The Case for Indian VC

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IVCA
INDIAN PRIVATE EQUITY
& VENTURE CAPITAL ASSOCIATION

About the Author

David Back is the co-founder of Zoomcar, the first car rental company in India to focus on "western-style" rentals with no chauffeur. Zoomcar launched in February 2013 with 7 cars in Bangalore. By the time Back left day-to-day management at the end of May 2015, it had grown to about 1,500 cars in 6 cities. The business continues to grow, and now has over 9,000 cars in more than 45 Indian cities.

Zoomcar's investors include Ford Motor Company, Mahindra & Mahindra, Sequoia Capital, Nokia Growth Partners, FundersClub, EmpireAngels, Former Infosys CFO Mohandas Pai, British politician and businesswoman Lady Barbary Judge, Former US Treasury Secretary Larry Summers, as well as professors at Wharton, Harvard Law School, and Cambridge University's Judge School of Business.

Back graduated magna cum laude from the University of Pennsylvania and cum laude from Harvard Law School, where he had teaching fellowships on the history and future of globalization under Niall Ferguson and under Larry Summers and Lant Pritchett. Back received a full scholarship to pursue an MBA at Cambridge University's Judge School of Business. He dropped out after one term to launch Zoomcar in India.

Back has had positions at McKinsey & Co, at Goldman Sachs, and in the General Counsel's office at the Kauffman Foundation. He also served as the Director of Government Relations for The Hydrogen Expedition – an attempt to circumnavigate the globe in a hydrogen fuel cell powered boat to raise awareness about alternative fuels.

About IVCA

The Indian Private Equity and Venture Capital Association is the apex body representing the interests of the PE and VC industry in India. IVCA in a member-powered non-profit organization founded over a decade ago by established industry professionals. The member firms comprise of influential firms from around the world, including Private Equity & Venture Capital Funds, Corporate Advisers, Lawyers and Institutional Advisors. IVCA is led by President Rajat Tandon and Chairman Padmanabha Sinha.

IVCA aims to: Develop and promote India's private equity sector and actively demonstrate its impact to the government, media, and the public at large; Establish high standards of ethics, business conduct and professional competence; Serve as a platform for investment funds to interact with each other and develop an ecosystem; and Stimulate the promotion, research, and analysis of private equity and venture capital in India.

Disclaimer

The (sometimes controversial) opinions expressed in this paper are solely those of the author, David Back. They do not represent the official position of the IVCA.

A Note about humility

The title for this paper comes from a book written in 1930 by the American historian Will Durant, The Case for India. This book was given to me by my investor, mentor, and friend, Mohandas Pai. In the introduction to this book, Durant writes "My knowledge is trifling and fragmentary in the face of a civilization five thousand years old."

This paper represents my thoughts after doing business in India for eight years. It also draws on dozens of conversations with entrepreneurs, angel investors, venture capitalists, private equity investors, lawyers, bankers, journalists, consultants, accountants, academics, family offices, development finance professionals, and people from the US and UK consulates. In addition, this paper contains my findings from examining scores of books, research papers, and investor reports, as well as thousands of news articles.

However, my knowledge is trifling and fragmentary. My research on the topic of entrepreneurship and venture capital in India is a work in progress. I still have much to learn, and I am actively trying to learn it. I welcome feedback; and I particularly welcome learning about any mistakes I have made.

Introduction: this too shall pass

In the fall of 2011, I attended the annual MIT Entrepreneurship in India conference. My Zoomcar Co-Founder Greg Moran and I were still not sure that we were going to take the plunge and move to India. The keynote speaker that year was Mohanjit Jolly, who was at the time the India head of DFJ – a major Silicon Valley VC firm. Jolly told the audience "Every challenge is an opportunity; and I love investing in India because there are ***so many opportunities!***" I reflected on his speech; and I thought that he was right. Risk and reward are always commensurate. If you want to get big rewards – whether that is money, impact, glory, adventure, or anything else – you have to take big risks.

Mohanjit Jolly was hardly the reason that Greg and I chose to move to India; there were dozens of factors that went into our decision. However, Jolly's confidence and passion really struck me. After spending several months in India across a few trips, I moved to Bangalore at the very beginning of 2013. Several months later, DFJ closed their India office; and Jolly moved to Silicon Valley. For the three years that I lived in India full-time, I kept muttering to myself "I guess there was just too much opportunity here!"

It turns out that Mohanjit Jolly was correct. There is an enormous amount of opportunity in India, as well as tremendous challenges. In May 2017, Jolly returned to India, co-founding Iron Pillar Fund in Delhi. Tim Draper partially re-entered India when the Draper Venture Network partnered with Blume Ventures in February 2017, and with Iron Pillar in November 2018.

Entrepreneurship is a high-risk pursuit where the business cycle is magnified: the booms really boom, and the busts really bust. This is exponentially more true in volatile emerging markets.

In 2010-2012, while Greg and I cooked up our scheme to start a company in India, the business world and financial media were full of BRICs, BRICs, BRICS. Foreign investment flowed into Brazil, Russia, India, and China (and South Africa), as well as other emerging markets. The BRIC(S) acronym was coined in a 2003 research report, Dreaming with BRICs written by the Head of Goldman Sachs Global Economic Research, Jim O'Neil. In 2010, Goldman Sachs doubled down, with an article titled Is This The 'BRICS Decade'? I worked in Goldman Sachs' Asset Management Division just after graduating from law school in the summer of 2012. Jim O'Neil had recently been promoted to become Chairman of the Division. Every time I heard his name (and I heard his name a lot), it always included the label "Jim O'Neil, the economist who coined the term BRICs."

Zoom launched on February 14, 2013. Just a few months later, in May 2013, US Federal Reserve Chairman Ben Bernanke announced that the Fed would taper off quantitative easing, a massive monetary stimulus program that provided low interest rates and cheap and plentiful money to financial institutions. The prospect of higher interest rates in the United States triggered the "taper tantrum". Capital flowed back into the US market; and currencies around the world plummeted – particularly emerging market currencies. As the World Bank reports, India was particularly hard hit. The Rupee lost 18% of its value in just three months. Morgan Stanley labelled India one of the "Fragile Five" countries along with Brazil, Indonesia, Turkey, and South Africa. India's foreign reserves plummeted as the Reserve Bank of India (RBI) purchased Rupee assets to try to stabilize the currency. The RBI raised interest rates by three-fourths of a percent over the course of the next four bi-monthly policy meetings. The RBI also tightened capital-control restrictions. Indian individuals had previously been allowed to transfer $200,000 per year outside the country. During the currency crisis, the RBI lowered this amount to a miserly $75,000. As the foreign exchange crisis improved, the restriction was lifted to $125,000 in June 2014 and to $250,000 in February 2015 (where it remains today). In order to prevent capital flight into gold, the RBI imposed a 10% tax on imported gold, and the Indian Government imposed strict limits on how much gold businesses or individuals could bring to India. Raising capital for Indian startups became almost impossible; and many good ventures starved. It was at this time that DFJ withdrew from India along with several other marquee funds like Canaan Ventures, Battery Ventures, and Sherpalo Ventures.

In May 2014, Narendra Modi was elected Prime Minister of India. The Congress Government of Manmohan Singh had started out with strong reforms and extremely high economic growth. But in 2012 and 2013, it was plagued by massive corruption scandals and inflation as high as 12% at one point. Modi promised business-friendly policies, "maximum governance with minimum government", and "acche din" ("good days"). Indian stock markets shot up immediately, and investment poured into the country. Twelve months later, the S&P BSE 500 Index (the Bombay Stock Exchange version of the S&P benchmark index) had grown more than 30%; and private markets were even more giddy.

In September 2014, Chinese ecommerce giant Alibaba listed on the New York Stock Exchange, raising $22B at a market capitalization of $168B, the largest IPO in history. On its first trading day, Alibaba's stock price rose 38%, increasing its market cap to $232B. Investors looking for the next emerging-market growth story poured into India. Raising capital for Indian startups became quite easy; and many bad ventures gorged themselves on abundant investment.

In just 2 weeks in 2014, Softbank invested almost $1B in Indian tech startups: $627M in Snapdeal – a company that had pivoted from being the "Groupon of India" to being the "eBay of India" to being the 2nd-place "Amazon of India", $210M in Ola – the "Uber of India", and $90M in Housing – an online real estate search startup led by a then 25-year-old. In the first half of 2015, Snapdeal raised $500M more from Softbank, Alibaba, Foxconn, Temasek, Blackrock, Myriad, and PremjiInvest. In April 2015, Snapdeal purchased mobile couponing venture Freecharge for an estimated $150M in cash and $250M in stock. Other mega-funds Tiger Global and DST Global poured money into Indian startups at generous valuations.

In June 2015, the overheated Chinese stock market collapsed, with the Shanghai Stock Exchange Composite Index losing 40% of its value in four months (a plunge from which it has still not recovered). In December 2015, the US Federal Reserve raised interest rates for the first time since 2006. The federal funds rate (the rate at which banks lend to one another) rose one-quarter percent from a target of 0.00-0.25% to 0.25-0.50%. The Indian S&P BSE 500 Index lost more than 10% of its value in two months, before slowly recovering. Raising capital for Indian startups became very difficult.

Between the end of 2015 and the first half of 2018, Tiger Global made no new investments in India. In March 2017, Flipkart investor Morgan Stanley wrote down the value of its stake for the fifth time, estimating the valuation of the company to be $5.4B. In April 2017, Tiger Global sold part of its Flipkart stake at a significant discount, valuing the company at a pre-money $9.3B – a large drop from the $15.2 valuation Flipkart had achieved in 2015. Tiger also sold stakes in Ola, as well as music venture Saavn and jewelry startup Caratlane. In July 2017, Snapdeal sold Freecharge to Axis Bank for a mere $60M. During 2017, Softbank wrote-down the mark-to-market valuations of Ola and Snapdeal; while firing the young founder of Housing and selling the venture to PropTiger for a valuation less than half of the amount of capital Housing had raised from investors (and about a quarter of its 2014 valuation). During the first half of 2017, Softbank attempted to force a merger between its struggling Indian ecommerce venture Snapdeal and the larger and better-capitalized Flipkart. When Snapdeal founders Kunal Bahl and Rohit Bansal balked at the $850M acquisition price (less than 15% of the valuation at its height); Softbank ruthlessly decided to invest $2.5 billion in Flipkart. That transaction included another partial sale of Tiger Global's stake. Snapdeal was unable to raise further funds and laid off about 97% of their almost 10,000-person workforce.

During the funding drought between the end of 2015 and the beginning of 2017, many startups went under, including food delivery ventures TinyOwl, Dazo, and Zupermeal, hotel search platforms Stayzilla and RoomsTonite, cloud kitchen Eatonomist, furniture and housewares ecommerce site FabFurnish, alternate lender Finomena, grocery delivery ventures PepperTap and GrocShop, EdTech platform Purple Squirrel, video microblogging site FranklyMe, advertising software company Oglas, credit-scoring service Cefy, and many others.

Speaking at a Bangalore conference held by US law firm Gunderson Dettmer and Indian law firm ARALaw in early 2017, I argued at the time "There are a lot of challenges now; but there are also a lot of opportunities. As just one example, I see that Snapdeal has massive layoffs. Well, a small percentage of those people who are being laid off probably are budding entrepreneurs. So it seems to me that this is a golden opportunity for early stage investors to

come in and get top talent at a relatively low price right now … Whatever the sentiment is now – whether it's good or bad – this too shall pass. I think there are always opportunities for good companies and good entrepreneurs."

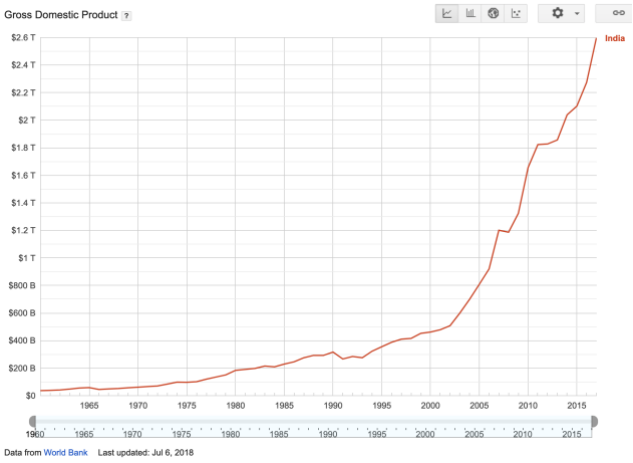
In 2018, Walmart paid $16B to purchase a 77% stake in Flipkart. Flipkart was started in October 2007. The venture received its first angel investment of about $20,000 from Ashish Gupta in 2008 and $1M from Accel in October 2009. Tiger Global invested $10M in January 2010 at a valuation of $30M. Walmart's acquisition made a tremendous amount of money for Flipkart's investors, founders, and stock-incentivized employees.

Now, India is booming. The country currently has 17 "unicorns", venture-backed private companies with post-money valuations of $1B or more. Softbank opened an India office in February 2019. Softbank's Executive VP Rajeev Misra told the Economic Times that as a "tourist investor", Softbank had missed out on many unicorns. DFJ made a big mistake by pulling out of India in 2013. Tiger Global left a lot of money on the table by selling part of its Flipkart stake in 2017 (although Tiger did just fine with its Flipkart investment). But investors who piled into India during the boom times of 2006-2007 and 2014-2015 suffered major losses.

In his 2015 book The Golden Tap, Kashyap Deorah writes

> *"When the VCs had started setting up shop in India in 2005-2006, the gold rush was accelerated by the positive sentiment due to a new UPA led government with an economist as Prime Minister who was perceived to have friendly financial and economic policies. There was a widespread belief amongst entrepreneurs and investors that India was going to be the next US and that it was only a matter of time. That did not unfold as promised. Now, when the global funds were making investments in India in 2014, the optimism seemed correlated with the entry of a new NDA led government with a business-friendly prime minister. The widespread belief now was that India was going to be the next China and that it was only a matter of time. Would the outcome be any different?"*

Deorah makes an excellent point. But despite the boom and bust cycles, the strong trend line is that India is rising tremendously fast. When Manmohan Singh entered office in 2004, India had a GDP of $700 billion. By 2018, India's GDP had surged to $2.7 trillion!



While accepting the Economic Times 2017 Business Leader of the Year Award, Mukesh Ambani, the Chairman and Managing Director of Reliance Industries and the richest person in Asia proclaimed his confidence that India represents the biggest investment opportunity in the world right now. "A few years ago, the fashion in India was to invest abroad. If you didn't invest abroad, you were left out. We took a contrarian bet and invested over 3.5 lakh crore (INR 3.5T, about $50B) in a single bet in India."

Narendra Patni was an entrepreneur who started India's tech industry. After studying Electrical Engineering from the Indian Institute of Technology (IIT) Roorkee, he received a master's degree in Electrical Engineering from Massachusetts Institute of Technology and then an MBA from the MIT Sloan School of Management. After graduating in 1969, he spent three years working at a consulting firm in Cambridge Massachusetts. In 1972 he imported the first computer to India and started Data Conversion Inc. In 1976, he moved on from data conversion services to software development services, starting Patni Computer Systems. In 1977, Patni hired a failed entrepreneur named NR Narayana Murthy to his only formal job, heading the software division at PCS. In 1981, Murthy departed PCS with some colleagues to found Infosys.

Dr. Harsh Mahajan is an entrepreneur who made a big impact in India's medical field. After graduating from Azad Medical College in New Delhi and completing a residency in radiology from PGIMER in Chandigarh, he received a one-year Rotary Fellowship at MD Anderson Cancer Hospital & Research Institute in Houston Texas. Dr. Mahajan returned to India after his fellowship in 1988. In 1991, he imported the first MRI machine to India. Now Mahajan Imaging has seven large-scale diagnostic centers in Delhi. They conduct advanced clinical and applied research with partners including MIT, All India Institute of Medical Sciences in Delhi, IIT Delhi, and others.

Texas Instruments became the first global company to set up a research and development center in India. In 1985, TI selected a mid-size military city in South India known for its lush greenery and many retirees as the location for their R&D facility. Now Bangalore is the "Silicon Valley of India" and Texas Industries remans a Fortune 500 blue chip company.

I am sure that the bold moves made by Narendra Patni, Dr. Harsh Mahajan, and Texas Industries were each as crazy as the idea of starting a car rental company in India was in 2012; and I am equally sure that while their stories end in triumph, there were also enormous hardships. I know for a fact that they withstood major economic downturns and major political transitions along the way.

Bill Gates once said that "We always overestimate the change that will occur in the next two years and underestimate the change that will occur in the next ten years." That is exactly what I believe about India.

Macro-economic development

India has a population of almost 1.4B; and the United Nations estimates that it will overtake China as the most populous country in the World by 2022. A 2016 report by the McKinsey

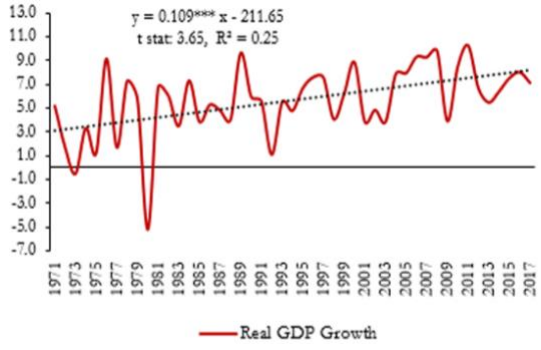
Global Initiative, India's Ascent: Five Opportunities for Growth and Transformation estimates that by 2025 India will have 69 metro areas with populations of more than one million each. In contrast, all of Europe has 35 such cities; and the United States has only 10. The Delhi National Capital Region (NCR) is projected to overtake Tokyo as the World's largest urban agglomeration in 2028.

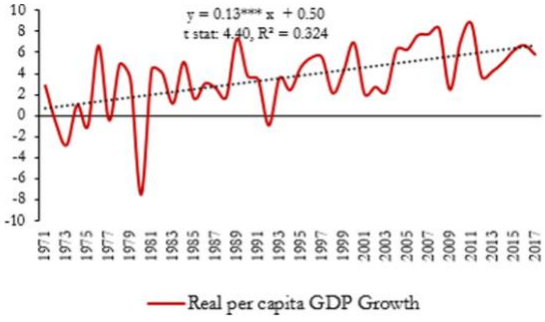
India has been the fastest growing large economy in the world for the past four years. In Our Time Has Come: How India Is Making Its Place in the World, Former US Deputy Assistant Secretary of State for South Asia and current Senior Fellow at the Council on Foreign Relations Alyssa Ayres describes India's economic ascent. Before embarking on major reforms in 1991, India was the 12th largest economy in the world at market exchange rates. In 2010, it was the 9th largest. By 2015, it had overcome Italy, Brazil, and Canada to become the 7th largest. In 2018 India surpassed France as the 6th largest. And in 2019, the IMF predicts India to overtake the United Kingdom as the World's 5th largest economy. By 2030, India is likely to be the 3rd largest economy in the World at market exchange rates.

Using purchasing power parity (PPP), which accounts for price differences across countries – India became the world's third-largest economy in 2011, surpassing Japan. PPP GDP per capita is the best measure of the economic well-being of the average person in a country; and it is useful for comparing the well-being of a country's population year-on-year. However, nominal or market exchange GDP is useful when measuring the aggregate economic strength of an economy, particularly for countries like India that rely heavily on imported commodities and defense equipment: imported oil, submarines, and jet fighters are not adjusted for local prices.

The forecast that India will have a larger GDP than Japan by 2030 is particularly striking because it is ahead of schedule. The original Goldman Sachs 2003 paper Dreaming with BRICs (which was already extremely bullish) predicted that "India's GDP would outstrip that of Japan by 2032."

A World Bank Senior Economist, Poonam Gupta wrote on the World Bank's End Poverty in South Asia Blog "India's long-term economic growth has steadily accelerated over a fifty-year period, without any prolonged reversals. Thus, while growth averaged 4.4 percent a year during the 1970s and 1980s, it accelerated to 5.5 percent during the 1990s-early 2000s, and further to 7.1 percent in the past one decade. The acceleration of growth is evident not just for aggregate GDP, but even more strongly for per capita GDP. The average pace of per capita growth was 5.5 percent a year in the last decade. Interestingly, when compared with some of the world's largest emerging economies, this steady acceleration of growth stands out as being unique to India"





Gupta continued "We argue that the deceleration to growth rates below 7 percent between Q3 2016–17 and Q2 2017–18 was an aberration, attributed to temporary disruptions in economic activity as the economy adjusted to demonetization and businesses prepared for the implementation of GST. At present, there are indications that the economy has bottomed out and, in the coming quarters, economic activity should revert to the trend growth rate of about 7.5 percent. We project GDP growth to be 6.7 percent in 2017-18 and accelerate to 7.3 percent and 7.5 percent respectively in 2018-19 and 2019-20 … India's remarkable growth experience lends credence to its long-term growth story." In an interview with the Press Trust of India, Ayhan Kose, the Director of the World Bank's Development Prospects Group states "In all likelihood India is going to register higher growth rate than other major emerging market economies in the next decade … I would look at the big picture for India and big picture is telling us that it has enormous potential."

The World Bank's bullish sentiment is echoed by many other multilateral organizations and development institutions. At an International Monetary Fund press conference in October 2017, the IMF Managing Director, Christine Lagarde said "We believe that India is for the medium and long-term on a growth track that is much more solid as a result of structural reforms that have been conducted in the last couple years." Tao Zhang, the Deputy Managing Director of the IMF who formerly worked at the World Bank and the Asian Development Bank, told the Press Trust of India in an April 2017 interview "We are extremely impressed by the work that is being done [by the Indian Government] and we expect it will pay off in terms of higher growth for the future." A global economics research report by Oxford Economics projects that India will remain the fastest growing large economy in the World for the entire decade 2019-2028.

These GDP numbers are contested. As the Wall Street Journal explains:

> *"The country's GDP numbers have gone through a lot of suspicious changes in recent years. In 2015, India decided to start using a new base and method to calculate GDP, immediately bringing its growth rate much closer to China's. In the past year, historical figures were recalculated to match the new methodology. Initially, it looked as if the new numbers showed India performing better under the previous government. Since then, there have been changes that put growth under Mr. Modi on top."*

The Modi Government stood by the official numbers. It said calculating the indicators was difficult and results evolve as more information becomes available. I am not able to make a judgment about whether the new GDP measurements are more or less accurate than the old ones. What I can say personally is that I have deep skepticism for data produced by the Indian Government, regardless of whether it is led by the BJP or by the Congress Party. More trustworthy statistics is an advantage of having true independence in institutions like the central bank.

In 2017, a headline in the Wall Street Journal declared India's Markets Break Away From the Fragile Five Pack. The article described how "renewed confidence in the country's relative economic and political stability have made it an emerging market haven in uncertain times." At the peak of the 2013 currency crisis, India's foreign exchange reserves reached a low of $275.5B; but they have since risen to $402B. Meanwhile, India's public external debt

(government debt denominated in a foreign currency) has reduced from 23.877% of GDP in 2014 to 20.523% in 2018. As a result, India is much less vulnerable to a currency crisis.

Bimal Jalan, the Reserve Bank of India Governor from 1997-2003 recently told the Economic Times "We are in a very good situation so far as inflation is concerned". Monthly consumer price index (CPI) inflation touched a high of 12% at the end of 2013; and had been between 8-10% for years before that. Since 2015, it has stayed between 2-6%, trending downward. The RBI sets monetary policy to target CPI inflation at 4% with a range of +/- 2%. Piyush Goyal, the Minister of Railways and Coal, spoke about the Modi Government's efforts to fight inflation "We inherited 10.1% inflation and took it down to 4.4-4.6%." According to the RBI, headline inflation was 3.6% in 2017 (official 2018 data is not yet available).

India has leaped ahead in the World Bank's Ease of Doing Business Rankings. Since the rankings began in 2008 up to 2016, India languished between the 130th and 134th "easiest" country to do business. In 2017 it jumped to 100th place, and it jumped again to 77th in 2018. These rankings measure 190 countries on 10 factors: starting a business, dealing with construction permits, getting electricity, registering property, getting credit, protecting minority investors, paying taxes, trading across borders, enforcing contracts, and resolving insolvency. Ramesh Abhishek, Secretary of the Department for the Promotion of Industry and Internal Trade declared "This sends a huge message to the entire investor community … Recognition by the World Bank is the ultimate assurance for the investor."

The World Bank Vice President for South Asia, Anette Dixon, stated "India is closing the gap between international best practices. It is a clear signal that not only has the country been open for doing business, but it is also competing for the preferred place for doing business." The India Country Director for the World Bank, Junaid Ahmed, added "It is not only about foreign investment, the doing business indicators capture the whole regulatory framework for small and medium firms. If you keep your eyes on that number, you see that growth in terms of jobs and in terms of employment is really going to make a push if India continues to make these shifts over time." In an interview with the Economic Times, the World Bank CEO Kristalina Georgieva summed up the findings "My belief is that India is reforming. It's improving as a place for business and it's improving in attention being paid to long-term fundamentals of a well-performing economy … The progress of India in reduction of extreme poverty is remarkable … [This government has been] a great partner to work with. [It] is serious about reforming and

tackling issues that for decades were, if not taboo, kept under the carpet or out of the spotlight – for example sanitation or gender equality."

India still has considerable progress to make on the Ease of Doing Business indicators, particularly registration of property, construction permits, and enforcement of contracts. The head of NITI Aayog, Amitabh Kant, articulated plans to improve further "We need commercial courts and online registration of cases." Ramesh Abhishek added "An area which is more complex and difficult is property registration. That needs more time by the states … on land records and digitization."

It seems that whenever a country is improving in the World Bank's Ease of Doing Business rankings (or really any rankings), public officials from that country proclaim that ranking to be "the gold standard"; but whenever a country is not doing well in those rankings, public officials decry them as "biased" or "flawed". It also seems like whenever a country is improving in rankings, the opposition parties in that country decry the rankings as "easily manipulated"; but whenever a country is not doing well in rankings, the opposition party holds them up as "an objective standard".

The World Economic Forum's Global Competitiveness Report measures economies on 12 pillars: institutions, infrastructure, macroeconomic environment, health and primary education, higher education and training, goods market efficiency, labor market efficiency, financial market development, technological readiness, market size, business sophistication, and innovation. These pillars are in turn organized into three subindexes: basic requirements, efficiency enhancers, and innovation and sophistication factors. The three subindexes are given different weights in the calculation of the overall Index, depending on each economy's stage of development. The WEF's approach evolves over time, with 2018 marking the introduction of their Global Competitiveness 4.0 methodology. This makes it harder to track progress of a particular country over time; although it also makes it harder for a government to game the system or "play to the test". India's ranking in the Report plummeted from 2007-2014 from 48th most competitive to 71st, recovered strongly in 2015-2017 to 40th most competitive, and seemingly backslid sharply in 2018 to 58th most competitive. The WEF clarified that India's fall from 40th to 58th is a result not of a worsening competitive environment in India; but instead due to their new methodology which included new factors such as workforce diversity, labour rights, e-governance, and disruptive businesses. "If we back-cast our new methodology to 2017, this indicates a rise of five places in (India's) ranking," the WEF said. In a 2014 article India's Competitiveness Crisis, the World Economic Forum stated "India's GDP per capita was higher than China's in 1991, today China is four times richer. This competitiveness divide helps to explain the different trajectories of these two economies." India's plunge from 2007-2014 and subsequent recovery reflect significant changes in the wealth creating potential of the economy.

The Global Innovation Index is produced by the World Intellectual Property Organization (WIPO) along with INSEAD and the Cornell SC Johnson School of Business. The GII uses a broad definition of innovation set by the OECD: "An innovation is the implementation of a new or significantly improved product (good or service), a new process, a new marketing method, or a new organizational method in business practices, workplace organization, or external relations." Like the WEF Global Competitiveness Report, its methodology evolves over time.

With 11 annual reports, it is now on its "fifth generation". It examines 5 innovation inputs: institutions (political environment, regulatory environment, and business environment), human capital and research (primary, secondary, and tertiary education, and research and development), infrastructure (information and communication infrastructure, general infrastructure, ecological sustainability), market sophistication (credit, investment, trade and competition), and business sophistication (knowledge workers, innovation linkages, and knowledge absorption). It also examines the outputs of innovation in the creation, diffusion, and impact of knowledge, and the creation of goods, services, and intangible assets. In 2007, 2008, and 2009, India ranked as the 41st most innovative economy. It steadily declined 6 years in a row to 81st place in 2015; and has steadily climbed every year since then from 66th in 2016, 60th in 2017, and 57th in 2018. Francis Gurry, the Director General of WIPO, said "There is a consistent trend now, and I expect the trend to continue."

In this year's Global Innovation Index report, Chandrajit Banerjee, the Director General of the Confederation of Indian Industry (CII) explained the significance that Indian industry place on the Index.

> *"India's position on the GII has been keenly monitored by the Indian government for the past few years. Joint efforts of CII and the publishers of the GII, including WIPO, have led to significant collaboration on improving Indian innovation metrics and identifying innovation challenges and opportunities. Since 2016, the report has also launched separately in India at an event jointly organized by the Department for the Promotion of Industry and Internal Trade, the National Institution for Transforming India, and CII. In 2016 India's Minister of State for Commerce and Industry instituted a high-level Task Force on Innovation to suggest ways to improve the innovation ecosystem … CII's partnership with GII continues to grow strong and I see it consolidating in years to come. I congratulate the GII team for their sustained efforts and untiring rigor."*

India has a reputation as a place where intellectual property is not respected. Personally, I was amazed when I saw the "Swiss Navy" line of pocket knives and lighters; and I have spent years chuckling to myself while I imagine the homesick Swiss Navy on their futile odyssey return to their landlocked country. However, even in this regard, India is changing. In 2017, India ranked a dismal 43rd out of 45 countries on the US Chamber of Commerce's IP Index. In 2018, it was 44th out of 50 countries. But in the newly-released 2019 Index, India has risen to 36th out of 50. That's not good; but it is better. The 2019 report highlights India's accession to the WIPO Internet Treaties and measures to combat piracy and counterfeiting. But, unsurprisingly, the report also describes considerable room for improvement, including barriers to licensing and technology transfer, limited protection for pharmaceutical IP rights included compulsory licensing in non-emergency situations, and a lengthy and cumbersome patent process. The report states "rights holders continue to face real challenges in enforcing their IP rights in India. India has high rates of substandard and counterfeit medicines, online and physical piracy, and counterfeiting." On a positive note, the Chamber's report does highlight that "India is one of the Index's leading economies for providing targeted incentives to SMEs. Expedited review for patent filings, reduced filing fees, and technical assistance are all available to Indian SMEs and startups."

Corruption is the curse of India. James Crabtree describes it in lurid (and sometimes gratuitous) detail in The Billionaire Raj: A Journey Through India's New Gilded Age. Some of the corruption in India is at a grand scale; such as giving away massive tracts of mineral rights to connected insiders for free; or doling out telecom spectrum on a first-come first-serve basis with only a few hours' notice where tipped-off insiders had all of the necessary paperwork ready; or fixed cricket matches and crooked cricket leagues; or the popular chief minister of a state convicted of acquiring disproportionate assets while in office, with a police raid on one of her homes finding seven hundred pairs of shoes, ten thousand saris, and substantial holdings of gold jewelry. But most of the corruption in India is quotidian: "a place at a school, a bed in a hospital, a water connection, a birth registration, a marriage license, a death certificate; in India the very rudiments of life seemed to require illegal payments." In 1939, Mahatma Gandhi despaired "We seem to have weakened from within. I would go to the length of giving the whole Congress a decent burial rather than put up with the corruption that is rampant."

Narendra Modi ran for Prime Minister on a campaign, above all, of fighting corruption. In the beginning of 2014, he gave a speech in Uttar Pradesh in which he declared "My mantra is I will not eat, and I will not allow others to eat." Crabtree writes that this brought roars from the crowd, who knew only too well what "eating" meant.

Corruption in India appears to be improving, albeit slowly. Transparency International conducts an interview of development organizations to create a Corruption Perceptions Index. In 2012 and 2013, India was perceived to be the 94th cleanest out of 180 countries. It has steadily improved and is now ranked as the 78th cleanest country in the world. Again, that is not good; but it is better. Depressingly though, only part of the improvement was due to a decreased perception of corruption in India; while part of India's rise in the rankings was due to increased perception of corruption in most parts of the world. Transparency International radically changed the methodology for this Index in 2012, and states that results prior to that cannot be accurately compared. This index is far from an objective measurement, because it ranks countries on perceptions. However, as Transparency International explains, corruption generally comprises illegal activities which are deliberately hidden.

Moody's upgraded India's sovereign credit rating to Baa2 with stable outlook in November 2017. They explained "The decision to upgrade the ratings is underpinned by Moody's expectation that continued progress on economic and institutional reforms will, over time, enhance India's high growth potential and its large and stable financing base for government debt, and will likely contribute to a gradual decline in the general government debt burden over the medium term. In the meantime, while India's high debt burden remains a constraint on the country's credit profile, Moody's believes that the reforms put in place have reduced the risk of a sharp increase in debt, even in potential downside scenarios." This was the first upgrade for India's credit rating in 14 years; and it reduced the cost of borrowing for the Indian government.

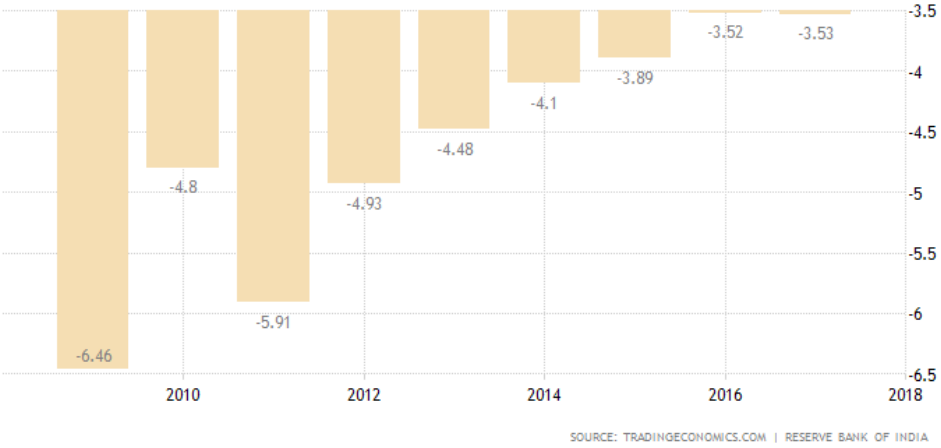
The other two major ratings agencies, Fitch and S&P, have not changed India's sovereign credit rating; and have each left it at their lowest investment grade rating at BBB- with a stable outlook. As reasons for not upgrading India's rating, they cite high public debt by the central and state governments, continuous fiscal deficits, low per-capita GDP, and an ongoing crisis of bad loans in India's state-owned banks. Some of these concerns seem valid, and some do not. I personally

believe that there is a strong argument in favor of these agencies following Moody's lead with a ratings upgrade.

Per-capita GDP seems like an outrageous basis for a low credit rating. In the Economic Survey for 2016-2017, then Chief Economic Advisor Arvind Subramanian argued that this is like saying "Please don't bother this year; come back after half-a-century."

India's public debt is moderate. According to the IMF, in 2017 central government debt was 45% of GDP, down from a high of 63% in 2002-2005. Including state debts, pensions, and other liabilities, the IMF states that India's gross public debt is at 68% of GDP, down from a high of 83%. S&P and Fitch rate Italy and Portugal one notch higher than India at BBB, despite Portugal's public debt to GDP ratio of 121% and Italy's public debt to GDP ratio of 130%. Spain is rated a much higher A- by both agencies, with a public debt to GDP ratio of 97%. During the Eurozone debt crisis which began in 2008 (and which continues today), highly indebted countries were dubbed the "PIIGS": Portugal, Italy, Ireland, Greece, Spain. I think this acronym is incomplete because it leaves out Iceland and Cyprus, both of which contributed to the banking and debt crisis. As a result, I propose that the correct acronym should have been the "SIC PIGI countries". S&P and Fitch currently rate all of these countries except Cyprus and Greece higher than India (although A+ rated Ireland and A rated Iceland have made major reforms and slashed public debt).

India's fiscal deficit was at 6.5% of GDP in 2009, 4.8% in 2010, 5.9% in 2011 and 4.9% in 2012. Then Prime Minister Manmohan Singh and then RBI Governor Duvvuri Subbarao voiced grave concern about these unsustainable deficits. In 2012, then Finance Minister Palaniappan Chidambaram announced an ambitious plan of fiscal consolidation. He pledged that India's fiscal deficit would reduce to 4.8% in 2013, 4.2% in 2014, 3.6% in 2015, and 3.0% in 2016. After the election of Modi as Prime Minister in 2014, his Finance minister Arun Jaitley announced a revised fiscal consolidation roadmap that would reach 3% deficit one year later: 4.1% deficit in 2014, 3.9% in 2015, 3.5% in 2016, and 3% in 2017. The Modi government achieved its deficit targets in 2014, 2015, and 2016. In 2016, Jaitley revised the consolidation roadmap further, targeting 3.2% deficit in 2017 and 3% in 2018. However, India's breached the 2017 target with a fiscal deficit of 3.5%. Jaitley again revised the consolidation roadmap, targeting a fiscal deficit of 3.3% in 2018. This target was also breached, but only by a small amount, with a 2018 fiscal deficit of 3.4%.



This "fiscal slippage" was viewed as "credit negative" by the major ratings agencies. Gene Fang, an Associate Managing Director at Moody's sovereign risk group said, "Ongoing slippage from the government's budgeted fiscal deficit targets over the past two years, and our expectation that the government will face challenges meeting its target again this coming year does not bode well for medium term fiscal consolidation." The Head of Asia Pacific for Fitch, Stephen Schwartz said "Longer term fiscal trends are more important to the sovereign rating profile, and we will evaluate these in the context of the post-election budget, which should provide additional guidance on the medium term outlook."

However, the Modi Government has pointed to a provision in the fiscal consolidation roadmap dubbed the "escape clause" that the government would exceed its deficit target if it undertook "far-reaching structural reforms in the economy with unanticipated fiscal implications."

The ratings agencies added that some of the measures used to reduce the deficit, such as selling state-owned businesses, taking a special dividend from the RBI, and cutting capital investment were not reliable or sustainable. Moody's explained "Achieving deficit reduction through such unpredictable revenue sources denotes weaker fiscal policy effectiveness than if consolidation were achieved through more durable and predictable sources such as tax revenue." One complication with measuring the fiscal deficit is that some spending, such as that funded by bond sales by state-owned and government-guaranteed enterprises is not accounted in the deficit.

In February 2019, Arun Jaitley was having surgery and Piyush Goyal presented the budget as Interim Finance Minister. Afterwards, he was interviewed by ET Now. The interviewer asked him "Fiscal consolidation, 3.4% next year, we were supposed to get to 3%. Where is the fiscal glide path?" Goyal quipped "That you should ask them who took the fiscal deficit to 6.5%." However, I suppose the ratings agencies could reply that they rate the long-term creditworthiness country, not any particular political party.

The negative assessment of S&P and Fitch have been at least partially validated by the banking crisis in India involving non-performing assets (NPAs). Government-owned banks made enormous loans to well-connected industrialists to expand gigantic conglomerates during the economic boom times of 2005-2008. When the global financial crisis hit and the tycoons couldn't repay, the banks decided not to recognize the bad loans because that would require them to provision capital to cover the losses. Instead, they continued lending to the industrialists who used the new loans to pay the interest on the old loans in a process known as "evergreening". This only delayed the day of reckoning and enlarged the final bill. In his book I Do What I Do, Former RBI Governor Raghuram Rajan reflects "How important was malfeasance and corruption in the NPA problem? Undoubtedly, there was some, but it is hard to tell banker exuberance, incompetence, and corruption apart." Nevertheless, in his first speech as Governor, Rajan declared "Promoters do not have a divine right to stay in charge regardless of how badly they mismanage an enterprise."

When the ultimate bill finally did arrive, it was huge. The Government announced a $33B bank recapitalization plan, following a much smaller $4B plan. The recapitalization was to combine a mix of taxpayer bailout, bank bond sales, and bank equity sales. The exact size of the bad debt problem is still not fully known. Oliver Wyman estimates the total amount of non-performing

assets at about $86B, some of which could be salvaged by lenders when distressed assets were finally auctioned off. India already had extremely tight credit before this crisis. In order to get a business loan, a company must provide 3 years of audited financial records. In order to buy a home, standard terms are that the purchaser must make a down payment of 50%, in contrast to 20% in the US (even to rent an apartment in India usually requires an 11-month security deposit compared to a 1-month deposit in the US). The NPA crisis has dried up bank lending even further and significantly slowed business formation and expansion.

Fitch has kept India's credit rating the same since 2006; and S&P has done the same since 2007. In 2007, India's central public debt to GDP ratio was 58% compared with 45% in 2018, nominal per-capita GDP adjusted for inflation was about $1,000, compared with about $2,000, and annual CPI inflation was running at 6.5% compared with 3.6% in 2017 (the latest year for which official data was available). However, the fiscal deficit has deteriorated: it was 2.8% in 2007, compared with 3.4% in 2018; and the NPA banking crisis has really hurt the Indian economy and increased the liability exposure for the government. Nevertheless, I believe that a lot has changed in India over 12 years and that should be reflected in the sovereign credit ratings of S&P and Fitch. I also think it is noteworthy that in the last wave of sovereign debt upgrades for India Moody's was also the leader of the pack, upgrading India's rating in 2004.

The Modi Government has pushed each year to privatize or to divest significant stakes in state-owned enterprises, or 'public sector undertakings" (PSUs). The Finance Ministry set a divestment target of about $10B for fiscal year 2017-2018 (in which it raised about $14B), about $11B for fiscal year 2018-2019 (in which it raised about $12), and has set a target of $13B for fiscal year 2019-2020. In some cases, these PSUs were listed on public stock exchanges, as with Hindustan Aeronautics Limited (HAL), Bharat Dynamics, Cochin Shipyard, General Insurance Corporation (GIC) and Life Insurance Corporation (LIC). The government also created two exchange-traded funds (ETFs) to facilitate investment into PSUs: the Bharat-22 ETF and the Central Public Sector (CPSE) ETF.

However, divestment through strategic sales – the outright sale of the enterprise to a private company – has not been successful. In 2018, the government attempted to sell a 76% stake in Air India to a private airline or consortium. The buyer would have had to assume almost $5B in Air India's debt while the government would pay for about $2B of the debt. The auction did not receive a single bid. Secretary for the Department of Investment and Public Asset Management (DIPAM) Atanu Chakraborty attributed the lack of interest from bidders to high oil prices and high volatility of the rupee. I think the failed auction has much more to do with Air India itself. Air India was created in 1953 when Prime Minister Nehru nationalized India's eight private airlines. For years, critics have proclaimed that the Modi Government was "selling the family silver" by divesting state-owned enterprises. Having flown Air India dozens of times, my personal opinion is that if Air India is your family silver, you should be seriously thinking about getting a new family.

Another limitation on the effectiveness of PSU divestment has been the high portion of stake sales, whether direct or through IPO, that are purchased by other PSUs, as explained by BloombergQuint. For example, about $5B of the $14B divested in 2017-2018 came from state-owned Oil and Natural Gas Corporation (ONGC) acquiring the Government's 51% stake in

Hindustan Petroleum. Other examples include Power Finance Corporation purchasing the government's stake in Rural Electrification Corporation. In other instances, the government's divestment was accomplished through a share buyback by the PSU, as which happened with Coal India, National Hydropower Corporation (NHPC), National Mineral Development Corporation (NMDC), Manganese Ore India Limited (MOIL), Indian Oil Corporation (IOC), and others. Consolidation of PSUs involved in the same line of business may make sense, as might profitable PSUs giving some of the profits to the government through a dividend or share buyback; but they are not genuine divestment. In many of the PSU IPOs, the largest purchasers were the primarily state-owned insurance companies LIC or GIC. In these cases, the insurers may be looking out for the best interests of their policy holders by purchasing what they genuinely believe are good long-term investments. But such purchases are a murky form of divestment.

All of the macro-economic changes in India have a real tangible impact on the ground. PWC conducts an annual survey of CEOs at the World Economic Forum summit in Davos each year. Since 2012, one of the questions is "Which three countries, excluding the country in which you are based, do you consider most important for your organization's overall growth prospects over the next 12 months?" I was astounded how perfectly the results mirrored my roller-coaster ride in India: in 2012, when Greg and I made the decision to move to India, the CEOs answered India 3rd most; in 2013, it was 4th most (the summit happens in January, and the "taper tantrum" didn't happen until May); in 2014, India had plummeted to 10th place. After Modi was elected, it rose to 6th place in 2015 and has slowly clawed its way back to 4th in 2019.

India is one of the youngest countries in the World. Our Time Has Come mentions that the median age in India is only 28 and that 'The workforce-age population, meaning those between the ages of fifteen and sixty-four, will continue to grow until 2050." This provides a tremendous opportunity for India. The higher a ratio of workers a country has to children and retirees, the greater the potential average production per capita – a demographic dividend. However, as Alyssa Ayres elaborates, this also presents tremendous challenges for India. "With such a large and youthful population, India needs to create one million jobs per month to absorb new entrants to the workforce."

While many people are justifiably concerned about the potential "demographic time bomb" and jobs crisis in India; I am optimistic. There is a particularly golden window of economic potential in a country when high fertility rates first start declining, as happened in China after its 1969 two-child policy and 1979 one-child policy. This creates the maximum ratio of working-age adults to support children and the elderly. India's steadily declining fertility rate won't provide as extreme an economic boost as did China's one-child policy, but it will also create less of a pension crisis decades down the line.

China scrapped the one child policy in 2016, as concerns mounted about its aging population and shrinking workforce. However, the Wall Street Journal reported that birth rate have actually declined, with fewer children born in China in 2018 than any year since 1961. China currently has 2.8 workers for each retiree. It is projected to decline to 1.3 workers per retiree in 2050. China's overall population is expected to start declining in 2030. Our Time Has Come cites "a Bloomberg analysis showing that by 2050, India's share the global workforce will grow from

today's 17.8 percent to 18.8 percent, while China's will shrink from today's 20.9 percent to 13 percent."

All of these improvements in India, combined with deteriorating business conditions (particularly for foreign businesses) make India what I consider the best current investment opportunity of the BRICS – especially for long term, illiquid assets. The original 2003 Dreaming with BRICs report predicted that "Russia's economy will overtake Italy in 2018; France in 2024; UK in 2027; and Germany in 2028." Instead, Russia's $1.56 trillion economy still lags far behind Italy's $1.9 trillion economy.

India overtook China as the largest market for inbound corporate mergers and acquisitions for the first time in 2018. The Wall Street Journal reported that acquires spent $39.5B in India vs $32.8B in China, the first time that India has surpassed its economically bigger neighbor. Most of the India acquisitions were in the fast-growing consumer and retail sectors. "With risks rising in China big companies have little choice but to take India seriously if they want scale in emerging markets. The run of deals will likely continue."

China is becoming a less attractive destination for foreign investment both because of domestic developments and because of the smoldering trade war with the United States. In a February survey of US businesses conducted by the American Chamber of Commerce in China, 89% replied that they had a pessimistic view on the bilateral trade relationship. Agence France Presse reported that nearly two-thirds said the tensions effected their plans for the Chinese market, and nearly one-quarter said they would delay further investment into China as a result. About one-fifth replied that they have moved or are considering moving production out of China as a result. In addition to the tariff battle, the companies described market access, government subsidized local competitors, and intellectual property theft as major concerns in China.

Waves of massive fiscal stimulus in China starting in 2008 have resulted in a massive buildup of debt. S&P and Moody's lowered China's sovereign credit rating in 2017, while Fitch had lowered it in 2014. China is still highly rated; but its trend line is negative while India's is positive. And while India has a problem with hazy public data like GDP numbers, official statistics from the Chinese Government are an impenetrable smog.

All of these changes present an incredible investment opportunity in India; but of course there are many challenges too. In India's Missing Middle Class, the Economist describes that "there are a great many who have risen above the poverty line – but not so far above it that they spend much on anything other than feeding their families … Apple made only 0.7% of its 2017 global revenue [in India]". The article cites a 2012 government survey that found that under 3% of Indian households had all five of: a car or scooter, a television, a computer, an air conditioner, and a refrigerator. The article explains "To get in the top 10% of earners, an Indian needs to make just over $20,000. Adjusted for purchasing-power parity, that is a comfortable income, equating to over $75,000 in America. But in terms of being able to afford goods sold at much the same price across the world, whether a Netflix subscription or Nike trainers" the spending power is far lower.

My older brother is a Wall Street Journal columnist, who spent 13 years in Taiwan, Nanjing, Singapore, Beijing, and Hong Kong. A few years ago, he told me "I hate when westerners say that there are a billion consumers in China. Unless you are selling rice, there are not a billion Chinese consumers!" I realized that people who claim that there are over a billion consumers in India are even more wrong – only half of India eats rice, while the other half eat bread!

Nevertheless, the market for rice and for everything else is growing in India. At the World Economic Forum meeting in Davos Switzerland, WEF presented a project in collaboration with Bain & Company, The Future of Consumption in Fast-Growth Consumer Markets. Nikhil Prasad Ojha, Partner and Head of Strategy Practice at Bain & Company India and Zara Ingilizian, Head of Future of Consumption at the World Economic Forum summarized the findings

> *"By 2030, [India] is on course to witness a 4x growth in consumer spend. It will remain one of the youngest nations on the planet and will be home to more than one billion internet users. The new Indian consumer will be richer and more willing to spend, and unlike her predecessors, she will have very specific preferences … Half the incremental consumer spend by 2030 will be simply to buy more of the products and services being consumed today. Affordable options will continue to be important. The remaining half will be split nearly equally on upgrading to premium offerings and including new variants in existing routines, such as adding organic food items and a new skincare regime, or adopting app-based ride-sharing. Premiumization and category addition will drive a significant share of incremental spend on eating (food and beverages at home, and dining out), looking good (personal care and apparel) and staying connected (cellphones, data packs and gadgets)."*

Dominic Barton, the former Managing Director of McKinsey & Co said in an interview with the Economic Times "I am very bullish [about India] … the economy is going to touch $10 trillion. I don't mean it next week, but you can actually start to say that this could be a $10 trillion economy. India is one of the absolute biggest growth pockets in the world … For McKinsey, India is a strategic battleground." Now nearly every multinational company must have an India strategy. Speaking at a massive rally in Silicon Valley, Narendra Modi said that "until recently the world saw India at the margins, but now is seeing it at the center!"

Improving policy and regulatory environment

Since the collapse of the Soviet Union and the decline of communism and socialism around the world in 1991, India's economy has steadily become more open to for-profit enterprises and to the outside World. In an essay written for McKinsey's Reimagining India, *Making the Next Leap*, Mukesh Ambani, the Chairman and Managing Director of Reliance Industries and the richest man in Asia, describes trying to do business before 1991:

> *"India's license raj was in full force back then. Companies had to get dispensation from the government for almost any decision of consequence. Public monopolies dominated many sectors; even when the government opened up certain industries to private firms like ours, it held power over our investment*

> *policy, production levels, prices, and financing. These sanctions created immense difficulties; they created an artificial scarcity for everything a business needed to succeed."*

Until 1991, India suffered from what an Indian economist, Raj Krishna, dismissively dubbed "the Hindu rate of growth". India's economic rise since 1991 shows conclusively that religion had nothing to do with the matter; and that India suffered from a "socialist rate of growth". Of course, the economic failure of Pakistan is another clear indicator that government, not religion, has been the obstacle to greater economic growth in South Asia.

The Indian economy has been reforming since 1991 in a stop-and-start pattern of bursts and doldrums. In the essay *Breakout or Washout* from McKinsey's Reimagining India, Ruchir Sharma, the Head of Emerging Markets Equity Research at Morgan Stanley Investment Management, writes "India has been typical of most other developing countries, which reform only in a crisis and fritter away the gains when things are going well." Reimagining India was published in 2012; and the Modi Government has behaved differently, accelerating the pace of reforms relentlessly.

In 2017, the Planning Commission was replaced by a central government think-tank, NITI Aayog. Soviet-style "Five-Year Plans" have been replaced by "Fifteen-Year Vision Documents", "Seven-Year Strategy Papers", and "Three-Year Action Plans". That may not sound like much of a change; but the key difference is that the Planning Commission had executive authority while the NITI Aayog is only an advisory body with no power to grant funds or make regulatory decisions.

The Indian Government implemented a central consumption tax, GST, in July 2017. Prior to this, states in India taxed goods coming from other Indian states. Checkpoints at state borders were often choked with long queues of trucks waiting for tax inspection. GST has removed these barriers and solidified India into a unified common market. Previously, companies would have different warehouses and distribution networks in each state. Now central warehouses can serve multiple states far more efficiently. The Economic Times cited a study of freight transit time estimating that paying taxes online with an E-way bill instead of physically at border checkpoints reduced the time taken to ship products 1,660km from Chennai to Calcutta from 50-65 hours down to 45-50 hours.

By combining many different state and central taxes, GST has made registering a company much simpler and made it much easier to pay taxes. By requiring online payment of taxes, it also has forced digitization on many companies. In Grant Thornton's 2019 Fourth Wheel Report, Partner Krishan Arora says "GST has led Indian businesses to become more transparent, compliant and join the formal economy … While a lot awaits to be done to fine-tune and simplify the new system, the fundamental intention to stimulate economic growth is intact and augurs well for overall business and deal climate."

Many people in India tell me that they vividly remember November 8, 2016, when Narendra Modi addressed the nation. He announced that anyone in possession of INR 1,000 or INR 500 notes (worth about $14 and $7) would have to turn them in for new currency. This

"demonetization" or "notebandi" made people line up in long queues outside banks in order to exchange their money.

The exact purpose of demonetization is not clear. Finance Minister Arun Jaitley said, "The idea is to make sure that this anonymous cash operating in the system itself becomes part of the system." Different government officials have claimed that it was done in order to fight counterfeiting, combat tax evasion, formalize and digitize the economy, or to bring down black money. "Black money" is a term that is widely over-used in India. It should refer to money that is the profit of a crime. However, in India it is more often used to describe money that is hidden from tax authorities; which should properly be called "grey money".

Demonetization caused a dramatic economic slowdown as people were unable to make large transactions while they were waiting to exchange their currency. ATMs had to be modified for the size of the new INR 500 note, which caused massive cash shortages for weeks in some places. It also cost billions of productive hours that people spent in queues.

The impact of demonetization has been mixed; and it has had many vocal supporters and vocal critics. IMF Economic Counsellor and Director of Research Maurice Obstfeld said that "The costs of demonetization are largely temporary, and we see permanent and substantial benefits accruing from the move." Carmen Reinhart, Professor of the International Financial System at Harvard's Kennedy School of Government, assessed demonetization as "short-term pain, but long-term gain." SBI Chairman Rajnish Kumar said "I would consider it positive as lots of money has come into the formal banking system."

Critics argue that the economic pain was too great for too small a benefit, that demonetization was poorly executed, and that criminals found was to circumvent the measure. James Crabtree describes in The Billionaire Raj: "One technique involved using middle-men, who bought up old notes at a discount and distributed them in small amounts to poor villagers in rural areas. In exchange for a fee, these villagers then deposited the money into their bank accounts, as if it was their own, before returning it to its original owner at a later date in new, clean bills."

In an Economic Times online survey in advance of the 2019 Budget, 29% of respondents said that demonetization was successful, 35% said it was partially successful; and only 32% replied that demonetization was "not successful". However, 49% of respondents said that black money has not been reduced under Modi; and only 32% said that black money had been reduced.

I think that demonetization could achieve its objectives better if the INR 2,000 note is removed from circulation. Many people tell me they believe replacing the INR 1,000 note with the larger note just makes bribery and other illegal transactions easier. The same survey asked, "If Modi bans Rs 2,000 currency note, how will it impact the economy?" 56% replied "It will hit black money hoarders." This move could be done more gradually than the original demonetization as the objective is simply to phase out a piece of currency rather than to catch people who have been secretly hoarding illicit cash. There is a global trend towards ceasing to print high-denomination money. Canada stopped producing its CAD 1,000 bill in 2000; and Singapore's stopped issuing its SGD 10,000 bill in 2014. In early 2016, European Central Bank president Mario Draghi said the ECB is considering halting production of the 500-euro note. In 1969, the

US stopped producing notes in denominations of $10,000, $5,000, $1,000, and $500 – removing the faces of Woodrow Wilson, Salmon Chase, James Madison, and Grover Cleveland from circulation.

India instituted a new Insolvency and Bankruptcy Code in August 2016 and the RBI ordered banks to push 40 of the country's biggest corporate defaulters into bankruptcy proceedings. Raghuram Rajan explains in I Do What I Do "Until the Bankruptcy Code was enacted, bankers had little ability to threaten promoters, even incompetent or unscrupulous ones, with the loss of their project." The lack of a viable bankruptcy process helped deliberate defaulters, but it hurt honest people whose businesses failed and who deserved a second chance. As Rajan elaborated "The system has to be tolerant of genuine difficulty while coming down hard on mismanagement or fraud." In Grant Thornton's 2019 Fourth Wheel Report, Restructuring Partner Ashish Chhawchharia says "The Code offers an attractive and conducive environment for entrepreneurs and the opportunity to develop global investor confidence in the Indian economy."

The Indian Government also brought the Fugitive Economic Offenders Act into law, empowering the authorities to attach and confiscate the assets of willful defaulters. Jaideep Khanna, the CEO Asia Pacific at Barclays declared "Payment discipline has improved because the regulator has imposed zero tolerance. The fact that we have IBC and owners can lose complete control of their company is beginning to change behavior which is fantastic … borrowers recognize that they cannot take their creditors for granted."

Under the Modi Administration, India has implemented other significant reforms such as: the Real Estate Regulation and Development Act, which finally imposes penalties on developers for construction delays or deficiencies and compensates purchasers; the Arbitration and Conciliation (Amendment) Act which makes alternative commercial dispute resolution easier, opening many more sectors for FDI and increasing FDI limits in other sectors; and distinguishing between foreign direct investment (FDI) and foreign portfolio investment (FPI) in taxation. The Modi Government also ended the colonial-era holdover practice of presenting a separate Railways Budget a few days before the Union Budget.

Dominic Barton told the Economic Times "Reforms by the Modi Government are not perfect in terms of execution, but they are jolts. Japanese PM Shinzo Abe talks about three arrows. But in India, we are talking about eight to nine arrows."

However, the challenges in India remain tremendous; and the government needs to keep reforming. Fighting corruption and getting people to pay the taxes they owe require more diligence and more resources.

Many economists and business leaders are calling for the next government to address regulations on land acquisition and labor. In Our Time Has Come, Alyssa Ayres says that distinguished Indian economists Jagdish Bhagwati and Arvind Panagariya "point to the socialist-era Industrial Disputes Act as the law in most urgent need of reform. The act requires any company larger than one hundred employees to seek government permission in order to shut down, even if it is unprofitable." Although there is a fast-track for startups to wind up.

In 2015, I was speaking with my Malayalam Kerala-born wife, Ann Koppuzha. I quipped to her that while Israel was had the nickname "startup nation", India was "shut-down nation". My joke wasn't very funny, but her response was brilliant: "Please, David. Do you think it's so easy to just shut something down in India?"

Many Indian businesses go to extraordinary lengths to remain below 99 employees. This creates a missing segment of mid-size companies that could drive economic growth and resiliency and provide many jobs. The "mittelstand", or proliferation of mid-size companies in Germany are considered the backbone of that country's industrial economy. In addition, the many temp workers and contractors that Indian companies hire to substitute for employees lack proper employment protections.

Former Chief Economic Advisor to the Government of India Arvind Subramanian wrote in his essay for McKinsey's Reimagining India, *The Precocious Experiment*, that "India's abundance of [unskilled labor] contributes little to growth because a panoply of regulations – a legacy of state-led development – stifles the expansion of labor-intensive industries such as apparel, furniture, and metal fabrication."

The report by the McKinsey Global Institute, India's Ascent explains this issue in greater detail:

> *"India's manufacturing sector has produced world-class companies in diverse sectors such as auto and auto components, two-wheelers, and pharmaceuticals. Yet most manufacturing enterprises are subscale and have low productivity. According to a study by the Asian Development Bank, 84 percent of India's manufacturers employed fewer than 50 workers in 2009, compared with 70 percent in the Philippines, 65 percent in Indonesia, and 25 percent in China.12 Across all sectors, India's largest companies (those with more than 200 employees) have about the same level of labour productivity as large enterprises elsewhere in Asia, but the country's smallest enterprises are only 25 to 65 percent as productive as their small-scale peers elsewhere."*

This really holds India back in the sectors that could provide mass employment. Alyssa Ayres writes "India's IT and IT-enabled services industries contribute 9.3 percent of GDP (2016), but they employee only 3.7 million people. A traditional manufacturing sector like textiles contributes 2 percent of GDP but employees more than 45 million."

Reforming the labor sector is not easy. Those who are employed often have a job for life, and do not want to give that up. Alyssa Ayres describes the extreme difficulty.

> *"In September 2015, some 150 million workers went on strike nationwide against the Modi government's proposed labor law reforms … One year later, ten Indian labor unions called another national strike to protest economic reforms generally, including plans to close loss-making state-owned enterprises. Some 180 million workers stayed away from the workplace on Sep 2, 2016, in one of the largest labor strikes in history."*

Ayres adds ruefully "As far as India has come in its journey shaking off the socialist past, a tough road still lies ahead." Poonam Gupta, the senior World Bank economist who wrote so

enthusiastically about India's accelerating growth decade-on-decade, added that "attaining a growth rate of 8 percent or higher on a sustained basis would depend on an effective structural reform agenda."

In an Economic Times online poll in advance of the 2019 Budget, 78% of respondents said that India needs more economic reforms. When asked "What is your main expectation from the new government that comes to power next year?" 47% replied that they wanted further economic reforms, 35% wanted it to create more jobs, 16% wanted it to give incentives to business and small entrepreneurs, and only 2% wanted it to waive off farm loans. Of course, the methodology of this survey is quite skewed – far more entrepreneurs read the Economic Times than do farmers.

Government reforms specifically relevant to the VC industry

The regulatory environment has progressively become more welcoming and responsive to venture capital and private equity. In launching his "Startup India" initiative, Prime Minister Modi proclaimed "We want startups! We want jobs!" Speaking about Startup India in a Facebook Live session, Suresh Prabhu, the Union Minister for Commerce & Industry and Civil Aviation declared "We are very excited that we are getting into a new phase of economic development in which ideas and innovation will drive the Indian economy and who will make it happen, it's you – the startup community!"

Ramesh Abhishek, the Secretary of the Department for the Promotion of Industry and Internal Trade (DPITT) said in an interview to Inc42

> *"Startups play an important role in driving a country's economic growth. In India, tech startups bring with them much-needed innovation that could be instrumental in solving some of the country's biggest social problems, be it in healthcare, education or waste management. With continued support from the government and its various departments, the startup ecosystem in India will be able to successfully foster a culture of entrepreneurship and disruption, which again would help in job creation."*

This is not just empty talk from politicians. In Grant Thornton's 2019 Fourth Wheel Report, the Chairman of IVCA, Padmanabha Sinha assesses the situation: "Regulatory and government push to boost the private funding economy has resulted in favourable outcomes for the PE/VC landscape."

The Small Industries Development Bank of India (SIDBI) has seeded many domestic venture capital firms through its fund-of-funds, which the VC firms leverage through private fundraising. This fund was established in 2016; and took a little over a year to begin making significant disbursements while it scrutinized the VCs seeking funding. With a corpus of about $1.4B, the SIDBI fund-of-funds has so far supported 110 domestic alternative investment funds (AIFs). SIDBI also makes direct venture investments into startups through its Opportunities Fund and Aspire Fund.

The Indian Government has also taken steps to allow more private capital into venture capital and private equity. Until 2013, Indian insurance companies were not permitted to invest in private equity (which includes venture capital). Now, they can invest 3-5% of their funds in private equity, depending on the type of insurance. Insurance companies have been slow to seize this opportunity; but they have begun investing in these alternative assets over the past few years. Minister of State for Finance Jayant Sinha stated "We want to enable these pools of long term capital that we have to be able to invest across a set of uncorrelated diversified asset classes. We need a pool of domestic limited partners who can also invest, whether it is endowments, trusts or insurance companies. We are working on this from regulatory and tax perspective to create a pool of domestic LPs."

Pension funds have also received permission to invest in private equity, but with restrictions that make doing so practically impossible. Pensions can only invest in AIFs that are publicly listed and are covered by credit ratings firms – and there are no such funds in India. Meanwhile, provident funds (pensions that are funded through legally-mandated paycheck donations similar to Social Security in the United States) were initially allowed to invest only in government debt, then in bank debt, then in corporate debt, and finally equities in 2015. However, provident funds can only invest 15% of their assets in equities, and even that only in the Bharat-22 or CPSE ETFs, or in ETFs linked to the blue-chip Sensex or Nifty 50 indexes. The next big opening of provident funds to put in equities is an expected increase in the percent of their funds they are allowed to invest to 25%. So it will probably be a long time before provident funds are invested in private equity (if ever). In contrast, the California State Employee Retirement System (CalPERS) currently invests 8% of its assets into private equity; and its Chief Investment Officer Yu Ben Meng is making the case to regulators that it should be increased to 16%.

Globally, the largest limited partners (LPs – the investors into venture capital funds) are pension funds, insurance companies, sovereign wealth funds, development finance institutions (DFIs) ultra-high net worth individuals or families, chartable endowments, funds-of-funds, and banks (which cannot invest depositor funds, but which can invest from their own balance sheets). Of these, pension funds are the largest sources of capital for VC and private equity funds. Ernst & Young estimated in 2013 that Indian individuals had about $40B in insurance policies, about $60B in private pensions, and about $90B in provident fund pensions. These numbers have increased since 2013 and insurance policies are growing faster than pensions; however total amounts invested in pension funds are still much larger than insurance assets.

The government has instituted other policies to facilitate and promote the amount of domestic and foreign funds in Indian private equity. For example, on the taxation front, it has allowed pass-through taxation for investments to the LPs. The tax authorities also now treat foreign LPs invested into India private equity funds as domestic capital.

One major issue facing the startup ecosystem has been the matter of "angel tax". As a measure to fight tax evasion and money laundering, then finance minister Pranab Mukherjee introduced a tax provisions in 2012 which stipulated that companies which received investments valuing their firms above "fair market value" would have to treat that excess valuation as taxable revenue. Entrepreneurs, investors, and others took deep objection. Senior tax lawyer Nishith Desai, the founder of one of the top venture capital and private equity oriented law firms in India, labelled it

"demon tax". The concerns reached a boiling-over point in 2018 as more and more startups began receiving tax notices from the Central Board of Direct Taxes (CBDT).

Industry trade groups such as IVCA and NASSCOM took their concerns to the government and to the public, along with a vocal collection of entrepreneurs, investors, lawyers, and others. Step by step, the government relaxed the rules, increased limits on investment and revenue, and even provided retrospective relief to many of the startups that had received the tax notices. The Co-Founder of the Indian Angel Network (IAN), Padmaja Ruparel said in an interview with TechCircle "Angel tax as an issue has been laid to rest … We would like to thank DPIIT and its secretary Ramesh Abhishek who brought CBDT on the table."

A major issue holding back Indian startups (and many other parts of Indian business and society) is the extremely slow pace of contract enforcement and property protection. The US Chamber of Commerce's IP Index states that

> *"The Government of India invested considerable energy into decreasing pendency rates for patent and trademark applications. More staff have been hired and resources invested into modernizing and improving the administrative capacities of the Office of the Controller General of Patents, Designs and Trademarks (CGPDTM). The GOI announced in August 2018 that the application backlog had been reduced. For patents, this meant a significant decrease from over 200,000 pending applications in March 2017 to just over 155,000 by the end of June 2018. For trademarks, a backlog of over 450,000 applications remained. In June 2018, it was reported that over 30 million civil and criminal cases were pending in India, of which 40% were more than 5 years old"*

In McKinsey's Reimagining India, Zia Mody Managing Partner of AZB & Partners writes in *The Creaky Wheels of Indian Justice*

> *"The sheer volume of legal actions accounts for most of the delay in India's judicial system. According to data published by the Supreme Court of India, a staggering 31.2 million cases were pending in India at the end of March 2012 … India's Supreme Court had over fifty-nine thousand cases pending. For every 100,000 people, the United Sates has 10.8 judges, Canada and Australia between 3 and 4. India has just 1.2 judges for every 100,000 people … Despite its shortcomings, India's judicial system remains the country's bastion of the rule of law, standing above the clamor of party politics and ensuring that justice is done, even if often too slowly … Judges are overworked and underpaid, but the vast majority of them are respected as men and women of the highest integrity."*

I believe that Indian entrepreneurs, investors, and nearly everybody else in the country would be better off if the government stopped doling out money through funds-of-funds or R&D tax credits, and instead used the money to hire judges. Tax credits for research and development don't help very much if the patents produced by that R&D can't be defended in court.

Jonathan Gray, the President of Blackstone, the largest investment manager in the world, declared at the 2019 ET Global Business Summit in Delhi that his firm intended to accelerate its

investments in India, having already invested over $10B. Gray said, "We want to be a business builder and community builder in India." He added "We thank the Modi administration for all these reforms." He concluded by declaring "Picture abhi baaki hai!" (The movie isn't over yet!).

Digital transformation

Internet penetration in India was only 0.5% in 2000. In Eric Schmidt's essay for McKinsey's Reimagining India, *The Next Five Hundred Million,* the Executive Chairman of Google wrote "In 2004, when Google set up its first R&D center outside of the United States in Bangalore, we were surprised to discover that one of our biggest challenges was with internet connectivity."

India has undergone a digital transformation since then. Now internet penetration is 28%, with 390M internet users in the country, according to research conducted by Bain & Co reported in the Wall Street Journal. The Telecom Regulatory Authority of India (TRAI) reports that India has over one billion mobile phones. Newzoo estimates that nearly 400 million of those are smart phones.

The proliferation of internet and mobile phones in India was already running at a fierce pace. In the past two years, it has accelerated dramatically due to the launch of Reliance Jio. Reliance Industries invested $35B to provide ultra-low-cost wireless coverage and broadband internet, building 20,000 cell towers and 150,000 miles of fiber-optic cable. The Economist reported that it took less than a year from launch for Jio to be delivering more data than any other mobile network in the world – over half the data delivered by all American carriers put together. And Jio's scale continues to grow even more massive. Ambani told Reliance Industries' July 2018 investors' meeting "We are determined to connect everyone and everything, everywhere."

Jio's ultra-low rates put several rivals out of business and forced the merger of the survivors into Bharti-Airtel and Vodafone-Idea. The price war Jio started have made data cheaper in India than anywhere else in the World. The Wall Street Journal reports that this has "cut average data prices in the country from more than $3 a gigabyte before Jio's launch to about 60 cents now."

The Wall Street Journal further reports that Indians are using the plentiful and cheap data plans. It cites data from mobile-analytics firm App Annie that "India last year surpassed the US in the number of apps downloaded from the Google Play store, according to mobile-app analytics firm App Annie."

Another article in the Wall Street Journal reports that YouTube now has 250M monthly active users in India. It describes how the video-sharing service has thrived in India:

> *To accommodate this new breed of binger, YouTube lets users search by voice in Indian languages. It allows users to download videos to their phones and watch later. To speed up download times on bad connections, it allows them to pick a lower picture quality and has rewritten its app from scratch so it uses one-tenth the memory. Most of these changes are developed for India but are being brought to other countries as well.*
>
> …

> *India-specific categories of videos have also taken off. Henna tattoo designs for brides, village cooking, spiritual gurus and Indian engineering-school entrance-exam cram courses are new genres that are thriving.*
>
> *YouTube's most-viewed channel is India's T-Series, a music video channel backed by one of the country's oldest media companies, which employed a simple content strategy: Bollywood music. T-Series has clocked close to 60 billion views—more than Justin Bieber, Katy Perry and Taylor Swift combined, according to YouTube.*
>
> *India's digital advertising market is still small, with only around $2 billion in revenues a year compared with more than $100 billion in the U.S., but the market could surpass $6 billion annually within the next five years, KPMG estimates. Advertising is dominated by Google and Facebook Inc., but many global tech and media players are trying to make money off the surge in video. They include Netflix Inc. and Amazon.com Inc.'s Prime, which are already among the top-earning apps in India. Another player is Hotstar, which offers shows from the many channels backed by 21st Century Fox. Viacom Inc.'s content is pushed to phones through an app called Voot. All are creating new content tailored to Indian audiences.*

Netflix is the highest grossing app in India for both Google Play and Apple's App Store. Netflix CEO Reed Hastings said, "We hope someone would do a Reliance Jio in every other country."

Bringing connectivity to hundreds of millions of people in rural India is an incredible achievement. Although I have mixed feelings about the result: I personally believe that television was the worst invention in the history of the world, surpassed only by social media.

One thing that is remarkable about mobile technology availability in India is how close it is to catching up with developed countries. 3G coverage was only offered in India a long time after it was available elsewhere; and 4G coverage came later in India than in wealthier countries. In contrast, 5G field trials are likely by the end of 2019 with deployments beginning in mid-2020, according to Abhay Karandikar, the Director of IIT Kanpur and the Chairman of the commission the government established on 5G technology. Vodafone Idea, Bharti Airtel, and Reliance Jio have partnered with telecom gear makers like Cisco, Samsung, Ericsson, and Nokia to conduct field trials. Even if commercially available 5G network doesn't arrive in India until 2021, it will be a much shorter lag than previous generations of technology. James Wu, the President for South East Asia at Huawei said, "From the long term perspective, I personally believe that the Indian 5G market will be a huge market and will be second only to China."

5G and Jio could both potentially be leap-frogged by satellite internet in the future. Bharti Airtel is a major investor in OneWeb, a company founded in 2012 trying to provide world-wide internet coverage, even to the most remote places, with a fleet of about 1,000-2,000 small satellites. The venture has raised over $2B from SoftBank, Qualcomm, Airbus, and Richard Branson's Virgin Group. The company aims to provide seamless connectivity for not only for phones and computers, but for planes, cars, and ships. OneWeb will compete with Elon Musk's Starlink as well as Telesat, LeoSat, and Kepler Communications

The success of Aadhaar is one of the most exciting technological developments in India. In his essay for McKinsey's Reimagining India, *A Technology Solution for India's Identity Crisis,* Nandan Nilekani, the Co-Founder and former CEO of Infosys, and Chairman of the Unique Identification Authority of India explains the significance:

> *"Hundreds of millions of Indians born in poverty or outside the nation's large metropolitan centers … cannot prove their formal identity. No official records hold their names, and therefore they can't prove who they are … Lack of an ID may prevent them from opening a bank account or renting a mobile phone … At thousands of enrollment centers around the country; people are lining up to have specially trained personnel take their photos, fingerprints, and eye images, which go to central servers for digital checking to make sure nobody gets more than one ID."*

Aadhaar was introduced by the Manmohan Singh Government, and continued under the Modi Administration. Alongside Aadhaar is the digital "India stack": eSign, eKYC (know your customer), digital lockers where citizens can receive and store official documents, and UPI (united payments interface) for secure digital transactions.

In I Do What I Do, Raghuram Rajan explains that the India stack is building individual digital credit histories. "This will be the foundation of a revolution in retail credit." Speaking in an interview with ET Now, Union Cabinet Minister for Housing and Urban Affairs Hardeep Puri suggested linking Aadhaar numbers with property transactions. He said such a move would go a long way in sucking black money out of real estate. Applying blockchain to property transactions could also help solve one of the most difficult issues in Indian real estate development – disputed titles. A new venture fund, Bharat Inclusion, is funding startups built on the India Stack.

Empowered by mobile proliferation, enabled by UPI, and forced by demonetization, digital payments have exploded in India. Inc42 reported that UPI transactions in India crossed 500M in November 2018 and 600M in December 2018. India now has an enormous number of digital payments companies or ventures building on that ecosystem. The opportunity led to Berkshire Hathaway making its first investment in India, putting money into the country's most valuable venture-backed private company, Paytm.

It is now possible to pay by QR code at a tiny kirana shop in some of the most remote parts of India. Thankfully, the National Payments Corporation of India (NPCI) is partnering with highway authorities to pay tolls with FASTag. Until my most recent trip, I always laugh with resigned humor on my first car ride in Mumbai. I land at Mumbai's excellent international airport and order an Uber to get to my hotel via the world class Bandra-Worli Sealink suspension bridge. At the entrance to the bridge is a tollbooth with a row of concrete boxes that each have two attendants: one to sit in the tollbooth and one to stand outside to take money from the drivers and hand it to the guy in the booth. I was thrilled when my cab glided through the automated FASTag lane!

The land of opportunity:

In 2002, the Onion, a joke newspaper in the US, ran a headline India's Top Physicists Develop Plan to Get the Hell Out of India. It described the members of the top-secret "Manhattan or Maybe London Project" spending years of sleepless nights to reach the breakthrough discoveries.

Now, things have changed. The Economic Times quotes several leading recruiting firms reporting a dramatic recent increase in the number of non-resident Indians (NRIs) seeking jobs back in India. Balchandra Variar, Senior Partner at executive search firm Transearch said "The willingness of people to come back to India has increased. They believe the action is here in India." Sunil Goel, the managing partner of GlobalHunt said "India is being pegged as one of the top markets for companies globally. Many companies have the largest workforce sitting out of India. Indian talent is getting credited with more and more success stories. Roles like global marketing head and global technology head are being shifted to India." Rituparna Chakraborty, the Co-Founder of Team-Lease Services said "There is a clear trend of companies in sectors such as pharmaceuticals, manufacturing, automobiles, and healthcare shifting more and more research and development work to India. In fact, quite a few companies are making India the hub for all R&D activities. This trend is leading many Indians to return from overseas to lead prime projects." Monica Agrawal, Senior Partner and Pead of Indian financial services at Korn/Ferry International, said that over the past year, she's seen a doubling in resumes from global Indians.

In addition to the pull of improving opportunities in India, there is also a push for NRIs to return to India. One major factor helping accelerate India's economic rise is one that makes me extremely sad and angry: self-destructive immigration policies and cultural shifts in the United States and other Western nations that are driving immigrants out or convincing them to stay home. The Trump Administration is making it harder to get an H-1B visa, harder to get an extension on that visa, and harder to get a green card. The Administration has also announced that it plans to halt the employment authorization document program, which gave work authorizations to the spouses of H1-B extension visa holders who are being processed for a green card. According to the US Citizenship and Immigration Services (USCIS), 74% of the current H1-B visa holders in the United States are Indian.

Immigrants are particularly important in the startup and venture capital ecosystem. In US Policy Regarding Highly Skilled Immigrants: Change Whose Time Has Come, a paper written by John Tyler, the General Counsel of the Kauffman Foundation and Peter Schuck, a professor at Yale Law School, and published in the Yale Law School Olin Journal of Law, Economic, and Public Policy (and for which I proudly served as a research assistant) cited research conducted by Stuart Anderson, Michaela Platzer, Vivek Wadhwa, and AnnaLee Saxenian that in the United States, "immigrants have been integrally involved with founding about one-quarter of the technology and engineering companies started between 1995 and 2005". The paper estimated that immigrants were between three and six-and-a-half times more likely to start a high-growth business than someone born in the US.

The United States' loss is a great boon for the startup ecosystem in India. After receiving his undergraduate degree from Wharton, Kunal Bahl worked at Microsoft on an F-1 visa that allows

graduating students from American institutions to work for 1-2 years. When he did not receive an H-1B visa to work longer, Kunal returned to India and started Snapdeal.

Transformation of the VC industry

Venture capital and private equity investors in India are very confident right now. In Grant Thornton's 2019 Fourth Wheel Report, the Chairman of IVCA, Padmanabha Sinha declared "The soaring investor confidence in India was evident in the record level of investments, exits, and raises … India's growth story remains a compelling bet."

The title of 2018's NASSCOM-Zinnov Indian Tech Start-up Ecosystem Report was *Approaching Escape Velocity* – a pleasant recovery from the steady title of the 2017 report, *Traversing the Maturity Cycle*, and the somber title in 2016, *Maturing*. In the foreword to the 2018 edition, NASSCOM President Debjani Ghosh and Zinnov President Pari Natarajan write "In 2018, Indian tech startup ecosystem regained momentum after the slowdown of previous two years. The year was marked with dramatic increase in number of unicorns, resurgence in investments, and rapid growth in advanced technology in startup ecosystem … Multiple indicators point that the Indian startup ecosystem is approaching escape velocity, and is setting itself up for a period of sustained growth."

The ecosystem of entrepreneurs, investors, and others is both growing and is growing more mature. Entrepreneurship is no longer seen as a path for oddballs who will never get married – and even if they did, would certainly never be accepted by their parents-in-law. Now, entrepreneurship is seen as a sexy path for young people and a respectable path for experienced professionals.

Sexiness in a profession is both good and bad. On the good side, there are more high caliber entrepreneurs and more deeply sophisticated investors then when I moved to India. There are also more types of innovative funding, more diverse sources of capital, more business models, more wise mentors, more value-adding accelerators, and more lawyers, bankers, and consultants who provide good advice. But in each of these categories, there are also a lot more bozos! As more capital and more media attention go into startups, there are many more unscrupulous founders selling snake-oil, many more inexperienced investors who strangle ventures with onerous terms, more accelerators that waste time and decelerate a business, and more paid "mentors" who are anything but.

Blume Ventures is the most prolific seed-stage VC fund in India. They see 40-60 pitches per week. In 2018, they made 8 new investments. Orios Ventures, another seed-stage fund in India, received over 8,000 pitches and had 2,000 in-person meetings in order to make 7 new investments in 2018. When Sequoia announced the first batch of their new SURGE accelerator, which comes with $1.5M in early stage investment, they received 1570 applications for 15 spots. Getting VC funding in India is now far more competitive than getting into Harvard, and almost as competitive as a Rhodes Scholarship.

As a result, the founders who are getting funded in India now tend to be older and more experienced than before, either as repeat entrepreneurs, early employees at high-growth startups, or senior people at excellent professional firms. At the 2019 Wharton India Economic Forum in Mumbai, Amrit Dixit, a Senior Managing Director and Head of Private Equity at Blackstone, said "The quality of the management team is the single biggest judgment call you have to make on the investment." In a survey of Indian private equity investors about what lessons they learned investing between 2001-2014 for McKinsey's 2015 report, Indian Private Equity: Route to Resurgence, 94% of respondents said one major lesson had been to back higher quality entrepreneurs with more experience. Comments included "Great promoters are worth paying for"; "Invest with socially and industrially reputed entrepreneurs who have a reputation to preserve"; and "Pay premium for trustworthy entrepreneurs."

With almost 100 pitches for each completed investment, VCs are now relying more on introductions from trusted sources. They are also putting more weight on easy selection filters; and it is now more difficult for founders to get venture funding in India without attending one of the top-tier schools, like IIT, IIIT, NIT, IIM, ISC, Harvard, Stanford, MIT, Oxford, Cambridge, or similar. That may mean that capital is being allocated more efficiently. But it also runs contrary to the myth of entrepreneurship as a field for mavericks where only ideas matter, rather than pedigree or network.

More experience is almost always beneficial in a mentor or investor. The first wave of tech entrepreneurs in India has been making angel investments and starting their own funds as their businesses matured, and they stepped out. These include Infosys Co-Founders Narayana Murthy (Catamaran Ventures), Nanadan Nilekani (Fundamentum), and Kris Gopalakrishnan (Axilor Ventures), and former Infosys CFO Mohandas Pai in cooperation with Manipal Group Chairman Ranjan Pai (Aarin Capital, Exfinity, Ideaspring, 3one4 Capital), Wipro Chairman Azim Premji (PremjiInvest), and UTV Founder Ronnie Screwvala (Unilazer). All of these individuals have also invested as LPs into other Indian VC funds.

Now, tech entrepreneurs who made money in the next wave of venture-backed businesses are making angel investments or starting their own funds. These include Flipkart Co-Founders Binny Bansal and Sachin Bansal (the two are not related), RedBus Co-Founder Phanindra Sama, TaxiForSure Co-Founders Raghunandan G and Aparmeya Radhakrishna, Former Chief Product Officer of Snapdeal Anand Chandrasekaran, Freecharge Founder Kunal Shah, Freshdesk Founder Girish Mathrubootham, and Toppr Co-Founder Zishaan Hayath.

Global venture capital firms are also putting more focus on India. Singapore sovereign wealth fund Temasek's venture arm, Vertex, has had an office in Bangalore for years. However, until 2015 it only served as a deal sourcing office. The decision on whether to invest or not was made in Singapore. As a result, deals moved slowly, and Vertex made few investments in India. Now, Vertex's India investment decisions are made locally, and it has become a more serious player in the ecosystem.

In my early days in India, the media had a long-running debate about who was the most successful global VC firm in India. The most often named contenders were Sequoia, Accel, SAIF, Lightspeed, Tiger Global, and Softbank. Sequoia, Accel, SAIF and Lightspeed each had

made major investments not only in Indian startups, but in building India offices with highly qualified and very experienced teams – a multi-decade commitment to the country. Tiger made its India investments from New York and SoftBank made its investments from Tokyo. All 6 of those funds have had extraordinary success in India; but I believe the "manage in India" hypothesis has been validated, particularly now that SoftBank has opened a permanent India office and poached top-talent from other funds in the country.

A new wave of Indian VC funds is being started by Indians who rose up through global VC firms. These include:

- A91, founded by Gautam Mago and VT Bharadwaj, two former Managing Director at Sequoia India along with Kaushik Anand, the former Head of India for Capital G, Alphabet's growth-stage private equity fund
- Pravega, founded by 2 principals from SAIF, Mukul Singhal and Rohit Jain
- Epiq, founded by former Managing Director of Matrix India Ritesh Navani
- Filter Capital, founded by the Managing Director of Warburg Pincus' Telecom Media and Technology (TMT) practice in India Nitin Nayar
- Fireside Ventures, founded by Helion India's Founding Partner Kanwaljit Singh
- Stellaris, founded by 3 former partners from Helion, Ritesh Banglani, Alok Goyal, and Rahul Chowdri
- Alteria Capital founded by Vinod Murali and Ajay Hattangdi, the founding team of Silicon Valley Bank (SVB) India

Capital is coming from more diverse sources. The influence of a small number of mega funds like SoftBank, Tiger Global, and DST is still felt, but it is diluted by other sources of large investments, including: funds like Primavera Capital and Forsun from China, Naspers from South Africa, Mirae Asset Fund from South Korea, Tybourne Capital and Hillhouse Capital from Hong Kong, Steadview Capital, TPG Growth, General Atlantic, Wellington Management, Eight Roads, Carlyle, KKR, Falcon Edge, Coautue, Tekne Capital, and Berkshire Hathaway from the United Sates; sovereign wealth funds like Singapore's Temasek and Government Investment Corporation (GIC), Qatar Investment Authority, Qatar Foundation Endowment, Abu Dhabi Investment Authority (ADIA), Abu Dhabi Investment Corporation (ADIC), and China Eurasian Economic Cooperation Fund; pension funds like the Canada Pension Plan Investment Board (CPPIB), Ontario Teachers Pension Plan Board (OTPPB), Caisee de Dépôt et Placement du Québec (CDPQ); and many others. A huge number of these entities have established permanent India offices to manage investments. There are also many more sovereign wealth funds and pension funds investing into Indian venture capital funds as LPs.

The Emerging Markets Private Equity Association (EMPEA) conducts an annual Global Limited Partners Survey. The 2018 survey collected the views of 107 decision makers at pension funds, development finance institutions, funds-of-funds, family offices, endowments, insurers, sovereign wealth funds, and other asset managers. It reports that 88% of the respondents (excluding those whose mandate is only to invest in emerging markets) said that they planned to maintain or increase the dollar value of their commitments to emerging market private equity over the next 2 years. EMPEA states that this is the highest proportion since 2014, "suggesting cautious optimism may be in order for EM-focused fund managers." The survey also finds that 52% of respondents plan to increase investments in venture capital funds, more than any other

investing strategy included in the survey. That figure is up from only 29% in 2016. One pension fund told the survey "Assets are overpriced in the United States, so opportunities to add further value are restricted."

India is also now more open to innovative funding models. As one example, when Greg and I pitched the Indian Angel Network (IAN) in 2013, they told us that they had never invested in convertible debt before and that they weren't about to start. Now convertible debt is common for early-stage VC investments. As another example, social impact investor Aspada has determined that the traditional VC structure of a 10-year fund lifetime is not suitable for bottom-of-the-pyramid investing, because some of the high-impact ventures they are funding will take far longer to achieve their potential. Aspada restricted from a fund with limited partners to become a permanent capital vehicle with shareholders, similar to the structure of Berkshire Hathaway (although Aspada is not publicly traded). A Harvard Business Review case study, Apspada: In Search of the Right Structure for Impact Investing by Michael Chu and Rachna Tahilyani explains that rather than having a defined fund life, Aspada disperses gains as dividends when they arise, sells shares to raise new capital, and has a secondary market for shareholders who want to exit.

When I moved to India, there was only one provider of venture debt in India, Silicon Valley Bank, which was purchased by Temasek and re-named Innoven Capital. Now there are at least 9 venture debt providers, including Alteria Capital, Trifecta Capital, and CapitalFloat.

Venture debt firms lend to startups immediately after they raise a round of equity from top-tier venture capitalists. I think that venture debt is a great asset class, because it increases fairness in the round. Venture capital deals will usually have a "lead" who sets the terms, hires the lawyers and accountants, and negotiates the documents. Then there are likely to be several "follows". The lead is taking a greater burden than the follows and sometimes takes a greater risk (if the lead makes a binding commitment before the follows do). Each successive follow then takes subsequently less risk – if a company is trying to raise $10M from 10 different investors, the 5th investor is taking the risk that the company won't raise its full round and will have to conduct its business undercapitalized; while the 10th investor knows that the startup has a full war chest. Yet each investor in a round usually receives the same terms. By coming at the end with a lower cost of capital, venture debt can replace the less risky tail of the round. Venture debt lenders expect a lower return for taking less risk, which is more fair.

The expansion of entrepreneurship and venture capital are pushing opportunities beyond the traditional hubs of Bangalore, Mumbai, and Delhi. Hyderabad now has a thriving tech venture ecosystem; Chennai has become a major hub for enterprise SAAS software, and Pune and Calcutta are seen as hot sources of talent. Kerala, Jaipar, and Chandigarh as seen as the next wave of emerging places where tech entrepreneurship is likely to take root and flourish.

More diverse types of business models are being funded as well. 2018's NASSCOM-Zinnov Indian Tech Start-up Ecosystem Report reveals that while consumer-focused startups continue to garner highest share of investment amount, the proportion of funding going to B2B startups is increasing each year. "Enterprises are increasingly looking for digital solutions to their enterprise problems, and Indian startups are tapping into this market. Global enterprises'

confidence in Indian software industry, increasing local demand for software products and talent availability are driving growth of enterprise software startups".

Foreign and Indian corporations are also becoming more involved in Indian VC, either as LPs or as direct investors. Qualcomm, Intel, and others have had corporate VC offices in India for a long time; and they were recently joined by Google, Cisco, and others. Dutch consumer and electronics firm Philips became an LP in new Indian venture capital firm Bharat Innovation Fund alongside Indian corporate Bajaj Electricals in order to gain a pipeline of startups and technologies to acquire. Chinese giants Alibaba, Tencent, Meituan-Dianping, and Didi Chuxing have all made multiple strategic venture investments in India, as have American companies like Visa, American Express, and MasterCard. Old-school Indian industrial conglomerates like Hero Group are making venture investments, as are India's earlier technology companies like Info Edge, as well as the newest group of upstart unicorns like Flipkart and Paytm.

Food and agriculture VC firm Omnivore Partners was developed out of Indian conglomerate Godrej's agriculture group, with Godrej as the anchor LP. In McKinsey's Reimagining India, Vivek Pandit, a McKinsey Senior Partner in Mumbai and Vikash Daga, a McKinsey Partner in McKinsey Delhi, quote Nisaba Godrej, The President for Human Capital and Innovation at Godrej Industries, in their essay *Decoding Digital India*, "Omnivore forced us to confront whether Godrej should support entrepreneurship beyond our corporate boundaries. Ultimately, we decided that it did not matter where disruptive innovation took place, as long as Godrej could play a part of it."

The Mahindra Group is a massive technology-to-tractors-to-hospitality-to-defense-to-retail Indian conglomerate that has become heavily involved in venture activities. Looking at their automotive group shows some examples. Mahindra & Mahindra is one of the largest car companies in India; and it is the largest tractor manufacturer in the World. They invested in, and later purchased the Reva Electric Car Company, producing the first commercial electric car in India. Mahindra invested in inter-city freight transport marketplace Porter, which it later merged with its own SmartShift division. They have invested in Lithium, an all-electric employee transport service (providing in India a similar service as the "Google busses" do in the San Francisco Bay Area). Mahindra also led Zoomcar's $40M Series C fundraise and has been an excellent partner. A senior executive in the Corporate Development department of Mahindra's automotive group told me "We don't know what the future of transportation will look like. But we do know that it won't look like the present. We are making investments in very different approaches to make sure that we are a major part of that future."

The startup ecosystem is made up more than entrepreneurs and investors; and these other parts of the ecosystem are growing stronger as well. Excellent law firms like Nishith Desai Associates and Khaitan & Co have deep experience in cross-border investments. An investment bank called Coolstartups began operations in Mumbai in 1999, itself backed by venture capital firm Infinity Ventures; and has now grown to become Avendus Capital, a startup and VC focused investment bank backed by KKR. WeWork and local co-working ventures like Awfis, CoWrks, Innov8, Bhive, and others provide startups with far better and far more flexible working conditions than Zoom's initial cramped quarters. The Mumbai International Arbitration Center allows investor disputes to be resolved in India, rather than needing to go to a foreign venue like Singapore or

London. Industry trade groups like IVCA and NASSCOM provide research, networking, education, ethical guidelines, and policy recommendations. All these and many other parts of the ecosystem are evolving.

India has also seen an increase in high quality incubators and accelerators, such as T-Hub in Hyderabad, CIIE at IIM Ahmedabad, and Venture Nursery in Mumbai. Some accelerators have specialized and provide advice and connections in a narrow field. Uppekha works with SAAS companies trying to sell their products outside of India. The Brigade program in Bangalore works with real estate technology ventures. JioGenNext works with ventures building apps specifically for the Jio ecosystem. Maersk OceanPro works with companies building technology it can use in its own global shipping.

For now, investors in India seem to expect the good times to last. When I asked if the level of confidence and the amount of funding paralleled the frothy boom of 2014, many investors told me that while valuations are high, they are supported by more fundamentals within the startups. They also told me that far more time is being spent on vetting and diligence than in 2014 "when deals were made over dinner."

Bain Capital's 2018 India Private Equity Report states that "Indian Dry Powder remained at levels similar to 2015 and 2016, indicating no dearth of capital for good-quality deals." It quotes the President and CEO of the Canadian Public Pension Plan Investment Board as saying in Dec 2017, "The good part about India is the substantial long-term economic growth. There is so much upside, so many opportunities … We want to do more private equity through working with our partners here and through direct opportunities." The Grant Thornton's 2019 Fourth Wheel Report also comments on "Ubiquitous dry powder" with money flowing into VC funds, growth capital, buyouts, fund-of-funds, and funds focused on secondary sales and distressed assets. Grant Thornton Advisory Partner Sumeer Abrol states "Raising attractiveness of India as an investment destination is expected to drive deal activity both from strategics and from financial investors who back such strategics."

All of this positive sentiment makes me nervous. After all, "this too shall pass". It is worth noting that the 2015 NASSCOM-Zinnov report, published just before a major downturn in the Indian venture capital market, was titled *Momentous Rise of the Indian Start-up*. However, it is not clear that prices are inflated. In October 2017, Warren Buffet said that the then-current price of global stocks would look cheap in three years' time if interest rates were one percentage-point higher; but look very expensive if interest rates in three years' time interest rates were three percentage-points higher. In the year-and-a-half since then, the US Federal Reserve has raised interest rates by 1.25%. I personally believe that long-term investors will find good opportunities in India; but investors looking only at a short-term horizon are taking an extremely risky gamble.

Unicorns in India

India currently has 17 publicly disclosed unicorns:

Company	Valuation	Disclosed Funding	Type of Company	Select Investors
Paytm	$10-12B	$2.8B	Digital payments	SAIF, SVB, Intel Capital, Sapphire Ventures, K2 Global, Ratan Tata, Ant Financial, Alibaba, Mountain Capital, Softbank, and Berkshire Hathaway
Ola	$6B	$3.8B	Ride hailing	Kunal Bahl, Anupam Mittal, Rehan Yar Khan, Tiger Global, Matrix, Sequoia, Steadview, Softbank, Accel, Ratan Tata, GIC, ABG, DST, Falcon Capital, Didi Chuxing, Baillie Gifford, Vanguard, RNT Capital, Falcon Edge, Tekne, YesBank, Tencent, Temasek, Sailing Capital, China Eurasian Economic Cooperation Fund, Eternal Yield International, Accel, Sachin Bansal, J3T Ventures, Lyon Assets
Oyo	$5B	$1.7B	Budget hotel aggregator	Shravan Shroff, Amit Patni, Anand Ladsariya, Ravi Kiran, Bharat Banka, VenutreNursery, DSG Consumer Partners, Lightspeed, Greenoaks Capital, Sequoia, SoftBank, Hero Enterprise, Huazhu Hotels Group, Grab, Didi Chuxing
Byju's	$5.4B	$827M	Online education	Aarin Capital, Lightspeed, Sofina, Sequoia, Chan Zuckerberg Initiative, Times Internet, IFC, Verlinvest, Tencent, General Atlantic, CPPIB, Naspers
Zomato	$3.6B	$756M	Restaurant review and food delivery	InfoEdge, Sequoia, Vy Capital, Temasek, Neeraj Arora, Ant Financial, Glade Brook Capital Partners, Saturn Shine, Shunwei Capital, Delivery Hero
Swiggy	$3.3B	$1.5B	Food delivery	SAIF, Accel, Norwest Venture Partners, Harmony Partners, RB Investments, Bessemer, Naspers, Meituan-Dianping, Coatue, DST, Wellington Management, Tencent, Hillhouse
BigBasket	$2.2B	$1B	Grocery delivery	LionRock Capital, Helion, Bessemer, Abraaj, Alibaba, Paytm Mall, Mirae Asset, CDC
Paytm Mall	$2B	$645M	Mobile-commerce marketplace	SAIF, Alibaba, SoftBank
ReNew Power	$1-2B		Solar and wind power developer	Goldman Sachs, Asian Development Bank, Global Environment Fund Management, ADIA, JERA, YesBank, CPPIB, OPIC
Billdesk	$1.8B	$242M	Payments processing	SBI, Clearstone, TA Associate, Temasek, March Capital, General Atlantic, Visa
Delhivery	$1.6B	$653M	Ecommerce logistics	Times Internet, Nexus, Multiples Asset Management, Tiger Global, Carlyle Group, Forsun, SoftBank
Freshworks	$1.5B	$249M	SAAS enterprise software	Accel, Tiger Global, CapitalG
Hike	$1.4B	$261M	Messaging app	Ruchi Sanghvi, Traveon Rogers, Aditya Agarwal, Matt Mullenweg, Bharti Enterprises, Tiger Global, Foxconn, SoftBank, Tencent
MuSigma	$1.2B		Data analytics	Sequoia, General Atlantic, MasterCard
InMobi	$1B	$321M	Mobile advertising	Sasha Mirchandani, Mumbai Angels, Shepalo Ventures, Kleiner Perkins, SoftBank, Tennenbaum Capital Partners
PolicyBazaar	$1B	$347M	Insurance and loan marketplace	Intel Capital, Inventus, Info Edge, Tiger Global, ABG, Steadview, PremjiInvest, Temasek, True Northland, Wellington Management, Chiratae Ventures, SoftBank
Udaan	$1B	$285M	B2B ecommerce	Lightspeed Venture Partners, DST Global

India is also home to many "soonicorns", companies that are widely anticipated to reach unicorn status soon. VCCircle reported that fantasy sports platform Dream11 is currently in negotiations with Steadview Capital to raise $100M at a valuation over $1B.

Other hotly anticipated "soonicorns" include:

- Loan and insurance marketplace BankBazaar
- Online event ticketing site BookMyShow
- CRM SAAS provider Capillary Tech
- Alternative lender CapitalFloat
- Automotive sales, research, and lending website Cardekho
- Travel portal ClearTrip
- Gym chain CureFit
- Information management and data protection SAAS provider Druva
- Baby-goods chain FirstCry
- Warehouse robotics and automation engineering firm GreyOrange
- Online grocery delivery service Grofers
- Communal housing landlord Houzz
- Online-first eyewear retailer Lenskart
- Digital payments provider MobiKwik
- Payments processor MSwipe
- Point of sale system provider PineLabs
- Online cosmetics retailer Nykaa
- Home health services aggregator Portea
- Online medical appointment platform Practo
- Shipping firm Rivigo
- Furniture retailer Urban Ladder
- Ecommerce logistics firm XpressBees
- Car rental company Zoomcar

Of course, readers who are paying attention should be skeptical that I put the company I co-founded on my list of "soonicorns". But you don't have to take my word for it! Zoomcar appeared on Inc42's 30 Indian Soonicorns that Have the Potential to be Unicorns by 2020, BDO India's The Next Wave – Unicorns of Today, Giants of Tomorrow, BWDisrupt's Soon to Be Unicorns: India's Top 40, and other recent lists.

The Problem with "unicorns"

I have several objections to the word "unicorn" in the venture capital context. Firstly, it prioritizes raising capital and achieving valuation about all other goals of a start-up. The point of creating a new company is the satisfaction of creating something new and realizing a vision, as well as to create sustainable jobs, satisfy a legitimate need for customers and society, provide a good return on equity to investors, and to make money for founders. Crossing an arbitrary valuation threshold is not the point.

In Young Turks, Shereen Bhan and Syna Dehnugara recount the stories of some of India's most dynamic young entrepreneurs. They spoke with Druva co-founder Jaspreet Singh , who wanted to stay away from Wipro, TCS, etc, so he joined a startup in Pune. "There were very, very poor standards of work and [the founder] was completely unethical. That experience made me realize that though there is a lot of glamor associated with startups, there are these types of startups as well, startups that can easily be sweatshops of the worst kind. I worked as hard as I could, but I lasted there no more than three months. But one thing I did learn from that stint – how not to do things and not to treat your people."

One of the inspirations for Greg and me to move to India was Valerie Wagoner. Valerie graduated from Stanford University, worked for eBay for two years, and then worked in Indian microfinance, financial inclusion, and women's empowerment. In 2010, Valerie started ZipDial, a highly innovative, bottom-of-the-pyramid company that could have only come from India. In a country where the desperately poor need to watch every single paisa (one-hundredth of a rupee), people were careful about the cost of sending a text or making a phone call. Indians used a "missed call" as a simple means of communicating – for example, calling a friend and hanging up after one ring to indicate that one had arrived at a location. ZipDial automated the missed call dial and hang up. The company found a way to monetize by giving consumer companies a way to connect with bottom-of-the-pyramid consumers. Companies like Unilever or Pepsi put a phone number in their advertisements that people could send a missed call to, and then receive a text message with communication about product information, deals, or any other messages that the business wanted to convey.

ZipDial raised between $1-2M from Mumbai Angels, Blume Ventures, Kae Capital, and 500 Startups. Five years after Valerie founded ZipDial, Twitter acquired the start-up for $30M. This was Twitter's first acquisition in India. ZipDial was far from being a unicorn, but it was a good company and a good exit! The investors all made a good return in a reasonable time frame; the founders did well; the company created high-quality and stable jobs; and ZipDial provided an innovative service that delivered value to its users.

Another inspiration for Greg and me to start Zoomcar was Streetcar in the United Kingdom. Two friends from Durham University, Brett Akker and Andrew Valentine, were impressed by the Zipcar business model in the United States and started a British copy-cat in 2004. They started with 8 cars, raised about $15M across three rounds, and grew to 1,200 cars in 10 UK cities. In 2010, six years after Streetcar was founded, Zipcar bought the start-up for $50M. That was a good company and a good exit! At the time, I was 26 years-old and in my second year at Harvard Law School. I thought that if I could start a company with 1,200 cars in 10 cities and sell it for $50M, it would be an incredible ambitious success.

During the deep doldrums of the summer of 2013, India was in the depths of a currency crisis and a scandal-plagued government. Zoomcar had huge demand; but raising money to expand was almost impossible. Other Indian entrepreneurs I spoke with at that time told the same story. The entrepreneurial ecosystem received a boost exactly when it needed it the most. RedBus was acquired by Naspers' and Tencent's Indian subsidiary Ibibo for about $140M. RedBus was a great company and a great exit that provided a jolt of confidence to the entire ecosystem! Ibibo later merged with MakeMyTrip. The former CFO of RedBus, Bharat Singh, proudly told me

that not only did RedBus make money for its founders and investors – but it continued to add value as a profitable and growing enterprise under both Ibibo and MakeMyTrip.

In the Young Turks interview with RedBus Co-Founder Phanindra Sama, he recounts: "I remember we had raised INR 2.5 crore funding (INR 25M or about $500k at the time) and that money was sitting in the bank, and in just six months there was another company that came up doing a similar thing. It was started by experienced people from the travel industry and they had INR 30 crore in funding (INR 300M or about $6M at the time) – more than ten times what we had. They launched in a major way with a radio campaign and newspaper advertisements and offers of one-rupee tickets and we started feeling very nervous … [Our mentors] encouraged us to actually build a product so compelling that customers come and pay us despite the competitor giving discounts … And one fine day in 2008 when Lehman collapsed, our competitors couldn't raise more money. Every day of their functioning involved burning money because of the deep discounts they offered whereas in our case, because we were selling tickets at a reasonable price and making money on every ticket, we didn't need as much external money to run our business … ever since then, when any competitor came along and promised offers or discounts, we really didn't worry so much. But we did worry about the innovative ones because this world of internet and technology is ever changing."

As the media obsesses over unicorns and reports on which companies set the record for reaching unicorn status the fastest, it encourages start-ups to take greater and greater risks. Entrepreneurs and investors can lose track of the point of what they are doing. As Snapdeal proves, merely becoming a unicorn is not the endgame. Creating the fastest unicorn is a terrible goal; creating the most resilient unicorn is a much more noble aim.

Resiliency in a company comes from several sources, only one of which is out-funding your rivals. It comes from moats in your business model (such as network effects), intellectual property, low debt, loyal customers, dedicated employees, high integrity, a good reputation, and many other things besides. In Dreaming With Your Eyes Open: An Entrepreneurial Journey, UTV Founder Ronnie Screwvala writes some things I could not agree with more:

> *"At the end of the day, people – not information and technology and certainly not money – are the most important assets your company will ever have …*
> *Companies succeed or fail based on culture*
> *…*
> *Your brand has arrived when it's of commercial advantage to your company and business, when people want to work for you and stay with you because of what you stand for, when customers trust you and expect a consistent product or service from you, and when you can leverage collaborations with people who clamour to partner with you."*

My second objection to the terminology of "unicorns" is that it is imprecise and has become clunky with additions like "soonicorn" and "decacorn". A field dominated by engineers and computer-scientists calls for a more fine-tooled measurement based on binary systems. The term "unicorn" was first used in the investing context by Aileen Lee, the founder of Cowboy Ventures. I have never read Aileen's name or heard her introduced at a conference without including the label "Aileen Lee, who coined the Silicon Valley term unicorn." A desire for

elegant precision in measurements, along with an urge to be immortalized in an acronym have led me to create the UNREALITY Index of start-up valuations:

Unicorn: $1-2B
Nazgul: $2-4B
Rakshasa: $4-8B
Elf: $8-16B
Autobot: $16-32B
Leviathan: $32-64B
Illuminati: $64-128B
Terminator: $128-256B
Yeti: $256-512B

Based on this Index, Flipkart exited as a very-respectable "autobot" company; and India currently has one "elf", three "rakshasas", four "nazguls", and nine "unicorns".

I now expect to see articles in TechCrunch, FastCompany, VCCircle, YourStory, Inc42, Forbes, e27, and others with headlines like "Will Leviathan Uber Exit as World's First Illuminati Company?" The answer of course, is yes.

A unicorn that has gone out of business is dubbed a "unicorpse". But there is not yet any clever term to refer to venture-backed private companies that once had billion-dollar valuations but then lost them, while still remaining in operation. Such companies could perhaps be called "once-a-corns" or "done-icorns". In my UNREALITY Index, they are called "blast-ended screwts" – named for the lamest of all the beasts studied in Hogwarts' Care of Magical Creatures class.

There is also not yet a term for a former unicorn that regains a billion-dollar valuation. The mythological UNREALITY Index conveniently offers the perfect label: "phoenix". India's three blast-ended screwts have not yet reached the end of their stories. Snapdeal, Quikr, and Shopclues may still rise again.

Risks

Political risk

Political risk is a permanent factor in emerging markets. Although policy uncertainty under the Trump Administration, Brexit confusion, rising authoritarianism in Turkey, and other turmoil in wealthy democracies shows that it is a risk factor everywhere.

Some investors are concerned about the upcoming Indian elections. They are also concerned by some of the measures the incumbent party has taken to win, such as the direct subsidy given to small farm owners, which will cost the government about $10.5B per year. Credit rating agencies have taken particular objection to farm loan waivers given by some of the individual states. They argue that such measures erode the culture of debt repayment.

Others are more sanguine about the risks. Coca-Cola's global CEO James Quincey told the Economic Times "We are going to keep investing, whatever the outcome." Capgemini CEO Paul Hermelin said at the 2019 ET Global Business Summit in New Delhi "I am convinced India will strive whatever the results of the election because the key factor is India has the most impressive reservoir of talents on the planet. I would be quite optimistic about that." Dirk Elsen, the Director of Emerging Markets at Triodos Investment Management, a Dutch development finance institution, told me "We invest in Democratic Republic of Congo. We don't consider political risk to be such a big issue in India."

FDI in retail was completely prohibited until 2006. That year, India allowed 100% FDI in wholesale trade, and up to 51% in single-brand retail. Under the single-brand rule, stores like Metro Cash&Carry and Nike are permitted; but not to Walmart, Carrefour, or Nordstroms. FDI in single-brand retail was increased to 100% in 2011. FDI in ecommerce was technically illegal as well; however, Amazon and Flipkart (which was founded and headquartered in India with almost exclusively Indian operations but was legally based in Singapore and was primarily owned by foreign investors) believed they had found a loophole by operating through closely held subsidiaries with cross shareholdings.

Amazons SEC filings in Q2 2015 said "Although we believe these structures and activities comply with existing laws, they involve unique risks. There are substantial uncertainties regarding the interpretation of Indian laws and regulations, and it is possible that the government will ultimately take a view contrary to ours."

Written in 2015, Kashyap's Deorah's book The Golden Tap describes the situation, "The government's philosophy behind disallowing FDI in ecommerce is at odds with the way Indian ecommerce is operating. Yet, the government has turned a blind eye towards the loopholes in the policy that allow for Indian ecommerce to be foreign owned. By doing so, the government retains the right to pull the rug from under their feet if it does not favor the country or the political party."

After Walmart purchased Flipkart, Reliance Industries announced that it was entering online retail. Shortly thereafter, the Indian Government clarified the ecommerce FDI restrictions to make clear that the way Amazon and Flipkart were operating in India was not legal. The foreign firms scrambled to restructure, and now operate in a leaner way than before.

"In terms of the regulatory environment, we were disappointed in the recent change in law and the lack of consultation," Doug McMillon, Walmart's president and CEO, said on the company's 2018 fourth-quarter earnings call. "But the team has worked to ensure that we're in compliance with the new rules. We hope for a collaborative regulatory process going forward, which results in a level playing field … In India, we remain optimistic about the ecommerce opportunity given the size of the market, the low penetration of ecommerce and the retail channel, and the pace at which it's growing."

Flipkart's CEO, Kalyan Krishnamurthy, wrote a letter to staff in which he declared "Walmart remains extremely confident in the potential of the Indian market and in Flipkart's ability to lead

the ecommerce space. By partnering with Flipkart, Walmart has taken a long-term view of the opportunities and hence in unfazed with any short-term hurdles."

Mukesh Ambani, the Chairman of Reliance Industries, likened the decision to Gandhi's movement of Swadeshi, self-reliance. That is outrageous. Gandhi took a vow of poverty to serve the poor. Mukesh Ambani lives in a billion-dollar home that has hundreds of servants for his family, six stories of parking for his fleet of cars, sports courts in the basement, a home cinema, and lavish parties where acrobats from Cirque du Soleil perform feats of contortion. Gandhi's symbol was the humble home spinning wheel, which is still on the flag of India. Reliance Industries is the largest producer of polyester fiber and synthetic yearn. But Ambani's misuse of Gandhi's philosophy is only one of many misappropriations the great leader has endured. Gandhi's face is on every single piece of paper currency in India. Gandhi hated the very concept of money. This is perhaps the worst tribute possible to one of the greatest men of the 20th century. I imagine that every time someone pays for something in cash in India (billions of times per day), Gandhi is cringing in heaven.

The secretary of India's Telecommunications Department, Aruna Sundararajan, declared that the Government would seek to create policies to build "national champions" in technology. Alyssa Ayres describes the effects of a previous policy to create Indian industrial champions:

> *"Ironically, pre-independence India boasted a promising auto industry, with global links. In 1928, General Motors established an assembly plant in Bombay; Ford Motor Company followed with a plant in Madras in 1930 and another in Calcutta the following year. But after Independence, a 1953 government directive required cars sold in India to be manufactured within the country, rather than assembled from imported kits. Both American makers exited India.*
>
> *…*
>
> *"In 1981, state-owned enterprise Maruti Udyog sought an international partner to manufacture sub-compact cars for India's growing middle class through a government-licensed joint venture. Suzuki was selected the next year, and the partnership flourished … But it was not until the mid-1990s, after liberalization, that India opened the automobile industry to major investment by foreign manufacturers … Automobile production grew from 1.26 million passenger vehicles in 2005 to 3.38 million by 2015.*
>
> *…*
>
> *At 460 acres, the Ford plant at Sanand is large by any standard, on par with some of the largest auto manufacturing plants anywhere in the world. It has the capacity to churn out 240,000 vehicles and 270,000 engines per year. Nineteen suppliers have located next door, creating a just in time manufacturing ecosystem that is efficient, allows for customization, and reduces the need for large inventory.*
>
> *…*
>
> *Suzuki, Toyota, Honda, Hyundai, Volkswagen, BMW, General Motors, Mercedes Benz, Mitsubishi, Renault, Audi, Nissan, and Skoda all manufacture in India now … That list does not include manufactures focused on the motorcycle and scooter markets that still account for the vast majority of vehicle sales in India.*
>
> *…*

> *The need for all these components requires auto manufacturers to have strong supplier networks for parts made of steel, rubber, glass, leather, plastics, electronics, light bulbs, even batteries. And then there are dealer networks for sales, financial institutions to help with sales, after market services like maintenance and repair, and the services that support any industry (marketing, payroll, benefits, legal and accounting, etc)."*

Pakistan

Pakistan presents a constant challenge and risk to India. This was demonstrated dramatically on February 14, 2019 when a Kashmiri suicide bomber killed 40 Indian "paramilitary police" in Pulwama. The terrorist was inspired by a group operating in Pakistan, and he almost certainly had material support from the organization as well. India retaliated by bombing a target inside Pakistan; and at least one Indian fighter jet was shot down in a dogfight. Pakistan's new Prime Minister, former cricket player Imran Khan, clearly articulated the dangerous stakes for both countries:

> *"History tells us that all big wars have been full of miscalculations. No one knows where they lead to. World War I was supposed to end in months, it took years. Hitler lost World War II because of serious miscalculations about the Russian winter. I ask India: with the weapons you have and the weapons we have, can we really afford such a miscalculation? Shouldn't we ask ourselves if it escalates from here now, where will it go?"*

China

Alyssa Ayres explains in Our Time Has Come:

> *"Although Nehru imagined … India and China were brothers with shared interests – complete with the slogan Hindi-Chini bhai bhai – China's surprise incursions across their border leading to war in 1962 revealed Beijing's differing view. It created a rift of suspicion that remains to this day. As Nehru wrote in 1963 'China's behavior towards us has shown such utter disregard of the ordinary canons of international behavior that it has severely shaken our confidence in her good faith. We cannot, on the available evidence, look upon her as other than a country with profoundly inimical intentions toward our independences and institutions.'"*

China claims the Indian state of Arunachal Pradesh, as well as part of neighboring Bhutan and Nepal. Chillingly, China calls this area "South Tibet". China refuses to grant visas to Indian citizens from Arunachal Pradesh, claiming that they are Chinese citizens from Chinese territory, and so do not need one. In the summer of 2017, Indian and Chinese troops had a tense standoff on the Doklam plateau in India ally Bhutan. Several fistfights broke out between the opposing soldiers along the line of control. Fortunately, no shots were fired, and nobody was killed. However, the next summer, China built a road, a soldiers' barracks, and other infrastructure in the part of the disputed territory that they control.

Chinas has used investments and financial pressure to gain considerable influence in Nepal, Sri Lanka, the Maldives, and Pakistan, almost encircling India. China has built a civil-military port in Gwadar Pakistan; and China has built a naval base that it operates independently in Djibouti. As Ayres writes, "The development of the China-Pakistan Economic Corridor, a $46B infrastructure investment project that will link China's west to Pakistani territory and eventually create a freight corridor to the Indian Ocean via the Gwadar port, consolidating Chinese and Pakistani claims to Gilgit-Baltistan areas of Jammu & Kashmir ."

China refers to Pakistan as an "iron brother" and has far surpassed the United States as the World's largest source of weapons to Pakistan. International arms tracker SIPRI estimates that from 2008-2018, China exported $6.4B worth of military equipment to Pakistan, compared to $2.5B from the US, and only $471M from 3rd place Italy. Pakistan is also the largest purchaser of military equipment from China, distant 2nd place Bangladesh only purchased an estimated $1.9B worth of military equipment from China during that time period. China's arms sales to Pakistan include fighter jets, radar systems, and submarines. China also conducts joint military exercises with Pakistan on land, air, and sea in Pakistan territory.

Ayres writes "China's long-running, all-weather friendship with Pakistan has enabled the latter to develop its nuclear weapons program and facilitated the continued presence of terrorist groups focused on India as a target." After the Pulwama attack, China blocked Masood Azhar from being put on a list of global terrorists by placing a technical hold on the proposal. Azhar is the leader of Jaish-e-Mohammad, the Pakistani group that claimed credit for the suicide bombing. China blocked previous attempts to designate Azhar as a terrorist in the UN in 2009, 2016, and 2017.

The United States, Canada, Japan Australia, and Poland have banned importing certain telecom equipment from Huawei and ZTE under the suspicion that it could be used for espionage. Other countries have permitted Huawei and ZTE to proceed, and others are still evaluating. India has so far stayed on the fence. Telecom Secretary Aruna Sundararajan told reporters in Feb 2019 "We have not taken a decision on whether they can take part in 5G trials." Mobile carriers in India are expected to spend $30-100B building 5G networks over the next 5-7 years; and the Indian telecom industry has been pressing the government for a decision quickly. Bharti Enterprises Vice Chairman Akhil Gupta said "We are at a loss what to do as an operator – should we order Huawei equipment or should we not? The risk cannot be taken by operators. I request the Government of India to make it clear as soon as possible." India's Telecom Equipment and Services Export Promotion Council, an industry trade group, wrote to the head of India's National Security Council seeking a ban on Huawei gear on national security grounds; however, they may have been secretly motivated by a protectionist desire to promote local companies. The Wall Street Journal reports that the Indian Army uses Chinese telecom equipment even in some of the sensitive border areas between the two countries. That seems like a huge risk.

China has used its economic power to coerce some matters in other countries, as use of so-called sharp power. In 2018, a social media marketing employee for Marriott International in the United States used a company account to "like" a twitter post from a pro-independence Tibetan group in India. The group had posted a comment praising Marriott for (mistakenly) listing Tibet as a separate country in a drop-down menu to search for hotels. When the Chinese Government

put pressure on Marriott, they fired the employee. "Not only can't you speak freely inside of China, but you can't even speak freely outside of China—and that's really bad," Xiao Qiang, a Chinese internet expert at the University of California at Berkeley, told the Wall Street Journal. Bowing to similar economic pressure, many airlines around the World, including all US international airlines, list Taipei as a destination in "China", without naming Taiwan. The US White House referred to this as "Orwellian nonsense". With startups like Paytm and Oyo majority-funded by Chinese enterprises, what kind of opposition will they be able to put up against such pressure? Out of the approximately 140,000 Tibetan exiles globally, roughly 100,000 of them live in India.

Chanakya (also called Kautilya) is an Indian political philosopher and royal advisor from roughly the third century BC. His Arthashastra is a book on par with Machiavelli's The Prince. In it, Chanakya articulates mandala theory, the origin of "the enemy of my enemy is my friend." As China has grown more powerful and more aggressive, India has grown closer to South Korea, Japan, and others, including the United States. Alyssa Ayres provides details:

> *"The Bush Administration declared that the United States should actively strive "to help India become a major world power in the 21st century … understanding fully the implications, including military implications, of that statement. The twin economic and strategic bases grew stronger still during both terms of the Obama administration.*
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> *…*
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> *Former Under Secretary of State for Political Affairs Nicholas Burns: "India has become a close partner of the US during the past decade. Our trade and investment ties are booming. Our military and political bonds are stronger now than at any time in the past. And we have become close and important security partners in the Indian Ocean and Western Pacific. And, together with other democratic nations such as Japan and Australia, Washington and Delhi should be strong enough in the next few decades to engage China but also to maintain our military predominance in the Asia-Pacific region in the future. In this sense, the rapid development of the US-India relationship is one of the most important American strategic initiatives of the last two decades. The fact that there is strong bipartisan support for this key relationship is an added source of strength as we look to the future.*
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> *…*
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> *In 2000, India and Japan declared a "Global Partnership" to represent their relationship, which expanded in 2006 to a "Strategic and Global Partnership." In 2014, the term for their bilateral ties received a further fillip, becoming a "Special Strategic and Global Partnership" during Modi's visit to Tokyo. Japan in a major development partner for India, using the strength of its development agencies and state-owned enterprises to pledge a $35 billion investment in projects in India over five years."*

Education and employment crisis

With such a young population, India has 1 million people entering the work force every month. The economy is booming, but still not enough to create the amount of jobs that are necessary. At

a Brookings India event in Delhi in March 2019, IMF Senior Economist John Bluedorn claimed that youth inactivity (joblessness) was about 30% in India, the highest in any emerging market.

I believe the foundation of this crisis has its roots in an education crisis. In Our Time Has Come, Alyssa Ayres discusses the connection:

> *"Manish Sabharwal, cofounder and chairman of Teamlease Services – one of India's largest temporary staffing agencies – has thought a lot about human capital and the type of training needed to equip Indians with skills to match the types of jobs available. No one can put India's training challenge into starker relief than Sabharwal given his fifteen years placing job seekers into open positions. Within India, Teamlease sees 10,0000 open positions every day that they simply cannot fill. The demand is there … But aligning India's education system with the demand is proving to be more of a challenge … Sabharwal says 15 percent of the high-end security guards in India actually have college degrees, showing the irrelevance of their degrees"*

Varun Aggarwal, co-founder of skills assessment firm Aspiring Minds, was quoted in Economic Times saying that 80% of the new graduates from engineering colleges in India are not employable. "Many can't even write basic code." Aggarwal also says that poor English language skills hold many job seekers back.

For McKinsey's Reimagining India, Madhav Chavan, the Co-Founder and CEO of Prathan, a nonprofit organization dedicated to providing quality education to India's underprivileged children, wrote an essay *Who Needs Classrooms.* He writes, "Pratham, the organization I head, was founded in 1994 with the motto 'every child in school and learning well' … I have been asking my colleagues whether Pratham should change its motto to 'every child *not* in school *but* learning well' … I am only half joking."

Prathan's 2018 Annual Status of Education Report produced paints a dismal picture. Testing students aged 14-18, it found that 23% could not count money correctly, 25% could not read basic text fluently in their native language; 41% could not tell time on an analog clock, 46% could not add grams to kilograms, and 57% were unable to perform simple division problems (3 digits divided by 1 digit). 86% of the students tested could identify the map of India; but only 64% knew the name of the national capital. 79% could name the state they live in; but only 42% could find that state on a map.

Azim Premji is the Chairman of Wipro. He is also the most generous philanthropist in Asia. He wrote an essay for McKinsey's Reimagining India, *India Rebooted.* In it, he writes,

> *"Over the past two decades, India has made considerable progress in ensuring that children have access to and are enrolled in schools. But the actual process of education at those schools is woefully inadequate. Unfortunately, there are no quick fixes for this problem. No one has a magic wand that can instantly improve the quality of how we teach our children. This will require increasing public expenditure and sustained painstaking effort on the front lines.*
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> …

> *Solutions will require political courage – and not just from career politicians. Too often in India we abdicate responsibility for such complex socioeconomic issues to the political class. If we are to truly reimagine our nation, every one of us – and certainly those of us in the business sector – must play a proactive, progressive role."*

Bill Gates, being interviewed in Times of India asked what specific factors are holding the country back "Most trends are positive, but my biggest disappointment when it comes to India is the education system. It should be far better. I don't want to be critical, but I do want to create higher expectations about it … Most of India's own philanthropists have picked education as a high priority and I'm very glad about that."

In some ways, India actually suffers from not enough job seekers. Women account for only a tiny part of the Indian workforce. As the World Bank CEO Kristalina Georgieva says, "For a society where women are so talented to have only 27% of them in the formal economy, that is not the best place to be." The Economist article India's Middle Class explains "Women's participation in the workforce … has fallen by around ten percentage points since 2005, as households seem to have used increases in income to keep women at home."

One of Zoomcar's first batch of 10 employees was Satya. She had a bachelor's degree in Business and Commerce from a college in a small town in Tamil Nadu. She started with Zoom as a call center employee making about $150 a month. She did a great job; and by the time I left India 3 years later, she had been promoted to manager and was making about $500 a month. At my farewell party, she started crying and told me "David, you are the first teacher I have ever had." At the same time, my heart swelled with pride and broke with sadness. Throughout her life, Satya had many people with the job title "teacher". What were they doing?!

Environment: the biggest risk

Yale University and the World Economic Forum have put India 177th out of 180 countries in their Environmental Performance Index and the World Health Organization (WHO) estimates that 22 of the World's 30 most polluted cities are in India. Air pollution leaves a thick layer of smog over Indian cities that chokes its people and takes years of their lifespan. The World Economic Forum explains that the microscopic particles "get into your bloodstream, causing cancers, strokes, and heart diseases, stunting children's growth and development, and even reducing their intelligence." The World Bank estimates that air pollution costs India 8.5% of GDP each year – a huge drain on resources.

Water pollution is so bad that in Bangalore, once called "the Garden City" of India, has had several of its lakes catch fire. The layer of pollution on top of Bellandur Lake has caught fire repeatedly since 2015. The thick polluted foam sometimes overflows from the lake, covering nearby streets.

India's crowded and overstressed cities are also incredibly exposed to natural disasters. The United Nations ranking of large cities at highest risk of natural disasters has Calcutta as the city in the world most vulnerable to major drought, Chennai 4th, and Ahmadabad 6th. Meanwhile,

they rank Delhi as the 2nd most vulnerable to major flooding and Calcutta 8th. Global climate change only increases these risks.

According to NITI Aayog's Composite Water Management Index,

> *"India is suffering from the worst water crisis in its history and millions of lives and livelihoods are under threat. Currently, 600 million Indians face high to extreme water stress and about 200,000 die every year due to inadequate access to safe water … Critical groundwater resources – which account for 40% of our water supply – are being depleted at unsustainable rates … In fact, by 2020, 21 major cities, including Delhi, Bangalore, and Hyderabad, are expected to reach zero groundwater levels, affecting access for 100 million people … [depleting groundwater reserves] is also likely to be a significant food security risk for the country going forward."*

In addition to this critical shortage of water, NITI Aayog's report also discusses shortcomings in water treatment and safety:

> *"While access has improved markedly in recent years, with almost 87% of rural households having access to 'basic water', the provision of safe water remains a large challenge. Currently, only half of the rural population has access to safely-managed water … More than 90% of the urban population has had access to 'basic water' since 2000, but only one-third of India's waste water is currently treated, leading to the high burden of water-borne diseases."*

It is hard to find a solution for these issues. And it is almost impossible to see the political will to do enough about issues like water shortages before it is too late. That is also true in the United States, where many cities in the South West have depleting aquafers, like Las Vegas, Las Angeles, and Phoenix. But the US has far greater resources to resolve a crisis or to relocate populations if necessary.

Conclusion

In India's 2014 National Election, more than 550 million people voted at more than 900 thousand polling stations. Between April 11 and May 19, 2019, about 900 million people are expected to cast their ballots at 1 million polling stations. It will be by far the largest exercise of democracy in the history of the world.

India truly is a land of enormous challenges and tremendous opportunities. In McKinsey's Reimagining India then Chairman and CEO of Coca-Cola wrote in *Thinking Outside the Bottle:*

> *"If you come to India with some grand, predetermined strategy or master plan, prepare to be distracted, deterred, and demoralized … Coca-Cola launched operations in India in 1950, shortly after independence. But in 1977, we exited (along with other multinational companies) after a new law diluted ownership … We returned to rebuild our business in 1993 as economic reforms unleashed a period of robust growth … Today, our India business is thriving … [By 2020] we think India could be one of our top five global markets."*

It is almost impossible for me to imagine that in 1993, 1/5 of the world's population did not have access to Coca-Cola. Many things in India defy imagination in the best and worst possible ways. After visiting India on a speaking tour, Mark Twain wrote in Following The Equator

> *"This is indeed India! The land of dreams and romance, of fabulous wealth and fabulous poverty, of splendor and rags, of palaces and hovels, of famine and pestilence, of genii and giants and Aladdin lamps, of tigers and elephants, the cobra and the jungle, the country of a hundred nations and a hundred toungues, or thousand religions and two million gods, cradle of the human race, birthplace of human speech, mother of history, grand-mother of legend, great-grandmother of tradition … So far as I am able to judge, nothing has been left undone either by man or nature, to make India the most extraordinary country that the sun visits on his rounds."*

My friend Bert Mueller, the Founder of the popular California Burrito chain in Bangalore quipped "Fortune favors the bold. India favors the patient." I could not agree more. Thomas Edison said that "genius is 1% inspiration and 99% perspiration." In India, it must be 99.9%! Not only is it much harder to get anything done in India than it is in New Jersey, it is also much hotter.

There is an expression in parts of India, "You've got the clock, but we have the time." India is a tremendous investment opportunity for very, very patient capital. Everything takes longer in India. Perhaps my most profound insight about India is that the concept of You Only Live Once largely does not apply. For most of the major religions in India, You Only Live Infinite Times. Many of my interactions in India have gone this way:
Me: *"C'mon, c'mon, hurry up. I've only got like 70 years to accomplish everything. YOLO."*
Person with whom I am trying to get something done: *"What is the rush? YOLIT."*

India is rising. It will not be the next China. It will not be the next United States. It will be India. I will close this paper with a few thoughts from Anand Mahindra's essay for McKinsey's Reimagining India, *Toward a Uniquely Indian Growth Model*. The Chairman and Managing Director of Mahindra Group writes:

> *"When I listen to pundits, economists, and multinational CEOs talking about India, I often detect a familiar note of frustration. India, they insist, should be blasting upward like a rocket, its growth rate ascending higher and higher, bypassing that of a slowing China … According to this way of thinking, India is an underachiever, perversely holding itself back … If we continue to judge India's progress by China's, using metrics like FDI and GDP growth, or statistics like the kilometers of highway and millions of apartments built, we will continue to be branded a laggard … Nor should that be the goal.*
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> *…*
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> *There is no sense in pretending that "India" is a single investment destination or even a coherent unified economic entity. India's 29 states [now 29] and 7 territories are as different from one another – as varied in language, food, culture, and level of development – as the nations of Europe.*
>
> *…*

> *India needs to find a way to distribute growth – to create new urban hubs all over the country that can attract talent and money … developing hundreds, even thousands of smaller cities around the country where the problems of water, transit, power, and governance can be negotiated at the local level.*
> *…*
> *For better or worse, India is where the future will be made. Let's get it right."*