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Learning by Doing:

ENTREPRENEURSHIP IN DEVELOPING COUNTRIES

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Introduction

The relationship between entrepreneurship and economic development has not been well explored. While it is obvious to some, many regard entrepreneurship as important without necessarily considering why it is important, and as such don't have a cogent idea of how and why it works. What is in the nature of entrepreneurship that is transformational and disruptive? Is everyone capable of becoming an entrepreneur, or is it a specialised skill? What are the rule systems that enable entrepreneurship? And can disruptive entrepreneurship survive absent of these rules? Why is there a trend towards magic bullet entrepreneurial solutions to economic development puzzles? Over the last six years, my team and I have conducted experiments in India combining research and practice, building out entrepreneurial solutions to socio-economic problems. Based on this experience of learning by doing, I address some of these aforementioned questions in this paper.

Why does entrepreneurship matter?

Outside of economics departments, one rarely hears the words 'poverty' and 'entrepreneurship' juxtaposed. Economists think the connection is obvious, and rarely address it publicly, while traditional development circles treat entrepreneurship and wealth creation with suspicion. In the Indian context, one only needs to watch popular Bollywood movies made between 1950 and 1990 to understand how wealth creation was looked down upon. In most movies, the bad guys tended to be the wealthy, and popular cinema tends to be reflective of existing social perceptions. Entrepreneurship was something to be tolerated but not encouraged, and a vast and cumbersome regulatory apparatus put business people in their place. Things changed a bit in the 1990s after liberalisation, but perceptions take time to change.[2] Regulatory mechanisms continue to be designed as obstacles to entrepreneurship and wealth creation, rather than as enablers.

Even if one favours redistribution, it's silly to try to redistribute poverty instead of growing the pie, creating and redistributing wealth in the process. Obviously, only business can create wealth, irrespective of whether it is state or privately owned. As former United Nations secretary general, Kofi Annan put it, "it is the absence of broad-based business activity, not its presence, which condemns much of humanity to suffering. Indeed, what is utopian is the notion that poverty can be overcome without the active engagement of business."[3]

In China, the economic superstar of the past two decades, many observers assume wealth was mostly created by state-run firms. In fact, several new estimates suggest that 70% of GDP is created by firms that are not state owned.As reported in *The Economist*, Zheng Yumin, the Communist Party secretary for the commerce department of Zhejiang province, told a conference last year that more than 90% of China's 43 million companies were privately owned.[4] In their 2010 paper, Qiao Liu and Alan Siu of the University of Hong Kong showed that average return on equity of non-state firms was 10% higher than the 4% average returns achieved by state-owned firms.[5]

Macro matters: The impact of growth and wealth creation

The Chinese variant of capitalism has not only created unprecedented wealth, but also reduced poverty on a scale never before seen in human history. In 1981, shortly after Deng Xiaoping kick-started market reforms,[6] 84% of the Chinese population lived in poverty, at less than $1.25 dollars a day. By 2009, that number had dropped to 11.8% of the population.[7] In absolute numbers, 825 million people (of 982 million)[8] in China lived in poverty in 1981, and by 2009, that number had dropped to 157 million (of a total 1.35 billon people). Whatever one may think of China's political establishment, one cannot deny this monumental achievement.

The developments in China did not happen in isolation; in fact, Deng Xiaoping was influenced by growth he saw in other parts of Asia. As former US treasury secretary Lawrence Summers has put it, "the dramatic modernization of the Asian economies ranks alongside the Renaissance and the Industrial Revolution as one of the most important developments in economic history."[9]

It started with post-war Japan, which emerged bombed and broken from the Second World War and transformed itself into an industrial superpower and the second largest economy on the planet.[10] More remarkable was the transformation of Taiwan, South Korea, and Singapore. When South Korea emerged from the Korean War, its per capita income was lower than Ghana's, Burma's or the Philippines' and without natural resources, it became the very definition of a basket case country.

In the late 1950s and '60s, Taiwan, South Korea and Singapore instituted market-oriented structural reforms and turned their economies around. Table 1 compares their per capita incomes with those of Kenya, Ghana,[11] North Korea and Bangladesh[12] in the same period. The comparison lays out starkly the difference that structural reforms and improvements in the business climate can make, with South Korea, Singapore and Taiwan enjoying some of the highest standards of living in the world, eliminating absolute poverty in the process.

FIGURE 1: PERCENTAGE OF PEOPLE ON LESS THAN $1.25 PER DAY IN CHINA

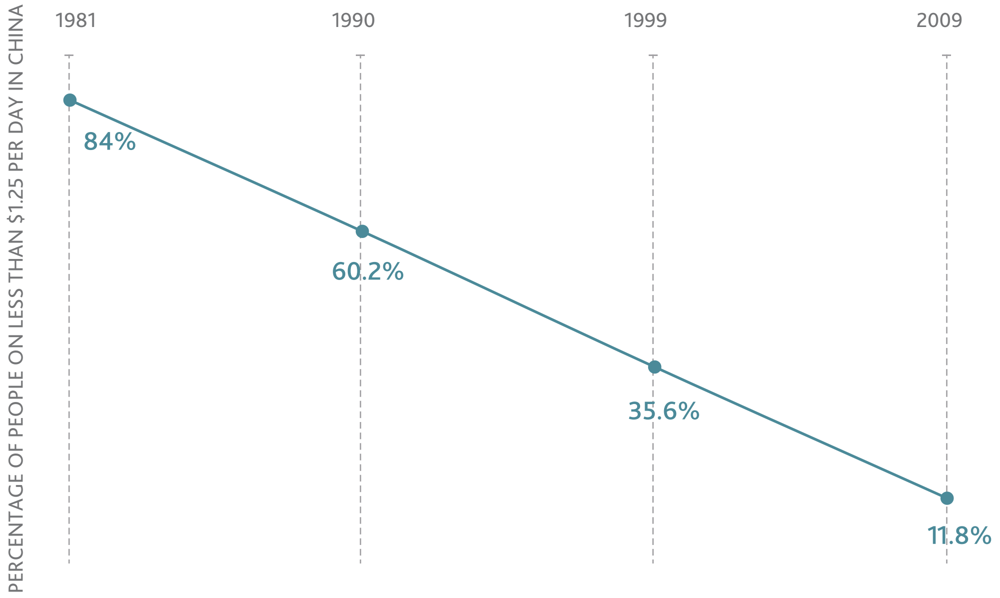


TABLE 1: PER CAPITA INCOMES (US$) IN SELECT COUNTRIES, 1960-2011[13]

COUNTRY	1960	1970	1980	1990	2000	2011
Kenya	98	142	447	366	406	817
Ghana	183	258	412	403	265	1,594
Bangladesh/East Pakistan	86	136	220	281	356	732
North Korea	NA	387	642	735	462	506
South Korea	155	279	1,674	6,153	11,347	22,388
Taiwan	NA	432	2,363	8,086	14,641	20,100
Singapore	395	925	4,913	11,845	23,815	47,268

FIGURE 2: PER CAPITA INCOMES (US$) IN SELECT COUNTRIES, 1960-2011

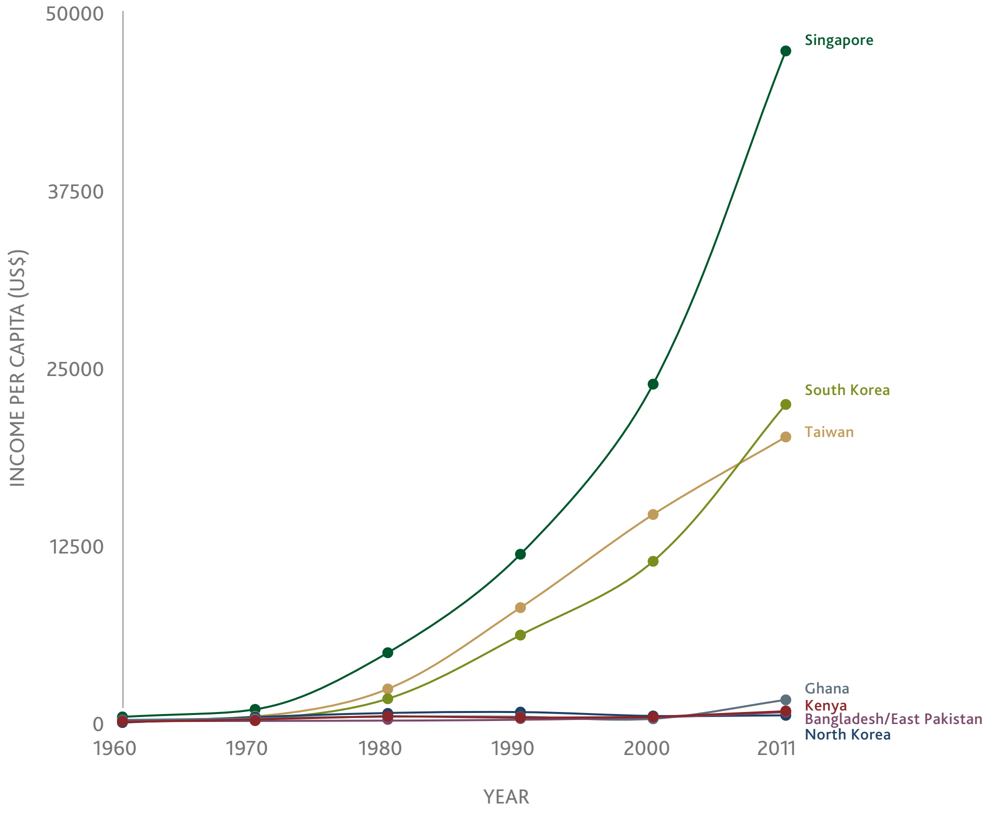


Figure 2 captures the data, and makes the comparison seem starker. Similar patterns show up elsewhere, indicating that entrepreneur-friendly countries are far better at creating wealth and getting rid of absolute poverty. The World Bank's Doing Business Index (DBI) ranks countries by their ease of doing business. Metrics include time taken to start a business, registering property, electricity, access to credit and the enforcement of contracts.[14] Table 2 lists the top 15 and bottom 15 countries in the DBI.

It comes as no surprise that barring a couple of exceptions, the most business friendly countries are also among the wealthiest countries in the world, while the bottom 15 countries are among the poorest countries in the world. Though the Doing Business Index has helped improve the entrepreneurial climate in several countries, sceptics still remain.[15]

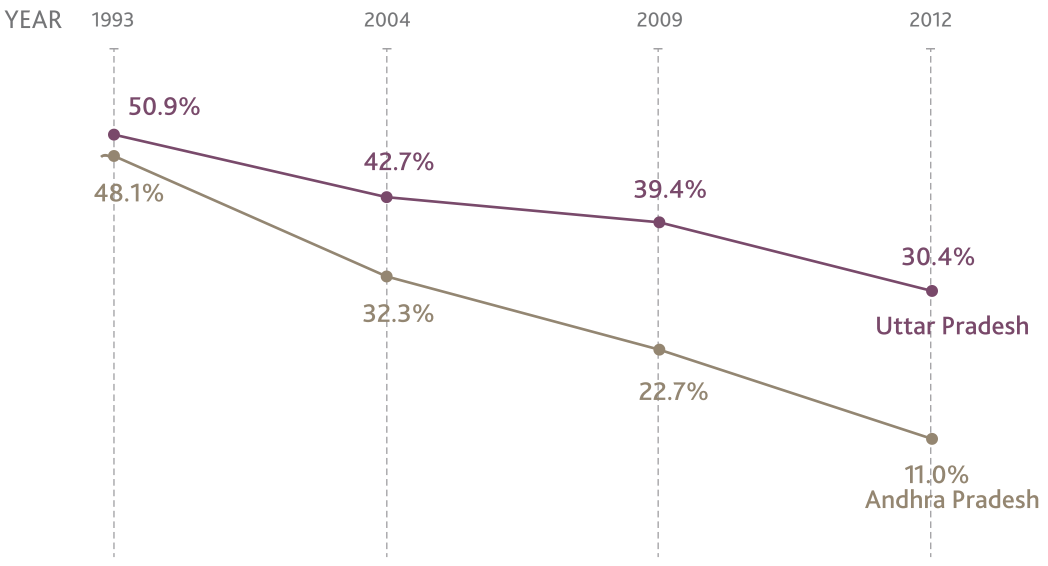
TABLE 2: THE TOP AND BOTTOM 15 COUNTRIES IN THE DOING BUSINESS INDEX 2013

TOP 15 DBI	BOTTOM 15 DBI
Singapore	Djibouti
Hong Kong	Angola
New Zealand	Zimbabwe
United States	Haiti
Denmark	Benin
Norway	Niger
UK	Cote d'Ivoire
South Korea	Guinea
Georgia	Guinea-Bissau
Australia	Venezuela
Finland	Congo (Democratic Republic)
Malaysia	Eritrea
Sweden	Congo (Republic)
Iceland	Chad
Ireland	Central African Republic

Large segments of the Indian policy establishment, for instance, consider the country to be sui generis. By this reasoning, China has an authoritarian government, which makes reforms much easier; Singapore is too small; Western examples are meaningless; and for some reason South Korea and Taiwan aren't discussed. So, it makes sense to look at sub-national data in India.

Kapoor (2013) compares two large states, Uttar Pradesh (UP) and Andhra Pradesh (AP), and examines rural and urban poverty rates from 1993 to 2012.[16] UP's population is currently 200 million while AP's population is 85 million, making them larger than most countries. In 1995, a young technocratic politician, Chandrababu Naidu, took over as chief minister of AP and immediately set about instituting market-friendly reforms,

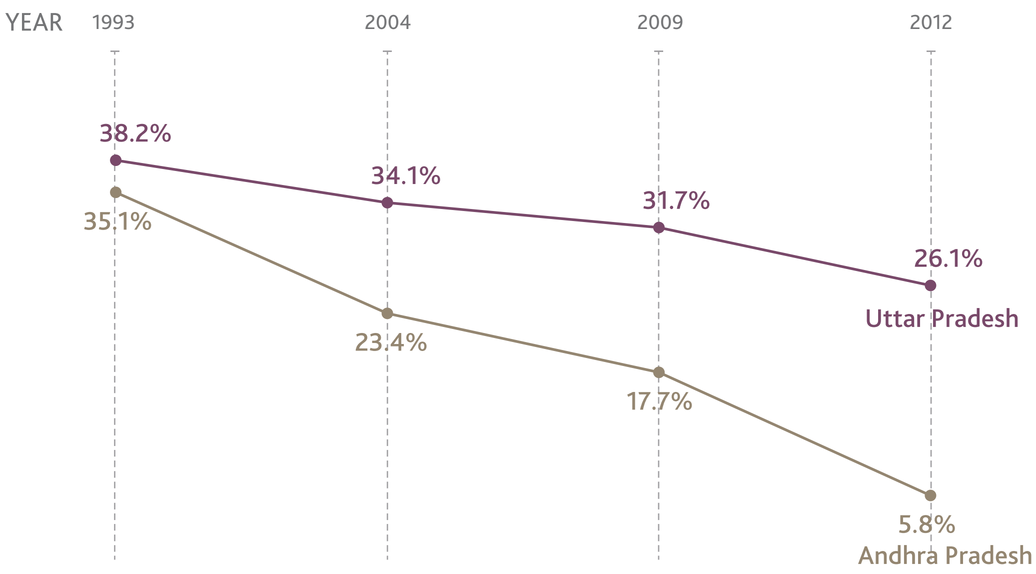
FIGURE 3: SUB-NATIONAL RURAL POVERY (%): UTTAR PRADESH vs ANDHRA PRADESH



including unpopular measures like slashing subsidies and increasing power tariffs. He set about transforming the capital, Hyderabad, into a technology powerhouse second only to India's premier tech cluster in Bangalore. Rapid economic growth followed.

Though Mr. Naidu lost an election in 2004, his successor built on his reforms and did a better job of redistribution.[17] Meanwhile, UP was led by a string of incompetent leaders. The difference between the two states is stark. In fact, a closer look at the data reveals that AP reduced its poverty levels by a China-like 35.4 percentage points[18] between 1993 and 2012, the highest levels of poverty reduction in the country. So much for India as a sui generis case.[19]

FIGURE 4: SUB-NATIONAL URBAN POVERTY (%): UTTAR PRADESH vs ANDHRA PRADESH



What is the trigger?

The obvious question is what did Taiwan, Korea, Japan, Singapore and now China do that many other countries did not?[20] This to me is the central question in economic development. Explanations have varied from culture and religion (Weber,[21] Landes[22]) to geography (Diamond,[23] Sachs[24] et al.). Some have postulated that literacy and human capacity are vital triggers, but the evidence doesn't say much at all; in 1960, Taiwan had a literacy rate of 54% while Korea had a rate of 71%.[25] Similarly, in 1981 when China had its economic take-off point, its literacy rate was 64% while in 1991, when India liberalised, its literacy rate was 54%. Not much by way of correlation there other than all of them being 50%-plus literate when their economies took off. My own bias is towards the institutional view articulated by North,[26] Rodri[27] et al, Acemoglu and Robinson,[28] which articulates the importance of institutions like rule of law, property rights, limited and strong governance, trust and open markets.

However, even the institutional view cannot explain why some countries adopted these institutions but not others. Presumably, everyone everywhere knew that some rules work and some others don't. And rules per se need not be hard to transmit; for instance, the rules around public health[29] have transmitted successfully and increased life expectancy around the world. However, the rules around institutions seem notoriously difficult to transmit.[30] Despite the observable success of Japan, Korea, Taiwan and China many other countries find it hard to adopt the same sensible reforms, resorting typically to sui generis arguments instead.

Enter the political entrepreneur

So, what does it take to adopt sensible rules that improve the wellbeing of people? In the examples above, we notice the emergence of political entrepreneurs in each of these countries who by their remarkable vision pull their countries and states in a completely different direction. I call them entrepreneurs because they perform an entrepreneurial function in terms of disrupting the existing equilibrium with innovative and bold new ideas. This holds true of Park Chung Hee in Korea, Lee Kuan Yew in Singapore, Deng Xiaoping in China, or even Chandrababu Naidu/Y.S. Rajasekhara Reddy or Nitish Kumar in the Indian states of Andhra Pradesh and Bihar respectively. One can also make the case that the 1991 reforms in India could not have happened without the astute political leadership of then prime minister Narasimha Rao, who provided the political backbone for tough reforms.

To illustrate further, while discussing the Asian growth miracle, one sees lines like "China adopted better institutions" or that "Singapore had better rules than Malaysia", but what does that really mean? Who in China or Singapore adopted those rules and why? And why didn't someone adopt them earlier? In my opinion, not paying serious attention to the efforts of political entrepreneurs who develop or adopt better rules is not helpful and distracts attention away from the most crucial ingredient, namely leadership.

Despite the obvious importance of leadership and political entrepreneurs, we don't really have a well-developed theory of political leadership, which is puzzling. Why don't we have a proper handle on what it takes to create these leaders? For that matter, how do we ensure these leaders are 'good' rather than 'bad'? In other words, how do we ensure we get Lee Kuan Yew and not Mao Tse Tung? How, when, where, and why do leaders show up? Could it simply be that the emergence of good leadership is not a controllable variable, and so there is very little attention paid to its centrality in discussions on economic development? In other words, these leaders lie outside the normal distribution curve and therefore do not fit any neat little models or theories. This puzzle probably needs an entire essay devoted it, but we shall return to it briefly later.

Lack of a proper theory of entrepreneurship

As with leadership, and in spite of the centrality of wealth-creating entrepreneurs in the economic development process, not much is known about them. In a 1968 paper,[31] Baumol focused on the supply of entrepreneurial skills within an economy and how to expand it. He reached the conclusion that there was "reason to suppose that these issues are to a considerable extent matters of social psychology, of social arrangements, of cultural developments and the like." As with political entrepreneurs, there is no formal theory of entrepreneurship that works in theories of the firm. Much has been written about the firm, but not about the individual who created the firm.[32] Referring to the model of the firm, Baumol says, "one hears of no clever ruses, ingenious schemes, brilliant innovations, of no charisma, or of any of the other stuff of which outstanding entrepreneurship is made. One does not hear of them because there is no way in which they can fit into the model."

As is the case outlier political leaders, we have little idea how, when, where, and why entrepreneurship occurs or even how best to encourage it. And why is life is so much more difficult for entrepreneurs in less mature economies? Not only do they have to deal with institutional constraints, high transactions costs, and bad rules that make it very hard to run a business, they also have to deal with social constraints and norms around failure, which will be discussed in the next session.

Ecosystems matter for entrepreneurship to flourish

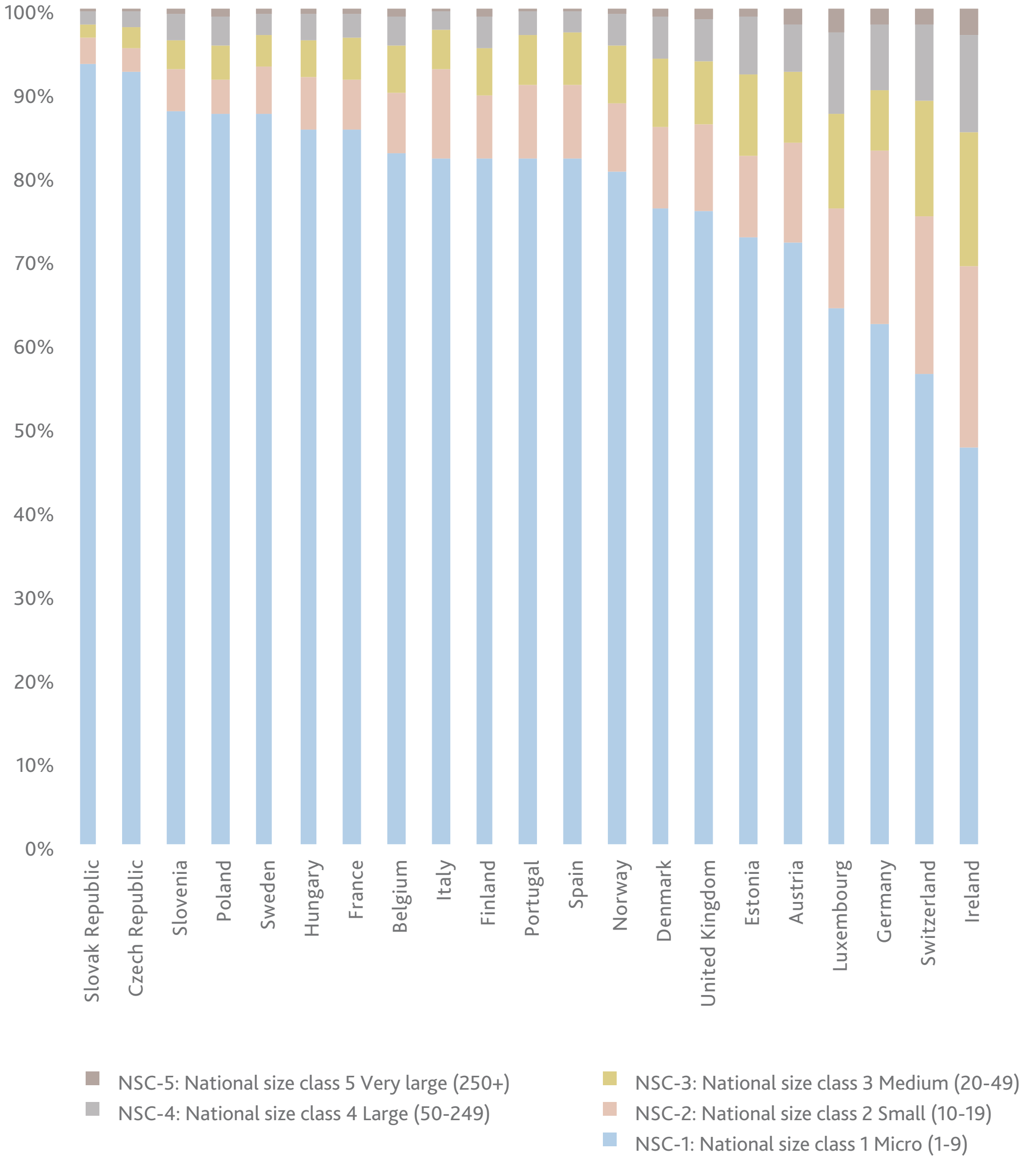
In 1999, Anna Lee Saxenian published a quantitative analysis of the contributions of highly skilled immigrants to the Silicon Valley ecosystem, and found that one-quarter of all new start-ups had an Indian or Chinese entrepreneur at the helm.[33] In newer research, Wadhwa, Saxenian and Sicilliano show that 24.3% of all companies in the US were founded by a team that included at least one immigrant, and of these companies, 33.2% were founded by Indian immigrants, higher than the next seven immigrant groups combined.[34]

So, why is it that Indians do so much better at entrepreneurship in the United States than at home? It almost seems like these entrepreneurs have to escape the rules of India and embed themselves in the rules of the United States to thrive. Why is it that a Vinod Khosla, who was born into a middle-class army officer's family in India, had to move to Silicon Valley to become one of the greatest entrepreneurs and venture capitalists of all time? Could Sergey Brin have co-founded Google in his native Russia? What makes Silicon Valley or Route 128 special?[35]

Once again, good rules. Rules here do not just mean the institutional framework in terms of property rights, minimal but strong governance, open markets and other liberal characteristics, but also less tangible ones like norms. Over 60 years ago, Alexander Gerschenkron wrote about the critical importance of social norms towards entrepreneurs.[36] In "California, the Great Exception", Carey McWilliams refers to the historic pattern of experimentation and innovation, from the Gold Rush onwards, and called it the edge of novelty. As he wrote, "Californians have got so used to the idea of experimentation—they have had to experiment so often—that they are psychologically prepared to try anything. Experience has taught them that almost 'anything' might work in California."[37] For over a 100 years, California has provided a template for tinkering like no other place on the planet. This in turn has changed the definition of 'what's acceptable' as a social norm, created a new class of role models, made it acceptable to fail and fail again and increased the acceptance of diversity and wild ideas.[38]

Above all, the biggest differentiator has been a greater acceptance of failure, which in turn encourages risk taking. Damaraju et al (2010) have shown that collectivistic societies tend to be less forgiving and stigmatise failure, which in turn is not conducive to entrepreneurial risk taking.[39] In general, developing countries tend to be a lot less tolerant of failure than developed ones, both from a social norms perspective, but also from an institutional perspective. Besides the social stigma, there are also issues like the high cost of capital to failed entrepreneurs and cumbersome bankruptcy procedures.

FIGURE 5: EMPLOYMENT IN SELECT OECD COUNTRIES, BY SIZE OF FIRM



Entrepreneurship in developing countries: Three types

It's important to understand and classify entrepreneurs in these markets because there is a great deal of confusion around this. I point out[40] that we can, broadly speaking, identify three types of entrepreneurs. First is the obvious, namely people in the mould of a Steve Jobs, Bill Gates, Mo Ibrahim or N.R. Narayana Murthy, who create huge businesses, hundreds of thousands of new jobs and are world renowned. Second is the small and medium business sector, ranging from small retail shops to the small and medium businesses of the German Mittelstand. Though relatively unheralded, they employ the vast majority of the workforce in developed countries. The caveat here is that without the large firms, it's not clear that small firms will exist, because the large firms create an eco-system in which smaller firms can thrive.[41]

Figure 5, based on OECD data,[42] captures the share of employment created by small and medium-sized businesses in developed countries. Micro and small businesses account for over 70% of all jobs in virtually every country in the figure. In India, by contrast, they employ less than 10% of the workforce.[43]

And finally, there is mere survival that is often mislabelled as entrepreneurship, because survival in a poor country can seem very entrepreneurial. However, is the person selling tea by the roadside an entrepreneur, or merely trying to eke out a living?

One of the downsides of the micro-finance movements of the past decade has been a celebration of survival entrepreneurship. In fact, well-functioning societies must look to encourage the first two types of entrepreneurship and eliminate survival entrepreneurship.[44] People caught in the third tier must be formalised and absorbed into the workforce of the first and second tiers.

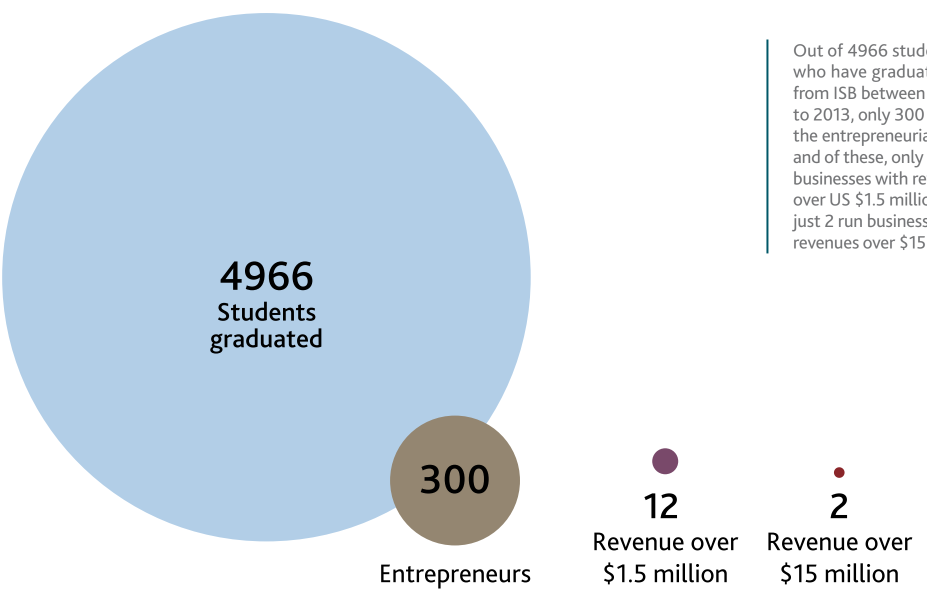
Another useful way of thinking about the three kinds of entrepreneurship is through a lens of intent. How many of those classified as entrepreneurs are there by design or intent, rather than by lack of options? I would argue that a genuine entrepreneur is motivated entirely by ambition and the idea of creating something new and innovative, while someone plying a trade by a roadside in a developing country is doing so because he or she has no other option. Intent matters when identifying entrepreneurs, and coming up with policies to enable entrepreneurship.

Intent vs. lack of options: An informal analysis of business school students

I did a quick analysis[45] of the number of entrepreneurs who have graduated from a premier business school in India. Out of 4,966 students who have graduated from ISB between 2001 to 2013, only 300 chose the entrepreneurial route, and of these, only 12 have businesses with revenues over US $1.5 million and just two run businesses with revenues over $15 million.

If in the cream of the crop in the country with all possible advantages from networks to student loan waivers, only 6.5% try to become entrepreneurs, why do we expect poor people to become entrepreneurs in much larger numbers? What's worse is that a focus on the wrong kind of entrepreneurs may not only lead to missed opportunities in terms of creating real businesses that could absorb informal workers, but also to lower tax revenues.

FIGURE 6: TOTAL NUMBER OF STUDENTS vs ENTREPRENEURS AT THE INDIAN SCHOOL OF BUSINESS



Out of 4966 students who have graduated from ISB between 2001 to 2013, only 300 chose the entrepreneurial route, and of these, only 12 have businesses with revenues over US $1.5 million and just 2 run businesses with revenues over $15 million.

Concrete barriers

Besides social norms, is there a way to buck the barriers to business in developing countries? As I point out in Abraham (2012), there are five major transactions costs that are real barriers. They are:

1. Government and regulatory policies—policies are designed to choke entrepreneurs, rather than to encourage them. As Manish Sabharwal, chairman of Teamlease, India's largest staffing and recruiting company likes to put it, "these policies are regulatory cholesterol that end up creating dwarves that remain stunted, instead of babies that grow."[46] In addition, as Professor Mudit Kapoor of the Indian School of Business[47] points out, incentives tend to target sectors and firms instead of being economy-wide in nature. These tend to have a distortionary effect by pushing resources into sectors that benefit from government subsidies.[48]
2. Access to finance—debt and equity are both equally hard to come by for entrepreneurs, especially in non-technology businesses, and low-income markets. Failure also increases the cost of capital dramatically.
3. Access to markets—more an issue with non-mature bread-and-butter businesses, which have a hard time accessing domestic and international markets for their products and services. Government policies can also distort markets and access to them.
4. Access to knowledge & networks—access to best practices, knowledge, and technology is very poor in developing countries.
5. Access to talent—finally, new ventures have a hard time attracting, and more importantly retaining talent, across the board. Inflexible labour laws make this problem much harder to tackle, especially with low-skilled labour.

Arbitraging inefficiencies?

The barriers listed above can be thought of as market inefficiencies, which in turn create an eco-system that's not conducive to entrepreneurial risk taking. Nonetheless, a genuine entrepreneur ought to arbitrage around existing inefficiencies and create wealth.[49] For instance, several investors think about emerging markets through the lens of mispriced risk, where there is a difference between actual risk and the perception of risk. However, that difference ought to be an opportunity for the entrepreneurial sort who can reprice risk earlier and better than others. Similarly, shouldn't each of the transactions costs/inefficiencies offer an opportunity for smart entrepreneurs?

So, why then do so many opportunities go a-begging in developing countries? Is this a real-world version of the joke about the economists and the $20 bill? Based on our experience in India combining theory and practice,[50] we have seen opportunities abound in low-income markets, but they are rarely tapped. We have successful investments in areas such as waste management, specialised low-income healthcare and affordable housing among others. With hindsight, one wonders why so few others could identify and invest in such clearly defined macro opportunities, linked to the inevitable urbanisation of the country.

I would argue that automatic market clearance is an underlying assumption when we think about entrepreneurs arbitraging all inefficiencies in markets. What if that is not the case, and markets get clogged for a variety of reasons like asymmetric information or credit constraints? Do markets then require a 'nudge' to clear? If so, what form does the nudge take? Capital with a longer time horizon that allows entrepreneurs to take greater risk? Research and knowledge that lower information asymmetries? Well thought out government policies and regulation that reduce market friction?

Our experience suggests so, and corresponds with the experiences of several entrepreneurs and investors. Sandeep Farias, co-founder of Elevar Equity[51] says that their first fund could not have been raised from investors with regular risk appetites and time horizons. "Our early investors—and for that matter many of our later investors—were focused on both financial returns and economic development. Without that impact investment mandate, it's highly unlikely we would have raised that initial capital."[52] This corresponds well with the experience of Kartik Srivatsa, the managing partner of SONG Fund (and later Aspada),[53] which had the Soros Economic Development Fund, Omidyar network and Google.org as its investors. Though both funds have performed well, it is doubtful that regular investors would have invested early in a thesis around low-income markets focused on opportunities in areas such as health, education and agriculture. The nature of their limited-partner capital allowed SONG and Elevar to experiment in ways that may not have been possible with conventional capital.

Another way to think about the market clearance conundrum is that investors make decisions based on the availability of information and on the flavour of capital, not always on available opportunities. Most of the limited-partner capital in the venture industry comes from Western financial institutions. So they are most likely to invest in the businesses they understand best, have experience investing in, and therefore consider mainstream, namely technology companies that provide non-linear returns.

An aggravating factor here is the inability of the $100 billion organised Indian pension fund market, for instance, to invest in venture capital. Instead, they are forced regulatorily to park their monies in treasuries. If a small part of this money—$2–3 billion—could be redirected to venture capital, it would, by virtue of being domestically sourced, be more likely to be invested in low-income markets. After all, the base of the pyramid constitutes the main portion of developing country markets, and is therefore the mainstream. This disconnect between what Western capital considers mainstream, and what the actual mainstream opportunities are, is a problem. The latter can be unlocked properly only once domestic capital starts flowing. Until then, perhaps one can think of impact investment capital as a bridge that helps clear the market to some extent. The experience of SONG and Elevar seems to support that hypothesis.

Karthik Muthuswamy, the former head of Elliott Fund Management[54] in South Asia, who has enormous experience investing in the region, offers another possibility. According to him, many low-income businesses are disruptive in precisely the way Professor Clayton Christiansen described disruptive innovation. They offer a new set of customers a different set of products and services at a far lower cost. Soon, however they challenge the mainstream players and provide benefits to low-income markets in the rich world too, in effect disrupting them. Once this is understood better, more venture capital money will flow to these businesses in their place of origin.[55]

If one digs into the history of venture capital in the West, we discover the name for venture capital in the early days was ‘development capital’, before Benno Schmidt of J.H. Whitney and Co changed it[56] first to private adventure capital (the name implies the high risk), which was shortened to venture capital. The additional developmental angle was that some of the early funds made investments into businesses set up by soldiers returning from World War II.

Similarly, our research group at ISB has spun out an affordable housing company, First Home Realty Solutions (FHRS), which builds the cheapest private sector housing in India, at between $5,000 and $13,000. At the time of writing, our research has led to the building of over 650 homes in various parts of India and FHRS is building 400 more in 2013/14. We owe a great deal of our success to a grant from the Rockefeller Foundation, which enabled us to do research on a range of issues in affordable housing before we made the call to commercialise the venture. Several mistakes were rectified in the research phase, which increased the chances of success in the marketplace.[57] Similarly, research done by the Monitor

Group[58] and the Royal Institute of Chartered Surveyors (RICS)[59] has helped other entrepreneurs in the affordable housing and housing finance space.

An Urbanisation-linked opportunity thesis

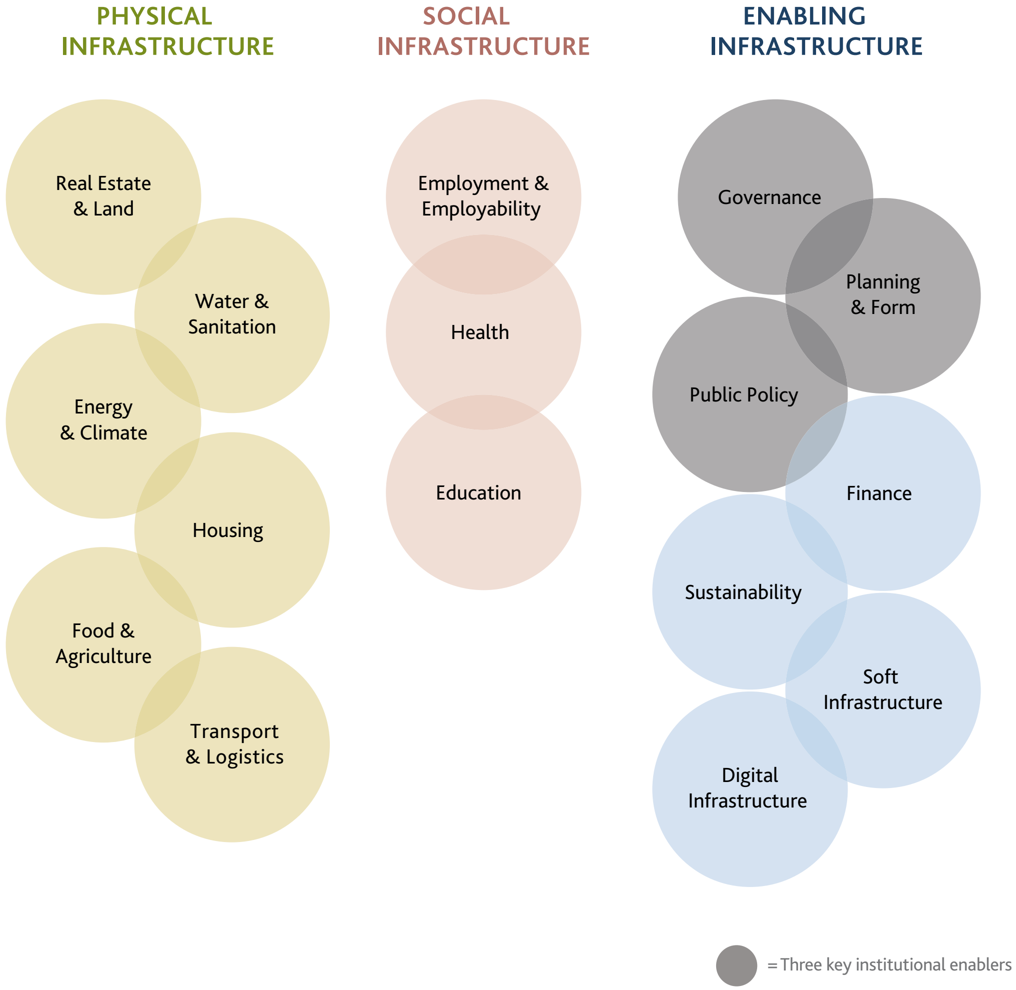
Could it be that there are plenty of $20 bills lying around and not being picked up by potential entrepreneurs because of market clearance problems described above? If the market clearance problems were addressed where would an entrepreneur look to find the $20 bills? Urban agglomerations would be a good place to start. By providing economies of scale, scope, and agglomeration, cities and towns facilitate entrepreneurship. In addition, they also provide better institutions, greater access to finance, better access to markets and access to a large labour pool.

Urbanisation is the biggest macro trend in developing countries, especially in Asia and Africa. Compared to 1800, when about 3% of the global population was urbanised, today over 50% live in cities, and that number is expected to go up to 80% by 2050. Of this growth in urban population, the vast majority (2.6 billion) will be in developing countries, compared with 170 million additional urban dwellers in developed countries. Economic growth increases dramatically with urbanisation, as urban areas provide scale, scope and agglomeration economies. In fact, just 600 cities create 60% of global GDP today,[60] and there is no reason to believe growth in developing countries will be different. Urbanisation, therefore, is crucial to the prospects of developing countries.

Given this coming spurt in urbanisation, as the vast majority of mankind transitions from being a primarily rural species to an urban one, we need to consider what constitutes well-functioning cities. As you can see in Figure 7, one can build a mental model for thinking about urban agglomerations in terms of physical, social, and enabling infrastructure.

The three key institutional enablers in grey are good governance, sound public policy and planning. If these three enablers are in place, the other verticals each represent a $100 billion–$1 trillion market opportunity over the next 15–20 years in India alone.[61] Extrapolate that across the developing world and one gets a sense of how big the entrepreneurial opportunities are. However, my guess is that market clearance issues remain, and it will take a clever combination of capital, information, and government efforts to tap into these opportunities at scale.

FIGURE 7: A MENTAL MODEL FOR URBANISATION



The elusive search for magic bullets

Before ending, I'd like to address a set of peripheral, yet important issues; important because they dominate global mindshare around entrepreneurship in low-income markets. This essay has previously outlined how fiendishly complicated entrepreneurship and economic development are in developing countries. We don't have a real grip on either leadership or entrepreneurship, both critical ingredients for development, or how to cultivate either. There is nothing inevitable about growth or development, which seems to require a combination of serendipity, good leadership and good institutions, which in turn creates an environment conducive to entrepreneurs, wealth creation and poverty alleviation.

Despite this historical complexity, every decade a magic bullet solution to end poverty shows up, and ends up being a distraction for the most part. In the late '90s, in the aftermath of the Internet revolution, the digital divide had to be bridged; we just needed to provide every poor person with a computer and somehow poverty would go away. In the early part of the 21st century, it was micro-finance that was positioned as the miracle cure to poverty; remove a credit constraint and the poor would magically become entrepreneurs. Now it's the turn of social enterprise to provide the magic bullet, where theoretically a combination of good intentions and a business plan serve as a substitute for economic growth.[62] One just needs to look at the early part of this essay and ask which of the Asian economies used social enterprise as its ticket to fast growth and rapid poverty reduction. If none of them did, why is there a belief that this is what's required in other developing countries, rather than what actually set the stage in those countries, i.e. good institutions and visionary political entrepreneurs.

At best, solutions like micro-finance and social enterprise provide a stop-gap solution, a bridge of sorts, while bigger problems get fixed and that's fine as long as they're not built up into anything larger. Unfortunately, many practitioners have no incentive to turn down the exaggerated rhetoric because it's the rhetoric that keeps donor money interested.

So, why the quest for magic bullets? There are no easy answers. In "A theory of good intentions,"[63] Paul Niehaus asks why behaviour is so often misguided. According to him, "frictions arise because perception and reality can diverge ex post, especially when helping remotely (as for example in international development projects)." He develops a model that suggests an explanation based on the idea that altruists want to 'think' they are helping, irrespective of whether they actually are. "The benefactor in the model endogenously prefers to avoid ex-post feedback and also avoids exante information about the beneficiary except to avoid subsequent disappointment. The result may help explain a range of puzzles about effective giving ranging from poorly chosen holiday gifts to misspent charitable donations and foreign aid." Other explanations may exist and pose an interesting question to researchers.

Misdiagnosing problems

In a similar vein, the quest for magic bullets is helped along by a misdiagnosis of underlying problems.

A good example of this is in the large slum of Dharavi in central Mumbai, which is used as a byword for extreme poverty in many circles, because living conditions seem terrible. Is this really true? Is poverty the central problem in Dharavi? Our research group analysed the housing market in midtown central Mumbai[64] and found that if we hold size constant (approximately 300 square feet of carpet area, in accordance with a largely accepted definition of affordable housing), then price is almost purely a function of location. Given that actual real estate rates in the area hover between $600 and $850 a square foot, if we assume an average of $725 per sq. ft., land cost alone adds up to $275,500.[65] Now assume a floor area ratio (FAR) of four, which is the maximum permissible in Mumbai, land cost ends up being $68,785 (380*181.25[66]). Adding constructions costs of $30 per sq. ft., which is typical of high-rise construction, we get an additional $11,400. The total, assuming there are no additional infrastructure costs, is $80,185 for a small 300 sq. ft. home, in a country where average per capita income hovers around $1,500. Even with this most conservative of cost estimates, we can see that non-slum low-income housing remains beyond the reach of most slum dwellers, even assuming the houses were sold at cost, with zero margins.

Is the problem in central Mumbai one of poverty or of escalating real estate prices, caused by bad government policy? At a minimum, the reality of the cost of land gives one pause while considering popular magic bullets like a $300 home,[67] absent a massive subsidy from the government. Unfortunately, there are no easy solutions.

FIGURE 9: DHARAVI: EXTREME POVERTY OR BAD REAL ESTATE POLICY?

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Conclusion: What have we learnt by doing?

We have spent the past seven years researching and developing entrepreneurial solutions for socio-economic problems in developing countries. This combination of applied research and experiments on the ground has been instructive. In closing, these are the key learnings:

1. Institutions matter. A country can have all sorts of advantages, including geography, and natural resources, but they don't add up to much in an institutional vacuum.
2. Leadership matters as much as institutions. As we have discussed, the rules around good institutions are reasonably well known, yet hard to transmit. This requires visionary political leadership of the kind Lee Kuan Yew, Deng Xiaoping, Narasimha Rao and Chandrababu Naidu have exhibited.
3. Once the political entrepreneur has set the stage with good institutions, the entrepreneur, the foremost agent of wealth creation, will hopefully take over. We still aren't really sure how to create an environment conducive to entrepreneurship beyond the basics. Or maybe that's all it is, a random draw on the back of good institutions.
4. For entrepreneurship to have the necessary impact on economic development by creating jobs, increasing competition and productivity, it is important to encourage the right kind of entrepreneur. Less survival entrepreneurship and more entrepreneurship of choice will lead to greater economic development.
5. Given issues like information asymmetry and mispriced risk, especially in low-income markets, there is a need for other actors to perform a catalytic bridge function to clear markets. This includes provision of different types of capital (including philanthropic dollars) and creating research that the entrepreneur can take advantage of while addressing inefficiencies.
6. All the philanthropic dollars in the world are not enough to get rid of absolute poverty, never mind what philanthropists think. Only economic growth can do that. So, the best way to think of philanthropic dollars is through the lens of catalytic leverage, be it political, financial or strategic. In other words, what can a philanthropic dollar do besides be a dollar, and what can it catalyse?

7. Trial and error is useful, and must be encouraged, when solutions aren't obvious, both at the political level as well as the entrepreneurial level. Assuming a basic set of rules is in place, the more the iterations, the likelier that a reasonable solution is created. An important related issue is that incentives to encourage entrepreneurship should be economy wide, and not narrowly targeted to pick winners either at the industry level or the firm level. Economy-wide trial and error is likelier to work simply because it draws on a larger pool.

8. Demonstration matters. Often, once an idea is proven, it drags other players into the market. For instance, once it's proven that it's possible to build affordable housing profitably for under $10,000, other developers show up. In effect, demonstration solves information problems and has a catalytic effect on markets.

9. Avoid frame of reference biases. Poverty in Dharavi looks abysmal, if one looks through a certain frame of reference. Where one person sees extreme poverty, another sees a thriving $1 billion economy of strivers. A 300 sq. ft. home may sound terrible to someone used to luxurious living, but to a slum dweller it may be a huge step up, not just in terms of quality of housing, but also in terms of collaterisable assets. Understanding and respecting consumer preferences, even if they appear to make no sense, is equally important.

10. There are no magic bullets. If the solutions were as easy as magic bullets make it sound, they'd be in place by now. Fiendishly complicated problems require a lot of time and patience to sort out. Beware stories that capture complexity in 1,000 words. Or at a minimum, do adequate diligence.

11. Technology is obviously hugely important, but it's important to not fetishise it. Neither personal computers nor nanotechnology, for instance, will eliminate poverty, but both could be a very useful means to that end. The best way to think of technology is that it reduces transaction costs, creating more efficient markets and increasing productivity.

Above all, as Vinod Khosla puts it, "the biggest change is to enable an environment where the consequences of failure are minimised, which in turn will encourage more risk taking."[68] In other words, societies which make it less costly to fail are more likely to produce leaders and entrepreneurs than societies with a high cost of failure, looking for the perfect leader. As Robert Kennedy once put it, "only those who dare to fail greatly, can ever achieve greatly."[69]

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1. The author would like to thank Vinod Khosla, Mudit Kapoor, Shamika Ravi, Manish Sabharwal, Sandeep Farias, Narayan Ramachandran, Karthikeyan Muthuswamy, Petra Sonderegger, Ajit Rangnekar, Kartik Srivatsa, Arvind Panagariya, and Ryan Streeter for their useful comments, insights and criticisms at various points. Above all, I would like to thank the Legatum Institute for their support and encouragement of this essay.

2. In India, for instance, the constitution declares the country to be a "socialist" republic. Interestingly, the word was inserted into the constitution in 1976 by an amendment, but was not something the framers of the constitution intended to have in the preamble. To the extent that legislators have to defend the constitution, they also have to, by definition, defend socialism.

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6. Major reforms included de-collectivising agriculture, private ownership of land, private business, introduction of dual price systems, and setting up special economic zones.

7. Chen, Shaohua and Ravallion, Martin. March 2013. "More Relatively-Poor People in a Less Absolutely-Poor World." *The Review of Income and Wealth*, Volume 59, Issue 1, p 1-28. 2009 numbers accessed at UNDP China website at http://www.undp.org/content/china/en/home/ourwork/povertyreduction/ overview.html.

8. OECD key statistic for Brazil, India, China and South Africa. Accessed at http://www.oecd.org/newsroom/34992235.pdf.

9. Quoted in Eichengreen, Barry, Donghyun, Park and Kwanho, Shin. "When Fast Growing Economies Slow Down: International Evidence and Implications for China." NBER working paper 16919. Accessed at http://www.nber.org/papers/w16919.

10. A status it lost very recently to China. In 2013, Japan is now the third largest economy, according to the *World Bank's World Development Indicators*.

11. Deliberately chosen as relatively successful African examples.

12. East Pakistan prior to independence in 1971.

13. Source: World Bank, United Nations and Econstats (IMF data).

14. The Doing Business Index can be accessed online at http://www.doingbusiness.org/rankings.

15. In recent times, several governments have lobbied to shut down the Doing Business Index entirely because of fear that their lack of reforms will get highlighted.

16. Kapoor, Mudit. "Economic Growth, Reforms and Public Policy: Andhra Pradesh," using estimates from NSSO surveys. Working Paper, Indian School of Business, 2013.

17. In fact, his successor Y.S.Rajasekhar Reddy ran a populist campaign, so it came as a surprise when he turned out to be a reformer once he became chief minister. His remarkable poverty reduction record led to a big re-election win in 2009.

18. China reduced its poverty levels by 40.6 percentage points between 1993 and 2008 (Ravallion and Chen 2013).

19. The rule of 70 is a rough, but useful guide to find how quickly incomes double. If an Indian state grows at 10% per year, incomes will double every 7 years, compared to growing at 2%, which means incomes will double every

35 years. In GDP measures, we simply divide 70 with the growth rate of a country to find out how long it takes for GDO to double.

20. This is a variant of a question Robert Lucas asked in "On the Mechanics of Economic Development," *Journal of Monetary Economics*, 22 July, 1988, pp. 5. He asks, "Is there some action a government of India could take that would lead the Indian economy to grow like Indonesia's or Egypt's? If so, what exactly? If not, what is it about the 'nature of India' that makes it so? The consequences for human welfare involved in questions like these are simply staggering: once one starts to think about them, it is hard to think about anything else."

21. Weber, Max. "The Protestant Ethic and the Spirit of Capitalism."

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29. They include sewage systems, drains, waste disposal, germ theory, vaccinations etc.

30. The economist Paul Romer has suggested that technological rules are easier to transmit than institutional rules, because the latter involve hard coordination problems, like, for instance, if a country tries to move from driving on the left side to the right side of the road.

31. Baumol, William J., Entrepreneurship in Economic Theory (1968). *The American Economic Review*, Vol. 58, Issue 2, p. 64-71 1968. Available at SSRN: http://ssrn.com/abstract=1506344.

32. Baumol says that an entrepreneur is "the individual who exercises what in the business literature is called 'leadership'."

33. Saxenian, AnnaLee. 1999. "Silicon Valley's New Immigrant Entrepreneurs," Public Policy Institute of California Publication. Accessed online at http://www.ppic.org/main/publication.asp?i=102.

34. Wadhwa, Vivek and Saxenian, AnnaLee and Siciliano, Francis Daniel. Oct 2012. "America's New Immigrant Entrepreneurs: Then and Now." Kauffman Foundation research paper. Accessed online at http://www.kauffman.org/~/media/kauffman_org/research%20reports%20and%20covers/2012/10/then_and_now_americas_new_immigrant_entrepreneurs.

35. This is not to suggest there are no entrepreneurs in India or elsewhere. On the contrary, post 1991, there has been a dramatic growth of entrepreneurial activity in India, though nothing like in the United States. It's more a question of why these entrepreneurs did not stay in India and start great companies.

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43. Ravi, Shamika. "What Drives Entrepreneurship: Some evidence from India," Working Paper, Indian School of Business, Oct 2013. Pg.3.

44. Zoltan Acs calls this category "necessity entrepreneurship" as opposed to "opportunity entrepreneurship" in his paper, "How is Entrepreneurship Good for Economic Growth?" in *Innovations*, Winter 2006 issue.

45. Based on the author's analysis of the institution's alumni database, which is up to date, but not 100% accurate, especially since many students who took the entrepreneurial route have failed and returned to corporate jobs.

46. In conversation with the author, Oct 2013.

47. In conversation with the author, Oct 2013.

48. One could argue that the apparel sector in India does not witness rapid growth at least partly because incentives tend to target service industries, whereas in Bangladesh, for instance, most of the incentives target the garment sector and therefore, we witness rapid growth in this sector.

49. For instance, firms that have trouble retaining talent have found ingenious ways to prevent attrition by focusing on hiring within specific small communities, implicit social bonds being key. There is even a popular word, Jugaad, which refers to getting around inefficiencies; however the costs of Jugaad do add up for firms, making it unviable in the long run.

50. The Centre for Emerging Markets (CEMS) at the ISB was set up to develop market-based solutions to pressing socio-economic problems like affordable housing, education, healthcare and energy. The author was executive director of the centre.

51. A medium-sized impact investment fund with investments in Peru, Mexico, Brazil and India, that has a decent track record and is raising a third fund in 2013.

52. In a conversation with the author, Oct 2013.

53. Both SONG and Aspada are early stage investing firms operating in India. Aspada today manages SONG fund's portfolio of investments. Funding for SONG was partially raised by the author.

54. New York based Elliott Fund Management is one of the oldest hedge funds in the world, with about $22 billion under management.

55. In conversation with the author, Oct 2013.

56. Whitney initially started funding entrepreneurs who were not welcome at banks.

57. For instance, we realised that building housing in industrial clusters was more viable than in big cities with expensive land. In these clusters, we realised potential tenants preferred living in single-storied housing, not in high rises.

58. Karamchandani et al. July 2010, July 2013. "Building Houses, Financing Homes" and "State of the Low-Income Housing Market". This research was funded by the Dell Foundation, World Bank etc.

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61. For instance, IEA estimates that India needs to spend $135 billion to merely ensure universal access to electricity. Similarly, just the low-income housing market was estimated to be $245 billion in 2012 by Deloitte Monitor research.

62. There is a dark side to these fads, because donor priorities shift and genuine charities doing excellent work have to scramble looking for business plans to match donor priorities. In many cases, this quest is elusive and nothing but a distraction from their core work. After all, how do you make polio vaccination a 'sustainable' business?

63. Niehaus, Paul. "A theory of good intentions." Aug 2013, accessed online at https://editorialexpress.com/cgi-bin/conference/download.cgi?db_name=NEUDC2013&paper_id=369

64. Dharavi is located on 500+ acres in central Mumbai.

65. 725 multiplied by 380, which is the 300 sq. ft. carpet area plus some additional built-up area; typically 380 sq. ft. of built up area in an apartment is sold as 300 sq. ft. of carpet area.

66. Land cost ($725) divided by the FAR of 4.

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About the author

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In 2012, Reuben was named to ***Wired's*** "Smart List 2012: 50 people who will change the world." He is on the International Advisory Group of Unicredit Bank, Italy's largest bank by assets; the advisory board of the Centre for Civil Society, India's leading classical liberal think tank; and the advisory board of THNK, The Amsterdam School of Creative Leadership. In 2009 he was selected as a Young Global Leader by the World Economic Forum, where he serves as Vice-Chair of the Global Agenda Council on Emerging Multinationals. He is an independent director on the board of the Soros Economic Development Fund (SEDF), where he helped set up SONG, an early stage venture fund with Google and Omidyar Network as co-investors. He is also on the board of First Home Realty Solutions, which builds low-income housing across India; RenewGen, a waste-to-energy company; and the DLF Foundation, set up by India's largest real estate company. A TED Global Fellow in 2007, he now sits on the TED Fellows Advisory Board.

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