GDP and as a result companies with market leading positions are unlikely to suffer intense competition. This can lead to very high returns on capital. Why allocate capital to competitive situations when there are so many other places to earn excess returns? For instance, one glass company maintains 25% profit margins in what should be a commoditised industry.

But there is also, frustratingly, an element that enjoys a closed, low competition economy and this is particularly the case in areas where government and corporations work most closely. The incentives are simply not in place to ensure the best welfare outcomes emerge. In the absence of proper competition, companies are not provided with incentives to work for the economy and infrastructure provision is one of the clearest examples of this.

At this point, it is valuable to compare India and China, as infrastructure is at the heart of the Chinese success. Many commentators worry about the role State Owned Enterprises (SOEs) play in the Chinese economy. There are concerns that SOEs are inefficient and lead to over investment. But in contrast to India's inability to deliver good infrastructure, I think the Chinese model wins hands down.

There are two elements to this. First, Chinese SOEs are as much incentivised by scale as by profit. Second, infrastructure can lead to huge windfall profits in some cases and so perhaps it is better if these are retained by the state.

Infrastructure is inherently risky. Good infrastructure is even riskier because it plans for an unknowable future. To illustrate, if the Sydney Harbour Bridge was built today with the same amount of spare capacity as it had in 1932, it would need 400 lanes. But there are also, certainly, examples of infrastructure failing and not living up to expectations; that's why it's considered a public good.

When infrastructure is delivered by private firms aiming to maximise profits, they will be cautious on design and construction. When delivered by SOEs with political aims, design and construction will be more aggressive and aim to balance welfare with profit targets. As a result, China has roads with spare capacity that are slowly filling up, compared to India that has roads full to capacity that are only expanding incrementally.

One good example of this is in the power sector. I visited six infrastructure companies that were all balancing investment in the energy sector between power purchase agreements (where the cost of power is pre negotiated) and merchant sales agreements (where the price is set by the market). All saw opportunities in merchant sales; but were keen to remain disciplined. As a result, they were not building power stations where the cost of power

would be greater than Rs3.50 per unit because they were concerned their competitors, each other, would lack discipline that the other would create too much supply. It would seem almost guaranteed that these providers will make substantial profits because of this disciplined focus and it will come at the expense of the Indian economy with lower energy consumption.

Which leads to a subsequent point; huge potential profits should be retained by the state, particularly in emerging markets. There is a role for private investment in infrastructure but that role should be after an asset is constructed and can be fairly valued by the market. Otherwise, windfall profits fall to the private sector, at the expense of the state, enhance already high income inequalities and promote corruption, as the 2G scandal highlighted.

Labour is the last constraint. From a top-down perspective, a large uneducated population acts as a drag on the state. India contributes a substantial part of its budget to income transfers to help maintain the living

standards of its poorest people. It is estimated that in the current generation of school age students, around 140 million people will not be educated. Their lack of education makes them extremely unproductive. I was once told that manufacturers in India struggle, not with finding good managers, but good staff. This was plainly the case in the many manufacturing firms I visited that were more reliant on technology, rather than labour and also on Business Process Outsourcing (BPO), where wages are rising quickly on a shortage of appropriately trained labour. Largely, the labour constraint is a function of the actions of government and companies. But, part of the success of the micro miracle has been individuals being prepared to work and create opportunities for themselves.

The connection between civil society, politics and business constrains the country's economy and does act as a brake on measures to raise the living standards of the poor. Effectively, it means India's formal economy grows less quickly than it could and so the informal economy must remain an important driver.



Building repairs.

So what does India look like?

For all the poverty of India, one of my favourite stories to illustrate the country's constraints was told by a property developer. Much of south Mumbai is geographically constrained; it is an island – there's effectively one way on and one way off. During the day traffic slows to a grind. One analyst told of a 20 minute journey into work (before peak hour) and a two hour journey home.

This property developer began going through the difficulties of building high rise buildings in south Mumbai and suggested that flying steel into the construction site may be the most efficient use of resources. Life in constrained India is expensive, for the poor and the rich. Only by removing the constraints on India can the enormous productivity improvement occur and allow India's formal and informal economies to work together more efficiently.

India's formal sector is where government, business and the outside world are connected and its informal sector is where the rest of the country aims to earn a living. The formal sector is the measured sector, the economy of the 64 million employed people and of agriculture where production can be measured. More prosaically, it is the gleaming towers of Gurgaon in Delhi or the Ambani residence in Mumbai.

The informal sector is the economy of the traditional cities. Here in the back lanes of Old Delhi or the slums of Mumbai important economic activity occurs. This activity employs the majority of urban dwellers as shop keepers and business owners, day labourers, auto rickshaw drivers or chai-wallahs. Some of the activity is exported. For instance, the slum of Dharavi in Mumbai produces 0.5% of India's exports in the form of recycled plastic and leather goods. It also employs the majority of rural workers too, as day labourers, share-croppers and farmhands.

The informal sector, and the crowded lanes and slums that go with it, is a function of the size of the formal sector. The larger the formal sector becomes, the quicker the informal sector can shrink and a more developed world form of urbanisation will emerge.

Removing constraints will enable India to enjoy the growth profile of its east Asian neighbours, but it needs a catalyst and that catalyst will not come from the top. Instead, the catalyst(s) will come from the cracks. A micro miracle created from the enterprise of Indians working in society's and the economy's cracks. By cracks, it is meant the places where the government and corporations tied to the government cannot play a role.

I imagine India as a sheet of concrete. It has been an unchanging block where order was set in stone; a combination of the country's political, commercial and social constraints. The order is historic, compounded in many ways by the lurch to economic self dependence in the post-partition period.

The rigidity of the system, the concrete block, and the constraints it creates, stops top-down reform and growth. India will not be China, or any other country that enjoyed a conventional 'economic miracle'.

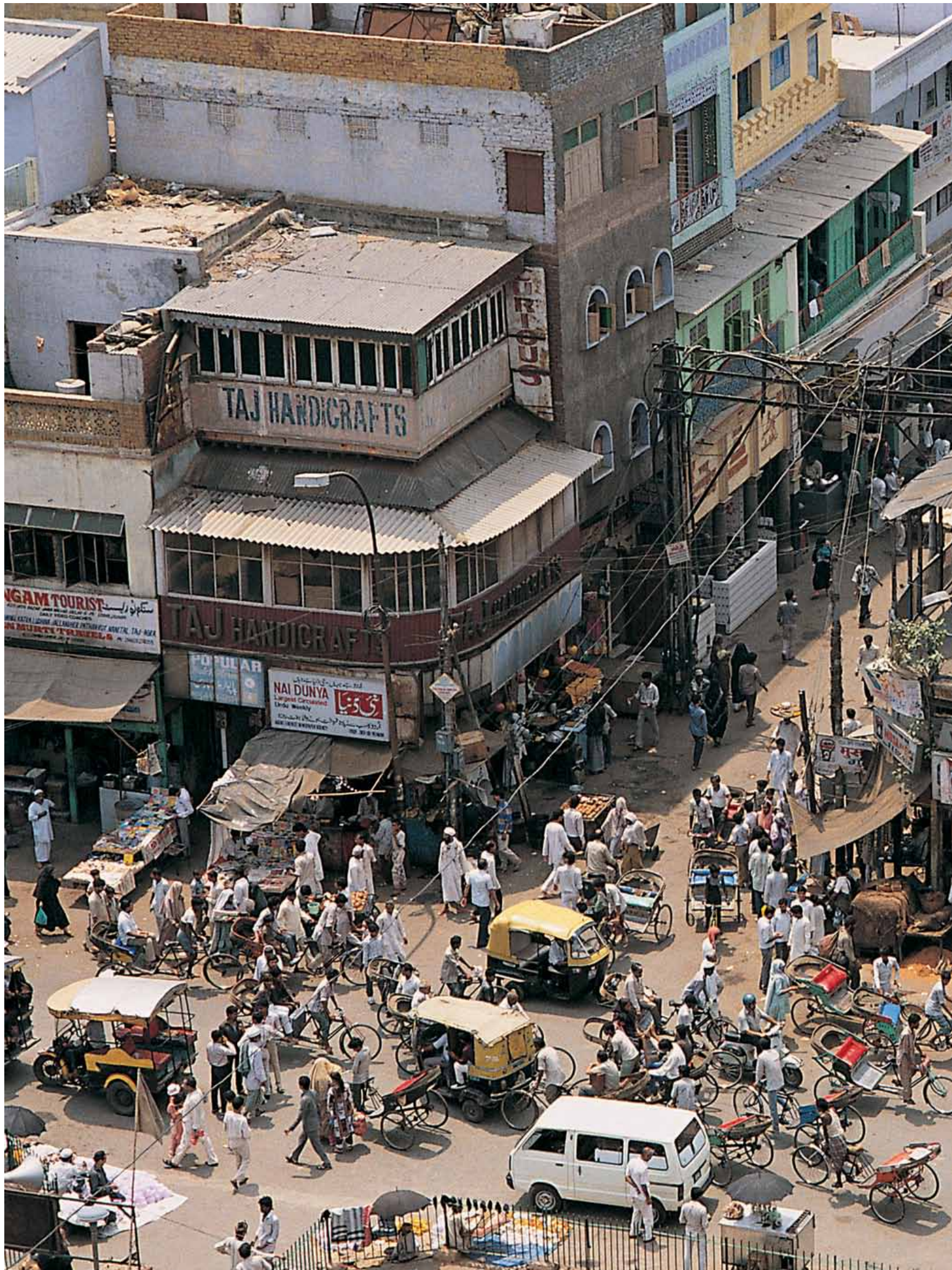
Since the end of the Second World War, there have been a number of 'economic miracles'. These have been economies that have successfully emerged, either from war and/or agrarian societies transformed into industrialised or developed economies. Germany, Japan, Korea and Taiwan are all good examples. More recently, China has enjoyed its own remarkable shift from an agricultural to industrial economy.

The establishment of industrialised economies in these countries came about through a mix of enhanced capital supply and an improvement in top down political delivery of projects and services. In the case of Germany and Japan, the mixture of Marshall Plan aid and an institution building program by the occupying forces provided the foundation for consistently strong economic growth over a sustained period. The experiences in Korea and Taiwan were similar, though Taiwan was perhaps more a local, rather than international story.

The mix of institutions and capital allowed the capital base of these economies to expand rapidly. As the capital base expanded, the ability for economic activity to rise also increased. This is the roads and railways, the ports and airports, and energy and water assets that raise the productive capacity of an economy. This is a capital broadening, that is, the asset base spreads out to include as many as possible.

But there are small cracks in the concrete, created by deregulation in the early nineties and probably more importantly, technology. In these cracks grow green shoots and with oxygen and sunlight (in this case open markets, increased demand and freedom from political interference), the green shoots grow and create bigger cracks, or, in the language of economists, positive externalities.

These green shoots are evidence of a micro economic miracle, capable of improving the lives of Indians, not by overcoming the constraints but working around them. In the course of my travels I saw examples of these green shoots of more productive growth in India in the actions of some government programs, companies and individuals, with potentially new ways of doing things.



New Delhi street corner.

There are, for all its troubles, elements within the political system in India that are driving substantial change. At a national level, or from the centre colloquially, reform is difficult and limited to those areas where there are not already entrenched interests. A good example of this is the Unique Identification card project (UID) that has been given Cabinet level support. Beyond the difficulty of reform in Delhi, there are strong elements of reform at the provincial level in India. Finally, one national program, the National Rural Employment Guarantee Act (NREGA), despite being limited by the constraints of a limited vision and corruption, is changing the country. These changes are outlined below.

The Unique Identification project

The UID is a fantastic example of a program that has grown in the cracks and is capable of delivering real change to people's lives. The scheme has a number of important elements, it fights corruption, it increases the capacity of the Indian government, it enhances service delivery across India and, finally, it improves India's fiscal position substantially.

The UID has so many redeeming features, but the primary aim is to provide every Indian with their own unique identity to reduce, or eliminate, the poverty premium. The poverty premium is the extra amount poor people pay for services in India, it also includes the money the poor don't receive because it has been siphoned away.

It is estimated that the poor in India pay around A\$10-20 billion a year in usurious interest, because banking services are unavailable to them. In 1985, the late Prime Minister of India, Rajiv Gandhi estimated that only 15% of subsidies and transfer payments due to the poor actually reached them. It is estimated that of the A\$250 billion targeted for the poor in the next four years, only between A\$100-\$110 billion will reach the right recipient. Similarly, 38% of the kerosene bought for use by poor households finds its way onto the black market. Unsurprisingly, the poorer the state, the higher the level of corruption and so the less the poor ultimately receive. By improving the efficiency of spending money, India can make a real difference to its fiscal position.

The source of the problem is twofold; a lack of identification and false identification. In a population of 1.17 billion there are just 70 million permanent account numbers for tax returns, 60 million passports and 90 million drivers' licenses, while at least 150 million are below the absolute poverty line. There is, also, an estimated 23 million 'ghost' public distribution cards (cards entitling users to subsidies) due to holders being dead, duplicated or having never existed at all! False inclusion of richer sectors of the population also accounts for substantial leakage in the system. It may also be possible to see some of India's many tax exiles and Swiss bank accounts returned to the country.

A UID would remedy this. Rather than being a tool for government service delivery, the UID will be a third party, trusted, authentication partner. Effectively, authentication in India will be established as a public good. This is important because it enhances trust in the network and enables private sector service delivery to also be enhanced.

The project is being delivered in a unique manner. It was launched in 2009 when the government announced that Nandan Nilekani, former CEO of giant IT consultancy Infosys, would serve as Chairman and hold cabinet status. Below Mr Nilekani are many more professionals undertaking sabbaticals within the organisation including investment bankers, hedge fund managers and IT professionals. These professionals are assigned tasks based on need rather than skill, so the hedge fund

manager was sent to rural Jharkand province to plan the roll out of the project locally.

Each individual in India will eventually have a UID. This UID will contain five pieces of information: Biometric information (such as a fingerprint) a name, an address, zipcode and date of birth. Once a UID has been issued, it will not be possible to gain another, because only one can be issued per fingerprint. Addresses are problematic. Too often, addresses are vague – for example, next to the temple and two down from the tea stall.

The UID will transform the transfer of government funds to the poor and open up substantial distribution channels for the private sector.

The impact of such a program on public service delivery can already be seen in small scale examples. For instance, in the central state of Madhya Pradesh, the move to online driver's license renewal has cut out a key opportunity for low level corruption as drivers no longer need to visit centres to be renewed. In another example, an identity card scheme in the southern state of Andhra Pradesh has enabled better monitoring of a work scheme. This has lowered the proportion of work flowing to ineligible recipients.

The specific benefits to the private sector may be relatively limited to the mobile phone industry and financial services. Proper identity makes telecommunication and financial services more accessible. It is estimated that around 500 million adult Indians are outside the formal banking sector, largely for an absence of incentive, but also appropriate identification. UID opens up more financial services products to households including loans and savings products such as life insurance. A further, perhaps, speculative product would be an exchange traded gold fund, with quite a substantial impact for the gold price if it were opened up to so many more Indians.

State politics

At a state level it is perhaps easier to identify politicians who can take advantage of the cracks and ignore process and legacy to chart a new path that will demonstrably change people's lives. Two examples of this are in Gujarat, one of India's richest states, and Bihar, one of India's poorest. In the course of the trip, both states were mentioned numerous times, to the point that I was often able to finish sentences for people who began to tell me how much they enjoyed working in either state.

Gujarat is India's western most-state and has had a tough recent past. In 1994, a bubonic plague epidemic broke out, resulting in 52 deaths and in a large internal migration of about 300,000 residents, who fled fearing quarantine. It seems that this was the same black plague that hit Europe in the Middle Ages. Then, in the early 2000s Gujarat observed some of the worst sectarian rioting in India since Partition in 1947, when up to 790 Muslims and 254 Hindus were killed. Indeed, there has been significant sectarian violence in Gujarat since 1969 when 2,500 people died.

But since that period much has changed and the state has been one of the most successful in attracting domestic and foreign investment. At the forefront has been one politician; Narendra Modi. Despite the Supreme Court of India finding that he played a significant, if passive, role in the sectarian violence (he was described as Nero, happy to sit by while the state erupted in violence) Modi is lionised for his work in transforming Gujarat. Indeed, he is described by some as a future Prime Minister.

The success of Modi seems to have been down to a mix of economic and social policies that have helped improve the lives of Gujaratis. He has worked hard to lower the level of infant mortality, raise the standards of preventative medicine and improve the boy:girl ratio. But through a scheme to bring electricity to every village, support on farm agricultural research and attract foreign investment, he has also managed very strong economic growth. The state's economic statistics are impressive. It has averaged 12% pa growth in the past five years, its capital base is 18% of the Indian total and its population enjoy the highest energy consumption in India. Gujarat's population is 50 million people.

“It is estimated that around 500 million adult Indians are outside the formal banking sector, largely for an absence of incentive, but also appropriate identification.”

There is no doubt that Modi would find national leadership a trickier proposition. He would find less support internationally, given the sectarian riots, though this image is shifting. He would also struggle to balance the competing interests that make policy-making from Delhi so difficult. But Modi has been able to choose a path that has substantially improved the lives of Gujaratis and he stands in stark contrast to many less productive state politicians.

Bihar, in India's east, is at the opposite end of the country and income spectrum to Gujarat. For many years it has been associated with backwardness and lawlessness. But from the moment I arrived in India it was offered as an example of positive change. A young man at the Reserve Bank of India told of how he could now stand on the platform of the railway station at Patna (the state capital) at 3am without fear of violence. Murder and kidnap for ransom were common in pre-reform Bihar. It is also possible for shops to now stay open after dark. Others spoke of the improved education and health outcomes or the lower corruption.

Courtesy of CLSA, I have a multitude of statistics to demonstrate the improvement in Bihar. New mobile phone subscriptions in the last five years have averaged a compound annual growth rate of 60%, suggesting rising wealth, from 2006-2009 convictions have doubled. Bridge construction funding has risen 10-fold from 2006-2007 to 2009-2010, surveys have found a six-fold increase in immunisation statistics and the number of institutionalised births has risen from just 45,000 in 2005-2006 to 1.25 million in 2009-2010.

There have been a number of programs aimed directly at women and girls. The state has instituted pensions for widowed wives and improved post natal care of babies; any girl who needs to travel more than 2km to school is provided with a bicycle, the laws to deter female infanticide have been made tighter and stricter, and a scheme has been set up to help women from poor families to marry.

The political change in Bihar has been substantial. For many years Bihar was the personal fiefdom of the Indian National Congress aligned Rashtriya Janata Dal (National People's Party), a political party associated with the Yadav family and corruption. But recent evidence suggests a stark change. In the most recent elections the NDA government, backed nationally by the Hindu nationalist BJP, received wide spread support. Indeed, strong support was received from Muslims.

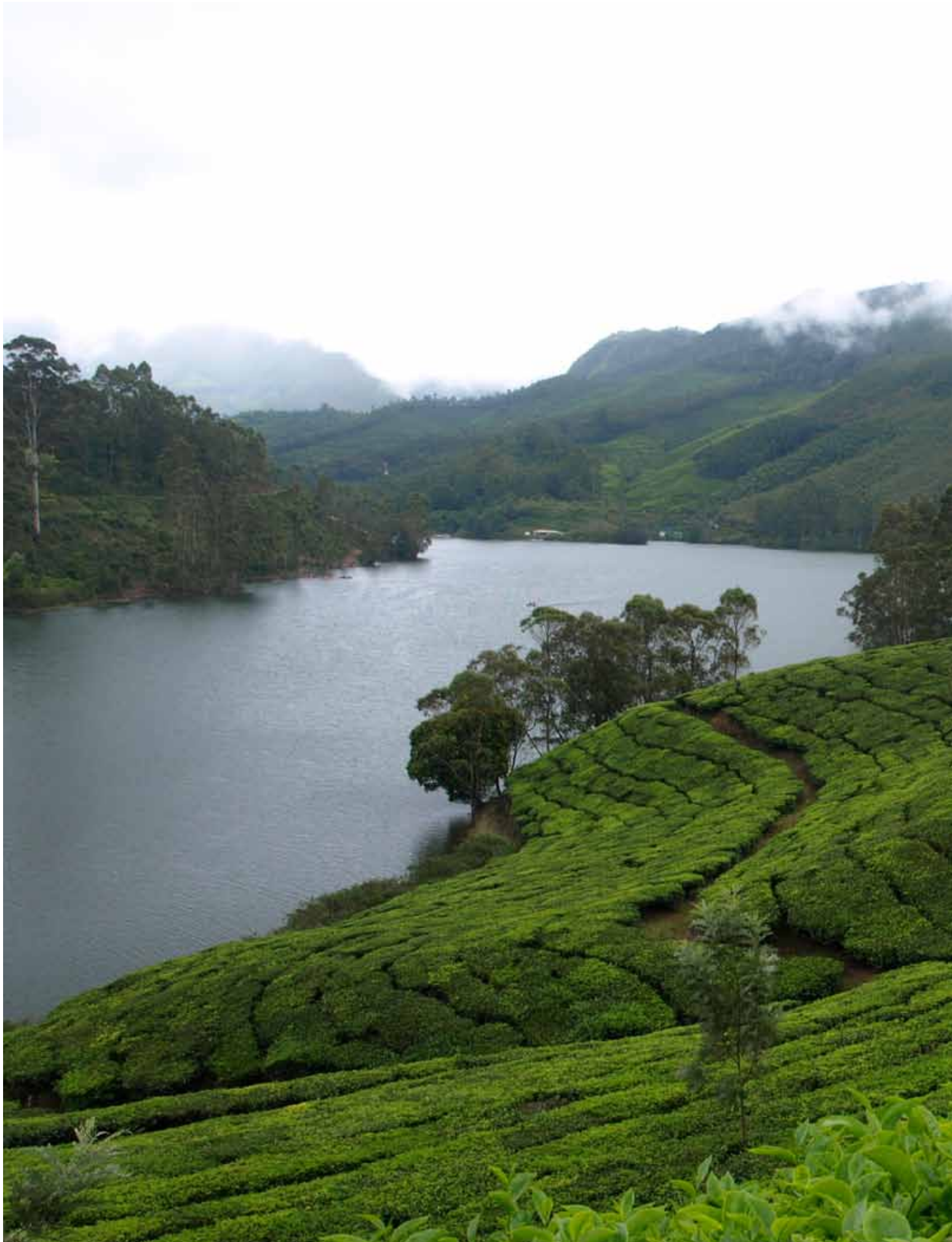
National Rural Employment Guarantee Act

Finally, the NREGA scheme, as its name suggests, guarantees 100 days of work for adults in any rural households annually, with a mandatory wage of Rs100 per day. The workers must also be provided with a crèche, water and shade. It was put into legislation in 2005 and in 2009-2010 cost the Indian government nearly A\$9 billion, with around 70% of the total being spent on wages. This may be the world's largest government work scheme.

There are undoubtedly problems with any large government programs. These problems match the constraints in the political system highlighted previously. Corruption is perhaps the most obvious problem with many claims of unqualified recipients, including government employees. The other is the lack of permanency of projects. There is a belief, reflecting the limited political vision noted above, that projects should be temporary; as though India's poor are stuck in a nightmare of being condemned to do the same thing for eternity. Surely, permanent projects that build society and improve productivity would be more valuable, especially to the poor?

One final criticism of the program highlights the positive externalities that change can create in India. Since NREGA has emerged, construction contractors and farmers have complained about a lack of migrant labour and the need to raise wages as NREGA offers a more lucrative alternative. There is a concern that some harvests will not be cut if the supply of labour does not rise. Of course, this is ridiculous. A shortage of labour should and will encourage more capital to be engaged in production to improve productivity. There is already evidence of harvesting contractors with combine harvesters emerging as a solution to more expensive labour.

While NREGA is driven by the India constrained, it is undoubtedly the case that raising rural incomes is very capable of creating positive change and improving living standards.



Tea plantation, Munnar, India.



The corporate sector

There are numerous corporations in India that have taken advantage of the cracks. Undoubtedly, they have done so because of the scale of the opportunity involved in unlocking the spending power of India's rural millions. But to unlock that spending power, it will often mean increasing that spending power by improving productivity.

The starting point for this change has been television. The growth of cable television has been all about the fast moving consumer goods (FMCG) industry increasing its penetration of Indian household spending. But television has had a wider social outcome and that has been to create a more aspirational India. Currently, around 135 million households, approximately 50%, have cable television, many of them deep inside the slums of India's big cities. Costs are very low – amounting to a couple of dollars a month for a basic subscription. While programming is built around family and historical dramas, cricket and advertising, it does play an important social role in two ways.

First, television provides all Indians with an insight into the world and into India's middle class. This has been very important in helping to create a more aspirational nation with education and Bollywood as the most obvious entry points for an improved living standard. Second, television has begun to shine more light on the political process. While many Indians will complain about the combative and, perhaps, meddlesome nature of the press, they do play an important role.

But television only gets so far in raising living standards. It will be other companies that do a lot of the hard work in raising household living standards. Some will do it through information, others will do it through a process of capital deepening by taking on the role of the state where it is required.

A lack of information has long been a substantial barrier to economic wellbeing in India. One example I witnessed during my time there highlights both its nefarious impact and that it still persists. A group of women in a small village in rural Andhra Pradesh make very fine, silk saris. These saris are highly prized. They are on sold to middlemen for less than A\$100 and subsequently sold for many multiples more. The group of women can make one sari per month – but if one woman becomes ill, the process can take up to six weeks, leaving them unable to pay money lenders and feed their families. The information crack accounts for the difference between the price the producer receives and the end user pays. By closing the information crack, the incomes of rural households and their capital base will rise, creating better education, welfare and agricultural outcomes.

ITC e-Choupal

One such scheme already does just this. e-Choupal is a scheme sponsored by tobacco company ITC, which has evolved into one of India's largest FMCG companies. The company's reach is large; it supplies 10 million shops nationally, with two million supplied solely by ITC. As such, its view of the economy is likely more accurate than any public data.

The e-Choupal program provides farmers with information including commodity and transport pricing, weather forecasts and improved farming techniques. The information is disseminated through kiosks which provide the physical infrastructure. There are 6,500 kiosks covering a network of 40,000 villages and four million farmers.

The scheme best highlights the micro miracle.

Before the emergence of e-Choupal, life for farmers selling grains and other commodities was tough. Farmers would take their produce to a mandi, or market. Each mandi may cover an area of 700sq km or more. The choice of mandi would be relatively arbitrary with limited pricing information to improve their decision. The farmer would often travel to the mandi overnight to avoid peak season crowds. At the mandi, a cursory assessment of the farmer's product would be undertaken before it was bagged (the baggers were often paid in spilled grain, which comes at the cost of the farmer) and then weighed. The farmer pays for the bagging and often agents would cheat on correct weight, again to the farmer's cost. The produce would then be auctioned. Finally, the farmer would be paid, though often this occurred in a series of payments rather than upfront. It was estimated that agents took about 2.5% to 3% of the sale price, despite claiming an official rate of just 1%, while farmers would lose even more along the way.

The e-Choupal system, devised as an IT based solution in the 1990s, seeks to remove these impediments and pay the farmer more. The system is based on the social dynamics of the village. A respected, but not wealthy, farmer is chosen as the point man, or 'sanchalak'. The sanchalak will be IT trained by ITC and provided with a computer and internet connection. ITC aims to have a sanchalak within 5km of every farmer in India.

The new system works as follows: the farmer will take a sample of grain to the sanchalak. The sanchalak will make an assessment of the grain's quality. He will also check the national price database which uses mandi prices. From these two pieces of information the farmer will be quoted a price. If he accepts, he will take the produce to an ITC processing centre, unbagged. The produce will be weighed electronically. A chemist will make a similar assessment of the grain and, in nearly all cases, approve payment. The payment will be made upfront.

“A lack of information has long been a substantial barrier to economic wellbeing in India.”

Certainly, ITC benefits from this scheme. As its website states “The network of 6,500 e-Choupal centres spread across 40,000 villages has emerged as the gateway of an expanding spectrum of commodities leaving farms – wheat, rice, pulses, soya, maize, spices, coffee, aqua products. The reverse flow carries FMCG, durables, automobiles and banking services back to villages.” This reverse flow is why ITC is so keen to promote the e-Choupals. As the income of farmers rise, their ability to spend rises and it is here that ITC and its 160 partners can benefit.

Shriram

Another company, possibly my favourite company in India, uses information in another way that creates opportunities for more Indians. Shriram is a finance company, operating almost entirely in the space of commercial truck finance. Unlike most other finance companies around the world, it does not use quantitative risk scoring. Instead, it has a unique model that enables it to lend more aggressively in a segment that would otherwise have very limited access to credit.

Trucks are the backbone of India’s freight industry. While the rail network is the largest in the world, it is trucks that bear the brunt of shipping goods around the country. Indian trucks are not, generally, the sophisticated road trains of Australia or the US. They are boxy, sturdy and simple vehicles, decorated in brilliant colours. Each and every truck has a sign warning they will honk the horn! They are designed to plough down roads filled with potholes; Indian tyres are the heaviest in the world, around 20% heavier than the global average.

Shriram operates in this market. It targets the small truck owners, those owning three trucks or less, or those that are aspiring to move from driver to owner. This is around 75-80% of the market. This part of the market is capital starved. Shriram’s competitors are private financials and the money lenders.

The unique business model of Shriram is to ignore quantitative risk-based credit models and instead use a more informal model that better captures available information and creates the right incentives for loan officers. This is extremely important in a segment where customers have no balance sheet, regular banking habits or collateral and will not file tax returns.

At the heart of the Shriram business model is the loan officer. The loan officer is also the credit and collections officer, meaning they will take responsibility for the loan if it becomes non-performing. Shriram has 15,000 staff, of whom 8,200 are loan officers and collection agents. They are well paid with starting salaries of Rs5-10,000 and then bonuses that can easily allow officers to earn around A\$500 per month.

When a new customer approaches Shriram, the loan officer will do a background check. This check will involve asking a variety of people about the character of the customer. This may include the tea shop or the betel nut shop, to see if bills are paid on time and his current employer to determine both performance, and also experience, in terms of the routes they might drive and the freight they may carry. The second element of risk assessment is the truck; indeed, truck valuation is the loan officers’ most important skill. Loan officers can, apparently, value trucks based solely on the sound of the engine. As a further buffer, Shriram lends loan to value ratios of a maximum of 60-65%. The loan officers will collect, in person, around A\$200 million monthly through 487 outlets.

Shriram is now broadening its offering. One initiative, similar to e-Choupal, is Aam Aadmi. The scheme leverages the competency of Shriram in truck valuation, and its status as a trusted third party to create a more liquid and transparent second-hand truck market in India. Trucks in India are highly liquid but, as with grain and sari markets, there are means by which middle men can extract economic rents. Shriram aims to establish a network of auto malls where regular truck auctions will occur, from which it will earn fee-based income. The creation of a more transparent model puts more money in the hands of the poor and so funds expanding their living standards.

SKS Microfinance

Microfinance, on a sufficient scale, is one more means by which the exploitation of cracks in the market enable the poorest people to be helped. Microfinance began in Bangladesh and involves providing poor families with small loans for the purchase of income producing assets such as mobile phones, livestock or small shops. The loans are provided to women only, and they are underwritten by peer groups of four other women.

I observed the enormous value of microfinance to a rural village. Villagers would use loans to pay for land leases, or more commonly, buy buffaloes. As capital is built, villagers tend to buy higher yielding buffaloes, allowing them to sell more milk, often to nearby towns. While borrowers continue to work, often as day labour, the extra income creates more stable household incomes and allows for home improvement (many live in mud huts) and education.

The business is more popular than the current government program, despite the government offering lower interest rates. Borrowers benefit in a number of ways, but mainly because it’s more efficient. Borrowers don’t have to travel to town to lodge applications, receive the money and pay down their loans, which

“The Indian education system is capable of identifying good students but ill equipped of making them work-ready.”

is important because travel means lost wages. In addition, the government approval process can take four months. The government simply does not have the reach to effectively deliver this sort of program; a perfect example of working outside the constraints of the system.

Scale is important. The scheme has obvious positive economic impact but only if it operates across the whole of rural India will it make a meaningful difference. SKS operates across 340 of India's 640 rural districts. Its ability to do so is created by its ability to hire enough people and use technology effectively. Typically, its people come from similar villages, are 10th grade educated and are presented with good career opportunities. They have learnt from McDonald's and Starbucks when hiring a large labour force and training them to deliver a standardised service. Often employees will not have seen a computer before. They now feel comfortable spreading the model through most regions in India.

The value of scale is in increasing the impact the business has on people's lives. SKS has sold solar lights and mobile phones through its network, but most promising are the benefits for poor, rural India.

Other business and charity

India's companies, particularly the IT ones, have been working in the cracks for a long period of time. Indeed, IT companies are probably the best example of this phenomenon.

This is a sector that did not exist in the early 1990s and has now become synonymous with India and its growth story. These companies have risen in the cracks. They have no significant infrastructure issues and they are not dependent upon the government for their existence, as is the case with many of the heavy industries and some manufacturing. IT companies employ around 1.5 million people (small in Indian terms, large in global terms), but their influence across India is substantial, as a driver of a stronger economy and society.

I visited Infosys' education campus in Mysore, Southern India. The campus is a monument to what India can create; a world class facility with a little bit of ostentation! The campus, on 350 hectares of land, houses around 11,000 students in 10,000 rooms and employs 5,000 software engineers. Students are put through a six month training course that covers programming as well as soft skills, such as project management and client relations, including how to undertake a conference call.

The students are taught in a number of buildings, but the Global Education Centre stands out. It is a large, domed building of one million square metres of space, built with enough steel to build the Howrah Bridge in Kolkata and enough concrete to build a six lane highway between Mysore and Bangalore. The students are housed in accommodation blocks that look like three star hotel rooms, with en suites, daily cleaning and numerous food courts. The students are paid between A\$3,000 and A\$6,000 a year (a good salary) but are bonded to the company; meaning they must pay a penalty, equivalent to three or four months salary, if they choose to leave before the end of their first two years.

Infosys clearly works in the cracks. The Indian education system is capable of identifying good students but ill equipped of making them work-ready. Infosys fills the crack by producing a world class piece of social infrastructure. Because its physical infrastructure needs are so small, some land and a high speed telecommunications connection, it does not need to interact with the government to achieve its aims. As a result, it is able to have a disproportionate impact on the economy; it increases India's human capital base, improves infrastructure where it can and spurs economic activity where it has operational bases.

The IT consultancies are obvious examples of what Indian companies can achieve by working in the cracks. But across India, I met with other companies that are doing similar things. Effectively, they are deepening their own capital base to make up for the lack of broadening in the nation's capital base. By taking responsibility for themselves, they help their employees take responsibility for themselves. This is the case across many aspects of India.

Finally, I was very impressed by a charity that was run from a Hindu temple in Bengaluru. Bankrolled and staffed by ex IT professionals and investors, the charity feeds over two million children a day through a school meals program. It takes advantage of state government schemes to fund much of the food cost, but puts in place its own capital to set up the most efficient processes. The charity runs industrial kitchens to provide children with a highly nutritious and calorific meal. It has a strong distribution system, from relationships with high quality producers to a fleet of specially designed trucks that can efficiently serve so many children. Its positive impact on children's lives is large; school meals mean the economics of allowing a child to stay in school improves. It also, obviously, improves learning outcomes as well. Again this was an opportunity to positively impact India that emerged from the cracks in the Indian system.



Mysore, southern India.

If poverty alleviation is the starting point for India, can the 'India of the gaps' do the job? In time, I believe it will. Indeed, I believe it is the only thing that can succeed, and will do so by offering opportunity, harnessing technology, creating scale and promoting change, in ways perhaps unimaginable today.

In part, I believe it will be successful because such slow progress is being made by the conventional channels and the opportunity to transform the lives of people living in the cracks is so big. The Indian economy is US\$1.5 trillion with a population of 1.17 billion. Its agriculture sector accounts for just 14.5% of GDP in the year ended March 2010, despite a rural population of 71%. These are people living very inefficient lives that will remain largely untouched by the formal sector. They need an alternative.

For those that are a part of the original system and who benefit from it, life is expensive and constrained. The traditional system is incapable of matching the rising demand levels, prices are rising and so too are interest rates. Businesses are passing up opportunities to expand because the capacity and capital just does not exist. Individuals live constrained lives. One executive discussed with me the fact that he refuses to visit friends more than 5km away because the traffic becomes too difficult. India needs a leap in productivity that can only be driven by something new.

For investors, these constraints are seen in high interest rates and inflation. As I toured India, company after company raised concerns about rising rates. Of course no company was prepared to say they were impacted, but borrowing rates of over 11% are hurting activity levels. The very nature of the constrained India, however, means demand destruction is more likely to see interest rate pressures ease than supply side change. Such an environment makes existing assets more valuable and, unfortunately for infrastructure builders, planned assets more expensive and so less valuable.

The other part of the story is that opportunity is critical to changing the lives of India's poor. When you observe a man, older than myself, nothing but muscle, sinew and bones, heaving a load at least his own weight, it is easy to think of him as a beast of burden; a man with no choice. Undoubtedly, his opportunity set is limited, but it exists, as it exists for all of us. He has made a choice between remaining on the land in Bihar or another rural province, and moving to a big city. His migration is a conscious choice and, no doubt, he still has dreams of

returning to his home village. He will respond to more lucrative opportunities and that's what is being created in the cracks.

The response to opportunities is seen in the education sector. Across India I heard of stories of drivers, earning perhaps A\$150 to A\$250 per month and spending up to a third or half of their income educating their children at private schools. People are prepared to give up an enormous amount in return for opportunity and they are increasingly aware of the opportunity that education offers. Interestingly, this is creating a flow of capital that is reversed in the west. Children are buying homes for parents rather than the other way around.

Technology, undoubtedly, is at the forefront of the change with mobile technology most important. As e-Choupal highlighted, improving information flows to farmers raises living standards. It will also, through UID, help to better deliver resources to those most in need and deserving. It will help to lower the level of petty corruption that increases the cost of government service delivery and drive improvement across the system.

Technology also helps to scale ideas and scale will be crucial if real change is to occur. Scale lowers the cost of service provision while creating greater reach. Without scale the visibility of success is low, meaning that the positive economic and political impact is lowered. An important part of achieving scale is the profit motive. This was certainly the case when talking to SKS Microfinance. The movement from not-for-profit to for-profit meant creating scale, helping more people and creating new product. The profit motive opened up the opportunities in insurance and working capital for shopkeepers and more will follow. I suspect the school meal charities will create a larger, more positive impact by going to for-profit. In particular, I can imagine that there are substantial opportunities in food distribution that could lead to broader improvements in food safety across India.

But the biggest opportunity in the cracks is the change they create both politically and economically. The cracks are getting bigger and the concrete block, relatively, is getting smaller. The change comes from the positive externalities.

“For all the frustration, something quite remarkable is occurring in India.”

The positive political externalities from politicians, businesses and individuals working in the gaps are profound and extend from national politics down to village level. Undoubtedly, Narendra Modi is impacting the debate in India about development. Is there not more politicians can do for the poor than provide enough rice? The success of Gujarat is well known across the country and more politicians are likely to follow his lead as they understand the positive impact he is having. It is also seen in the idea that Yadav family women would vote against the family to support better policy outcomes in Bihar.

But the biggest change occurs at the bottom, not at the top. Both SKS Microfinance and the school meals charity talked about some of the political battles they are fighting. In some cases they have lost but often they win, for the simple reason that they are providing a service that is valuable and that no one else is providing. SKS talked about how it would give villagers the option of SKS leaving with village debts written off or the politician backing down. Generally, the politician backed down. Similarly, technology is helping to create a world with lower levels of corruption that again creates positive externalities by lowering the cost of living and raising income levels.

The positive economic externalities are profound. I hesitate to use the phrase, but the changes in India are very often driven by ‘trickling economics’; some from the way down, a lot from the way up. I don’t like the phrase because often it is lazy shorthand; used to explain the potential benefits of a policy that benefits only one group of people. But undoubtedly, change in one part of India can impact change elsewhere.

There are simple positive multiplier effects from these programs with scale in the provision alone. The UID scheme plans to create 360,000 jobs with most of these people employed in 67,000 registration centres. Similarly the microfinance business can only be scaled by people, while Shriram is a big and generous employer. Inevitably, these employees spend elsewhere and so raise employment elsewhere. In many ways the driver of demand for education has been the rise in salaries in the Business Process Outsourcing (BPO) industry. The steep rise in salaries has increased demand for services, particularly in the home and as drivers, with the consequence of higher wages in these migrant labour industries as well. As a result, migrant labour spends more on education.

Another, profound example has occurred in Bihar. Across India I heard of the impact of NREGA and state level political reform in Bihar on the rural labour supply. There is, apparently, an Indian saying “The Punjabi dreams of London and the Bihari dreams of the Punjab”. Bihari labour has been very important in getting crops harvested

across India for as long as people can remember. But now it is disappearing, as Biharis choose to stay at home and benefit from the change in their own state and the guaranteed income of NREGA. This is raising state income in Bihar, but also creating the conditions for productivity improvement elsewhere. In particular, farmers have to shift further up the productivity curve, by employing more capital, to cope with less and more expensive labour. In time, the requirement for greater capital intensity should lead to land consolidation and cheaper food prices.

Additionally, these schemes are putting capital in the hands of those who can benefit most. In the microfinance example, the rates of return are at least 50% annually and sometimes as high as 250%. Similarly, Shriram is putting trucks in the hands of people who will get more from them with the consequence of improving outcomes across the economy in terms of freight costs and positive multipliers. Both Shriram and SKS Microfinance are proposing financial services that have very little in common with the models of the developed world. They are models that have the capability to offer better outcomes for customers at the most basic level. Rather than create customers for the traditional banks, I would hope these companies begin to utilise their different methods to compete directly with the banks.

Finally, the India of the cracks offers great opportunity for investors. Within this space is the opportunity to create demand where it did not once occur, to ease supply-side pressures and avoid the corrosive influences that exist within the constraints of India. The scarcity of capital in India does mean that within an inflationary environment it is still possible to earn a high return on capital – particularly when investment is particularly focused at lowering prices. Lower prices will be a function of competition, competing away some of the more attractive margins, and finding new ways to do things.

India’s inability to follow the path of other economies has forced upon it a different path; a micro miracle that creates a vibrant, growing garden from the concrete block. The micro miracle is about involving more people in development and so it can actually drive a more inclusive growth. It is also about capital deepening rather than capital broadening. It is about individuals and companies deepening their own asset base rather than waiting for the government to do it for them. In many ways it is driven by squeezing more from assets than has ever been the case. India won’t change the world, as China currently is, but it will, through its own people, change the lives of the country’s poor. For all the frustration, something quite remarkable is occurring in India.

ADB	Asia Development Bank
Aam Aadmi	Introduced in 2004 by the Indian National Congress-led United Progressive Alliance government. Its objective was to strengthen the Right to Information Act, National Rural Employment Guaranteed Scheme, National Food Security Act and Bharat Nirman Yojana by way of economic and social inclusion of every underprivileged section of society.
Autarky	Is the quality of being self-sufficient. Usually the term is applied to political states or their economic policies. Autarky exists whenever an entity can survive or continue its activities without external assistance.
BJP	The Bharatiya Janata Party (Indian People's Party) is one of the two major political parties in India, the other being the Indian National Congress. Established in 1980, it is India's second largest political party. The Bharatiya Janata Party traditionally has supported Indian Nationalism and strongly advocates conservative social policies, self-reliance, free market capitalistic policy, foreign policy driven by a nationalist agenda, and strong national defence. The party's platform is generally considered right of center in the Indian political spectrum.
BPO	Business Process Outsourcing is a subset of outsourcing that involves the contracting of the operations and responsibilities of specific business functions (or processes) to a third-party service provider. Originally, this was associated with manufacturing firms, such as Coca Cola that outsourced large segments of its supply chain. In the contemporary context, it is primarily used to refer to the outsourcing of business processing services to an outside firm, replacing in-house services with labor from an outside firm.
Chai-wallahs	The term wallah is one who performs a specific task, chai wallahs are tea sellers.
CLSA	CLSA Asia-Pacific Markets is one of the region's largest and most highly rated independent equity brokers and financial-services groups, focused on providing broking, investment banking and asset management to corporate and institutional clients around the world. Founded in 1986, CLSA has its headquarters in Hong Kong and offices or representatives in 15 cities across the Asia-Pacific region, as well as New York, London, San Francisco and Dubai. CLSA is majority owned (65%) by Crédit Agricole, France's largest retail-banking group, with the remainder held by staff.
Deng Xiaoping	(22 August 1904 – 19 February 1997) was a Chinese politician, statesman, theorist, and diplomat. As leader of the Communist Party of China, Deng was a reformer who led China towards a market economy. While Deng never held office as the head of state, head of government or General Secretary of the Communist Party of China (historically the highest position in Communist China), he nonetheless served as the paramount leader of the People's Republic of China from 1978 to 1992.
GDP	Gross Domestic Product refers to the market value of all final goods and services produced within a country in a given period. It is often considered an indicator of a country's standard of living.
Luddites	The Luddites were a social movement of British textile artisans in the nineteenth century who protested – often by destroying mechanised looms – against the changes produced by the Industrial Revolution, which they felt were leaving them without work and changing their way of life.
Nadir	An extreme state of adversity; the lowest point of anything.
NDA	The National Democratic Alliance is a centre-right coalition of political parties in India led by the Bharatiya Janata Party (BJP) and had thirteen constituent parties at the time of its formation in 1998.

NREGA

The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) is an Indian job guarantee scheme, enacted by legislation on August 25, 2005. The scheme provides a legal guarantee for one hundred days of employment in every financial year to adult members of any rural household willing to do public work-related unskilled manual work at the statutory minimum wage of 100 (US\$2.22) per day in 2009 prices.

This act was introduced with an aim of improving the purchasing power of the rural people, primarily semi or un-skilled work to people living in rural India, whether or not they are below the poverty line. The law was initially called the National Rural Employment Guarantee Act (NREGA) but was renamed on 2 October 2009.

Share-croppers

Share-cropping is a system of agriculture in which a landowner allows a tenant to use the land in return for a share of the crop produced on the land (eg, 50% of the crop).



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Acknowledgements

I would like to thank the Global Emerging Markets team for their support, in particular the India Team – David Gait and Sashi Reddy. Thanks also to David Dixon and Steven Halmarick.

Finally, I'd like to thank Anir Udha Duppa and his team at CLSA for their assistance and patience while guiding me around India for three weeks.

James White



