McKinsey Global Institute

India's turning point

An economic agenda to spur growth and jobs

August 2020

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Authors
Shirish Sankhe, Mumbai
Anu Madgavkar, Mumbai
Gautam Kumra, Delhi
Jonathan Woetzel, Shanghai
Sven Smit, Amsterdam
Kanmani Chockalingam, Mumbai

Preface

This report was written as India, along with countries everywhere, was grappling with the human tragedy and economic crisis brought on by the COVID-19 pandemic. The duration and intensity of the crisis will mark economic policy in the short to medium term, as we and others have described in a range of publications. This report goes much further. It looks at the longer-term trends that will affect India's economy over the next decade and beyond, and focuses on what we consider to be India's critical challenge: restoring strong GDP growth in order to create sufficient gainful jobs for the tens of millions of people who will join the labour force between now and 2030. If India is able to move back to a fast-growth track, it will ensure greater broad-based prosperity for its people and secure its place in the ranks of emerging economies that have outperformed their peers in recent decades. Failure to restore high growth, however, risks a decade of economic stagnation and rising joblessness.

This report is the latest in a long history of research by the McKinsey Global Institute into India's economy, reflecting our strong commitment to the country and its growing role in the global economy. Recent publications include *Digital India: Technology to transform a connected nation* (March 2019) and *India's labour market: A new emphasis on gainful employment* (June 2017).

The research was directed by Shirish Sankhe, a McKinsey senior partner in Mumbai; Anu Madgavkar, an MGI partner in Mumbai; Gautam Kumra, a McKinsey senior partner in Delhi; Jonathan Woetzel, an MGI director in Shanghai; and Sven Smit, an MGI co-chairman based in Amsterdam. The team was led by Kanmani Chockalingam and comprised Rishi Arora, Anjali Bajaj, Jigya Bhagat, Abhishek Ghosh, Shishir Gupta, Arihant Jain, Priya Jindal, Chaitanya Kedari, Sunakshi Wadhwa, and Priyanka Yalamanchili.

We are grateful to our academic adviser for this report, Dr Rakesh Mohan, senior fellow at the Jackson Institute for Global Affairs, Yale University, and distinguished fellow at Brookings India, for his invaluable guidance and support. We were also fortunate to have received helpful input from leaders including Sajjid Chinoy, managing director and chief India economist, JP Morgan; K.V. Kamath, president, New Development Bank and former chairman, ICICI Bank; Amitabh Kant, CEO, NITI Aayog; Uday Kotak, managing director and chief executive officer, Kotak Mahindra Bank and president, Confederation of Indian Industry; Neelkanth Mishra, co-head of APAC strategy, Credit Suisse; Nandan Nilekani, co-founder and chairman of Infosys and founding chairman of the Unique Identification Authority of India; Arvind Panagariya, professor of economics at Columbia University and former vice-chairman of NITI Aayog; Ajit Ranade, president and chief economist, Aditya Birla Group; Sangita Reddy, joint managing director, Apollo Hospitals and president of The Federation of Indian Chambers of Commerce and Industry; Rathin Roy, director, National Institute of Public Finance and Policy; Manish Sabharwal, chairman, Teamlease Services; Jayant Sinha, Member of Parliament and Chairperson for Standing Committee on Finance; and Ravi Venkatesan, founder, Global Alliance for Mass Entrepreneurship and former chairman of Microsoft India. While we benefitted greatly from the variety of perspectives we gathered from these leaders, our views have been independently formed and articulated in this report.

Many McKinsey colleagues provided analysis and advice: Chirag Adatia, Ruchi Aggarwal, Alex Bolano, Brajesh Chibber, Mahima Chugh, Rajat Dhawan, Gourav Ganguly, Avinash Goyal, Rajat Gupta, Sarvesh Gupta, Karthikeyan K S, Noshir Kaka, Vikram Kapur, Jitesh Khanna, Amit Khera, Alok Kshirsagar, Abhijit Kulkarni, Khushboo Kumra, Akash Lal, Aleksander Marynski, Ketav Mehta, Mrinalini Mirchandani, Riti Mohapatra, Neelesh Mundra, Subbu Narayanswamy, Nitika Nathani, Sathya Prathipati, Jaidev Rajpal, Himanshu Satija, Ramdoss Seetharaman, Joydeep Sengupta, Suvojoy Sengupta, Jeongmin Seong, Suveer Sinha, Vishakha Sinha, Renny Thomas, Gandharv Vij, Varun Vijay, and Hanish Yadav.

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As with all MGI research, this work is independent, reflects our own views, and has not been commissioned by any business, government, or other institution. We welcome your comments on the research at MGI@mckinsey.com.

James Manyika
Co-chairman and director, McKinsey Global Institute
Senior partner, McKinsey & Company
San Francisco

Sven Smit
Co-chairman and director, McKinsey Global Institute
Senior partner, McKinsey & Company
Amsterdam

Jonathan Woetzel
Director, McKinsey Global Institute
Senior partner, McKinsey & Company
Shanghai

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In brief

India's turning point: An economic agenda to spur growth and jobs

India is at a decisive point in its journey towards prosperity, and it is time to make the next step change in the pace of reform. The economic crisis sparked by COVID-19 could spur actions that return the economy to a high-growth track and create gainful jobs for 90 million workers by 2030; letting go of this opportunity could risk a decade of economic stagnation. This report's key findings are:

A reform agenda can be implemented in the next 12 to 18 months to pave the way for economic growth in the coming decade. With the right measures now, India can raise productivity and incomes for workers, small, midsize, and large firms, keeping India in the ranks of the world's outperforming emerging economies.

With 90 million more workers in search of nonfarm jobs by 2030, India needs to act decisively to resume its high-growth path. Post COVID-19, annual GDP growth of 8.0 to 8.5 percent will be required with continued strong productivity growth and faster employment growth than in the past to create the 12 million gainful nonfarm jobs annually that are needed, up from just four million created each year between fiscal year 2013 to 2018. Even before the pandemic, India's economy faced structural challenges, and GDP growth fell to 4.2 percent; the crisis compounds the challenge. Absent urgent steps to spur growth, India risks a decade of stagnating incomes and quality of life.

In the high-growth path, the manufacturing and construction sectors can accelerate the most. Manufacturing could contribute one-fifth of incremental GDP to 2030, while construction could add one in four of the incremental nonfarm jobs required. Labour- and knowledge-intensive services sectors also need to maintain their past strong growth momentum.

Across all sectors, three growth booster themes spanning 43 frontier businesses have potential to create $2.5 trillion of economic value and 30 percent of India's nonfarm jobs in 2030. These themes provide productivity momentum throughout their sectors and higher-wage pathways for workers. They are: global hubs that serve India and the world such as in manufacturing and agricultural exports and digital services; efficiency engines to boost competitiveness, including next-generation financial products and high-efficiency logistics and power; and new ways of living and working, including the sharing economy and modern retail.

To capture frontier opportunities, India needs to triple its number of large firms, with more than 1,000 midsize and 10,000 small companies scaling up. India has about 600 large firms with more than $500 million in revenue. They are 11 times more productive than average and generate almost 40 percent of all exports. However, many more are needed: large firms' revenue contribution to GDP in 2018 was 48 percent, and India's potential is to achieve 70 percent by 2030, in line with outperformer economies. Addressing a "missing middle" of midsize firms can enable the emergence of 1,000 more large firms and 10,000 more midsize firms by 2030. Improving access to capital and easing other barriers to business would help the best-performing firms of all sizes climb the ladder of scale and global competitiveness.

Reforms in six areas can raise productivity and competitiveness; more than half could be implemented rapidly via policy or law. They are: (i) sector-specific policies to improve productivity in manufacturing, real estate, agriculture, healthcare, and retail; (ii) unlocking supply in land markets to reduce land costs by 20 to 25 percent; (iii) creating flexible labour markets for industry, with better benefits and safety nets for workers; (iv) enabling efficient power distribution to reduce commercial and industrial tariffs by 20 to 25 percent; (v) privatising 30 or so of the largest state-owned enterprises to potentially double their productivity; and (vi) improving the ease and reducing the cost of doing business.

Financial-sector reforms and streamlining fiscal resources can deliver $2.4 trillion in investment while boosting entrepreneurship by lowering the cost of capital for enterprises by about 3.5 percentage points. In the high-growth scenario, investment will need to rise to at least 37 percent of GDP from 33 percent pre-crisis, with a sharp uptick in private-sector investment. To finance this, some four percentage points of household savings could move to financial products, through measures to unshackle insurance, pension funds, and capital markets. Measures like a "bad bank" for nonperforming loans and reforms in directed bank lending could reduce capital costs. Some 3.6 percent of GDP may be channelled to productive infrastructure and other expenditure through measures to streamline government spending and government-owned assets, along with the tax buoyancy effects of higher growth itself.

While the central government's pro-growth agenda is critical, roughly 60 percent of the reforms can be led by the states, and all require active participation by the business sector. State governments could select frontier businesses and set up "demonstration clusters," for example, manufacturing export hubs, while pursuing other key reforms, including in agriculture, power, and housing. Businesses would need to commit to productivity growth, develop a long-term value creation mindset, and develop capabilities in innovation, digital and automation, M&A, partnerships, and corporate governance. With this, the coming decade for India could be one of high growth, gainful jobs, and broad-based prosperity.

India's high-growth imperative

High GDP growth with sustained productivity and jobs growth

Additional nonfarm jobs, 2020–30

90M

High productivity growth, 2023–30

6.5–7.0%

per year

High GDP growth, 2023–30

8.0–8.5%

per year

Three growth booster themes to drive productivity, employment, and economic value

Economic value of 43 frontier business opportunities, $ trillion, 2030

1 Global hubs serving India and the world	2 Efficiency engines for India's competitiveness	3 New ways of living and working
1.0	0.9	0.6
Manufacturing exports, IT and digital, agricultural ecosystems, healthcare, tourism	Financial services, automation, mining, power, logistics, e-governance	Resilient cities, sharing economy, modern retail, climate change models, digital communications

ECONOMIC VALUE **$2.5T**

NONFARM JOBS **30%**

1,000+ new large, competitive firms, 11x more productive than all firms, on average

Potential for large firms (with revenues > $500M)
2018 vs 2030

Greater in number
# of large firms
600 → 1800 (3x)

Larger scale and scope
Revenue, % of GDP
48% → 70% (1.5x)

More profitable
Return on assets, %
1.2% → 1.9%

More competitive
% of top-quintile firms replaced over two decades
57% → 66%

Effective, time-bound reforms in product markets and factor markets and for financing growth

- Sector-specific pro-growth policies
- Unlocking supply in land markets
- Flexible labour markets
- Improving ease and reducing cost of doing business
- Privatisation and asset sales
- Efficient power distribution

- Channelling household savings to capital markets
- Reducing cost of credit intermediation
- Streamlining public finances to allocate capital more efficiently

More than

50% of reforms implemented rapidly by policies or laws

60% of reforms led by states

Businesses with high aspirations, focused on frontier business opportunities, and developing capabilities with a long-term mindset

Executive summary

The COVID-19 crisis is an urgent reminder that India is at a turning point: it needs to take decisive reform steps to get the economy back to a stronger growth track that creates millions of gainful jobs—or risk a decade of rising joblessness and economic stagnation. Even before the onset of the pandemic, India's growth had been slowing down due to structural issues; the COVID-19 crisis has put a chill on GDP globally as well as in India. But India cannot afford to wait to take action. Some 90 million workers will be looking for gainful nonfarm work opportunities between now and 2030, based on current demographics and possible transitions of workers out of agriculture. An additional 55 million women could enter the workforce by 2030 if their long-standing underrepresentation is at least partially corrected. Only a return to rapid and sustained GDP expansion of 8.0 to 8.5 percent annually that is fuelled by high productivity growth will enable the large-scale creation of gainful opportunities needed for these workers. Experience suggests that this is possible. India has delivered rapid economic growth, productivity increases, and poverty alleviation over much of the past quarter-century, and its innovative companies can help achieve high economic aspirations—if the right policies and incentives for growth are in place. Manufacturing and construction are the two sectors that would need to amplify the most, adding 9.6 and 8.5 percent annual GDP growth and 11 million and 24 million jobs respectively from 2023 to 2030.

The good news is that there is no dearth of opportunity. This report highlights opportunities available in the post-pandemic era and how India might be able to achieve them. It identifies three potential growth boosters, spanning 43 high-productivity frontier business opportunities (so called because they are at the frontier of productivity in their respective areas), that have the potential to generate $2.5 trillion of economic value and 30 percent of the nonfarm jobs in 2030. These opportunities could contribute about half the increase in GDP between fiscal year 2020 and 2030. The three growth boosters foresee an India with a stepped-up global role in both manufacturing and services, an efficient and competitive foundation for economic growth, and new ways of living and working that create value. India's firms would play a critical role in achieving these goals, including through more than 1,000 midsized, dynamic companies that could climb the ladder of scale to become large and more than 10,000 small companies that could become midsized. To enable these opportunities, the central and state governments would need to adopt a pro-growth reform agenda in product markets of critical sectors like manufacturing and construction, agriculture, retail, and others, and in factor markets like capital, labour, land, and power. Financial reforms will also be needed to ensure that sufficient capital is available; we estimate the total requirement at about $2.4 trillion in 2030, with small and midsize companies alone needing access to more than $800 billion. Achieving these goals will not be simple. Yet the alternative—a decade with just 5 percent annual growth, the lowest decadal growth since 1983—would simply be too costly for an economy that aspires to be ever stronger and more inclusive.[1]

43 frontier business opportunities have the potential to create $2.5 trillion in economic value in 2030.

[1] National Accounts Statistics, Ministry of Statistics and Programme Implementation.

A clarion call is sounding for India to put growth on a sustainably faster track and avoid a decade of potential stagnation

Over the decade to 2030, India needs to create at least 90 million new nonfarm jobs to absorb the 60 million new workers who will enter the workforce based on current demographics, and an additional 30 million workers who could move from farm work to more productive nonfarm sectors. To absorb this influx, the country will need about 12 million additional gainful nonfarm jobs every year starting in fiscal-year 2023—triple the four million nonfarm jobs created annually between 2012 and 2018.[2] If an additional 55 million women enter the labour force, at least partially correcting historical underrepresentation, India's job creation imperative would be even greater.

For this magnitude of employment growth to be gainful and productive, India's GDP will need to grow by 8.0 to 8.5 percent annually over the next decade, based on economic scenarios we have developed and benchmarks of how economic growth and employment have correlated in other emerging economies. The economy grew at just 4.2 percent in fiscal year 2020.[3] Moreover, at the time of writing, many forecasters expect it to sharply contract due to the COVID-19 pandemic, with high uncertainty about the range of possible economic outcomes for fiscal years 2021 and 2022.[4] Our analysis looks beyond the COVID-19 crisis, with scenarios beginning in fiscal year 2023, assuming India takes steps to transition out of the COVID-19 recession by then. Many of our proposed actions would start well before 2023, however, and in fact be implemented in the next 12 to 18 months.

Choosing a high-growth path that creates 90 million gainful jobs requires India to simultaneously increase its rate of employment growth sharply and maintain its historically strong productivity growth. To achieve 8.0 to 8.5 percent GDP growth, net employment would need to grow by 1.5 percent per year from 2023 to 2030, similar to the average net employment growth rate of 1.5 percent that India achieved from 2000 to 2012, but much higher than the flat net employment experienced from 2013 to 2018. At the same time, India will need to maintain productivity growth at 6.5 to 7.0 percent per year, the same as it achieved from 2013 to 2018.[5] The two objectives are not contradictory; indeed, employment cannot grow sustainably without high productivity growth, and vice versa.[6]

If India fails to put in place measures to address pre-pandemic trends of flat employment and slowing economic growth, and does not manage the shock of the crisis adequately, its economy could expand by just 5.5 to 6.0 percent from 2030, with a decadal growth of just 5 percent. The economy would absorb only about six million new workers into the workforce as compared to 60 million in the high-growth path, marking a decade of lost opportunity (Exhibit E1).

2 National Sample Survey 2011–2012 (68th round); Periodic Labour Force Survey 2017–18; ILOSTAT.

3 National Accounts Statistics, Ministry of Statistics and Programme Implementation, 2020.

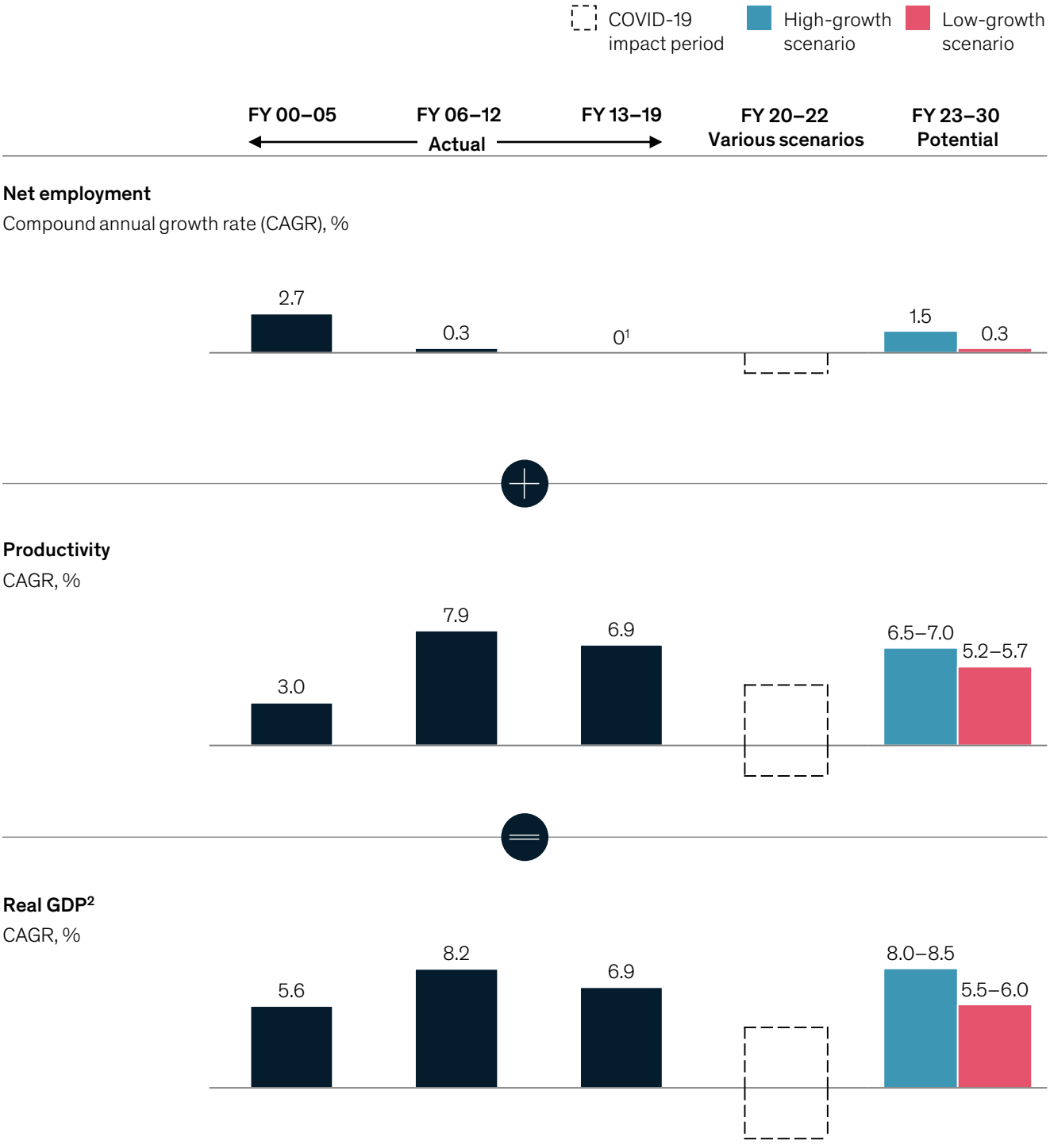
4 *Minus five – India's GDP growth outlook for fiscal 2021,* CRISIL, May 26, 2020; *Indian Economy: GDP Outlook,* ICRA, July 2020; *Survey of Professional Forecasters on Macroeconomic Indicators– Results of the 64th Round,* Reserve Bank of India, June 4, 2020; World Bank; Ritu Singh, "Coronavirus Impact: World Bank predicts 3.2% contraction for India in FY21," *CNBC TV18,* June 9, 2020; Aishwarya Paliwal, "India's GDP growth to remain between -6% to 1%: Financial commission chairman," *India Today,* May 22, 2020.

5 National Sample Survey 1999–2000 (55th round); National Sample Survey 2004–2005 (61st round); National Sample Survey 2011–2012 (68th round); Periodic Labour Force Survey 2017–18; ILOSTAT; National Accounts Statistics, Ministry of Statistics and Programme Implementation, 2020.

6 For details on how productivity growth and employment growth are interconnected, see David Hunt, James Manyika, and Jaana Remes, "Why US productivity can grow without killing jobs", *McKinsey Quarterly,* February 2011, and *Jobs lost, Jobs gained: Workforce transitions in a time of automation,* McKinsey Global Institute, December 2017. For details of productivity and employment performance of other outperformer emerging economies, see the technical appendix.

Exhibit E1

In the high-growth path, India's GDP could expand at 8.0 to 8.5 percent per year, with a sharp rise in employment and sustained productivity growth; the low-growth path implies negligible job creation.



[1] FY 19 data assumed to be 2018 data from Periodic Labour Force Survey 2017–18.
[2] Using real GDP at 2004–05 prices through FY 12 and 2011–12 prices from FY 13.
Note: High-growth scenario is in line with India's historical best GDP growth; in low-growth scenario, India records lowest decadal growth since 1983. Timelines were chosen based on availability of employment data.

Source: National Accounts Statistics, Ministry of Statistics and Programme Implementation; National Sample Survey 1999–2000 (55th round), 2004–2005 (61st round), 2011–2012 (68th round); Periodic Labour Force Survey 2017–18; ILOSTAT; McKinsey Global Institute analysis

Sustained reforms have delivered rapid growth, but India's economy was stalling even before COVID-19, and with the crisis, it risks a stagnant decade

Over the past three decades, India has outpaced many other global economies, propelling the country into the ranks of just 18 outperforming emerging economies that achieved robust and consistent high growth over that period.[7] Yet India's economy was already stalling and showing signs of structural weaknesses before the COVID-19 crisis.

India's real GDP growth has averaged 6.8 percent annually since 1992, with nominal per capita GDP rising 18-fold and real per capita GDP by a multiple of 3.6.[8] Growth has been inclusive, with economic prosperity translating into significant improvement in living standards. In just the decade between 2005–06 and 2015–16, about 270 million people were lifted out of extreme poverty.[9] More recently, the push to reduce multidimensional poverty by addressing basic needs holistically has also made progress: about 95 percent of households had access to electricity in 2018, up from 72 percent a decade earlier, while almost 100 percent of the population had access to basic sanitation as of July 2019. The share of Indian adults with at least one bank account has more than doubled since 2011, to 80 percent in 2017, driven by Jan-Dhan Yojana, a mass financial inclusion programme.[10]

India's track record of inclusive growth was the fruit of pro-growth reforms that lifted productivity and helped the country weather shocks and cycles (Exhibit E2). These reforms featured early pro-competition measures, including the 1991 dismantling of anachronistic licensing rules, sharp cuts in customs tariffs, and the privatisation and deregulation of telecommunications and electricity. Among other initiatives were measures to boost capital accumulation, including through liberalisation of foreign direct investment, issuance of new banking licenses to the private sector, and steep cuts in personal income tax. More recently, measures including the Aadhaar digital ID programme and the introduction of the Goods and Services Tax system marked attempts to formalise the economy.[11]

However, since the 2008 global financial crisis, India's growth trajectory has slowed and structural weaknesses have become apparent. Since 2013, the country's main demand engines—domestic private investment and global demand—have stalled. On the investment side, bank credit to industry slowed, and the proportion of nonperforming assets to total assets tripled to more than 9 percent in the period from fiscal year 2012 to 2019, driven by loans to the corporate sector, predominantly before 2010.[12] Due to mounting credit risk aversion, the cost of capital remained high despite falling inflation, and this held back investment. From a demand perspective, the trade intensity of global GDP declined, and India was unable to take advantage of shifts in global value chains. Exports declined as a share of India's GDP from 25 to 19 percent between 2013 and 2019.[13] Gross domestic savings and household savings growth slowed down, while labour force participation fell from 58 to 49 percent between 2005 and 2018; much of the decline was in female, rural labour force participation.[14] Core sectors, including manufacturing and construction, showed signs of stress. For example, average annual car production grew by about 4 percent from fiscal year 2013 to 2018, compared with 16 percent in 2004–12, while cement production growth averaged 4 percent, compared with more than 11 percent in the previous period.

7 For methodological details and a full list of the 18, which include China, Malaysia, Singapore, South Korea, Thailand, and Vietnam, see *Outperformers: High-growth emerging economies and the companies that propel them,* McKinsey Global Institute, September 2018.

8 World Bank.

9 Multidimensional Poverty Index 2018, UN Development Programme (UNDP).

10 Swachh Bharat Mission dashboard; Asli Demirgüç-Kunt et al., *The Global Findex Database 2017: Measuring financial inclusion and the fintech revolution,* World Bank, April 2018.

11 The Aadhaar (Targeted Delivery of Financial and Other Subsidies, Benefits and Services) Act, 2016, *Gazette of India,* March 2016; Press Release, Central Board of Indirect Taxes and Customs, July 2, 2017.

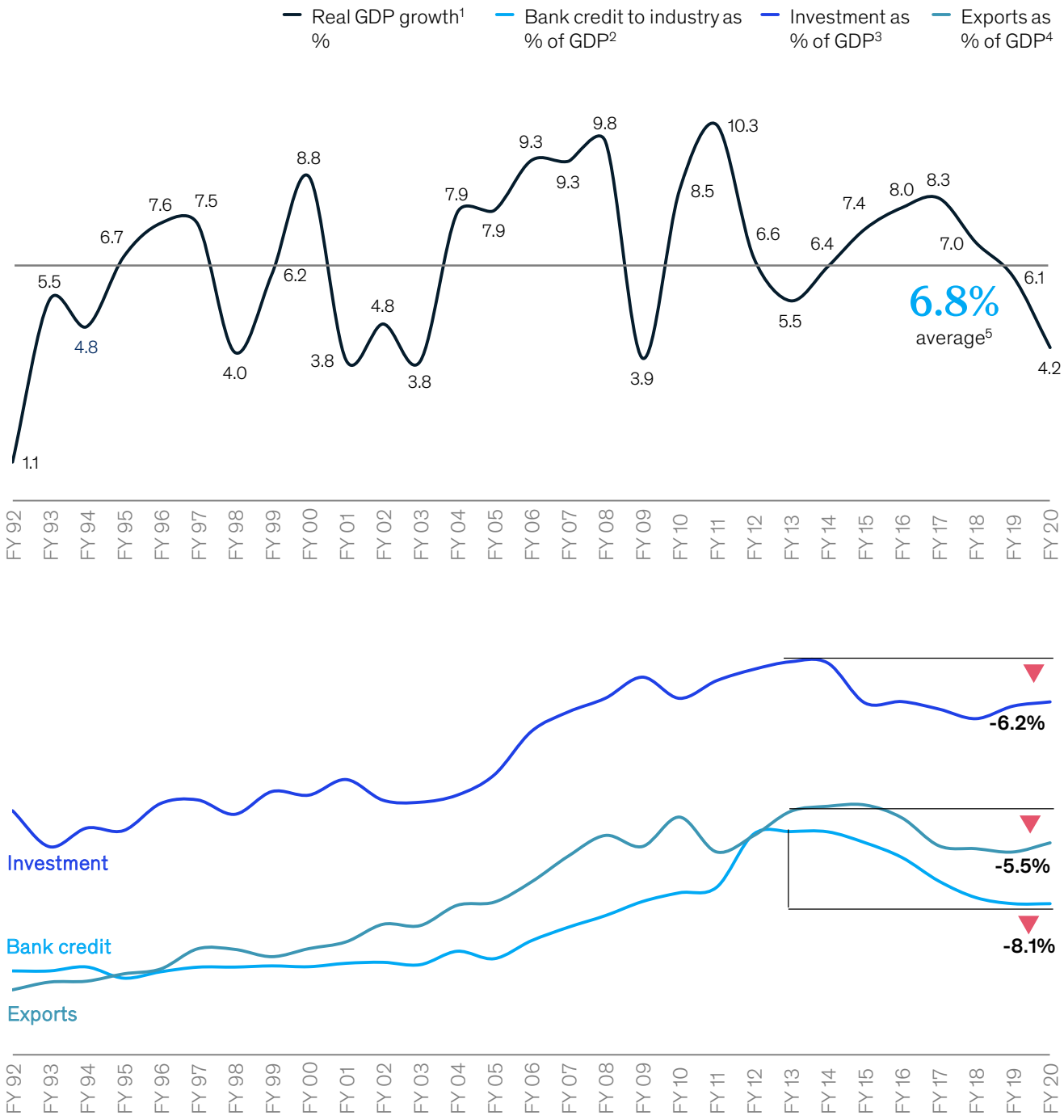
12 "Deployment of bank credit by major sectors", *Handbook of statistics on Indian economy,* Reserve Bank of India, May 2020; "Sectoral Deployment of Non-Food Gross Bank Credit – Outstanding," *Handbook of statistics on Indian economy,* Reserve Bank of India, March 2020; "The festering twin balance sheet problem", in *Economic survey 2016–17,* Ministry of Finance, January 2017; *Union budget 2017–18,* Ministry of Finance; "Trends in Non-performing assets – Bank Group-wise", *Report on trend and progress in banking in India,* Reserve Bank of India, November 2012 and December 2019.

13 National Accounts Statistics, Ministry of Statistics and Programme Implementation, 2020.

14 ILOSTAT.

Exhibit E2

India has achieved long-term growth of 6.8 percent per year, but structural weaknesses were exposed in the aftermath of the global financial crisis.



[1] Using real GDP at 2004–05 prices till FY 12 and 2011–12 prices from FY 13.
[2] Nominal metric; % of nominal GDP.
[3] Real metric; real gross capital formation as % of real GDP.
[4] Real metric; % of real GDP.
[5] Using real GDP at 2004–05 prices till FY 12 and 2011–12 prices from FY 13.

Source: National Accounts Statistics, Ministry of Statistics and Programme Implementation; Reserve Bank of India; McKinsey Global Institute analysis

In the labour market, overall employment was flat from fiscal year 2013 to 2018, according to data from the National Sample Survey Office. Some 22 million nonfarm jobs were created, while a similar number of workers left the agricultural workforce. Household savings have fallen as a consequence.[15]

The pandemic is a further shock that comes on top of India's structural slowdown, and it makes actions that can spur higher employment and productivity growth through the recovery all the more critical (see Box E1, "Assessing the impact of the COVID-19 crisis on India's economy").

Box E1

Assessing the impact of the COVID-19 crisis on India's economy

The COVID-19 pandemic has caused considerable suffering worldwide, in both lives and livelihoods. According to scenarios developed by McKinsey & Company and Oxford Economics, global GDP could contract by 3.5 to 8.1 percent in 2020. In India, the pandemic and the lockdowns implemented in an effort to contain it have reduced demand and could bring about the most severe decline in GDP in about four decades. At the time of writing, the McKinsey–Oxford Economics scenarios suggest that India's GDP could contract between 3 and 9 percent in the current year, depending on the effectiveness of virus containment and economic policy responses. Uncertainty remains high on both dimensions, and therefore on the depth and duration of the health and economic costs for India. The initial 10-week lockdown saw the economy operate at about half of full capacity, by our estimates, with significant strain on micro, small, and medium-size (MSMEs) businesses and large corporates. Our estimates suggest that the financial strain on households, MSMEs, and corporates, if unmitigated, would increase the level of nonperforming assets by seven to 14 percentage points in fiscal year 2021 (mitigatory steps taken by the Reserve Bank of India and the government could moderate the effect on nonperforming assets). Unemployment rose to an all-time high of over 20 percent in the first two months of the first quarter of fiscal year 2021, although it fell significantly to about 10 percent in the third month.[1]

The government responded with a package of liquidity and fiscal measures to stabilise the economy in the short term, to support low-income households, farmers, MSMEs, and the financial system.[2] These reforms may have a potential fiscal deficit impact of about 1.5 percent in fiscal year 2021. Coupled with contracting GDP and reduction in government revenue, this could lead to an incremental central fiscal deficit of about four percentage points over the budgeted 3.5 percent of GDP, with possible medium-term implications on government borrowing as well.

The government also announced several long-pending structural reforms that go some way to addressing issues we raise in this report. These included allowing farmers to sell produce more freely in the agricultural sector; starting the process of privatising power distribution companies in states and union territories; and providing more robust and portable benefits to migrant workers. India's state governments have been given some incentive to push these reforms further, by linking additional borrowings to progress on the reform agenda. If the detailed policies required in each of these areas are designed and implemented well, these reforms have the potential to help India recover to pre-COVID-19 levels and provide real growth impetus in 2023 and beyond, although at the time of writing, most execution details were still awaited.

1 Centre for Monitoring Indian Economy.
2 "Atmanirbhar Bharat Abhiyaan", Press Information Bureau of India, May 12, 2020.

15 Society of Indian Automobile Manufacturers database; Sandhya Keelery, Cement production volume in India from financial year 2008 to 2019, Statista, July 7, 2020; Profile Of The Indian Cement Industry, Shodh Ganga; *Handbook of statistics on Indian economy,* Reserve Bank of India, September 2013 and 2019; National Smaple Survey 2011–12 (68th round); Periodic Labour Force Survey 2017–18.

Nationally, to generate the productivity and jobs needed, the manufacturing and construction sectors will need to grow the most

In the context of both structural growth slowdown and the economic shock of the pandemic, recovering to a high-growth path will not be business as usual for India. Achieving the dual objectives of higher employment growth and higher productivity growth will require two sectoral shifts. First, India's sectoral mix would need to move towards higher-productivity sectors that also have the potential to create more jobs. Second, and more importantly, within individual sectors, there would need to be a move towards new business models that harness global trends to drive productivity and demand.

Two sectors—manufacturing and construction—have the potential to give the biggest lift to productivity and jobs growth, respectively. In other emerging economies, sectors such as construction and trade typically absorb the greatest numbers of workers moving out of agriculture and increase average labour productivity at the same time. While manufacturing has been a powerful growth driver in most outperforming economies, its share of employment is peaking and starting to decline earlier in the development process, a phenomenon called premature deindustrialisation.[16] Our analysis suggests that manufacturing may continue to be a source of job creation for countries, including India, with low wages, strategic endowments, or a sufficiently large domestic market size. Between 2000 and 2010, China's manufacturing GDP grew by 13 percent annually while the country simultaneously raised the share of manufacturing employment by five percentage points. Similarly, Bangladesh and Vietnam both increased their employment share of manufacturing by three percentage points and GDP share of manufacturing by five to six percentage points in the decade between 2006 to 2016 and 2009 to 2016, respectively.[17]

To set aspirations for the potential level of growth by sector for India, we look back to identify which sectors propelled India's earlier high-growth phase, between 2005 and 2012, when the overall economy grew at 8.2 percent per year. Based on this comparison, we find that the manufacturing and construction sectors could achieve the largest acceleration in sector GDP growth relative to the past (Exhibit E3). In the coming decade, manufacturing productivity has the potential to rise by about 7.5 percent per year, based on benchmarks of other outperforming economies, contributing more than one-fifth of the incremental GDP in our estimates. For example, adopting automation and Industry 4.0 practices in key manufacturing sectors can increase productivity by 7 to 11 percent.[18] Construction could add as many as one in four of the incremental gross jobs (before netting labour transitions out of agriculture). These estimates are based on elasticity of labour demand in the past and the performance of other outperformer economies and high-growth Indian states.

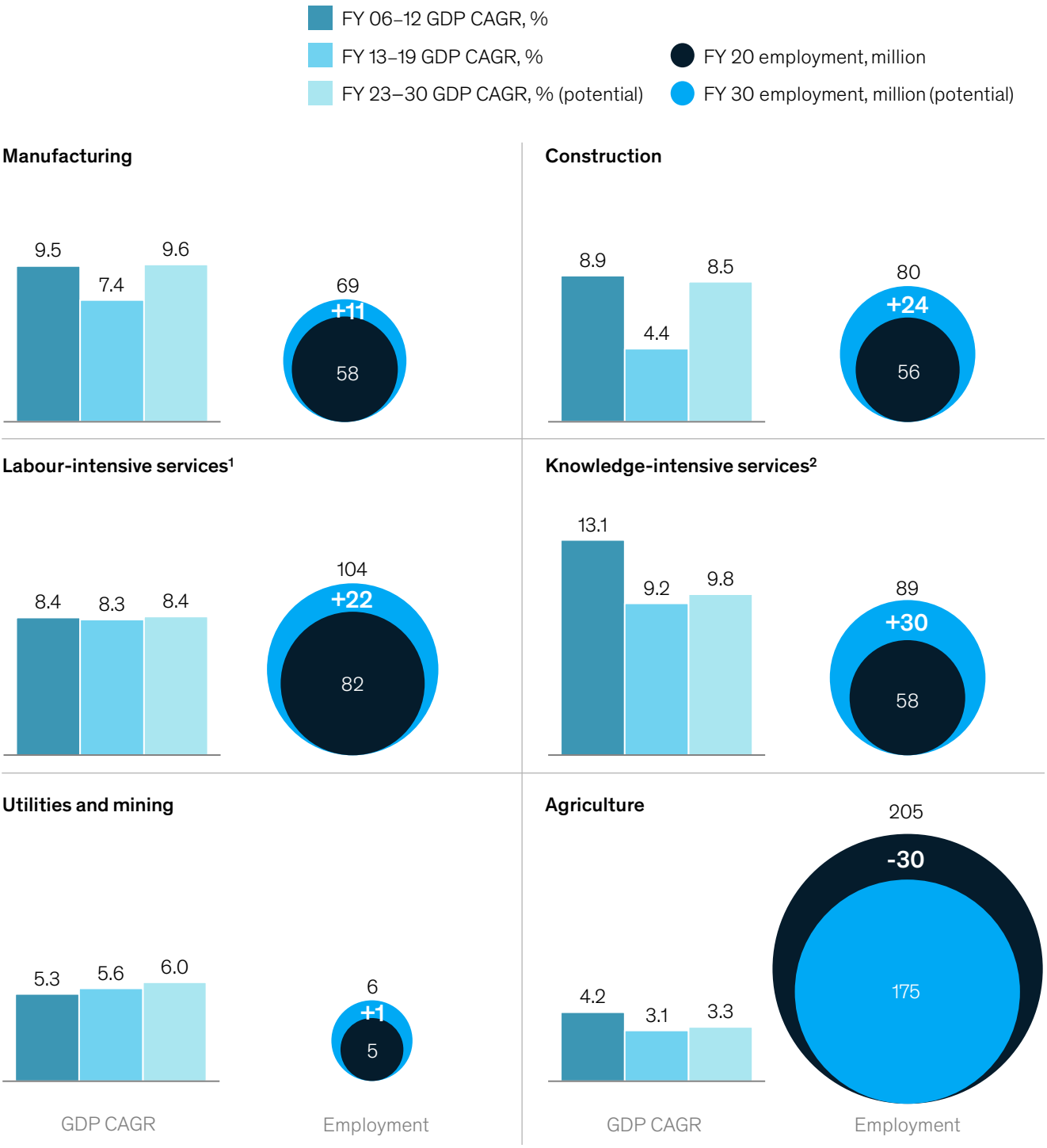
In addition, labour-intensive sectors such as trade, transportation and storage, and hotels and restaurants, and knowledge-intensive sectors including communication and broadcasting, information technology (IT) and business-process management (BPM), financial services, education, healthcare, and other professional services will collectively have to sustain and improve on their past strong momentum. The agriculture sector will need to increase productivity at its historical rate, thus continuing its long-term trend of shedding jobs as labour moves from agriculture into higher-productivity sectors and ensuring higher incomes for all workers, including those left in the agriculture sector. We estimate that about 30 million farm jobs could move to other sectors by 2030 as part of a high-growth strategy.

To create 90 million nonfarm jobs by 2030, India's GDP will need to grow 8.0 to 8.5% annually from 2023.

16 Dani Rodrik, "Premature deindustrialization", *Journal of Economic Growth,* March 2016, Volume 21, Number 1, pp.1–33.
17 For details, see *Outperformers: High-growth emerging economies and the companies that propel them,* McKinsey Global Institute, September 2018; IHS Markit Comparative Industry Service.
18 *A future that works: Automation, employment, and productivity,* McKinsey Global Institute, January 2017.

Exhibit E3

In the high-growth path, manufacturing and construction need to accelerate the most, while knowledge- and labour-intensive services maintain their historical momentum.



[1] Includes trade, transportation and storage, and hotel and restaurant sectors.
[2] Includes communication and broadcasting, IT-BPM, financial services, education, healthcare, and other professional services.
Note: Sectoral GDP and employment in the high-growth scenario estimated based on employment elasticities for India and several outperforming emerging economies. For details, see technical appendix.

Source: National Accounts Statistics, Ministry of Statistics and Programme Implementation; Periodic Labour Force Survey 2017–18, ILOSTAT; McKinsey Global Institute analysis

Beyond national aspirations, each state would also need to create enabling conditions to grow productivity within champion sectors

Beyond the national aspirations for growth by sector, the picture may look very different in individual states. State economies have followed varying patterns of growth since 2005, with different sectors emerging as champions. Regardless of which sector led, the states that achieved high productivity growth outperformed the rest from 2013 to 2019 in both GDP and employment growth. For these states, the impetus was provided by rising productivity of workers within sectors, rather than shifts in the mix across sectors. More important than selecting which sector to grow is to create the conditions for businesses within each sector to raise their productivity.

For example, among the high-growth states, the within-sector productivity growth for the states of Andhra Pradesh and Telangana (combined), Gujarat, Karnataka, and Odisha was 6.3 to 7 percent each year, much higher than that in underperforming states, where it was about 4.5 percent (Exhibit E4).[19] The services sector drove AP–Telangana's combined outperformance, while manufacturing was the champion in Gujarat. Karnataka's acceleration was powered by the services sector, while in Odisha, manufacturing and mining led the charge.

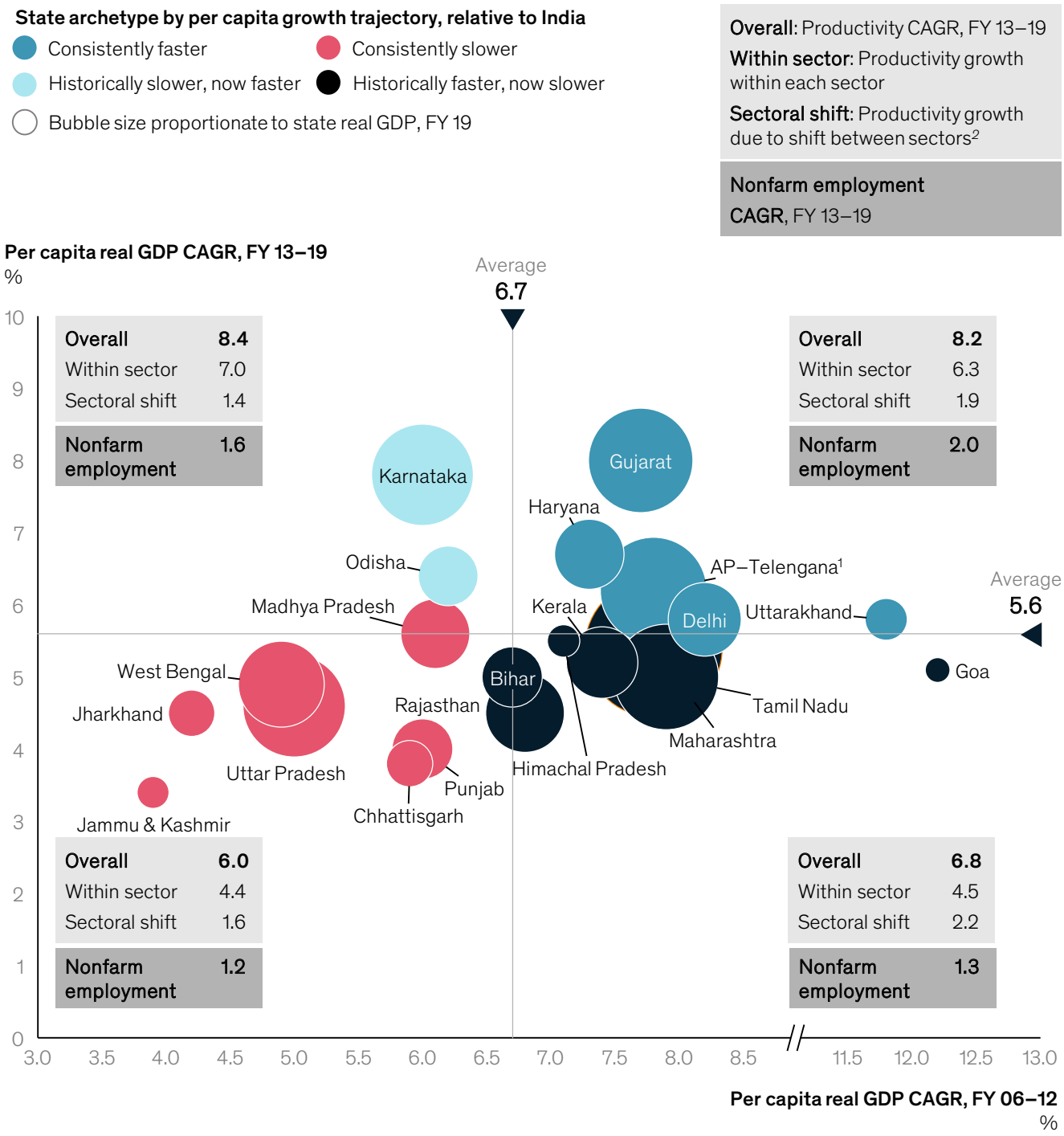
The lessons are twofold. First, while each state will need to find its champion sectors to propel growth, any sector can be transformed into a champion sector. Second, and more importantly, states will need to create the enabling conditions for high-productivity enterprises to flourish within sectors in order to create more competitive businesses and gainful work opportunities.

While each state will need to find its champion sectors to propel growth, any sector can be transformed into a champion.

[19] National Sample Survey 1999–2000 (55th round); National Sample Survey 2004–2005 (61st round); National Sample Survey 2011–2012 (68th round); Periodic Labour Force Survey 2017–18; ILOSTAT; National Accounts Statistics, Ministry of Statistics and Programme Implementation, 2020.

Exhibit E4

High within-sector productivity growth has boosted GDP growth, along with faster nonfarm employment growth.



[1] Andhra Pradesh and Telangana states together.
[2] Gross Value Added (GVA) data is used instead of GDP for productivity calculations at sectoral level. For details, see technical appendix.

Source: National Accounts Statistics, Ministry of Statistics and Programme Implementation; ILOSTAT; McKinsey Insights India; National Sample Survey 2011–12 (68th round); Periodic Labour Force Survey 2017–18, McKinsey Global Institute analysis

Three growth-boosting themes can contribute $2.5 trillion of economic value and support 30 percent of nonfarm jobs in 2030

To achieve 1.5 percent employment growth and 6.5 to 7 percent productivity growth, India needs to leapfrog ahead. Fortunately, it has many opportunities to do so. Global trends such as digitisation and automation, shifting supply chains, urbanisation, rising incomes and demographic shifts, and a greater focus on sustainability, health, and safety are accelerating or assuming a new significance in the wake of the pandemic.[20] These trends will drive demand for new kinds of goods and services and improve productivity. For India, they could manifest as three growth boosters that become the hallmarks of the post-pandemic economy. Within these three growth boosters we find 43 potential business opportunities that could create about $2.5 trillion of economic value in 2030 and support 112 million jobs, or about 30 percent of the nonfarm workforce in 2030.[21] About half the increase in GDP between fiscal year 2020 and 2030 could be contributed by these business opportunities. They also create job pathways for lower- and mid-skill workers to achieve higher productivity and wages, at least 2.5 times more than traditional models, on average, based on our estimates. Exhibit E5 details out these frontier opportunities and their potential economic value in 2030.

Growth booster 1: Global hubs serving India and the world (13 frontier business opportunities)

Despite the COVID-19 crisis, India can already position itself to be part of global value chains in key areas. Out of the total opportunity from the three growth-boosting themes of $2.5 trillion in economic value in 2030, this theme offers about $1 trillion. To achieve this, India will need to work now to grasp opportunities presented by forces such as rising wages in other parts of Asia, trade conflicts, and efforts to make supply chains more resilient.[22] Rising flows and volumes of data suggest demand for a range of offshored and nearshored services.[23] Greater affluence and leisure time and a focus on health and safety in advanced and emerging economies (including India) will also open up opportunities to produce and sell more manufactured goods and services. Examples include the following:

— **Globally competitive manufacturing hubs.** High-potential sectors like electronics and capital goods, chemicals, textiles and apparel, auto and auto components (including the electric vehicle ecosystem), and pharmaceuticals and medical devices contributed to about 56 percent of global trade in 2018. India's share of exports in these sectors is 1.5 percent of the global total, while its share of imports is 2.3 percent.[24] By raising its competitiveness in these sectors through government-led reforms in land, labour, and power, among others, as well as through firm-led productivity enhancement measures like supply chain digitisation, we estimate that India could generate $455 billion in economic value in 2030. These sectors could generate $400 billion in exports by 2030, up from $140 billion in 2018. Large exporters are about three times more productive than smaller manufacturers in these sectors and can support 11 million jobs in 2030 (about 16 percent of all manufacturing jobs).[25]

[20] The McKinsey Global Institute's extensive research on these trends includes, for example, *Digital India: Technology to transform a connected nation* (March 2019); *A future that works: Automation, employment, and productivity* (January 2017); *Globalization in transition: The future of trade and global value chains* (January 2019); *Urban World: Mapping the economic power of cities* (March 2011): and *Climate risk and response: Physical hazards and socioeconomic responses* (January 2020).

[21] Our estimates of economic value cover potential increases in gross value added (GVA) as well as productivity gains and cost savings made possible by these business models by 2030. See the technical appendix for further details.

[22] See *Risk, resilience, and rebalancing in global value chains,* McKinsey Global Institute, August 2020; *China and the world: Inside the dynamics of a changing relationship,* McKinsey Global Institute, July 2019; and *Globalization in transition: The future of trade and value chains,* McKinsey Global Institute, January 2019.

[23] *Digital globalization: The new era of global flows,* McKinsey Global Institute, February 2016.

[24] UN Comtrade DESA/UNSD, comtrade.un.org

[25] McKinsey Corporate Performance Analytics; CMIE ProwessIQ.

Exhibit E5

Three growth boosters, spanning 43 high-productivity frontier business opportunities, can contribute $2.5 trillion to the economy by 2030.

Potential economic value[1] $ billion, FY30

Global hubs serving India and the world 990	**Globally competitive manufacturing hubs**	455	Electronics, high tech and capital goods Chemicals (including plastics and rubber) Textiles and apparel Auto and auto components Electric vehicles (EVs) and batteries Pharmaceuticals and medical devices
	Global IT and digital services hub	285	Digital services in automation, cloud, cybersecurity, mobile, AI, 3-D printing, IoT, big data analytics, social media, etc
	High-value agricultural ecosystems	145	Digitally enabled agriculture services (precision advisory, National Agriculture Market (eNAM), digital farmer financing) Agriculture and food processing exports
	Healthcare services for India and the world	55	Medical and care-based service exports Remote and other innovative healthcare operating models Wellness and prevention therapeutics
	High-value tourism	50	Tourism circuits with high-quality infrastructure and services
Efficiency engines for India's competitiveness 865	**Next-generation financial services**	335	Flow-based lending Resolution and recovery business models Risk capital investment vehicles Long-term contractual savings products Digital payments
	Automation of work and Industry 4.0	275	Automation of current work activities (eg, network optimisation) Digital and analytics (including IoT)
	Efficient mining and mineral sufficiency	110	Market-based models (privatised, sublicenced) New models for exploration and sourcing
	High-efficiency power distribution and logistics models	80	Multimodal freight infrastructure Logistics platforms and marketplaces Market-based models in power distribution (privatised, sublicenced) Digitised power infrastructure
	E-governance of the future	65	Government e-Marketplaces Comprehensive Direct Benefit Transfer and portable benefits Digital Land 2.0 Digital citizen and business services
New ways of living and working 635	**Productive and resilient cities**	195	Affordable mass housing (leveraging modern construction methods) Mass transit Water infrastructure Property services
	Sharing economy for jobs, skills, and education	170	Online skilling and work platforms Online education platforms App ecosystems
	Modernised retail trade ecosystems	125	B2B/B2C marketplaces including e-commerce Digitised supply chains for traditional trade ecosystems
	Climate change mitigation and adaptation models	90	Mitigation models (renewables solutions, energy-efficient solutions in buildings and factories, waste-to-value and wastewater solutions, emission control solutions) Adaptation technologies
	Digital communication services	55	Universally available, affordable high-speed internet connectivity Digital media and entertainment

[1] Economic value is estimated annual value of productivity gains, cost savings, and incremental GVA. Each opportunity is sized separately; interaction effects are not considered. For details, see technical appendix.

Source: McKinsey Global Institute analysis

— **Global IT and digital services hub.** India's traditional strength in IT-enabled services can be augmented with modernised capabilities to reflect digital and emerging technologies like artificial intelligence (AI) and machine learning-based analytics. These technologies could propel as much as 40 percent of overall revenues in the sector by 2025, and exports could increase significantly from $150 billion currently.[26] India can generate $285 billion in economic value in 2030 with an average yearly investment of about $10 billion.

— **High-value agricultural ecosystems.** Agricultural products accounted for 8.5 percent of global trade in 2018, but measured by net exports, India has less than 1 percent share of this market.[27] Exports could grow to $95 billion by 2030, from $35 billion in 2018, by establishing export hubs for high value-added produce and food products, including livestock and fisheries, pulses including soybean, spices, fruits and vegetables, horticulture, and dairy, among others. In addition to creating handling, storage, and processing infrastructure, the sector can improve productivity drastically through farm-based digital services. For instance, adopting precision agriculture—providing real-time data to farmers to optimize fertilizers, pesticides, and other inputs—can increase productivity by up to 60 percent, while 60 percent of agricultural surplus can be transacted through e-marketplaces, improving farmers' price realisation by 10 percent.[28] These models, combined with processing hubs, can generate about $145 billion of economic value by 2030 with an average yearly investment of $10 billion.

— **Healthcare services for India and the world.** India can do more to build infrastructure and harness innovative healthcare operating models such as tech-enabled remote healthcare, wellness and prevention therapeutics, and medical and care-based service exports. Using digital technologies to reallocate tasks between doctors, nurses, and health associates, enabled by law and policies, could free up 20 to 25 percent of doctors' capacity.[29] This would result in better access to healthcare and savings through reduction in days lost due to ill health. The preventive healthcare and wellness market could grow from about $17 billion in 2020 to about $60 billion in 2030, driven by rising per capita preventive healthcare expense, in line with other emerging economies.[30] The number of medical tourists alone could rise 4.5 times, from about 640,000 in 2018 to about three million in 2030, provided steps are taken to keep costs affordable, ensure a supply of qualified doctors, enhance India's overall reputation in healthcare, and simplify patient processes.[31]

— **High-value tourism.** In 2018, about 10 million foreign tourists visited India, far fewer than Thailand (38 million, including 10 million to Phuket alone) and China (63 million).[32] Tourism circuits with high-quality infrastructure and services could attract some 50 million foreign tourists in 2030. This could generate $100 billion in spending to boost local economies and create higher-earning opportunities for five million low- and medium-skill service-sector workers.

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26 *Perspective 2025: Shaping the digital revolution,* NASSCOM, October 2015; *Technology sector in India 2020: TECHADE: The new decade strategic review,* NASSCOM, 2020.

27 UN Comtrade DESA/UNSD.

28 R, Maheshwari, K. R. Ashok, and M. Prahadeeswaran, "Precision farming technology, adoption decisions and productivity of vegetables in resource-poor environments", *Agricultural Economics Research Review,* September 2008, Volume 21; *Doubling farmers' income,* NITI Aayog, policy paper number 1/2017, March 2017.

29 N. Chandrasekaran and Roopa Purushothaman, *Bridgital Nation: Solving Technology's People Problem,* Gurgaon, India: Penguin Books, October 2019.

30 *Value added service—wellness and preventive healthcare,* Federation of Indian Chambers of Commerce and Industry (FICCI), December 2016; *Indian habit of being healthy,* Redseer, September 2018.

31 India tourism statistics 2019, Ministry of Tourism, 2019.

32 India tourism statistics 2019, Ministry of Tourism, 2019; *International tourism highlights 2019,* World Tourism Organization (UNWTO); Mastercard's Global Destination Cities Index 2019.

Growth booster 2: Efficiency engines for India's competitiveness (17 frontier business opportunities)

Technological innovation—accompanied by the appropriate governance and market reforms—can help India improve economy-wide competitiveness. The business models in this grouping can eliminate inefficiency in areas that underpin a competitive economy: power, logistics, financial services, automation, and government services. In each case, opportunities for value-creating market-based models could emerge, generating about $865 billion in economic value by 2030.[33] Examples include the following:

— **Next-generation financial services.** Key opportunities include innovation in digital payment offerings, new flow-based lending products that use a variety of transactions and other types of data to underwrite loans, asset resolution and recovery models that could make insolvency processes more streamlined and effective, and a larger range of risk capital investment vehicles such as alternative investment funds (AIFs), private equity, and products and channels that deepen the long-term contractual savings market of insurance and pensions. For example, we estimate that 80 percent of the unmet credit needs of MSMEs could be bridged by 2030 by leveraging data generated by platforms like the Goods and Services Tax Network to verify these companies' financial status.[34]

— **Automation of work and Industry 4.0.** At least 12 to 13 percent of today's work has the potential to be digitised, for example through network and inventory optimisation and demand-based planning—and that share could rise as the impact of COVID-19 sets in. The benefits include greater efficiency; for example, about 60 percent of manufacturing-sector output could leverage predictive maintenance, smart safety management, and product design. These in turn can lift productivity in plants and factories by 7 to 11 percent.[35] Across sectors, India could generate $275 billion in economic value by 2030 while supporting 16 million jobs. Many workers in these roles will need retraining, and some may be displaced, needing redeployment.

— **Efficient mining and mineral sufficiency.** India's geological strata are similar to Australia's, suggesting that the country is rich in minerals. However, in 2016–17, India's import-to-production ratio was high, at 3.7.[36] Resource access is critical to India's manufacturing growth. Requirements for energy and resources to drive this growth will make India even more heavily dependent on imports. Auctioning larger leases by amalgamating smaller resource blocks and enabling private participation could improve efficiency and increase exploration. This in turn could help India achieve resource sufficiency in an efficient and sustainable manner in materials like coal, with production rising from about 900 million tonnes to about 1.2 billion tonnes and zero net imports in 2030. Iron ore production could grow to more than 420 million tonnes by 2030, from about 200 million tonnes in 2018, according to our estimates.[37] Similarly, bauxite could increase from 20 to about 35 million tonnes from 2018 to 2030 and zinc-lead ore could potentially increase from 8 to more than 10 million tonnes by 2030. The increase in production of these resources would need to be carried out in an efficient and sustainable manner.

— **High-efficiency power distribution and logistics models.** In the power sector, compared to 20 other countries, India is the only economy whose industrial power tariffs are higher than residential tariffs, making the manufacturing sector less competitive. This is largely due to inefficiencies in power distribution and cross-subsidisation.[38] Undertaking productive market-based models like privatised or franchised distribution companies, rationalisation of tariffs, and digitised power infrastructure could reduce power tariffs to the commercial and industrial (C&I) segment of power consumers by

[33] For business models, including automation of work and Industry 4.0, e-governance, and digital communication services, see *India's trillion-dollar digital opportunity,* Ministry of Electronics and Information Technology, February 2019.
[34] *Digital India: Technology to transform a connected nation,* McKinsey Global Institute, March 2019.
[35] *A future that works: Automation, employment, and productivity,* McKinsey Global Institute, January 2017.
[36] Ministry of Mines annual report, Ministry of Commerce.
[37] McKinsey BMI; McKinsey MineSpans.
[38] Energy prices and taxes, International Energy Agency, 2016.

20 to 25 percent, by our estimates. Similarly, India's logistics costs, at 13 to 14 percent of GDP, are high by global standards, and its modal mix is skewed towards high-cost road transport, which accounts for 60 percent of logistics, compared with 37 percent in the United States.[39] Building a multimodal freight ecosystem with a greater share of low-cost rail and water modes, and logistics marketplaces could drive down cost by 20 to 25 percent. Creating efficient logistics and power distribution models could be a game-changer for India's manufacturing competitiveness.

— **E-governance model of the future for government services.** Digital technologies can bring about a step change in government services, lowering both cost and time spent, for example through comprehensive direct benefit transfer (DBT) and portable benefits, government e-marketplaces, digital land services, and digital citizen and business services. For example, DBT has already shown an estimated savings of 10 percent; 80 percent of government procurement can be made electronically, leading to price efficiency gains of 10 percent.[40] We estimate the potential annual economic value from e-governance to be at least $65 billion by 2030, improving the productivity of the public administrative workforce by about 15 percent and creating other wide-ranging productivity benefits to the economy.

Growth booster 3: New ways of living and working (13 frontier business opportunities)
Indian businesses can create economic value of about $635 billion by 2030 if they tap into the shifting preferences of Indians aspiring to a higher standard of living. Safer, higher-quality urban environments, cleaner air and water, more convenience-based services, and more independent work in the new ideas-based economy are all opportunities to create millions of productive jobs in service sectors. Examples include the following:

— **Productive and resilient cities with affordable housing and infrastructure.** India has the opportunity to put in place a robust planning approach for its top cities, which have low capital investment per capita and are less productive than they should be. India would need 25 million affordable housing units by 2030, at a low cost of at most 2,000 rupees per square foot, depending on income segment.[41] For example, mass affordable housing that uses modern construction practices, including prefabricated and modular construction and lightweight aluminium formwork is five to six times more productive than the sector average and would reduce cost to home buyers.[42] Other opportunities include a planning approach that increases the floor space index (FSI) systematically to make the right parts of cities more dense and productive. India's maximum FSI ranges from 1.8 to 5 across most cities, while averages are lower as the minimum FSI across cities ranges from 1.2 to 3.5. By contrast, FSI in cities in developed countries across the world are higher; for example, the maximum FSI level in New York is 12, and in Singapore it is 14.[43] With city planning in place, several opportunities to build businesses around this theme may occur, including mass affordable housing leveraging modern construction practices, urban infrastructure such as mass transit, and water, among others. Put together, for a country of India's urban scale, we estimate that these ideas could generate $195 billion in economic value in 2030 and support about 30 million jobs, for average yearly investments of $75 billion.

39 Draft National Logistics Policy, Ministry of Commerce, February 2019.
40 Direct Benefit Transfer, Government of India; *Digital India: Technology to transform a connected nation,* McKinsey Global Institute, March 2019.
41 *Brick by brick: Moving towards "Housing for All",* Royal Institution of Chartered Surveyors (RICS) and Knight Frank, 2019.
42 See *Reinventing construction: A route to higher productivity,* McKinsey Global Institute, February 2017.
43 Prahalad Singh, *Updates: Floor Space Index in India's Top Cities,* Common Floor, November 15, 2019; Purva Chitnis, "FSI Increased for Residential, Commercial Buildings in Mumbai," *Bloomberg Quint,* April 27, 2018; *Shaping Melbourne's Central City,* Department of Environment, Land, Water and Planning, Victoria State Government, November 2016.

— **Sharing economy models for jobs, skills, and education.** These models reflect changes in demographics and consumption, including online training and work platforms, education platforms, and app ecosystems to share ideas and meet all sorts of needs. More efficient and transparent labour markets result in better matching, leading to 6 to 7 percent higher wages, 7 to 22 percent less search time, and increased labour force participation, especially of women. Some 60 percent of new entrants into the labour force could potentially acquire new skills using digital tools and technologies.[44]

— **Modernised retail trade ecosystems.** India's share of traditional trade is high relative to peers at about 85 percent, while its modern trade and e-commerce segments account for only 10 percent and 5 percent of total gross merchandise value, respectively.[45] We estimate that modern trade and e-commerce are five and nine times more productive than traditional retail. Both these modes offer convenience and value, which are two key requirements for an Indian consumer. Following the pattern of other emerging economies, India could increase the share of both e-commerce and modern trade to 20 percent and put in place digitally enabled supply chains. Such steps would generate $125 billion in economic value by 2030 and lift the productivity of 5.1 million storekeepers in the fragmented retail sector and workers in the e-commerce sector.

— **Climate change mitigation and adaptation models.** The growing physical risks and rising hazards of climate change are creating opportunities in mitigation and adaptation models.[46] Some mitigation models include more energy-efficient buildings and factories, waste-to-value and wastewater solutions, and improved emission controls. Adopting more renewable solutions could have a significant impact: India could more than quadruple its renewable energy capacity, from 87 gigawatts to 375 gigawatts, and increase the share of wind and solar energy in power generation from about 7 percent in 2019 (overall renewables share excluding hydro-electric power is 8.3 percent) to best-in-class (about 30 percent) in 2030.[47] Climate risk adaptation technologies, for example, protecting a city from rising sea levels, developing early-warning systems for lethal heat waves, and installing cooling shelters to protect those without air-conditioning, could also become opportunities. We estimate that all of these opportunities could generate $90 billion in economic value in 2030 and support about two million jobs for an average yearly investment of $75 billion.

— **Digital communication services.** Communication, media, and entertainment are at an inflection point, with increasing numbers of smartphone users and rising data consumption. Digital media and entertainment are spurred by universal high-speed connectivity, with mobile as the primary channel. Technologies such as augmented reality, virtual reality, artificial intelligence, and natural language processing help customise and enhance the user experience. Services with high growth potential include over the top (OTT) video streaming, with strong original content and distribution capabilities, digital classified ads in recruitment, matrimony, automotive, real estate, and other categories. Other fast-growing opportunities include digital gaming, in particular, app development for "Indianised" games, and digital media, particularly local language news content. This can generate opportunities in universally available, affordable, high-speed internet connectivity and fast-growing digital media and entertainment ecosystems. In all, this opportunity could generate $55 billion in economic value in 2030, with an average yearly investment of $3 billion.

44 *Independent work: Choice, necessity, and the gig economy,* McKinsey Global Institute, October 2016.
45 Euromonitor International Retailing 2020 Edition.
46 See *Climate risk and response: Physical hazards and socioeconomic impacts,* McKinsey Global Institute, January 2020.
47 "India set to cross 100GW renewable energy capacity mark in 2020", *Economic Times,* December 26, 2019; *Global Energy Statistical Yearbook 2020,* Enerdata; Energy statistics 2020, Ministry of Statistics and Programme Implementation.

We estimate that enabling these 43 frontier business opportunities will require an average annual investment of $425 billion. That is about half of India's total investment in fiscal year 2020, $865 billion.[48] All of these frontier business opportunities require targeted reforms including sector-specific policies and incentives in manufacturing, real estate, and other sectors.

To capture promising frontier opportunities, some 1,000 midsize and small firms will need to become large and 10,000 small firms need to become midsized

Large companies that are productive and competitive will play a critical role in creating these frontier business opportunities. Our research suggests that in other outperforming emerging economies, large firms with annual revenues exceeding $500 million not only help boost GDP and productivity but also act as catalysts for change—driving exports, investing in job training, and paying higher wages, among other factors. They are also nimbler and more innovative at adopting new technologies.[49]

In India, too, large companies have been significant drivers of growth and innovation over the past three decades, although their contribution to GDP has declined since 2012. India has about 600 such firms. Their labour productivity is 11 times higher than that of the overall economy. They are 2.3 times more productive than midsize firms (revenues between $40 million and $500 million), and their profitability is 1.2 times greater. They account for almost 40 percent of total exports and employ 20 percent of the direct formal workforce. They provide jobs with better benefits than other companies do.[50]

Large firms in India face two major challenges, however. First, India has fewer large firms relative to GDP, and those firms make a smaller revenue contribution to GDP than corporate peers in China, Malaysia, South Korea, and Thailand. Second, the productivity and profitability performance of large companies in India have scope to close the gap with peers in other outperforming emerging economies.

Large Indian firms contributed revenues equivalent to 48 percent of nominal GDP in 2018. Large firms on average contribute 1.5 to 1.6 times more in other outperforming emerging economies, including China, Malaysia, and Thailand—and 3.5 times more in South Korea. This pattern holds in a number of key sectors. For example, the revenue contribution of India's 27 large construction firms is 11 percent of the sector's nominal gross value added (GVA). Other outperformer economies have between two and ten times the number of large firms (adjusted for size), and their revenue contribution is roughly seven to 12 times larger. The story is similar in retail trade, where India's 48 large firms make a revenue contribution of 38 percent of nominal GVA. Adjusted for size, that is about one-half to one-quarter the number of large firms in peer economies, whose revenue contribution is up to 13 times larger.

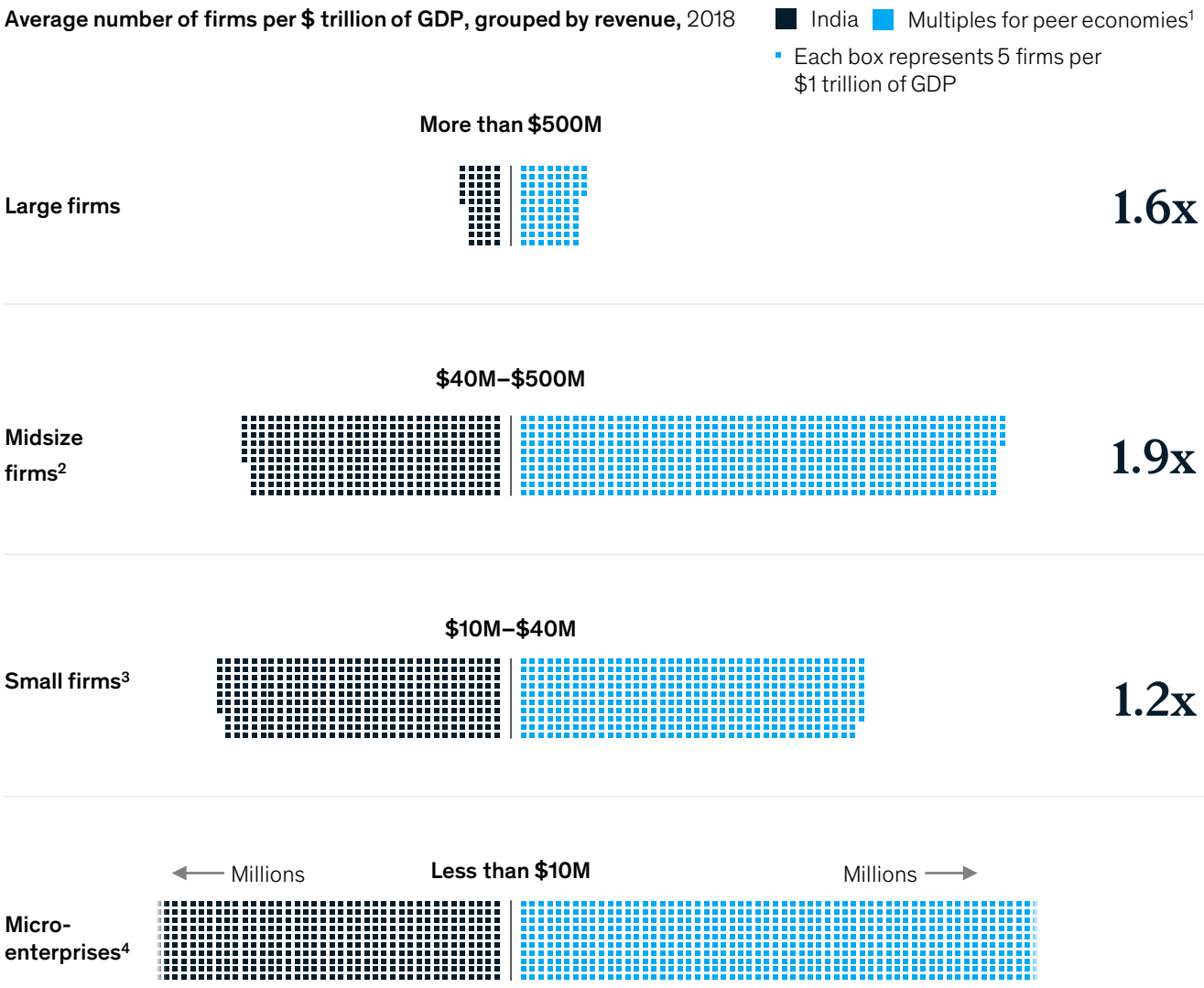
India's large firms have also not achieved their productivity or profitability potential. Overall productivity levels are on average one-tenth to one-quarter those of peers in other outperformer economies across sectors. Large state-owned companies in some sectors fall behind private-sector productivity levels: although there are some notable exceptions, Indian state-owned enterprises (SOEs) as a whole are at best half as productive as private-sector companies across key sectors.[51] The profitability of India's large firms, measured as return on assets, has been falling since 2012, from 1.9 to 1.2 percent, particularly driven by a few sectors such as financial services and construction, among others. Profits are also concentrated within a few large firms. Our analysis shows that just 20 of the country's roughly 600 large firms contribute 80 percent of the total profit of large firms.

48 National Accounts Statistics, Ministry of Statistics and Programme Implementation, 2020.
49 *Outperformers: High-growth emerging economies and the companies that propel them*, McKinsey Global Institute, September 2018.
50 CMIE ProwessIQ; McKinsey Corporate Performance Analytics; National Accounts Statistics, Ministry of Statistics and Programme Implementation, 2020; Periodic Labour Force Survey 2017–18; EPFO India.
51 World Input-Output Database (WIOD); CMIE ProwessIQ.

What underlies these performance trends and the difficulty of scaling? One factor is that India has a "missing middle" of midsize firms that typically grow into formidable competitors of larger rivals and, as happens in other emerging economies, eventually topple some of them from their perch. For example, peer emerging economies have almost twice as many midsize firms per trillion dollars of GDP with revenue between $40 million and $500 million. As a result, peer economies end up with 1.6 times the number of large firms with revenues more than $500 million, compared to India, per $1 trillion of GDP (Exhibit E6).

Exhibit E6

India has only about one-half to two-thirds as many midsize and large firms compared to other "outperformer" emerging economies, per $1 trillion of GDP.



[1] Peer economies refers to China, Malaysia, Thailand, South Korea, and Vietnam.
[2] Midsize firms are companies with revenue of $40M to $500M.
[3] Small firms have revenue of $10M to $40M.
[4] Microenterprises have revenue of less than $10M; total number of microenterprises in India are estimated to be 63 million as per *Ministry of Micro, Small & Medium Enterprises Annual Report 2018–19*.

Source: McKinsey Corporate Performance Analytics; CMIE ProwessIQ; McKinsey Global Institute analysis

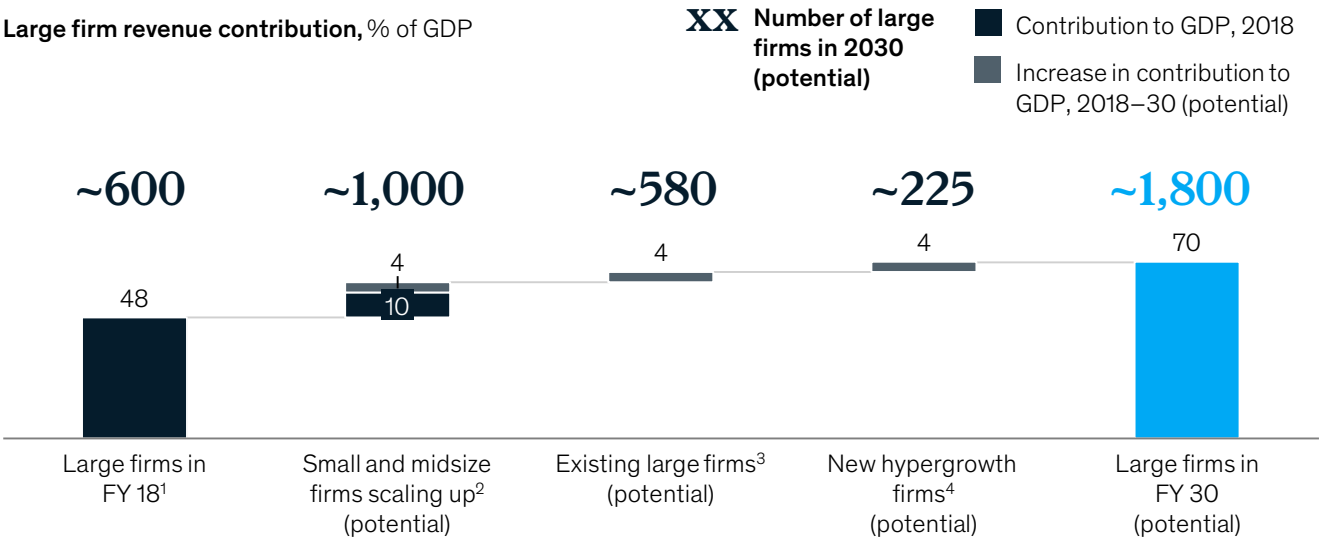
The upward mobility of small and midsize firms matters because it influences the degree of competitive pressure to which large firms are subjected. The higher such pressure, or contestability, the greater the likelihood that only the most efficient and high-performing firms will survive at the top. In some other emerging economies, it is harder for big firms to stay at the top. In China, for example, 66 percent of companies in the top quintile of firms by economic profit have been replaced over the past two decades. In India, by contrast, only 57 percent of top companies were replaced. In some sectors in India, including automotive and chemicals, the percentage of incumbents who were replaced is even lower.

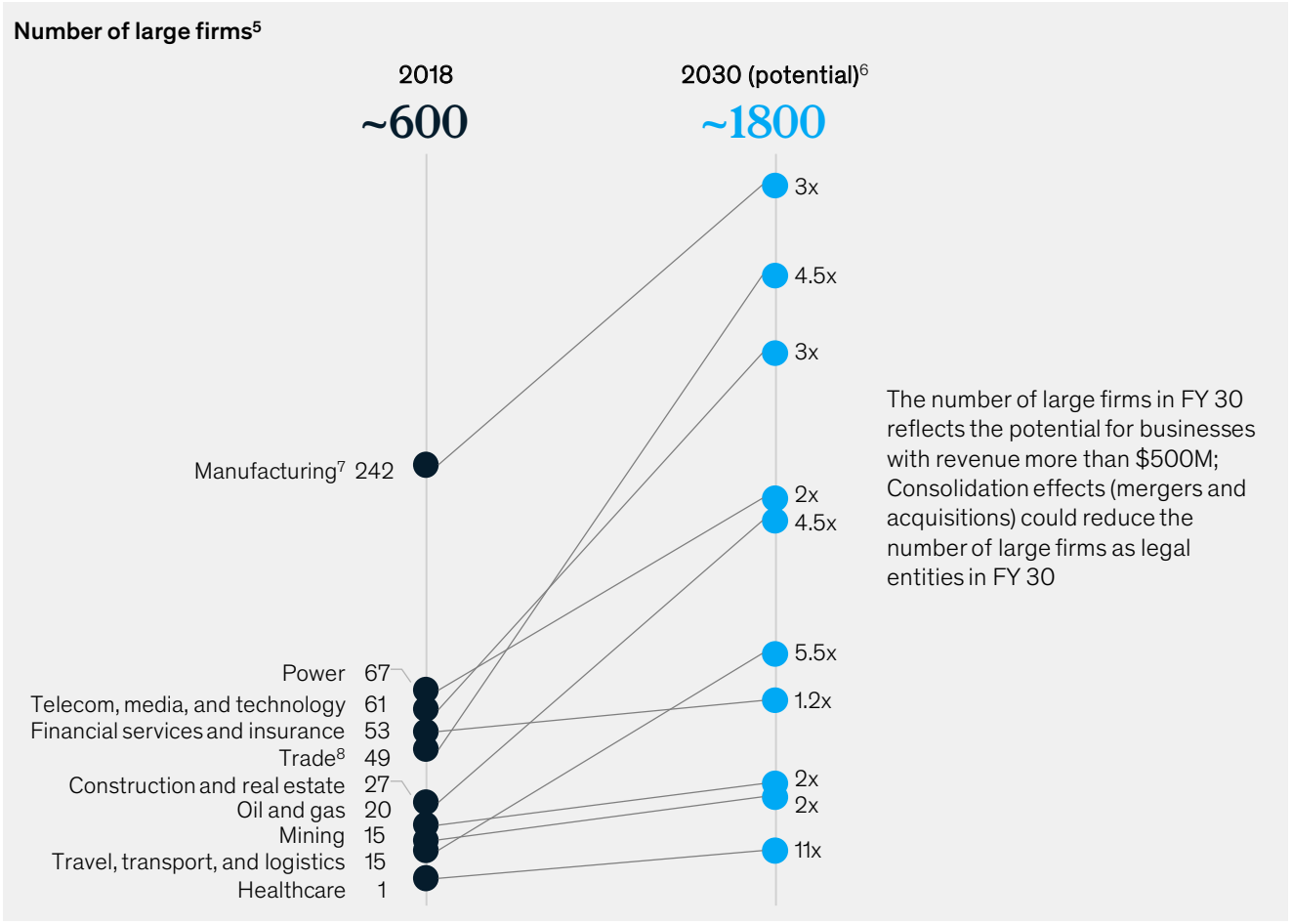
In order to achieve higher and system-wide productivity, India would need to raise the level of contestability and enable 1,000 or more small or midsize firms to scale up to large firms, and 10,000 or more small firms to scale up to midsize (Exhibit E7). That in turn will require capital: we estimate that these firms will need about six times the amount of capital currently used, of which about half needs to be risk capital. Achieving such a goal will take reforms to deepen capital markets and enable efficient financial intermediation for savings to reach these companies. It will also mean taking steps to improve the ease and reduce the cost of doing business at the national and state level, as we discuss below. If the reforms are successful, the number of large firms in India could more than triple, and their revenue as a proportion of India's GDP could rise from 48 to 70 percent—more in line with benchmark emerging economies. They could also account for about 15 million jobs in 2030.

India will need 1,000 or more small and midsized firms to scale up into large ones, tripling their number.

Exhibit E7

Large firms' revenue could rise to 70 percent of GDP in 2030 as about 1,000 smaller firms scale up; the greatest potential lies in fragmented sectors such as trade.





1 Firms with revenue more than $500M in FY 18.
2 Firms with revenue less than $500M in FY 18, but growing to more than $500M revenue by FY 30.
3 Firms with revenue more than $500M in FY 18 as well as FY 30.
4 Firms incorporated after FY 18, growing to become firms with revenue more than $500M by FY 30.
5 Excludes other miscellaneous firms not a part of the represented sectors. Companies operating in more than one sector considered in the sector that contributed to maximum revenue in FY 18.
6 Potential number of large firms by FY 30 represented as a multiple of the number in FY 18, rounded off to the nearest half.
7 Includes automotive, auto components, and advanced industries; basic materials; cement; chemicals; consumer goods; manufacturing of electronics; pharmaceuticals and medical products; steel; textiles; and other manufacturing.
8 Includes wholesale and retail trade; and hotel, restaurant, and entertainment.

Source: McKinsey Corporate Performance Analytics; CMIE ProwessIQ; National Accounts Statistics, Ministry of Statistics and Programme Implementation; IHS Markit Comparative Industry Service; McKinsey Global Institute analysis

Six areas of targeted reform are critical to unlock opportunities

To seize the chances offered by the frontier business opportunities—and to help increase the productivity and competitiveness of India's firms—we outline reform options on six key themes to boost productivity and job growth and in general make doing business easier. These reforms would also continue the push to formalise the economy and make it more inclusive. Exhibit E8 lists reforms critical for major sectors and frontier business opportunities. In a number of cases, the government in its reaction to the COVID-19 pandemic has already begun to introduce some of the measures. However, much more needs to be done across all six themes in order to achieve the $2.5 trillion in economic value and the decade of high GDP and productivity growth we envision. The measures are not exhaustive, but focus on the main policies that will move the needle most significantly.

1. **Introduce sector-specific policies to raise productivity in manufacturing, real estate, agriculture and food processing, retail, and healthcare**

Specific measures in key sectors can boost India's competitiveness and raise investment in product markets. In all, we estimate that these sectors—manufacturing, construction, labour-intensive services, knowledge-intensive services, utilities and mining, and agriculture—could contribute $6.3 trillion in GDP in 2030, compared to $2.7 trillion in 2020.[52]

— **Manufacturing.** The manufacturing sector has the potential to generate $1.25 trillion in GDP in 2030, more than double the $500 billion it accounted for in 2020. A key step forward for India to build out the global manufacturing hubs described earlier will be a holistic policy framework that takes into account each sector's needs and priorities. This can have three components. First, a stable and declining tariff regime, with removal of inverted duty structures. For example, high-tech firms and others can import certain items at customs duties of 10 percent or less, whereas raw materials including seamless alloy steel tubes, pipes, and carbon steel all carry a 15 percent customs duty.[53] Second could be building well-functioning, port-proximate manufacturing clusters, with free-trade warehousing zones, faster approval processes, and more flexible labour laws, as China has done in its free-trade zones. A final element is select sets of incentives, which are targeted, time-bound, and conditional and reduce the cost disadvantage India faces in comparison with other outperforming emerging economies. For example, handset production is between 10 and 20 percent more expensive in India than in Vietnam or China, which have benefited from cheaper components due to a strong manufacturing ecosystem and better infrastructure.[54] These incentives, potentially including tax concessions as well as incentives for capital investment and innovation, could be granted on achievement of certain output and investment-linked targets to help close the gap in key sectors, including electronics, auto, chemicals, pharmaceuticals, and food processing. To take one possible example, that of chemicals, incentives might be provided for capital expenditure, for example, for plant and machinery for integrated chemical parks, or tax concessions for environmental protection facilities, and incentives for innovation.

Manufacturing could generate $1.25 trillion in GDP in 2030, more than double the total today.

52 National Accounts Statistics, Ministry of Statistics and Programme Implementation, 2020.
53 SN Roy and Abhishek Agrawal, "How to achieve self-reliance in the capital goods sector", *Hindu BusinessLine*, May 19, 2020.
54 Ministry of Electronics and Information Technology; "Hanging up on mobile phone exports, India likely to miss 'hub' tag", *Business Standard*, January 14, 2020.

Exhibit E8

Six reform themes are critical for major sectors and frontier business opportunities within each sector.

Real CAGR FY 23–FY 30, % (potential) | Nominal GDP in FY 30, $ billion (potential) | Jobs in FY 30, million (potential) | ● Critical reform area

Frontier business opportunities	❶ Select sector-specific reforms (illustrative)	Real CAGR FY 23–FY 30, % (potential)	Nominal GDP in FY 30, $ billion (potential)	Jobs in FY 30, million (potential)	Cross-cutting reforms: Land ❷	Labour ❸	Power ❹	Privatisation, asset sales ❺	EODB, CODB[1] ❻
Manufacturing		**9.6%**	**1,250**	**69**					
Electronics, high tech and capital goods	A stable and declining tariff regime and removal of inverted duty structure				●	●	●	●	●
Chemicals, plastics, rubber	Port-proximate clusters with free-trade warehousing zones, faster approval processes, flexible labour laws, plug-and-play infrastructure, low input costs				●	●	●		●
Auto and auto components					●	●	●		●
Electric vehicles (EVs) and batteries	Holistic sector-specific policy framework such as time-bound and conditional incentives, eg, production-linked incentives, capital subsidies, etc; clear, stable tech-agnostic policies to aid innovation, quality management, etc				●	●	●		●
Pharmaceuticals and medical devices					●	●	●		●
Textiles and apparel					●	●	●		●
Construction		**8.5%**	**550**	**80**					
Affordable mass housing	Large-scale housing projects; single-window clearances; reduced fees; level playing field in terms of taxes like GST; home ownership tax incentives, regulatory amendments, increased FSI in city master plans				●	●			●
Mass transit					●	●			●
Water infrastructure					●	●			●
Property services					●	●			●
Labour-intensive services		**8.4%**	**1,150**	**104**					
Modern retail and e-commerce	Level playing field, eg, business model and product agnostic FDI policy								●
B2B/B2C marketplaces									
Digitised supply chains									
High-value tourism					●		●		●
High-efficiency logistics models					●		●	●	●
Multimodal freight operations									
Logistics platforms									
Knowledge-intensive services		**9.8%**	**2,550**	**89**					
Healthcare services for India and the world	Higher primary healthcare spending: public-private-partnership models; tele-health regulations, online training in new tasks; simplified processes for medical tourists, digital portal for tourists to access professionals and infrastructure				●	●	●		●
Innovative operating models									
Wellness and prevention therapeutics									
Medical and care-based service exports									
Global IT and digital services hub					●		●		●
Digital services in automation, cloud, analytics, etc									
E-governance of the future: DBT, etc									●
Online skilling, education, and work platforms and app ecosystems					●		●		●
Universal, high-speed internet and digital media and entertainment					●		●	●	●
Next-gen financial services	Channelling household savings to capital markets; tax incentives, creating a level playing field, enabling more risk capital investment vehicles, removing product market barriers; special assets bank, privatisation of banks							●	●
Utilities and mining		**6.0%**	**300**	**6**					
High-efficiency power distribution	Franchised/privatised DISCOMS; higher renewables share; lowered cross-subsidies; targeted subsidies						●	●	
Climate change mitigation and adaptation models					●		●		●
Mitigation models: renewables, energy-efficient solutions, waste-to-value and wastewater solutions, emission control solutions	Continued interstate grid transmission access, enforcement of minimum purchase of renewables by DISCOMs , transition to secondary and tertiary ancillary services markets, grid banking, time of day tariffs, net metering								
Climate risk adaptation technologies									
Efficient mining and mineral sufficiency					●	●		●	●
Agriculture		**3.3%**	**600**	**175**					
Agriculture and food processing exports	Reforms to MSP, APMC, ECA, GST; agriculture-production clusters; viability gap funding for food processing facilities; stronger FPOs for aggregation and finance[2]				●	●	●		●
Digitally enabled agriculture services									●

[1] Ease of doing business and cost of doing business.
[2] MSP: Minimum Support Prices; APMC: Agricultural Produce Market Committee; ECA: Essential Commodities Act; GST: Goods and Services Tax; FPO: Farmer Producer Organization.

Source: McKinsey Global Institute analysis

— **Real estate.** The construction sector has the potential to more than double its GDP to $550 billion, from $250 billion in 2020. Productive and resilient cities, which we identify as an aspiration for India, will require significant changes in the real estate sector. The ratio of home price to income is on average 4.3 in the eight largest cities in India, compared to less than 1.5 in a set of OECD countries.[55] The higher price of land in India is a large contributing factor and land market reforms, which we discuss below, would have a substantial impact; other sector-specific measures could also help boost the real estate sector. Home-ownership could be incentivised by rationalising stamp duties and registration fees to reduce costs to buyers and offering greater tax incentives, potentially including US-style tax deductions for mortgages up to a certain level. Regulatory amendments in tenancy and rent control policies could bring additional investment into the construction of rental stock. Large-scale affordable housing projects could enable modern construction methods that can increase productivity and reduce costs. Creating a level playing field with respect to goods and services tax for prefabricated and regular buildings would also help. Finally, time and cost delays can be brought down substantially by introducing a digitally enabled, single-window clearance for large affordable housing projects.

— **Agriculture and food processing.** India's potential to generate up to $95 billion in high-value agricultural exports will require a number of domestic reforms. This export growth could be driven predominantly by livestock and fisheries, pulses like soybean, spices, fruits, and vegetables, horticulture, dairy, and other agricultural produce. It could raise agricultural productivity and farmers' incomes. Possible options include changing the Agricultural Produce Marketing Committee (APMC) Act to ensure barrier-free interstate trade and amending the Essential Commodities Act (ECA) to deregulate the supply and distribution of agricultural commodities. Such steps would, in turn, enable private entities to set up their own markets, attract investment in infrastructure, and offer farmers competitive remuneration. These reforms have been announced by the government as part of its COVID-19 package, but they will need to be supported by specific policies and implemented at the state level. Furthermore, reforms to the system of minimum support prices could also potentially bring down the cost of commodities and help farmers develop a more accurate sense of market pricing; farmers could in return receive direct subsidies or other forms of support. The goods and services tax structure could also be reformed to encourage more value-added activities. Commodities currently are not taxed, unlike processed foods, which incur a tax of up to 18 percent.[56]

— **Retail trade.** Achieving the potential $125 billion in economic value by 2030 that we have identified will require a fundamental transformation of the retail landscape, with traditional models that account for more than 85 percent of sales volume giving way to a much larger share of e-commerce and modern trade. Improving supply chains, ensuring procurement scale, and enabling omnichannel and online-to-offline channels could also boost productivity. To achieve this shift, India will need a level playing field across trade formats, which would imply minimal regulatory intervention and a competitive environment with improved ease of doing business. One possible measure would be to adopt a foreign direct investment policy that is agnostic to both business models and products.

— **Healthcare.** India's potential to increase access to quality healthcare and attract medical tourism will require ramped-up spending and investment from the public sector; more than half of households in urban areas and about two in five households in rural areas currently depend on private-sector healthcare.[57] India currently spends about 3.5 percent of GDP on healthcare, below the level in China (5.2 percent) and Brazil (9.5 percent); in OECD countries, the average is just below 9 percent. We estimate that India could nearly double healthcare spending to 6.4 percent of GDP by leveraging public-private-partnership models and doubling public investment from about 28 percent to

[55] *Institutionalising the rental housing market in India - 2019*, Khaitan & Co and Knight Frank, 2019; House-price-to-income ratio in selected countries worldwide as of 1st quarter 2019, Statista, December 2, 2019.
[56] GST rates for goods and services as of 30.06.2020, Central Board of Indirect Taxes and Customs.
[57] Patralekha Chetterje, "Gaps in India's preparedness for COVID-19 control", *The Lancet Infectious Diseases*, April 17, 2020, Volume 20, Number 5.

56 percent.[58] India could also increase healthcare productivity by enabling new business models, including telemedicine, that make more effective use of human resources along the healthcare value chain. To attract medical tourists, India will need to simplify and rationalise processes, such as visa approvals and access to medical professionals through a digital portal, innovative services, and medical packages.

2. **Unlock land supply to reduce the cost of residential and industrial land use, spurring demand for construction labour and building materials, and making industry more competitive**

As noted in the real estate section above, buying a home is financially out of reach for many Indians, especially those in the bottom two income segments. The high cost of land is a key reason. For companies, too, high-cost land is a brake on expanding productive capacity. We estimate that, by enacting several key reforms, India has the potential to reduce land costs by 20 to 25 percent and increase the supply of land available for construction.[59]

Steps towards achieving this could include mapping out 20 to 25 percent of public and state-owned enterprises' land that is suitable for construction and currently underused. Large amounts of land are available with defence, railways, port trusts, and airports. A portion of this land could be leased out at affordable prices to private developers. Other countries have already tried this; for example, Turkey released 16,000 hectares of land for affordable housing at marginal prices between 2003 and 2013.[60] Floor space index zoning regulations could also be reformed to reflect variations in accessibility via public transit or the distance from central business districts. Informal settlements and unregistered land could be formalised, including by speeding up the digitisation of land records, cadastral maps, and surveys, deploying modern technologies including differential GPS and drones. Finally, the process of land acquisition for industrial use could be significantly eased. Some states have implemented measures like land pooling, enhancing the state land bank for industrial use, and introducing legislative amendments to ease the acquisition of land by the private sector, subject to high-level clearance.[61] To ease conversion of land from agricultural to industrial use, Karnataka has implemented a simplified online, single-window system that requires fewer document submissions for land use conversion for industrial purposes. Approval is automatic after 30 days if no response has been received.[62]

3. **Create flexible labour markets with stronger social safety nets and more portable benefits to help the labour force become more mobile across occupations, sectors, and locations**

More vibrant manufacturing and a more vibrant economy in general will require more flexible labour markets. India continues to place labour restrictions on manufacturing companies. The limits encourage small firms to remain small, imposing high compliance costs as firms cross a low threshold of employment. India has about 250 national and state labour laws. Per-worker costs for firms increase by 35 percent after the tenth worker due to additional regulations.[63] Given the scale of the employment challenge over the next decade, the government could consider reviewing the various laws on the books and examine options to improve labour market flexibility. Barriers to labour flexibility could be removed by providing more freedom to manufacturing companies to shape the size, composition, and skills of the workforce, in line with evolving needs. For example, the requirement that firms obtain government permission for layoffs, retrenchments, and closures was introduced in 1976

58 World Health Organization Global Health Expenditure database; "Health expenditure and financing: Health expenditure indicators", Organisation for Economic Co-operation and Development (OECD) Health Statistics database.
59 See *A blueprint for addressing the global affordable housing challenge*, McKinsey Global Institute, October 2014.
60 Housing Development Administration of Turkey (TOKİ).
61 "Punjab cabinet gives nod to new land pooling policy for industrial sector", *Hindustan Times*, July 22, 2020; "UP amends revenue code, simplifies land acquisition process to expand land bank for industries", *Financial Express*, May 29, 2020; "Bill to acquire lands for industrial projects tabled", Hindu, March 2, 2020.
62 "Land conversion for industries to be simplified, expedited", Hindu, December 5, 2018.
63 Udit Misra and Nushaiba Iqbal, "Explained: What labour law changes by states mean", *Indian Express*, May 16, 2020; Amrit Amirapu and Michael Gechter, "Labor regulations and the cost of corruption: Evidence from the Indian firm size distribution", *Review of Economics and Statistics*, March 2020, Volume 102, Issue 1.

and amended to apply to all firms employing 100 or more workers from 1984.[64] Since 1984, India's manufacturing sector has grown tenfold in GVA in real terms, while the threshold has remained the same. Increasing this threshold at least in line with GVA growth would reflect the modern environment. Other options could be excluding downsizing undertaken due to technology interventions or export order seasonality, flexible domicile requirements, and streamlined compliance regulations. Enhanced labour flexibility and lower cost of labour compliance would need to be paired with measures to reinforce income security in case of unemployment. As India progresses to a more formalised labour market, unemployment protection may need to be part of a nationally defined social security system, along with support to get unemployed workers back into gainful work (including employment exchanges and matching services, vocational skills training, and retraining services). Domestic labour mobility between geographical locations in India matters, too. In the high-growth path to 2030, many newly created jobs will be in cities, potentially raising the urbanisation rate; we estimate that the incremental shift towards urban employment could total 8 percentage points. Accordingly, current disincentives to mobility, such as the fear of loss of entitlements, may need to be reduced, lowering barriers to migration. For example, subsidies could be linked to Aadhaar, and programmes similar to "one nation, one ration card" could be introduced. Finally, implementation of the affordable housing schemes for domestic migrant labour launched under the government's Pradhan Mantri Awas Yojana scheme can be expedited.

4. **Reduce commercial and industrial (C&I) power tariffs by 20 to 25 percent through new business models in power distribution**

To create the high-efficiency power distribution models we identified as being among India's frontier opportunities will likely require structural reforms to the power system. Power tariffs are 20 to 40 percent higher than in peer economies. Measured against 20 other economies, both emerging and developed, India is the only country with higher tariffs for industrial consumers than residential ones.[65] Moreover, as a result of low collection efficiency, theft, and poor billing practices, India's aggregate technical and commercial losses are high on average at about 19 percent, compared to 10 percent in best-in-class players.[66]

Various reform measures could help reduce C&I power tariffs by 20 to 25 percent. These include a shift to franchising models or privatisation of power distribution companies in the top 100 cities; the introduction of cost-reflective tariffs for C&I customers and direct benefit transfers for subsidies, which can bring down cross-subsidies; and a focus on smart meter penetration. While some of these reforms have been announced by the government as part of its COVID-19 package, they may need to be supported by specific policies and implemented at the state level. In addition, India could consider separating carriage and content operations, which would introduce competition and improve efficiency.

5. **Monetise government-owned assets and increase efficiency through privatisation of more than 30 state-owned enterprises (SOEs)**

A sharp uptick in productivity will be the common denominator of growth-boosting reforms. Achieving that will require changes to state-owned enterprises, whose productivity for the most part lags behind that of private-sector firms. Large-scale privatisation could give a needed boost to key sectors, more than doubling or tripling productivity, and potentially contribute between 0.2 and 0.4 percentage points annually on average to incremental GDP, as per our estimates.[67] For this to happen, privatisation would need to be accompanied by an appropriate institutional framework and effective competition. This has been found to be critical in bringing about improvements in company performance because it is associated with lower costs, lower prices, and higher operating efficiency.[68]

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64 The Industrial Disputes (Amendment) Act, 1976; The Industrial Disputes (Amendment) Act, 1982.
65 Energy prices and taxes, International Energy Agency, 2016.
66 Annual reports, Ujjwal DISCOM Assurance Yojana (UDAY), Ministry of Power.
67 CMIE ProwessIQ.
68 Saul Estrin and Adeline Pelletier, "Privatization in developing countries: What are the lessons of recent experience?", *The World Bank Research Observer*, February 2018, Volume 33, Issue 1.

Privatisation proceeds would contribute to government coffers. In all, India has about 1,900 state-owned enterprises. We analysed companies for which data are available, some 577 of the 1,900 total. These had a total book value of about 20 lakh crore rupees (about $290 billion) in 2018.[69] We estimate that about 400 of these SOEs could be privatised. That figure excludes SOEs in strategic sectors, such as nuclear energy, and in sectors in which the assets of state-owned enterprises are worth more than their equity, such as power transmission companies, in which the government may want to maintain control through a majority stake and realise value via an asset monetisation programme. For the 400 or so SOEs that could be privatised, the government's share of the book value was $140 billion in 2018, and potential privatisation proceeds could be $540 billion between 2020 and 2030. Privatisation could be carried out through a combination of public equity issuance or shares sale on the stock market, divestiture to a strategic investor, or employee participation in equity, with the purpose of reducing the government stake below 50 percent. Large gains would be possible even if a relatively small number of privatisations were carried out: we estimate that just 2 percent of all SOEs could yield as much as 80 percent of all potential proceeds from privatisation. In addition, assets owned by the government, including roads, railways, ports, airports, power infrastructure (for example, transmission grids), and telecom towers could be monetised.

6. Improve the ease and reduce the cost of doing business at the state and city level

India has made significant progress in the World Bank rankings for ease of doing business. The country rose from 130th overall in 2016 to 63rd in 2020 and earned a citation as one of the ten economies that had made the most improvement across three or more dimensions. However, Indian companies large and small still face obstacles in doing business that crimp their effectiveness and limit their productivity. These range from payments for public procurement that are sometimes significantly delayed; limited efficiency in export-import processes and compliances that make exporting twice as long a process as in some other emerging economies; duplication of compliances from both central and state authorities across processes; tedious and slow processes to obtain construction permits; a lack of judicial capacity to enforce contracts; time-consuming compliance stipulations for tax payments that can require 250 hours or more; understaffed patent offices that mean the average time for granting patents is 64 months, almost triple the time in China, Europe, and the United States; and a low recovery rate for insolvencies.[70]

A number of the issues and obstacles that companies face could be resolved if the government adopted global best practices in relevant areas. For example, to accelerate the granting of patents would require more staff, but also more adept use of technology to improve process efficiency. To simplify and expedite tax payments, the existing electronic filing system could be extended, creating a one-stop shop for a range of taxes. China, for example, has included stamp duties and other taxes in its e-filing system. To enable prompt, on-time payments, South Korea has created an e-procurement system to ensure transparency in the contracting and payment processes. Some countries have set up a single portal for business licences by integrating company registries, tax administration, and social welfare departments. An "e-governance for business" mission at the state government level would be required to improve the ease of doing business at the local level across a large number of cities and towns within each state.

[69] *4th annual report on the Working and Administration of the Companies Act, 2013 year ending 31.3.2018*, Ministry of Corporate Affairs, December 2018; CMIE ProwessIQ.
[70] *Doing business 2016–2020*, World Bank.

Three pillars of financial reform spanning capital markets, credit intermediation, and public finances could help raise the $2.4 trillion of capital required in 2030

Assuming the requisite reforms spur growth and stimulate appetite for private investment, India will need to find new sources of finance. We estimate the total capital requirement would grow to about $2.4 trillion in 2030, compared with about $865 billion in fiscal year 2020, based on an average annual investment growth of about 9 percent.[71] Small and midsize companies will need access to more than $800 billion in capital in 2030. This would mean reversing the trend among these firms of credit contraction and weak equity raising. India will also need to finance government expenditure, budgeted in the range of 26 to 29 percent of GDP each year.[72] This could be done through a combination of government tax and nontax revenues, and maintaining the borrowing level.

To enable investment to return to about 37 percent of GDP, the level India has achieved in high-growth periods in the past, from 33 percent in fiscal year 2020, a triple focus is needed to unlock the supply of capital at a lower cost:

Channelling more household savings to capital markets. While foreign capital has a critical and growing role to play, the importance of domestic savings cannot be overemphasised, as our previous research on emerging economies has shown.[73] India can meet the bulk of its investment requirement through domestic sources of capital if it succeeds in raising the household savings rate to 19 percent of GDP from the current 17 percent and, within household savings, raising the flows to financial rather than physical assets to 11 percent of GDP in 2030, from 7 percent in 2018. That amounts to annual average growth of 12 percent in the pool of capital available for financial intermediation (rather than invested in land or gold). Net foreign capital inflows would also need to rise to about 3 percent of GDP from 1.8 percent—that is, quadruple from $50 billion in fiscal year 2018 to $200 billion in 2030. Of this, net foreign direct investment would need to increase to $120 billion (1.8 percent of GDP) from about $30 billion (1.1 percent), in line with peers like China, South Korea, Malaysia, and Thailand.[74]

Beyond the sums required, India would need to ensure that a higher share of household financial savings flows to productive and high-growth firms through a more efficient and deeper capital market. The overall depth of financial markets in India, as measured by outstanding equity, corporate bonds, and government bonds and cumulative five-year issuances of securitised products, is about 140 percent of GDP compared to an average of about 240 percent among peers.[75] Equity and debt instruments both lag; mutual fund assets under management are equivalent to 12 percent of GDP, less than half the level of peer economies at 26 percent.[76] In addition, the turnover ratio of the Indian stock market has fallen from 143 percent in 2008 to 58 percent in 2018 and further to 29 percent in 2019, compared with 224 percent for China, 130 percent for South Korea and 64 percent for Thailand.[77] The challenge over the next decade will thus be to create conditions that encourage household investment in shares and debentures, insurance, pensions, and other instruments that give greater depth to India's capital market.

71 National Accounts Statistics, Ministry of Statistics and Programme Implementation, 2020.
72 Union government budget documents; *State finances: A study of budgets of 2019–20*, Reserve Bank of India, September 2019.
73 See *Outperformers: High-growth emerging economies and the companies that propel them*, McKinsey Global Institute, September 2018.
74 Balance of payments, Reserve Bank of India, June 2018; World Bank national accounts data; OECD National Accounts data; National Accounts Statistics, Ministry of Statistics and Programme Implementation, 2020; International Monetary Fund Balance of Payments database.
75 Peers include China, Malaysia, Singapore, South Korea, and Thailand; World Bank; Debt securities statistics, Bank for International Settlements, June 2020; Securities and Exchange Board of India; Korea Treasury Bond, Ministry of Economy and Finance; Dealogic.
76 World Bank; Association of Mutual Funds in India.
77 *World Federation of Exchanges database,* World Bank.

A number of reform measures can help deepen the capital markets. First, existing products and channels could extend their reach through coherent incentives and a level playing field across products. For example, taxes on capital market instruments could be reduced and rationalised. Singapore has zero percent long-term capital-gains taxes, while India taxes capital gains on unlisted corporates at 20 percent and listed ones at 10 percent.

Dividends are taxed at the marginal income tax rate, for example, at different tranches of 31 or 43 percent, including surcharges, for segments of the population with annual income more than 15 lakh rupees. That compares with dividend withholding tax rates of 10 percent in Thailand and zero percent in Malaysia. Across capital market instruments, varying tax rates could be evened out: alternative investment funds are subject to 20 percent long-term capital gains tax for domestic residents, for example, compared to 10 percent for foreign investors.[78] Other measures could be taken to make equity trading more attractive, such as lower transaction costs and simplifying compliance requirements for trading in stock exchanges. Enabling more risk capital investment vehicles like private equity is also critical; India has about 100 private equity firms, while the United States with 7.5 times the GDP has 33 times the number, at 3,300.[79]

Second, existing product-market barriers such as distribution margins and investment restrictions on a range of instruments will also need to be reduced. For example, investment in alternative investment funds is currently restricted for institutional investors like banks, insurance companies, and pension funds. Third, more financial instruments and channels could be introduced. For example, a government-backed mortgage securitisation organisation like Fannie Mae in the United States could be set up. Beyond domestic capital, foreign sources of capital can be tapped to a greater extent. If India were to be incorporated into the global bond index, and a hassle-free process designed, this could increase flows of foreign investment.

Apart from these three broad measures, economies have leveraged development finance institutions (DFIs) to deliver strategic, long-term finance to target sectors and priorities, including exports and infrastructure, in many emerging economies. Although this can result in market distortions and rent capture, some policy experts say DFIs are needed now more than ever, given their countercyclical role and their ability to bridge infrastructure financing gaps and address failure in the allocation of risk capital by capital markets.[80] Certain outperforming economies have built-in measures to limit this potential distortion; for example, South Korea's Development Bank had a strict loan ceiling on project costs to assure co-investment, risk sharing, and aligned incentives.[81]

Reducing cost of credit intermediation. The average commercial borrower in India has seen continued high real interest rates, which are more than five percentage points higher than in other outperforming emerging economies (Exhibit E9). India can reduce its cost of financing by about 3.5 percentage points by taking steps to reduce the cost of credit intermediation in the banking system. The government borrowing programme that relies heavily on bank deposits reduces the sources of capital available to the private corporate sector and consequently increases the cost of capital for commercial borrowers. We estimate that "crowding out" by government borrowing keeps the cost of commercial credit about 1.2 percentage points higher in India than in similar emerging economies.

78 *Capital gains tax*, Mazars, Singapore; *Taxation on equities investment*, Stock Exchange of Thailand; *Simple tax guide for Americans in Malaysia*, Tax for Expats; *Union budget 2019-20*, Ministry of Finance; "Real estate investment trust (REITs) and infrastructure investment trust (InvITs) in India", *Financial Foresights*, FICCI, Q3 FY 14–15, Volume 5, Issue 2; T E Narasimhan, "IVCA seeks tax parity, approval for AIFs to invest in NBFCs ahead of budget", *Business Standard*, January 25, 2020.

79 *India private equity firms*, Crunchbase; *United States private equity firms*, Crunchbase.

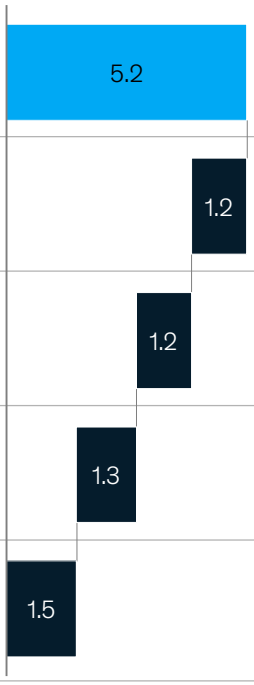
80 Jiajun Xu, Xiaomeng Ren, and Xinyue Wu, "Mapping development finance institutions worldwide: Definitions, rationales, and varieties", NSE Development Financing Research report number 1, Peking University, Institute of Structural Economics, May 2019.

81 For details, see *Outperformers: High-growth emerging economies and the companies that propel them*, McKinsey Global Institute, September 2018.

Exhibit E9

The average financing cost to commercial borrowers in India is structurally higher by an estimated 5.2 percentage points than in comparable economies.

Drivers of difference in the cost of commercial loans in India vs other emerging economies Percentage Points	Average nominal rates, 2019[1] % India	Other emerging economies[2]	Potential levers to reduce cost of commercial loans
Fund and fee-based charges paid by borrowers[3]	10.7	5.5	
Crowding-out effect of government borrowing[4]	1.2		Streamlining public finances, market-linking small-savings rates, rationalising SLR[5] requirement, focusing PSL[6] obligations on key priorities
Credit risk provisions due to nonperforming loans	1.8	0.6	Special Asset Bank or AMC[7], strengthening Insolvency and Bankruptcy Code processes to reduce NPAs[8]
Operating expenses	2.7	1.4	Building operational efficiency through privatisation, digitisation, and automation, among others
Residual effects	5.0	3.5	



[1] Nominal rates considered; estimates based on a sample of commercial banks in each country.
[2] Simple average of China, South Korea, and Thailand.
[3] Assumes borrowers pay all fund-based and fee-based (non-fund-based) charges.
[4] Estimated based on yield curve for government securities in India relative to those in sample countries.
[5] Statutory Liquidity Ratio.
[6] Priority Sector Lending.
[7] Asset Management Company; Special assets bank or AMC can address the NPA overhang issue, but the fundamental project and entity risk would need to be addressed by reforms, for example, improving ease of doing business, improving cost competitiveness, among others.
[8] Nonperforming asset.

Source: World Bank; International Monetary Fund; Reserve Bank of India; Bloomberg; McKinsey Corporate Performance Analytics; McKinsey Global Institute analysis

An important step to address the "crowding out" would be to streamline public finances, as described in the section below. This would enable a reduction in the statutory liquidity ratio, as India did in the 1990s, to free up more lending to nongovernment segments and reduce its cost. Streamlining public finances would also allow market-linked interest rates on government small savings schemes, enabling higher savings (at lower interest rates) to flow into bank deposits, for commercial enterprises to borrow at lower cost. India's commercial borrowers also pay a higher credit risk premium of about 1.2 percentage points; and one factor driving this is the rising level of non-performing assets (NPA) in banks, which almost tripled over the last decade. A solution could be to improve the health of the financial sector, by establishing a "special assets bank", backed by private-sector funding, to help tackle resolution of NPAs. This could be an independent legal entity designed as an off-balance-sheet vehicle to enable maximum transfer of risk. It could aggressively price recovery of specific NPAs. Among several international precedents for such action is Sweden's establishment of a "bad bank" that helped the country push through banking reforms after a financial crisis in the early 1990s.[82] While a special assets bank could

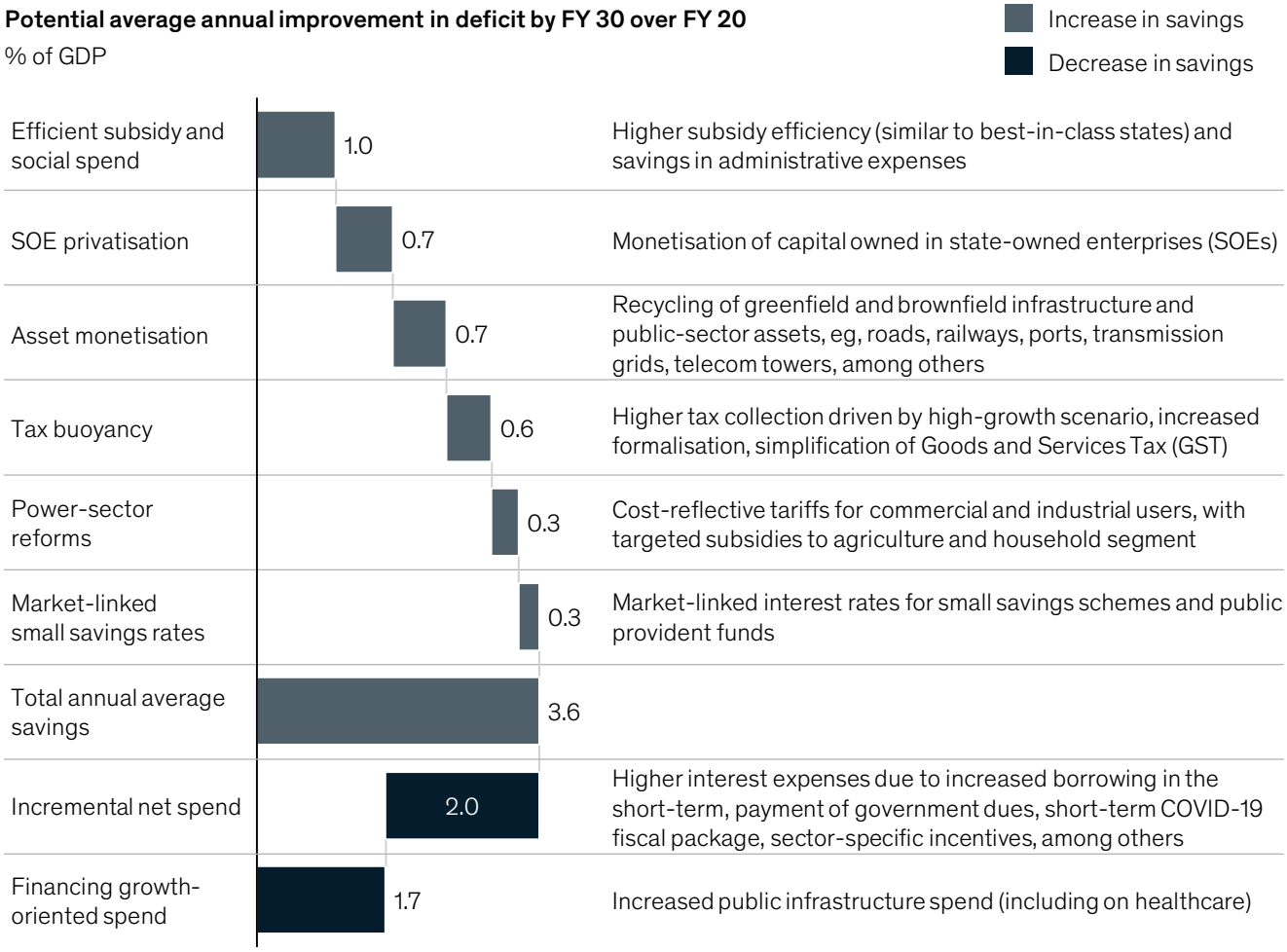
[82] Dominic Barton, Roberto Newell, and Gregory Wilson, *Dangerous Markets: Managing in Financial Crises*, Hoboken, NJ: John Wiley and Sons, 2002.

address issues due to the NPA overhang, fundamental project or entity risk would need to be addressed through reforms—for example, improving ease of doing business and cost competitiveness, as described in the earlier section. Finally, Indian banks' operating expenses are 1.3 percentage points higher than peers'. A privatisation agenda in banking could help to reap the efficiencies of consolidation and usher in more market-based incentives for cost optimisation.

Streamlining public finances to allocate capital more efficiently. In the short term, India's public finances will take a toll from COVID-related expenses, which increase government liabilities and interest expenses even as GDP contracts. The government has little choice in the short term, given the pandemic's deleterious effect on the economy; it is the only player able to mobilise demand in the Indian economy. Yet, viewed over the decade to 2030, India has several opportunities to streamline its public finances and channel more resources to productive infrastructure. We estimate that India has the potential to save about 3.6 percent of GDP on an annual basis, on average over fiscal years 2021–30. Net of the anticipated higher spending needs of about 2.0 of GDP, it would imply that India's government has the potential to allocate about 1.7 percent of GDP on average each year, or approximately 5.7 trillion rupees (about $80 billion), to finance additional growth-oriented spending (Exhibit E10).

Exhibit E10

With reform, India could release up to 3.6 percent of GDP on average per year, to finance additional spending, including on infrastructure.



Source: Ministry of Statistics and Programme Implementation; Reserve Bank of India; Annual reports of SOEs; Union Budget documents; Ministry of Corporate Affairs database; CMIE ProwessIQ; McKinsey Infrastructure Stock & Spend Analyzer; *Performance Report of State Power Utilities 2018–19*, Power Finance Corporation Limited; *Seventh Annual Integrated Ratings of State DISCOMs,* Power Finance Corporation Limited; *Annual Survey of Industries 2017–18 and 2016–17,* Ministry of Statistics and Programme Implementation; World Bank; Income Tax Return Statistics Assessment Year 2018–19; *India's path from poverty to empowerment,* McKinsey Global Institute, 2014; McKinsey Global Institute analysis

These savings could come from a range of measures quantified in the exhibit. First, 1 percent of GDP, on average per year over the next decade could come from more efficient subsidy and social spending—direct benefit transfers of all subsidies could improve subsidy efficiency from 60 to 65 percent currently to 75 percent, in line with some best-in-class states.[83] Second, 0.7 percent of GDP on average per year could come from privatising the top 2 percent of all state-owned enterprises. Third, 0.7 percent of GDP on average per year could come from monetising assets including roads, railways, ports, airports, power infrastructure (for example, transmission grids), and telecom towers. Fourth, 0.6 percent of GDP annually in the same period could come from greater tax buoyancy, particularly driven by faster growth; the high-growth path can increase corporate profitability, employment, wages, and consumption, and in turn drive up tax revenue. And finally, 0.6 percent of GDP annually could come from power-sector reforms, as noted earlier, and rationalising interest rates on government borrowing from small savings schemes and pensions funds—a measure already announced.

Central and state governments will need to work together and in concert with business leaders to achieve India's high-growth imperative

About half of the reforms identified in this report can be enacted through a policy or law, relatively quickly, though even these will require the government to work with deep domain experts, think tanks, academia, industry bodies and the private sector, among others to draft detailed policies and laws, that could remain stable for a sustained period of time. Other reforms will require the government to act on implementation of initiatives and projects.

While the central government's pro-growth vision and agenda are essential, state governments have a critical role to play. They will need to implement roughly 60 percent of the reforms (Exhibit E11). Business leaders also have a major responsibility for realising the high-growth agenda. They will need to collaborate with government to ensure a sound near-term on-the-ground recovery from the COVID-19 crisis and, at the same time, commit to the long-term growth that is needed to create 90 million jobs over the next decade.

The starting point will be a clear and sharp vision, arrived at by the central government in alignment with the business community. Action must follow vision, with reform measures put in place alongside incentives and structures across all levels of government to ensure that they are implemented.

For a reform agenda to endure across multiple years, an institutional body could steward the process under the chairmanship of the Prime Minister, with the right level of empowerment, including for resource allocation, and technical- and domain-specific expertise. This role could be played by an existing body chaired by the Prime Minister, like NITI Aayog and the government-instituted Development Monitoring and Evaluation Office (DMEO) within it, or by a High-Level Group within the Prime Minister's Office. Keeping the urgency of reforms in mind, a set of committees across manufacturing, financial-system reform, public finance, and centre-state coordination for concurrent topics and cross-cutting reform could be set up to frame policies in a time-bound manner. These would each be headed by an eminent thought leader with relevant expertise, with experts from the business sector, academia, think tanks, and industry bodies invited to serve. These committees could create strategic visions with executable plans, milestones, and outcomes clearly outlined, within a three-to-six-month time frame.

[83] *From poverty to empowerment: India's imperative for jobs, growth, and effective basic services*, McKinsey Global Institute, February 2014.

Exhibit E11

About 60 percent of the reform agenda requires action at the state level, and more than half can be implemented through a policy or law.

Real sector reforms - government as policy maker | Real sector reforms – government as implementer | Financial system reforms – government/regulator as policy maker

Central-government-led reforms 40%	Central-government-supported, state-led reforms 40%	State-led reforms 20%
Sector-specific pro-growth policies		
Manufacturing		
• Stable and declining tariff regimes, removal of inverted duty structures • Time-bound and conditional incentives to electronics, automotive/EVs[1], chemicals and pharmaceuticals		• Port-proximate clusters: expedite Sagarmala
Real estate		
• Increase in tax incentives for home ownership	• Large-scale affordable housing projects; rationalisation of stamp duty/registration fee • Regulatory amendments to enable greater supply in rental housing market • Introduction of single-window clearance for all large affordable housing projects	
Agriculture and food processing		
• Reform of minimum support prices	• Implementation of APMC[2] reforms announced • Implementation of ECA[3] reforms announced • Tax reforms and incentives for processed food • Extension of Mega Food Park to large integrated food processing facilities and viability gap funding	
Retail trade		
• Level playing field, eg, model/product agnostic FDI policy		
Healthcare		
	• Enabling new healthcare human resources models • Simplification of processes for medical tourists	• Investment in primary healthcare system: balance payer and provider roles
Unlocking supply in land markets		
• Mapping and releasing underutilised public land for development		• Mapping and releasing underutilised public land for development • Increasing FSI[4] in city master plans • Expediting land records digitisation • Easing land acquisition by land pooling, etc
Flexible labour markets		
	• Reduction in labour compliances, flexible policies • Removal of migration barriers	
Efficient power distribution		
	• Model DISCOMs in top 100 cities, franchised and privatized models; cost-reflective tariffs • Increase in renewables' share in electricity mix	
Privatization and asset sales		
• Increase in SOE productivity through privatisation and asset sales	• Privatisation of state DISCOMs	
Improving ease and reducing cost of doing business (EODB and CODB)		
• E-governance, direct benefit transfer		• E-governance, direct benefit transfer
Financial system reforms		
• Deepen capital markets[5] • Reduce cost of credit intermediation[5] • Streamline public finances[5]	• Streamline public finances[5]	

1 Electric vehicles.
2 Agricultural Produce Marketing Committee.
3 Essential Commodities Act.
4 Floor-space-index.
5 Reforms include incentives and levelling the playing field, rationalising product market barriers, enabling new instruments and channels, rationalising reserve, priority sector requirements, establishing special assets bank, increasing subsidy efficiency, privatisation, asset sales, power sector reforms, market-linking small savings.

Source: McKinsey Global Institute analysis

In the implementation phase of reforms, the stewarding body under the prime minister could monitor progress and solve implementation problems and bottlenecks. This group would meet monthly to review outcomes and deliverables using data and dashboards, steer national-state coordination and public-private coordination, and resolve implementation issues, similar to the PRAGATI model used for the Prime Minister's review of critical infrastructure projects.

The policies framed at the national level would have to be driven at the state level. State governments will also need to set their visions and blueprints to address key pro-growth priorities. Each Chief Minister would appoint a similar state-level committee to develop a vision for the state. The vision and blueprint would need to include a basic set of reforms that each state would have in common, such as in the power sector or ease of doing business. Furthermore, the vision would make choices around which frontier business opportunities would be growth priorities. The choices would vary by state depending on local endowments, such as agricultural resources, educated professionals, and port-proximate land. It would also depend on the distance of the state from the productivity frontier and the urgency of bridging the gap, for example, in areas like power-sector distribution losses, logistics cost, and the quality of urban infrastructure.

As an illustrative example, in Maharashtra, seven to eight districts could potentially champion key frontier business opportunities. The Mumbai–Thane–Raigad cluster could become a global manufacturing hub with proximate clusters, particularly in electronics, chemicals, textiles, and pharmaceuticals. Pune could capitalize on its expertise in IT services to become a global IT and digital services hub as well as an automotive manufacturing hub. Nagpur could champion world-class efficient logistics models and manufacturing, particularly in electronics and aeronautics; Solapur can become a manufacturing hub, particularly in textiles and apparel; Ahmednagar, Jalgaon, and Ratnagiri can champion high-value agricultural ecosystems; Nashik can champion high-value tourist circuits and hubs, and Sindhudurg can also become a new tourist hub.

States could then create powerful demonstration effects by taking a few of these ideas and making them work, at scale, in select areas. A CEO-led special purpose vehicle (SPV) could be set up by the state government with the mandate to make these projects successful. For instance, a state could use an SPV to select a port-proximate cluster to develop and invite large companies and their MSME supply chains to set up factories and offices there, providing land, plug-and-play infrastructure, common utilities like effluent treatment plants, skill development centres, and low-cost input factors like power tariffs. Such clusters in other economies have contributed significantly towards export manufacturing. For example, the Bangladesh Export Processing Zones Authority has eight Export Processing Zones (including the Chittagong export processing zone), which generated $7.2 billion of exports in 2017–18, primarily in apparel, equivalent to 20 percent of Bangladesh's national exports.[84] Similar effects could be created in agricultural processing, power DISCOM privatisation, and affordable housing.

Finally, India's business leaders can help restore the country to a high-growth path. That will require focus on three key themes. First, firms would need to raise aspirations and commit to productivity growth through a set of frontier business ideas, choosing from amongst the ones we lay out in this report and even beyond this set. The choice of which opportunities to commit to would vary for each company, but making bold investments in a few areas will be critical in order to be a winner and shape India's high-productivity economy in the coming decade.

[84] Annual report 2017–18, Bangladesh Export Processing Zones Authority.

Second, businesses need to develop a long-term value creation mindset coupled with a strong performance-oriented culture; both of these create stakeholder value in the long-term. This implies adopting a forward-looking approach to investment, building an organisational culture that focuses on long-term value creation, and articulating a shared vision and purpose with accountability to all stakeholders. The long-term mindset needs to go hand-in-hand with outcome-based performance management and a systematic approach to managing the performance of teams and individuals.

Third, firms will need a set of winning capabilities if they are to emerge as large, high-growth, globally competitive businesses:

— **Customer-centric innovation.** Firms that have been able to create winning propositions have seen high revenue and profit growth. Both large and small firms across sectors need to build capabilities that enable razor-sharp understanding and focus on customer needs along with innovation, with localisation and tailoring for India, along the value chain of product design, pricing, distribution and the back-end.

— **Operational excellence and scalable platforms.** Firms across sectors will need to ramp up digital and data capabilities to create lean, scalable operating platforms. Such measures could go from installing digital architecture for back-offices, digitising supply chains, and moving customer sales and service interfaces online. Automation and the full gamut of Industry 4.0 techniques will need to be at the forefront of this wave, including assembly-line automation and IOT-enabled data analytics, amongst others.

— **Ability to be ahead of the curve and win in discontinuities.** Companies that are pioneers in their fields and shape new ecosystems tend to capture disproportionate value. Critical capabilities for firms of the future will be reshaping established business practices, fostering creativity and nimbleness, and making bold capital allocation decisions.

— **Well-executed mergers, acquisitions, and partnerships.** With India's fragmented corporate landscape, particularly in sectors such as retail, logistics, and construction, consolidation could be key to regaining a competitive advantage. Firms will need to build their mergers and acquisition and partnership muscle and learn how to capture value by consolidating disaggregated and distributed players.

— **Finally, strong corporate governance and trust-based brands that attract capital, customers, and employees.** Clear reporting, strong accountability, transparency, a focus on ethical values, and brands built based on trust and purpose will become even more important in the decade ahead. The COVID-19 pandemic is just the latest in a line of events that have focused public attention on how companies behave. Exemplary performance together with exemplary behaviour will provide a powerful base for firms in India to compete and thrive and to attract capital, customers, and employees.

India is at a turning point. Faced with the challenge of creating 90 million jobs over the next decade, the country will need to implement significant reforms across the economy to ensure that high-growth conditions are in place to generate those jobs, or risk a decade of economic stagnation and declining quality of life. At a time when the global economy has taken severe knocks from the coronavirus pandemic, restoring 8.0 to 8.5 percent GDP growth is an ambitious goal. Yet India has shown time and again over the past three decades that it can confound even the loudest sceptics and put in place the key changes that enable its economy to outperform. Over the next decade, it needs to do so once again.

1. A clarion call for India

2020 has brought a humanitarian challenge of huge proportions in the form of COVID-19, with grave implications for lives and livelihoods. Like other countries, India is making efforts to navigate the crisis. The economy has achieved almost 7 percent annual growth over the three decades since 1991, but even before the shock of the pandemic, growth had slowed. Domestic private investment and exports have been stalling, and bank and corporate balance sheets have been strained. At the time of writing, COVID-19 casts further uncertainty on the economic outlook for 2021–22, in India and globally. In this challenging economic climate, India's labour force is growing rapidly and the country's economy will need to create at least 90 million jobs to accommodate the influx of workers over the next decade. Growth will need to pick up again, with vigour and momentum, to meet their aspirations, or India risks a decade of low growth with stagnating quality of life and rising joblessness. A clarion call is thus sounding for the country to put growth back on a sustainably faster track.

This report focuses on a range of measures that Indian policy makers and business leaders could take to restore high growth and large-scale job creation. In this chapter, we focus on the demographic changes that will alter the labour market, India's successful reforms of the past and its weaknesses today, and the critical need to raise productivity over the next decade to generate GDP growth and create the millions of gainful new jobs required.

Over the past three decades, India has been an emerging market "outperformer" that achieved high growth rates and inclusive outcomes

Over the past three decades, India has been an "outperformer"—one of just 18 emerging economies that achieved robust and consistent high growth over decades. While seven of those countries, including China, Singapore, and South Korea, have been outperformers for 50 years, 11 others—including India and Vietnam—have outperformed over a 20-year span. Much of this expansion was propelled by pro-growth policy reforms and the subsequent emergence of productive, competitive large firms (with annual revenues of more than $500 million).[85] In India, too, this story holds true. India had several waves of pro-growth economic reforms, which resulted in the economy's growing at nearly 7 percent over fiscal years 1992 to 2020, with the revenue of large firms relative to the economy more than doubling, from 20 percent of GDP in 1995 to 48 percent by 2018.[86]

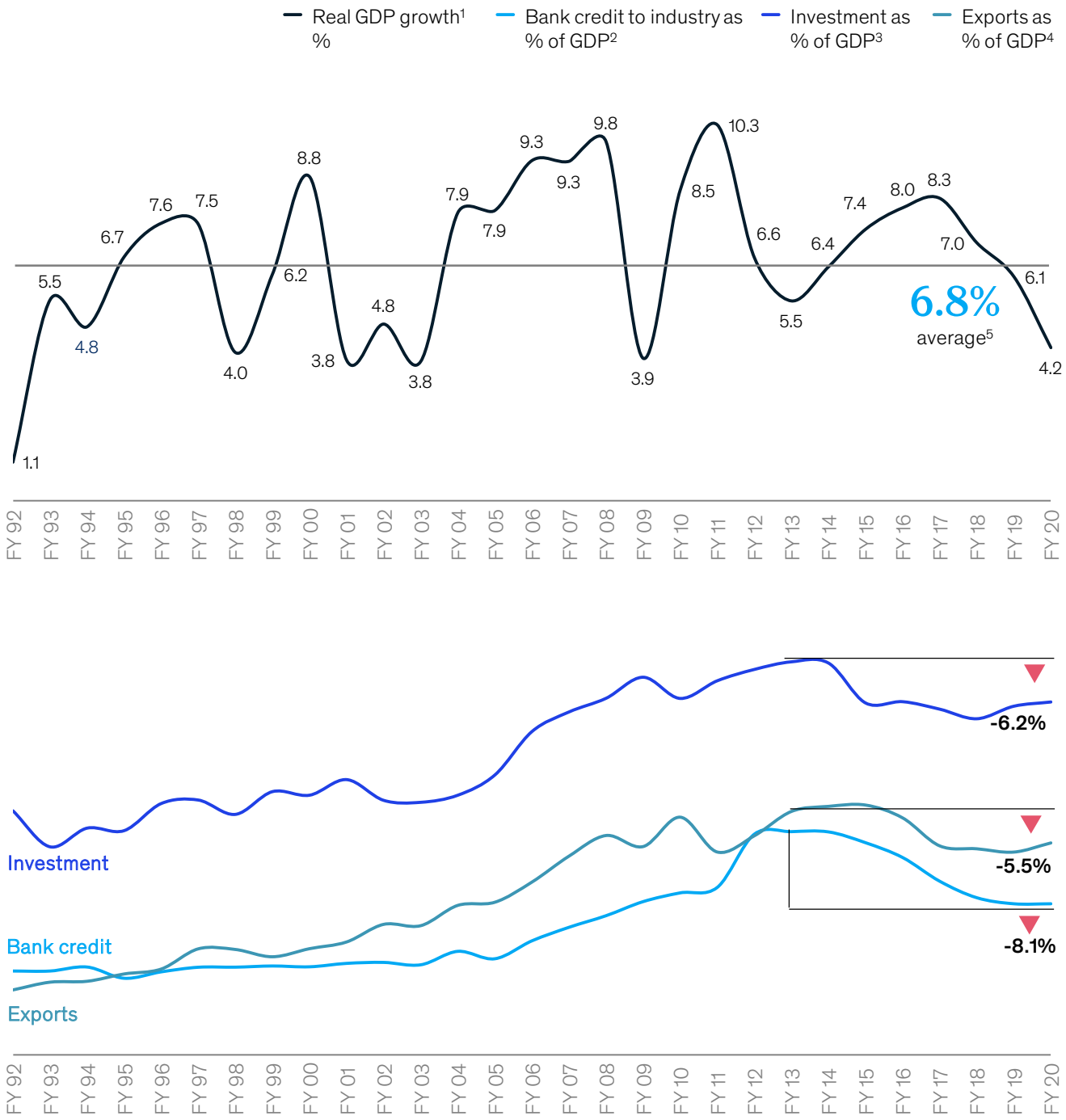
India's high GDP growth translated into significant improvement in living standards and access to basic services. Between 2005 and 2019, India's nominal per capita income grew five-fold.[87] The country also made significant strides on multidimensional poverty, with broad access to basic services throughout the country. India lifted about 270 million people out of extreme poverty between 2005 and 2017.[88] By 2018, 95 percent of households had access to electricity, up from 72 percent a decade earlier, and almost 100 percent of the population now has access to basic sanitation.[89]

These advances were the fruit of pro-growth reforms, first put in place by India's government in 1991, that lifted productivity and enabled the economy to grow through major shocks and cycles (Exhibit 1).

[85] For details of our methodology, see *Outperformers: High-growth emerging economies and the companies that propel them*, McKinsey Global Institute, September 2018.
[86] CMIE ProwessIQ; National Accounts Statistics, Ministry of Statistics and Programme Implementation.
[87] World Bank.
[88] Multidimensional Poverty Index 2018, UNDP.
[89] World Bank; Swachh Bharat Mission dashboard.

Exhibit 1

India has achieved long-term growth of 6.8 percent per year, but structural weaknesses were exposed in the aftermath of the global financial crisis.



[1] Using real GDP at 2004–05 prices till FY 12 and 2011–12 prices from FY 13.
[2] Nominal metric; % of nominal GDP.
[3] Real metric; real gross capital formation as % of real GDP.
[4] Real metric; % of real GDP.
[5] Using real GDP at 2004–05 prices till FY 12 and 2011–12 prices from FY 13.

Source: National Accounts Statistics, Ministry of Statistics and Programme Implementation; Reserve Bank of India; McKinsey Global Institute analysis

Reforms came in several waves and, for the most part, persisted or accelerated even a decade after initial implementation. In the early phase, India focused on pro-competition reforms such as the dismantling in 1991 of the "license raj" system and the de-reservation of small-scale industries from 1997. The economy was opened up to foreign direct investment, and trade was gradually liberalised, including through the reduction of customs tariffs from a simple average of 80 percent in 1990 to 56 percent in 1992, and a devaluation of the rupee in 1991.[90] Other reforms included opening sectors like aviation and telecommunications to private and foreign capital, along with privatisation efforts in the early 2000s, which included Videsh Sanchar Nigam Limited, now part of Tata Communications, Indian Petrochemicals Corporation Limited, and Hindustan Zinc Limited. Pro-investment reforms in this period included the deregulation of interest rates from 1993 to 1996, the reduction of the government's crowding out of savings through reduction in statutory reserve ratios for banks from 38.5 percent in 1992 to 25 percent in 1997, new banking and insurance licences issued to the private sector in 1993 and later in 2003, and the creation of a modern capital market. The subsequent wave of reforms continued the focus on increasing competition and trade liberalisation, including the reduction of customs tariffs, which declined to a simple average of about 9 percent in 2018 from 56 percent in 1992.[91] India's investment rate (measured as gross capital formation as a percentage of GDP) rose from 28 percent in 2004 to more than 39 percent in 2013, taking advantage of the ample global capital flows available at the time.[92]

The most recent reforms have focused on formalisation and inclusion. This is apparent in the reach of India's digital identification programme, Aadhaar. As of 2020, about 1.3 billion Indians have Aadhaar digital identification, up from 510 million in 2013, making it the largest digital ID programme in the world.[93] Other initiatives include robust adoption of digital technologies, enabling an efficient financial payments system and reduced leakages in subsidy disbursement; introduction of the goods and services tax system in 2017 to unify India as a single market and address tax evasion; and the 2016 insolvency and bankruptcy code, which aimed to speed up bankruptcy resolution through transparent mechanisms. Accompanying these steps has been a range of basic service inclusion measures, such as universal banking access, microenterprise loans, mass sanitation, energy access, health insurance, and housing subsidies. The share of Indian adults with at least one digital bank account more than doubled to 80 percent from 2011 to 2017, driven by Jan-Dhan Yojana, a mass financial-inclusion programme.[94]

These reform waves enabled broad-based economic growth for three decades. From fiscal year 1992 to 2020, service sectors grew by an average of 8.0 percent annually. Industry growth followed, at 6.5 percent annually, while agriculture grew by 3.3 percent annually and the share of agriculture in GDP fell from about 29 percent to 15 percent. New jobs were predominantly created in industry and services. The peak of job creation came in the period between 2000 and 2005, when about 7.3 million nonfarm jobs were created annually; GDP growth peaked between fiscal year 2005 and 2012 at 8.2 percent annually.[95]

90 Montek S. Ahluwalia, "India's economic reforms: Achievements and next steps", *Asian Economic Policy Review*, January 2019, Volume 14, Issue 1; World Integrated Trade Solution database, World Bank.
91 *Chronology of Bankrate, CRR and SLR Changes*, Reserve Bank of India; World Integrated Trade Solution database, World Bank.
92 National Accounts Statistics, Ministry of Statistics and Programme Implementation.
93 Aadhaar dashboard, Unique Identification Authority of India.
94 Asli Demirgüç-Kunt et al., *The Global Findex Database 2017: Measuring financial inclusion and the fintech revolution*, World Bank, April 2018.
95 National Accounts Statistics, Ministry of Statistics and Programme Implementation; National Sample Survey 1999–2000 (55th round); National Sample Survey 2004–2005 (61st round); National Sample Survey 2011–2012 (68th round); Periodic Labour Force Survey 2017–18.

Growth momentum has slowed recently, further compounded by COVID-19 uncertainties; India needs to take steps to avoid a stagnant decade

In the aftermath of the 2008 global financial crisis, the external environment grew more challenging, even as a twin balance sheet problem intensified domestically, revealing structural weaknesses in India's economy. Domestic private investment and exports—two engines of demand for India through its high-growth phase—stalled. India's investment declined due to unsustainable corporate borrowing which translated into tripling of the ratio of nonperforming assets to total assets between 2012 and 2019, from about 3.1 percent to 9.1 percent, even as real lending rates remained high despite falling inflation.[96] This combination of factors made it hard for many companies to service debt and for banks to underwrite loans. Bank credit to industry slowed, from 22.4 percent of GDP in fiscal year 2013 to 14.3 percent in fiscal year 2020 (see Box 1, "India's twin balance sheet problem").[97] Meanwhile, global trade intensity slowed following the 2008 financial crisis and the slow economic recovery globally thereafter. While labour-intensive trade moved out of China, India failed to capitalise on new trade opportunities as effectively as Bangladesh, Cambodia, and Vietnam. Exports declined as a share of GDP from 25 to 19 percent between fiscal year 2013 and 2020.[98]

Box 1

India's twin balance sheet problem

Bank credit to industry fell from 22.4 percent to 14.3 percent of GDP between fiscal year 2013 and 2020. One of the reasons for this negative trend in credit availability was the significant rise in gross nonperforming assets (NPAs). The overall gross NPA ratio tripled from 3.1 percent of total loans in fiscal year 2012 to 9.1 percent in 2019, lowering the banking sector's profitability and its ability to grant further credit.[1]

India has faced a twin balance sheet problem, with both the banking sector and the corporate sector undergoing financial stress. The problem originated in the pre-2010 period, when large corporations were granted loans for future planned projects. Between 2004 and 2010, the amount of bank credit to industry outstanding increased five-fold. These loans were priced at levels reflecting the past strong growth of companies. But they did not price in high project risk premiums, policy uncertainty, or the illiquidity of underlying collateral. As growth stagnated during the global financial crisis, projects started underperforming. Borrowers were hit by higher costs (due to difficulties in obtaining land and environmental clearances for expansion), lower revenues, and greater financing costs (due to rising interest rates and a depreciating rupee). The combined effect squeezed corporate cash flows, quickly leading to debt servicing problems. Other root causes for rising NPAs have been cited as misgovernance, evergreening of loans, and fraud.[2]

This increase in NPAs was driven by the industrial sector (including manufacturing, power, construction, and mining); the industrial gross NPA ratio remained high at 17.4 percent, constituting about two-thirds of total NPAs at the end of September 2019, compared to just over 6 percent for the service sector.[3] Many of the industries where NPAs are concentrated are in need of reform through regulatory and policy interventions.

1 "Deployment of bank credit by major sectors", *Handbook of statistics on Indian economy*, Reserve Bank of India, May 2020; "Sectoral Deployment of Non-Food Gross Bank Credit – Outstanding," *Handbook of statistics on Indian economy*, Reserve Bank of India, March 2020; "Trends in Non-performing assets – Bank Group-wise", *Report on trend and progress in banking in India*, Reserve Bank of India, November 2012 and December 2019.

2 "Sectoral Deployment of Non-Food Gross Bank Credit – Outstanding," *Handbook of statistics on Indian economy*, Reserve Bank of India, March 2020; "The festering twin balance sheet problem", in *Economic survey 2016–17*, Ministry of Finance, January 2017; *Union budget 2017–18*, Ministry of Finance, 2017; Raghuram Rajan, *Note to Parliamentary Estimates Committee on bank NPAs*, September 2018; Pronab Sen, *What ails the Indian banking sector?*, Ideas for India, September 2018.

3 "Sectoral NPAs of SCBs", *Report on trend and progress in banking in India*, Reserve Bank of India, December 2019.

96 "Trends in Non-performing assets – Bank Group-wise", *Report on trend and progress in banking in India*, Reserve Bank of India, November 2012 and December 2019.

97 "Deployment of bank credit by major sectors", *Handbook of statistics on Indian economy*, Reserve Bank of India, May 2020; "Sectoral Deployment of Non-Food Gross Bank Credit – Outstanding," *Handbook of statistics on Indian economy*, Reserve Bank of India, March 2020.

98 National Accounts Statistics, Ministry of Statistics and Programme Implementation, 2020.

With both domestic investment and global exports slowing, core sectors including manufacturing and construction showed signs of stress. For example, average annual car production grew by about 4 percent from fiscal year 2013 to 2018, compared with 16 percent in 2004–12, while cement production growth averaged 4 percent, compared with more than 11 percent in the previous period.[99] In the labour market, overall employment was flat from fiscal year 2013 to 2018, according to data from the National Sample Survey Office. Some 22 million nonfarm jobs were created, while a similar number of workers left the agricultural workforce.[100] Gross domestic savings fell as a share of GDP by four percentage points between 2013 and 2019, to 30 percent. All of these stresses culminated in GDP growth dropping to 4.2 percent in fiscal year 2020.[101]

Current COVID-19 uncertainties only compound risks for India (see Box 2, "The potential impact of COVID-19 on India's economy"). In the absence of well-executed structural reforms implemented quickly, India's corporate sector may not have the confidence to make investments. That in turn could affect employment, intensify wage weakness, and reinforce sluggish consumption. The economy risks stagnating and averaging only about 5 percent GDP growth over 2020 to 2030, the lowest decadal growth since 1983, and indeed a lost opportunity.[102] The effect on employment would be significant, with India creating only about net six million jobs (and 30 million nonfarm jobs) by 2030, compared to the net 60 million jobs—corresponding to 90 million nonfarm jobs—that could be created in the high-growth path.

Domestic investment and global exports have been slowing, and core sectors including manufacturing and construction have shown signs of stress.

99 Society of Indian Automobile Manufacturers database; Sandhya Keelery, Cement production volume in India from financial year 2008 to 2019, Statista, July 7, 2020; Profile Of The Indian Cement Industry, Shodh Ganga.
100 National Sample Survey 2011–12 (68th round); Periodic Labour Force Survey 2017–18; National Accounts Statistics, Ministry of Statistics and Programme Implementation, 2020.
101 Handbook of Statistics on the Indian Economy, Reserve Bank of India, Table 11, September 2019; National Accounts Statistics, Ministry of Statistics and Programme Implementation.
102 National Accounts Statistics, Ministry of Statistics and Programme Implementation.

Box 2

The potential impact of COVID-19 on India's economy

The COVID-19 pandemic has caused considerable suffering worldwide, in both lives and livelihoods. At the time of writing, more than 780,000 deaths are attributed to the disease. India has recorded more than 2.8 million cases and 53,000 deaths.[1] Supporting victims, their families, and their communities, building healthcare capacity, and managing effective lockdowns are the most critical interventions required.

The economic impact of COVID-19 is highly uncertain and can be judged only in terms of potential scenarios. According to estimates by McKinsey & Company and Oxford Economics, global GDP is expected to contract by 3.5 to 8.1 percent in 2020. In India, the pandemic and the lockdowns implemented in an effort to contain it have resulted in a fall in demand and could bring about a severe decline in GDP. At the time of writing, the McKinsey–Oxford Economics estimates are that India's GDP could contract 3 to 9 percent in the current year, depending on the effectiveness of virus containment and economic policy responses. Even over a two-year period, estimates of India's GDP vary from growth of 4.2 percent to contraction of 3.5 percent, depending on the depth of the economic hit in fiscal year 2021. Whatever the extent of the crisis, it marks the most severe decline in India's GDP in four decades. This will particularly affect sectors such as construction, trade, transportation, hotels, and manufacturing.

The initial 10-week lockdown saw the economy operate at about half of full capacity. Workers have experienced an intense period of dislocation, with sharply reduced incomes. The unemployment rate was at an all-time high of more than 20 percent in the first two months of the first quarter of fiscal year 2021. Some of the output loss reversed in the third month, and the unemployment rate fell significantly, to about 10 percent.[2] Our estimates suggest that the financial strain on households, MSMEs, and corporates, if unmitigated, would lead to an increase in nonperforming assets of about 7 to 14 percentage points in fiscal year 2021 (the effect on NPAs could be less severe due to some mitigatory steps taken by Reserve Bank of India and the government). This comes on top of already strained corporate and bank balance sheets before COVID, as we have noted earlier.

The government and the Reserve Bank of India have responded with a package of liquidity and fiscal measures to stabilise the economy in the short term by supporting low-income households, farmers, MSMEs, and the financial system.[3] These measures may have a potential fiscal deficit impact of about 1.5 percent in fiscal year 2021. Coupled with contracting GDP and reduced government revenue, this could lead to an incremental central fiscal deficit of about four percentage points over the budgeted 3.5 percent of GDP, an overall fiscal deficit of as much as 11 to 13 percent of GDP, with possible medium-term implications on government borrowing as well.

Beyond immediate crisis response measures, the government also announced some long-pending structural reforms that could have positive effects on medium-term growth. They include portable migrant benefits like the "one nation, one ration card" system; amendments to laws to enable farmers to sell their produce freely and gain better remuneration through amendments to the Essential Commodities Act and Agricultural Produce Marketing Committee (APMC) act; a legal framework to enable farmers to engage with processors, large retailers, and other players; power-sector reforms to reduce cross-subsidies and the privatisation of some electricity distribution companies; and pro-competition reforms that propose to limit the scope of state-owned enterprises and progressively privatise or merge them in nonstrategic sectors, steps to encourage commercial mining in the coal sector through revenue-sharing mechanisms, and exploration and production regimes for partially explored blocks.

These and other reform ideas could provide momentum for long-term growth beyond the COVID-19 recession. On paper, they go some way towards meeting suggestions that we make in this report. At the time of writing, the execution plan for most reforms was undetermined. The only certainty is that steps taken by the government over the next one to two years will be critical, both to demonstrate willingness to implement effective reforms and to keep demand engines humming through public spending.

1 "Coronavirus (COVID-19) Cases", Our World in Data, August 19, 2020.
2 Centre for Monitoring Indian Economy.
3 "Atmanirbhar Bharat Abhiyaan", Press Information Bureau of India, May 12, 2020.

Looking ahead, India will need to create at least 90 million more nonfarm jobs by 2030

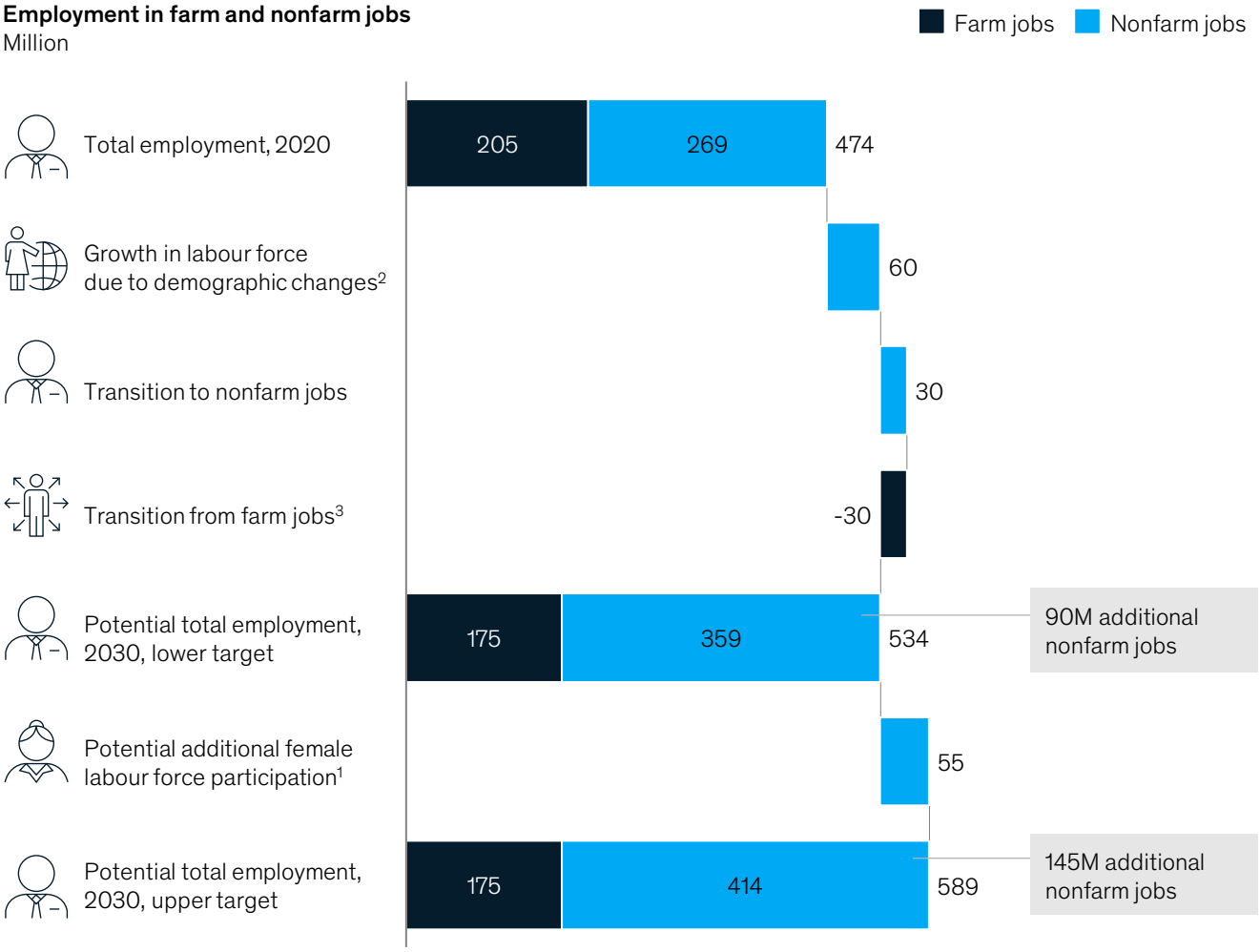
India's population is rising and could grow to more than 1.5 billion people by 2030. The working-age population—those over the age of 15—could increase by 1.3 percent annually, to 1.2 billion .[103] Based on this demographic surge alone, keeping labour force participation rates constant by age and gender cohorts, India would have 60 million more people entering the labour force and seeking employment by 2030. The trend-line growth of the labour force, based on demographics, will coincide with a continuing shift in employment structure from farm jobs to nonfarm sectors. India saw an annual shift of about 3.7 million jobs out of agriculture between 2012 and 2018. If this pace is sustained, we estimate that India's farm employment would decline from 44 percent of the total in 2018 to about 30 percent in 2030.[104] This is in line with the proportion of agricultural employment found in other low- and middle-income countries on average, as well as in China, at similar expected levels of per capita income. Accommodating a labour force transition of this magnitude, in addition to natural labour force growth, implies that India needs to create at least 90 million nonfarm jobs between 2020 and 2030.

Even more nonfarm jobs will be needed if India is to meet the aspirations of all people. The country's current labour force participation rate is just 49 percent, meaning that only about half of people of working age engage in paid work. The female labour force participation rate is among the lowest for large economies and is falling; compared to other economies like China at 61 percent, Thailand at 59 percent, Bangladesh at 36 percent, and Sri Lanka at 35 percent, India's female labour force participation was at 21 percent in 2019, and has fallen from about 32 percent in 2005.[105] But it could rebound to 30 percent by 2030, with 55 million more women potentially entering the labour market. The driving force of this increase could be women in the prime age group of 25 to 54 years. Their labour force participation could rise from 28 percent to 46 percent.[106] Such a lift would be a legitimate aspiration for India, in line with the level of female employment seen in other low- and middle-income South Asian emerging economies such as Bangladesh and Sri Lanka. Including this potential increase in the proportion of working women, and assuming they all seek nonfarm employment, India would need to create 145 million incremental nonfarm jobs by 2030 (Exhibit 2).

[103] "Statistics on the working-age population and labour force", ILOSTAT, 2019.
[104] National Sample Survey 2011–2012 (68th round); Periodic Labour Force Survey 2017–18; ILOSTAT.
[105] "Statistics on the working-age population and labour force", ILOSTAT, 2019; see also *The Power of Parity: Advancing women's equality in India*, McKinsey Global Institute, November 2015.
[106] "Statistics on the working-age population and labour force", ILOSTAT, 2019.

Exhibit 2

India needs to create at least 90 million more nonfarm jobs by 2030, and up to 145 million more considering the potential for rising female labour force participation.



[1] Female labour force participation rate has potential to increase from 19% to 30% in 2030, driven by the prime age group.
[2] Overall labour force participation rate considered to be 49%, similar to 2020.
[3] Assuming farm employment reduction in line with historical trends.

Source: ILOSTAT; McKinsey Global Institute analysis

To create sufficient gainful employment, India's GDP needs to grow by at least 8.0 to 8.5 percent annually over the next decade

In the current context, delivering high GDP growth may seem a tall order, given the sharp economic contraction during the COVID-19 pandemic. This report takes a long-term perspective: it is based on scenarios beginning in fiscal year 2023, under the assumption that India has transitioned out of the pandemic crisis by then.

To frame the growth opportunity for India, we split GDP growth into its components of employment growth and productivity growth, where productivity is defined as value added per worker. For example, over fiscal years 2000 to 2019, India's employment grew at 0.8 percent and its productivity grew at about 6.1 percent, adding up to GDP growth of 6.9 percent. Similarly, from 2000 to 2018, China's employment and productivity grew at 0.4 percent and 8.8 percent, respectively, resulting in GDP growth of 9.2 percent; in Vietnam, 1.8 percent employment growth and 4.7 percent productivity growth added up to 6.4 percent GDP growth.[107]

The economic scenarios for India that we have developed for the time frame of 2023–30 suggest that creating sufficient numbers of gainful and productive nonfarm jobs would require GDP growth (measured as the sum of employment and productivity growth) of between 8 and 8.5 percent annually. This rate of economic growth is needed for India to generate 60 million net new jobs by 2030 and 90 million nonfarm jobs, the equivalent of 1.5 percent annual growth in net employment from 2023 to 2030. This would be in line with the employment growth achieved by India between 2000 and 2012—and almost double the 0.8 percent historical employment growth over the past 20 years.[108] At the same time, India will need to maintain productivity growth at 6.5 to 7 percent per year, the same as it achieved from 2013 to 2018.[109] The two objectives are not contradictory; indeed, employment cannot grow sustainably without high productivity growth, and vice versa. For example, every ten-year rolling period but one since 1929 has seen increases in both productivity and employment in the United States. This is because productivity isn't only about efficiency; it is no less about expanding output through innovations that improve the performance, quality, or value of goods and services, raising incomes and aggregate demand.[110]

Exhibits 3 and 4 represent the linkages between employment, productivity, and GDP growth for India, historically as well as in the future, illustrating the potential in the high- and low-growth paths. We consider the time periods of fiscal years 2000–05, 2006–12, and 2013–19, based on the availability of employment data.[111] It should be noted that in the event of India's female labour force participation rate rising to the level described earlier, an even higher GDP growth rate, perhaps 10 percent annually, would be necessary. That is similar to China's growth from 1991 to 2010.[112]

[107] National Accounts Statistics, Ministry of Statistics and Programme Implementation; National Sample Survey 1999–2000 (55th round); Periodic Labour Force Survey 2017–18; IHS Markit Comparative Industry Service.

[108] National Sample Survey 1999–2000 (55th round); National Sample Survey 2004–2005 (61st round); National Sample Survey 2011–2012 (68th round); Periodic Labour Force Survey 2017–18; ILOSTAT.

[109] National Sample Survey 1999–2000 (55th round); National Sample Survey 2004–2005 (61st round); National Sample Survey 2011–2012 (68th round); Periodic Labour Force Survey 2017–18; ILOSTAT; National Accounts Statistics, Ministry of Statistics and Programme Implementation, 2020.

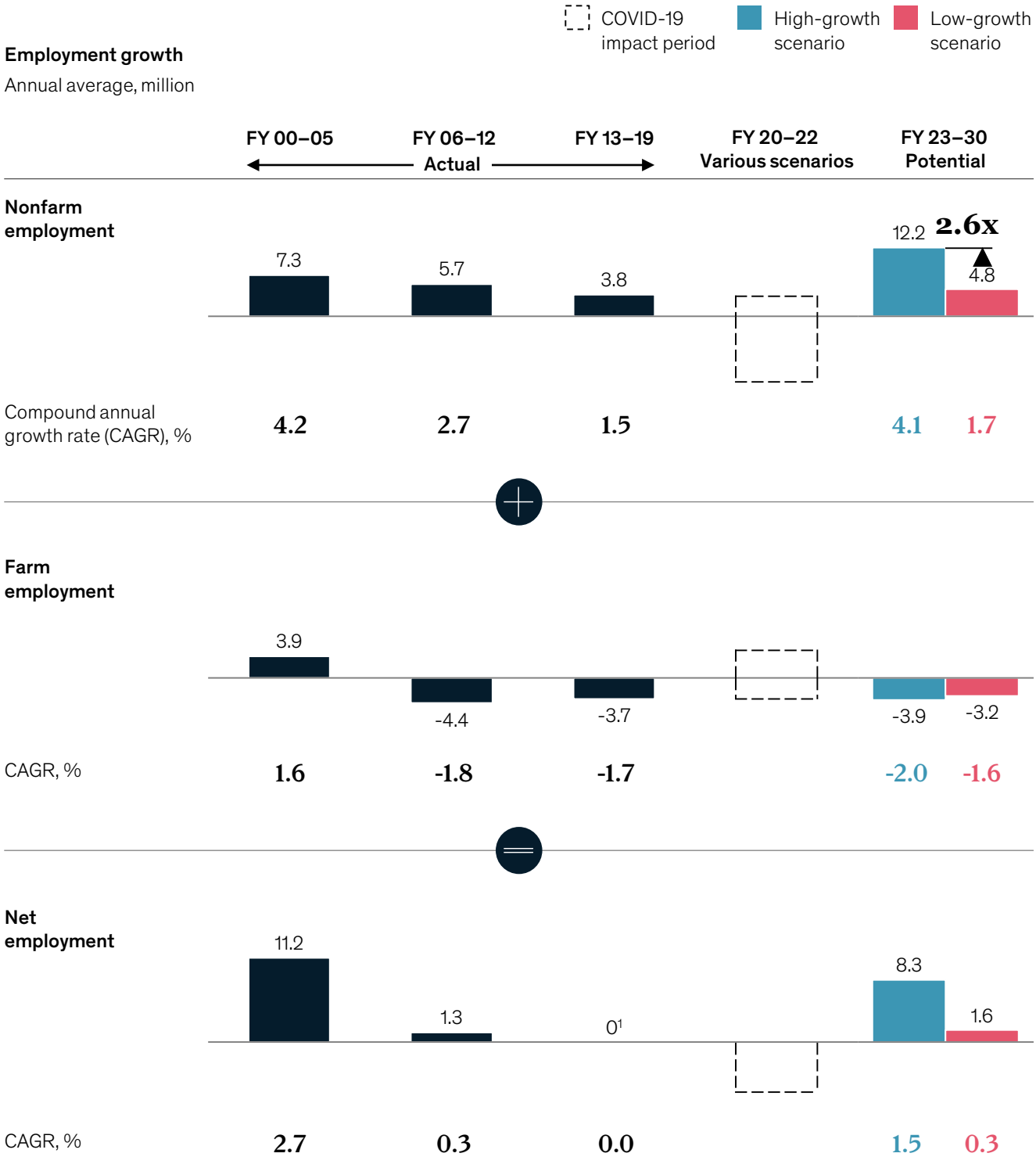
[110] For details on how productivity growth and employment growth are interconnected, see David Hunt, James Manyika, and Jaana Remes, "Why US productivity can grow without killing jobs", *McKinsey Quarterly*, February 2011, and *Jobs lost, Jobs gained: Workforce transitions in a time of automation*, McKinsey Global Institute, December 2017. For details of the productivity and employment performance of other outperformer emerging economies, see *Outperformers: High-growth emerging economies and the companies that propel them*, McKinsey Global Institute, September 2018.

[111] National Sample Survey 1999–2000 (55th round); National Sample Survey 2004–2005 (61st round); National Sample Survey 2011–2012 (68th round); Periodic Labour Force Survey 2017–18.

[112] World Bank.

Exhibit 3

In the high-growth scenario, India could generate 90 million nonfarm jobs by 2030, almost three times the nonfarm jobs created in the alternative low-growth scenario.



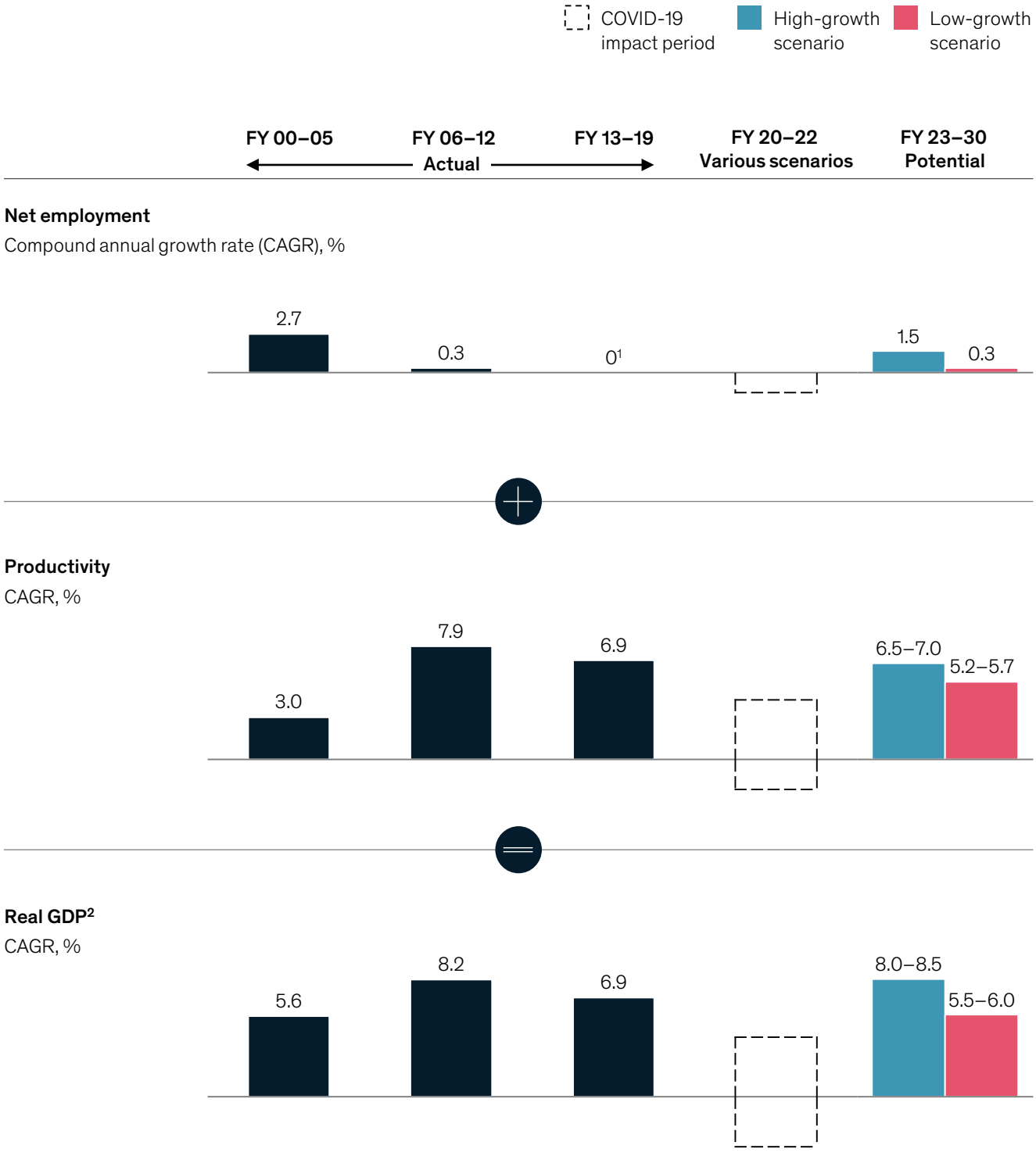
[1] FY 19 data assumed to be 2018 data from Periodic Labour Force Survey 2017–18.

Note: High-growth scenario is in line with India's historical best GDP growth; in low-growth scenario, India records lowest decadal growth since 1983. Timelines were chosen based on availability of employment data. Annual nonfarm employment of 12.2 million between FY 23 and FY 30 translates to 90 million incremental nonfarm jobs by FY 30 in the high-growth scenario; annual nonfarm employment of 4.8 million between FY 23 and FY 30 translates to 30 million incremental nonfarm jobs by FY 30 in the low-growth scenario.

Source: National Accounts Statistics, Ministry of Statistics and Programme Implementation; National Sample Survey 1999–2000 (55th round), 2004–2005 (61st round), 2011–2012 (68th round); Periodic Labour Force Survey 2017–18; ILOSTAT; McKinsey Global Institute analysis

Exhibit 4

In the high-growth path, India's GDP could expand at 8.0 to 8.5 percent per year, with a sharp rise in employment and sustained productivity growth; the low-growth path implies negligible job creation.



[1] FY 19 data assumed to be 2018 data from Periodic Labour Force Survey 2017–18.
[2] Using real GDP at 2004–05 prices through FY 12 and 2011–12 prices from FY 13.
Note: High-growth scenario is in line with India's historical best GDP growth; in low-growth scenario, India records lowest decadal growth since 1983. Timelines were chosen based on availability of employment data.

Source: National Accounts Statistics, Ministry of Statistics and Programme Implementation; National Sample Survey 1999–2000 (55th round), 2004–2005 (61st round), 2011–2012 (68th round); Periodic Labour Force Survey 2017–18; ILOSTAT; McKinsey Global Institute analysis

At the national level, the manufacturing and construction sectors need to expand the most to generate the productivity growth and jobs needed

Two sectors—manufacturing and construction—have the potential to give the biggest lift to productivity growth and jobs growth, respectively. This is broadly in line with the experience of other emerging economies on their decades-long journey towards prosperity.

Sectors such as construction and trade typically absorb the greatest numbers of workers moving out of agriculture. In previous research, we found that many countries could lift productivity and employment simultaneously in construction. Malaysia and Singapore, for example, grew construction-sector employment at 3 to 5 percent per year in the past decade, while achieving more than 5 percent annual growth in construction-sector productivity, while Vietnam achieved similar levels of employment growth, but lower productivity growth.[113]

While manufacturing has been a powerful productivity and employment driver in most outperforming economies, its share of employment eventually peaks and starts to decline. This peak is occurring earlier and earlier in the development process, a phenomenon called premature deindustrialisation.[114] Our analysis suggests that manufacturing can be a source of job creation, especially in lower-income countries including India, whose low wages, strategic endowments, or domestic market size make them attractive destinations. Between 2000 and 2010, China grew its manufacturing GDP by 13 percent a year while simultaneously raising the share of manufacturing employment by five percentage points. Similarly, Bangladesh and Vietnam both increased employment share of manufacturing by three percentage points and GDP share of manufacturing by five to six percentage points between 2006 to 2016 and 2009 to 2016, respectively. The evidence is more mixed in Indonesia, Thailand, and South Korea, where share of employment or share of manufacturing output grew, but not both.[115]

To set aspirations for the potential level of growth by sector for India, we look back to identify which sectors propelled its earlier high-growth phase, between 2005 and 2012, when the overall economy grew by 8.2 percent per year. We compare those growth rates with more recent trends to identify areas where India could close the gap. In the earlier growth phase from 2005 to 2012, value added in India's manufacturing sector displayed very strong momentum, at 9.4 percent annual growth, compared to 7.4 percent in 2013–19. Similarly, the construction sector grew at 8.9 percent each year earlier, compared to just 4.4 percent in the more recent period. Value added in services—both knowledge- and labour-intensive—showed strong annual growth of 9.2 percent and 8.3 percent, respectively, through 2013–19, and we assume that in the future, India could maintain this strong momentum in these sectors. Finally, for agriculture, we assume a growth rate close to the long-term average annual growth rate for the sector, 3.3 percent, from 2023 to 2030.

Based on these assumptions in our high-growth scenario, two sectors—manufacturing and construction—have the potential to give the biggest lift to productivity growth and jobs growth, respectively (Exhibit 5). Manufacturing could contribute more than one-fifth of the incremental GDP that is needed to achieve the growth required, while construction could add as many as one in four of the incremental nonfarm jobs. The estimates for employment are based on elasticity of labour demand in the past and the performance of other outperformer economies and high-growth Indian states.

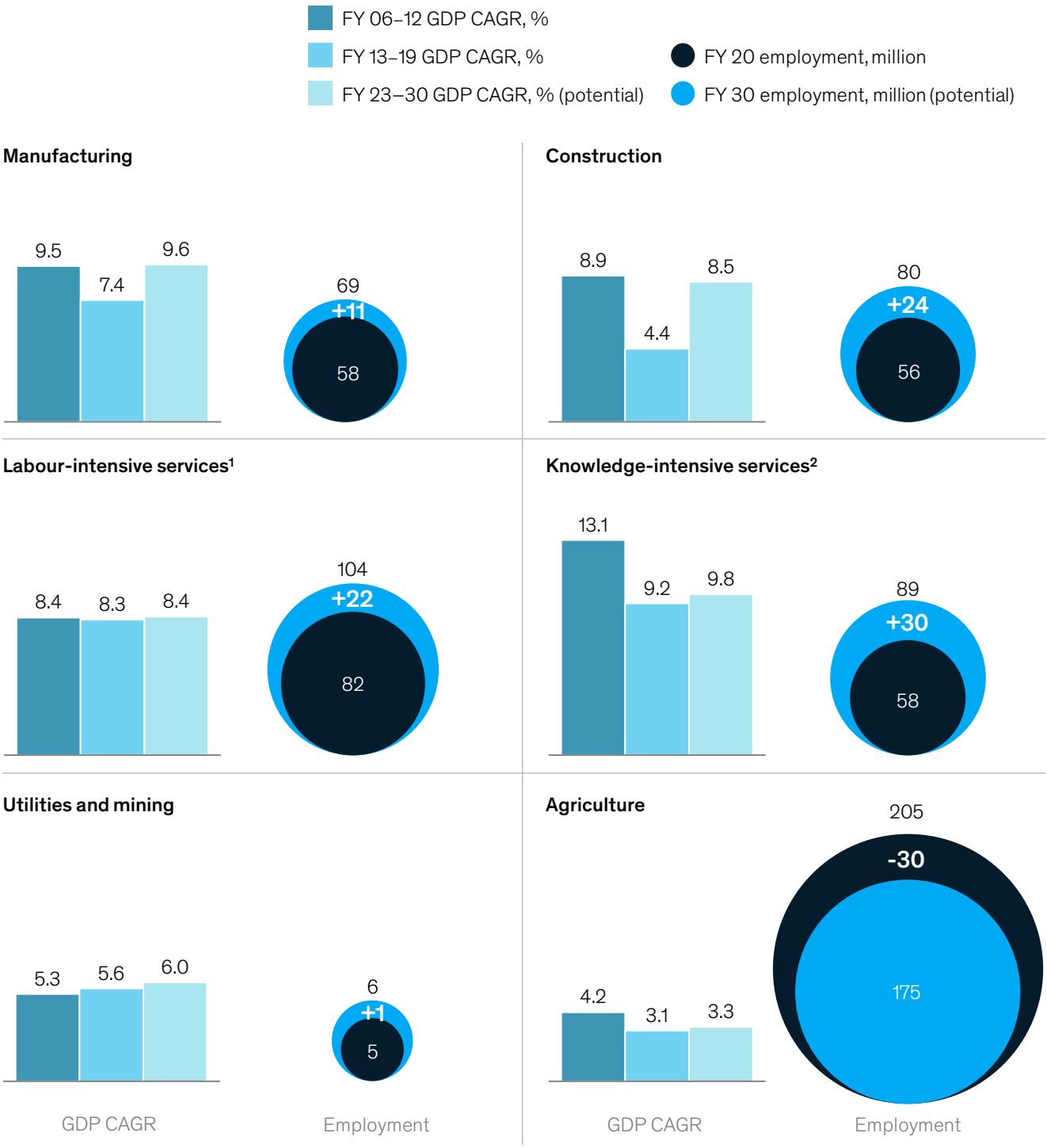
[113] For details of the sectoral GDP and employment performance of other outperformer emerging economies, see *Outperformers: High-growth emerging economies and the companies that propel them*, McKinsey Global Institute, September 2018.

[114] Dani Rodrik, "Premature deindustrialization", *Journal of Economic Growth*, March 2016, Volume 21, Number 1.

[115] For details of the sectoral GDP and employment performance of other outperformer emerging economies, see *Outperformers: High-growth emerging economies and the companies that propel them*, McKinsey Global Institute, September 2018; IHS Markit Comparative Industry Service.

Exhibit 5

In the high-growth path, manufacturing and construction need to accelerate the most, while knowledge- and labour-intensive services maintain their historical momentum.



[1] Includes trade, transportation and storage, and hotel and restaurant sectors.
[2] Includes communication and broadcasting, IT-BPM, financial services, education, healthcare, and other professional services.
Note: Sectoral GDP and employment in the high-growth scenario estimated based on employment elasticities for India and several outperforming emerging economies. For details, see technical appendix.

Source: National Accounts Statistics, Ministry of Statistics and Programme Implementation; Periodic Labour Force Survey 2017–18, ILOSTAT; McKinsey Global Institute analysis

Achieving this growth potential would mean the share of manufacturing rising from 18 percent of GDP to 19.3 percent over the course of a decade. For construction, growth would need to rise by 8.5 percent annually in the post-pandemic 2023–30 time frame, compared with historical growth rates of 4.4 percent in fiscal years 2013 to 2019, and the share of employment would need to increase from about 11.5 percent to 15 percent as per our estimates.[116]

Labour-intensive sectors such as trade, transportation and storage, and hotels and restaurants, and knowledge-intensive sectors including communication and broadcasting, information technology (IT) and business process management (BPM), financial services, education, healthcare, and other professional services, will collectively have to sustain and improve their past strong momentum. Labour-intensive services could see GDP growth of 8.4 percent compared with historical growth of 8.3 percent over the past six years, while knowledge-intensive services can see a GDP growth of 9.8 percent compared with historical growth of 9.2 percent.[117] By contrast, the agriculture sector would continue its long-term trend of shedding jobs as labour moves into higher-productivity sectors, ensuring higher incomes. We estimate that about 30 million farm jobs will move to other sectors by 2030 in the high-growth scenario.

Beyond national aspirations, each state would also need to create enabling conditions to grow productivity within its champion sectors

The sectoral growth picture may look very different in each of India's states, a diverse set of regions that mimic whole countries in economic size, population, and complexity. India's states have exhibited varying patterns of economic growth since 2005, with different sectors emerging as champions. But regardless of which sector led, states that achieved high productivity growth from 2013 to 2019 outperformed the rest, not only in GDP growth, but also in nonfarm employment growth (Exhibits 6 and 7).

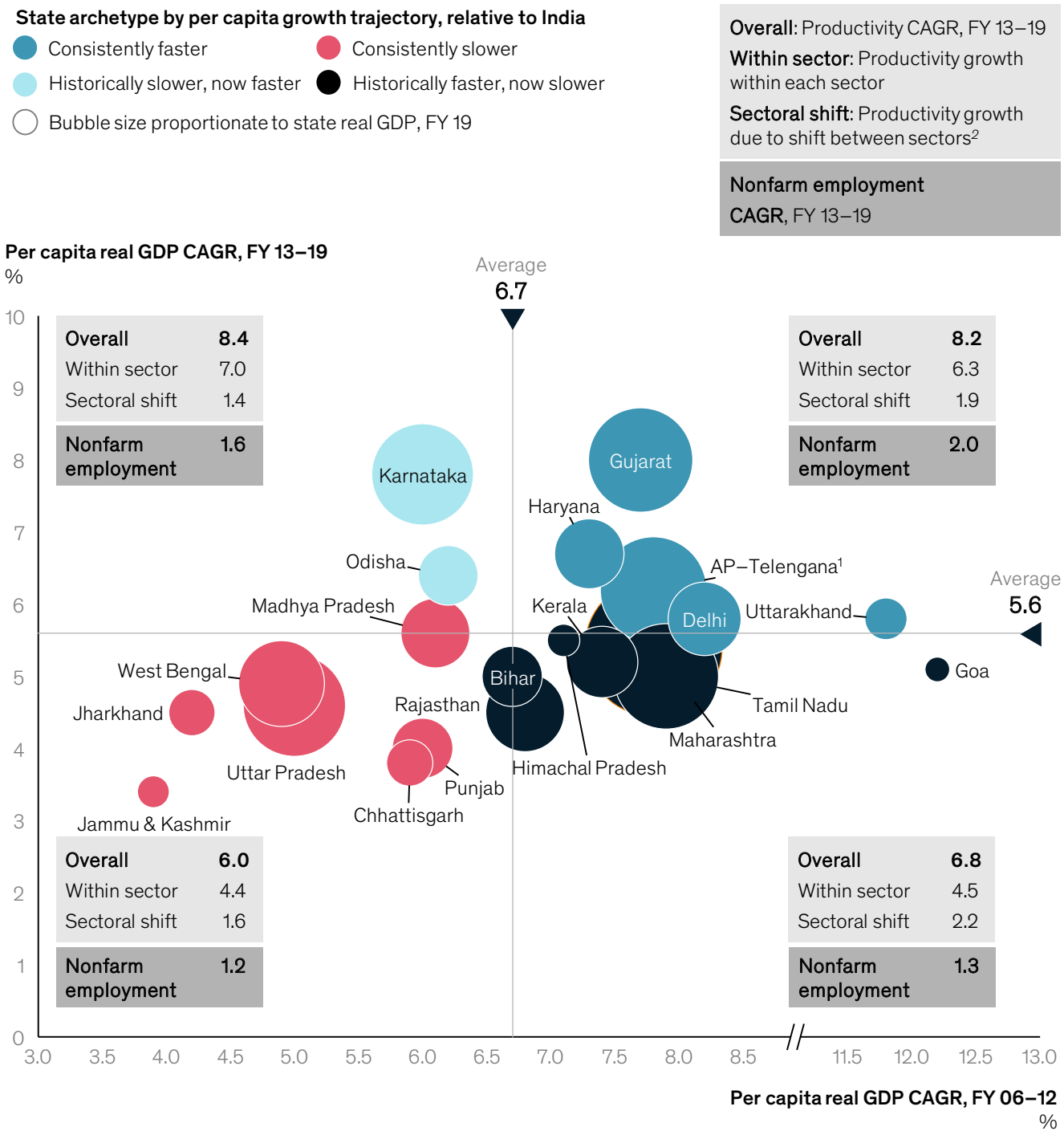
State productivity growth, in turn, has two components. One is the growth that occurs as employment shifts from low-productivity sectors, such as agriculture, to high-productivity ones, such as manufacturing. The second is the growth that occurs because workers and enterprises within a sector, for example within manufacturing or agriculture, migrate to higher-productivity work and business models. The latter component—within-sector productivity growth—differentiates high-growth states from lower-growth ones. We observed the same pattern at the national level for outperforming emerging economies. Between 1965 and 2012, long-term economic growth for these countries was overwhelmingly driven by productivity growth within individual sectors rather than from the mix across sectors. In other words, their success hinged less on finding the right sectors to grow than on tapping sources of competitive advantage and driving productivity improvements within those sectors.

To illustrate this point, we see that some states, like Andhra Pradesh and Telangana (combined), Gujarat, and Haryana, grew consistently faster relative to India's national growth in both fiscal year 2006–12 and 2013–19. Each of these states had its own sector champions, responsible for the bulk of the growth, with no common pattern emerging: the services sector drove AP and Telangana's outperformance, while manufacturing was the champion in Gujarat. In Haryana, manufacturing and services contributed equally to the state's higher-than-average growth between 2013 and 2019. But in AP and Telangana and in Gujarat, within-sector productivity grew much faster. For the group as a whole, within-sector productivity grew at 6.3 percent per year, while employment shifts across sectors contributed 1.9 percent annually from fiscal year 2013 to 2019.

[116] National Accounts Statistics, Ministry of Statistics and Programme Implementation, 2020.
[117] Ibid.

Exhibit 6

High within-sector productivity growth has boosted GDP growth, along with faster nonfarm employment growth.



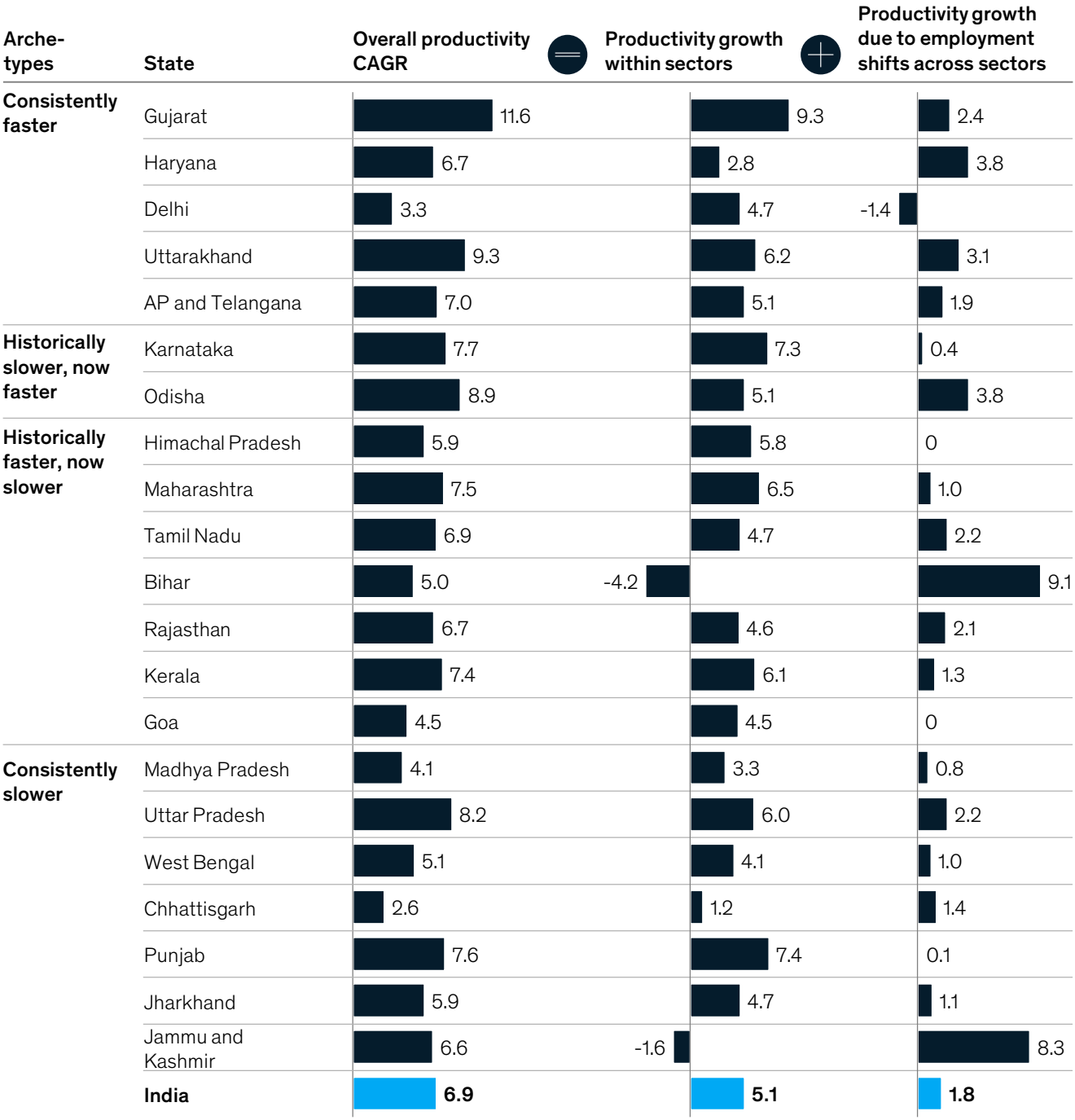
[1] Andhra Pradesh and Telangana states together.
[2] Gross Value Added (GVA) data is used instead of GDP for productivity calculations at sectoral level. For details, see technical appendix.

Source: National Accounts Statistics, Ministry of Statistics and Programme Implementation; ILOSTAT; McKinsey Insights India; National Sample Survey 2011–12 (68th round); Periodic Labour Force Survey 2017–18, McKinsey Global Institute analysis

Exhibit 7

Overall productivity growth is driven more by productivity growth within sectors than by shifts in employment across sectors.

Productivity growth across states, FY 13–19[1]
Compound annual growth rate, %



[1] Generalised exactly additive decomposition analysis at 11-sector level. Sectors analysed include agriculture, manufacturing, mining, utilities, construction, retail and accommodation, transport and communication, finance, professional services, government services, and other services.
[2] For details, see technical appendix.

Note: Figures may not sum to 100%, because of rounding.

Source: National Accounts Statistics, Ministry of Statistics and Programme Implementation; National Sample Survey 2011–12 (68th round); Periodic Labour Force Survey 2017–18; McKinsey Global Institute analysis

The same is true for states like Karnataka and Odisha, which accelerated relative to others in 2013–19, but from a slower relative growth rate earlier. Karnataka's acceleration was powered by the service sector, while in Odisha, manufacturing and mining led the charge. For these states as a group, the acceleration in 2013–19 was driven by strong productivity growth within sectors, about 7 percent annually, meaning that workers and enterprises in many of the sectors raised their productivity levels.

Next we consider states that showed slower growth than India's average. Some, like Goa, Maharashtra, and Tamil Nadu, had grown faster from fiscal year 2006 to 2012, but then slowed down relative to India's average in 2013–19. There was no single weak spot across these states. In Goa, the mining sector collapsed, dragging down state GDP growth, while in Maharashtra, all sectors, particularly agriculture and mining, contributed to the slowdown. In Tamil Nadu, the service sector weighed on GDP growth. For this group, within-sector productivity growth was lower, at 4.5 percent per year, than for the first two categories of states. The consistently slower-growth states also had champion sectors that contributed to growth: agriculture in Madhya Pradesh, manufacturing and mining in Uttar Pradesh, and construction in West Bengal. However, in each of these states, an underperforming sector weighed on aggregate GDP growth. Manufacturing and services lagged in Madhya Pradesh, and agriculture was a drag in Uttar Pradesh and West Bengal.[118]

The lessons are twofold. First, while each state will need to find champion sectors to propel growth, any sector can be transformed into a champion sector. Second, and more importantly, states will need to create the enabling conditions for high-productivity enterprises to flourish within sectors, in order to create more competitive businesses and gainful work opportunities.

Given the size of its demographic surge, India needs to achieve at least 8.0 to 8.5 percent GDP growth in the decade ahead to create enough jobs to gainfully employ new entrants to the workforce. That in turn will require a strong productivity boost. The COVID-19 pandemic is both a hiatus for growth and a clarion call for a new round of pro-growth reform measures to achieve those essential goals if the country is to avoid a lost opportunity. What could be the sources of this expansion? In the next chapter, we look at three sets of growth boosters.

The pandemic is a hiatus for growth and a clarion call for a new round of pro-growth reform measures.

[118] National Accounts Statistics, Ministry of Statistics and Programme Implementation; National Sample Survey 1999–2000 (55th round); National Sample Survey 2004–2005 (61st round); National Sample Survey 2011–2012 (68th round); Periodic Labour Force Survey 2017–18; Census 2011.

2. New frontiers of productivity and job growth

The world is changing rapidly, and India's economic success over the past three decades is both a driver of that change and a result of it. Powerful forces including digitisation and automation, shifting global supply chains, urbanisation, and rising incomes in emerging economies have combined to fundamentally alter the world's economic gravity, shifting it to the east and south.[119] These trends will drive demand for new kinds of goods and services in India, as in many other countries, and improve productivity. The COVID-19 pandemic will not halt these and other fundamental global trends and, in fact, could accelerate their momentum or give them new significance. In this chapter, we look at how India could better capture the opportunities that six of these megatrends offer to raise productivity growth and create the jobs the country needs to cope with the demographic surge over the next decade.

Myriad opportunities beckon. Here, we focus on three sets of growth boosters that could become the hallmarks of the Indian economy in the post-pandemic era. First, India could step up its role with global manufacturing and services hubs that serve both the country and the world; second, it could create new efficiency engines to boost competitiveness; and third, India could find new ways to build on these trends and on shifting consumer preferences to improve living and working conditions for all Indians.

In all, these three growth boosters include 43 individual frontier business opportunities with the collective potential to create about $2.5 trillion of economic value and 30 percent of the nonfarm jobs in 2030. About half the increase in GDP between fiscal year 2020 and 2030 could be contributed by them. The 43 frontier business opportunities are themselves high-productivity opportunities that businesses can build. But they also provide productivity momentum throughout their sectors and create job pathways for low- and medium-skill workers to gain higher skills and wages.

Six global trends will play an essential role in India's growth over the coming decade

Prior MGI research both globally and specific to India has highlighted key trends that have shaped the global economy and will continue to do so over at least the next decade. Here we briefly describe six trends we expect to be particularly relevant to India's economy over the next decade, which are accelerating their momentum or assuming a new significance in the wake of the pandemic.

Digitisation and automation.[120] Automation and digitisation are making significant advances across sectors and spurring new business models. Based on our scenario modelling, we estimate that automation could raise productivity growth globally by 0.8 to 1.4 percent annually. At the same time, automation is changing the nature of work as machines play an ever-larger role in a range of work activities. By our estimates, for about 60 percent of all occupations, at least 30 percent of constituent activities could be done by machines,

[119] Richard Dobbs, James Manyika, and Jonathan Woetzel, *No Ordinary Disruption: The Four Global Forces Breaking All the Trends*, New York, NY: PublicAffairs, 2015.

[120] For McKinsey Global Institute analyses that cover the global picture, see *A future that works: Automation, productivity, and employment*, January 2017, and *Jobs lost, jobs gained: Workforce transitions in a time of automation*, December 2017. For an Indian perspective, see *Digital India: Technology to transform a connected nation*, March 2019.

although less than 5 percent of jobs can be fully automated. More broadly, digital technologies are changing the way we share knowledge, transact, and communicate. Our research shows that while economies and companies around the world have begun to embrace these technologies, they have so far realised less than 25 percent of the digitisation potential. And many promising technologies are still at an early stage: for example, 5G cellular networks may bring telemedicine to rural areas, and drones and robotics can boost the productivity of crops.

India is among the top countries globally on the pace of digital adoption, in part thanks to the Aadhaar programme, which now has about 1.3 billion users.[121] The country has more than 700 million internet subscribers and 425 million smartphone users.[122] India can capitalise on these trends by creating the conditions for rapid tech-enabled innovation. But it will also need to focus on education and training, not just for new entrants to the labour market but also for midcareer workers, to address the potentially large-scale displacement and redeployment that automation will bring about over the next decade and beyond.

Shifting global supply chains.[123] There have been several structural changes in the nature of globalisation over the past few decades, which could affect India's economy over the next 10 years. Trade intensity (the share of output that is traded) is declining within almost every goods-producing value chain. Flows of services and data now play a much bigger role in tying the global economy together. All global value chains are becoming more knowledge-intensive and, contrary to popular perception, only about 18 percent of global goods trade is now driven by labour-cost arbitrage. Demand is growing in China and the rest of the developing world relative to advanced economies. With its wages rising, Chinese producers are now focusing on meeting domestic demand. For example, in apparel, China exported 71 percent of the finished apparel goods it produced in 2005. By 2018, that share was just 29 percent. Finally, new technologies are becoming increasingly embedded in trade value chains.

Going forward, companies may accelerate supply chain transitions. According to a 2019 survey by the American Chamber of Commerce, about 17 percent of companies have considered relocating or actively relocated their supply chains away from China. More recently, the COVID-19 crisis has accelerated the need for stronger business continuity planning and supply chain diversification efforts. For instance, Japan's automakers and South Korean electronics players have indicated that they may accelerate the diversification of their manufacturing footprints within Asia. Other surveys suggest that US and European companies are also planning to source more heavily from a broader set of Asian countries.[124] Such economies, including India, could capitalise on these trends to attract a larger share of global supply chains in the coming decade.

Climate change and sustainability.[125] Earth's climate is changing, and that is already having a substantial physical impact at the local level. Rising global temperatures bring higher probabilities of acute hazards, such as heat waves and floods, as well as chronic hazards, such as drought and rising sea levels, along with an intensification of their outcomes on liveability and workability, food systems, physical assets, infrastructure services, and natural capital. For example, as heat and humidity increase in India, by 2030, we have estimated that between 160 million and 200 million people could live in regions with a 5 percent average annual probability of experiencing a heat wave that exceeds the survivability threshold for a healthy human being, absent an adaptation response.

121 Aadhaar dashboard, Unique Identification Authority of India.

122 *The Indian Telecom Services Performance Indicators: October–December, 2019*, Telecom Regulatory Authority of India, June 2020; Strategy Analytics database, June 2020.

123 *Globalization in transition: The future of trade and global value chains*, McKinsey Global Institute, January 2019; *Risk, resilience, and rebalancing in global value chains*, McKinsey Global Institute, August 2020.

124 *Risk, resilience, and rebalancing in global value chains*, McKinsey Global Institute, August 2020; *China and the world: Inside the dynamics of a changing relationship*, McKinsey Global Institute, July 2019; Oliver Tonby and Jonathan Woetzel, "Could the next normal emerge from Asia?", McKinsey.com, April 8, 2020.

125 *Climate risk and response: Physical hazards and socioeconomic impacts*, McKinsey Global Institute, January 2020.

Given the substantial share of outdoor work in India, the economic consequences of such intense heat waves could also be considerable; the average share of effective annual outdoor working hours lost due to extreme heat in exposed regions globally could increase from 10 percent today up to 15 percent by 2030 and up to 20 percent by 2050, based on our scenarios. Additionally, about 36 million people in India are at risk of chronic coastal flooding by 2050.[126]

These conditions are spurring innovation and may give rise to new business opportunities. Decarbonisation investments in parallel with adaptation investments will need to increase, particularly in the transition to renewable energy. Renewables will become cheaper than existing coal and gas in most regions by 2030 and could account for 50 percent of power generation after 2035, in a significant shift from reliance on fossil-fuel-based generation.[127] Globally, electric vehicle use has also been on the rise, with EV penetration growing at an annual rate of 41 percent; it leapt from 0.9 percent of the total light-weight vehicle market in 2016 to 2.5 percent in 2019 and could potentially reach 30 percent (excluding two wheelers) by 2030.[128] Battery technology, hydrogen fuel cells, and carbon capture and storage investments are taking off. To stay ahead of the curve, India will need to invest in many of these business models which are both productive and sustainable.

Urbanisation.[129] Increasing urbanisation has been a driving force for economic growth in recent years, especially in emerging economies such as India, as people move from farms to nonfarm jobs and their prosperity increases. Our prior research has found that just 440 cities in developing countries will account for close to half of overall GDP growth by 2025 as up to one billion people enter the global consuming class—with incomes high enough to classify them as significant consumers of goods and services. India's urbanisation rate rose from 28 percent in 2001 to 31 percent in 2011, according to the census, and is expected to have grown to 34 percent as of 2017, according to World Bank estimates.[130]

The trend could continue, with India's urbanisation rate rising to about 40 percent, propelled by natural growth in semi-urban and urban centres and rural-to-urban migration.[131] The proportion of jobs created in urban areas, 36 percent of total jobs today, as per our estimates, could rise to 44 percent by 2030. While the economic growth prospects of this rising urbanisation trend are significant, so too are the challenges. With the onset of the COVID-19 pandemic, gaps in Indian cities have become more apparent; the pandemic has largely been an urban health crisis along with a mass exodus of migrants from cities, which could slow down urbanisation rates. India will need to build out urban infrastructure in a significant and productive way, putting in place large networks of affordable housing, urban transportation, public health systems and utilities.

Rising incomes and demographic shifts.[132] Rising prosperity in India and other emerging economies is boosting the number of people worldwide joining the consuming class. By 2030, our research suggests that the developing world will account for half of global consumption. In India, rising incomes can result in consumer spending increasing from $1.8 trillion in 2020 to $3.5 trillion by 2030, making the country one of the largest consumer markets globally; this is 1.2 times the United Kingdom's current GDP.[133] India has a relatively young population, with a median age of about 29, which is considerably younger than the median age of advanced economies, at about 40 years.[134] This increase in incomes will create opportunities in discretionary goods and services, including entertainment, tourism, and other forms of recreation.

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126 G Seetharaman, "Coastal concerns: Rising sea levels will inundate coastal areas sooner than projected", *Economic Times*, November 10, 2019.
127 *Global energy perspective 2019*, McKinsey.com, 2019.
128 Thomas Gersdorf, Russell Hensley, Patrick Hertzke, Patrick Schaufuss, and Andreas Tschiesner, *The road ahead for e-mobility*, McKinsey.com, January 27, 2020; *Global EV outlook 2019*, International Energy Agency, May 2019.
129 *Urban world: Cities and the rise of the consuming class*, McKinsey Global Institute, June 2012.
130 *World Urbanization Prospects: The 2018 revision*, United Nations Population Division, 2018.
131 *India's urban awakening: Building inclusive cities, sustaining economic growth*, McKinsey Global Institute, April 2010.
132 *Urban world: The global consumers to watch*, McKinsey Global Institute, March 2016.
133 National Accounts Statistics, Ministry of Statistics and Programme Implementation, 2020.
134 Alexandra Brown and Rochelle Guttmann, "Ageing and labour supply in advanced economies", *RBA Bulletin*, Reserve Bank of Australia, December 2017; *Median Age 2018*, The World Factbook, US Central Intelligence Agency.

Health and safety.[135] The COVID-19 shock demonstrates that widespread health is essential for global prosperity. According to MGI research, each year, poor health reduces global GDP by 15 percent. As the whole world reimagines public health and rebuilds its economy, we have a unique opportunity not merely to restore the past but to dramatically advance broad-based health and prosperity. Using interventions that already exist today, the global disease burden could be reduced by about 40 percent over the next two decades. More than 70 percent of the gains could be achieved through prevention by creating cleaner and safer environments, encouraging healthier behaviours, and addressing underlying social factors as well as broadening access to vaccines and preventive medicine. The remainder would come from treating disease and acute conditions with proven therapies, including medication and surgery. Today, average life expectancy in India is almost four years longer than it was a decade ago, although more than one of those years is in poor health. With the advent of COVID-19, the focus on health and safety has increased; greater investments are expected in healthcare services and infrastructure. This creates opportunities across innovative healthcare operating models serving both domestic and international consumers.

Frontier business opportunities have the potential to contribute $2.5 trillion of economic value and 30 percent of nonfarm jobs in 2030

The trends outlined above could manifest as an array of opportunities to build new businesses. We anticipate that three types of growth boosters could emerge in India. They represent a set of frontier business opportunities that are at least 2.5 times more productive than other opportunities businesses can build. These opportunities also provide productivity momentum throughout their sectors and create job pathways for low- and medium-skill workers to obtain higher skills and wages, similar to the IT revolution in early 2000. The 43 individual frontier business opportunities identified have the collective potential to create about $2.5 trillion of economic value and support 112 million jobs, or about 30 percent of the nonfarm workforce in 2030. These business opportunities could contribute about half the increase in GDP between fiscal year 2020 and 2030. Our estimates of economic value are based on potential increases in gross value added (GVA) as well as productivity gains and cost savings made possible by these business models by 2030. In this chapter, we focus on the potential nature and size of the opportunities. Exhibit 8 details the three growth boosters and the individual business opportunities within them.

[135] *Prioritizing health: A prescription for prosperity*, McKinsey Global Institute, June 2020.

Exhibit 8

Three growth boosters, spanning 15 frontier ideas and 43 high-productivity business opportunities, can contribute $2.5 trillion to the economy by 2030. (1/2)

Potential economic value[1]

$ billion, FY 30

Global hubs serving India and the world

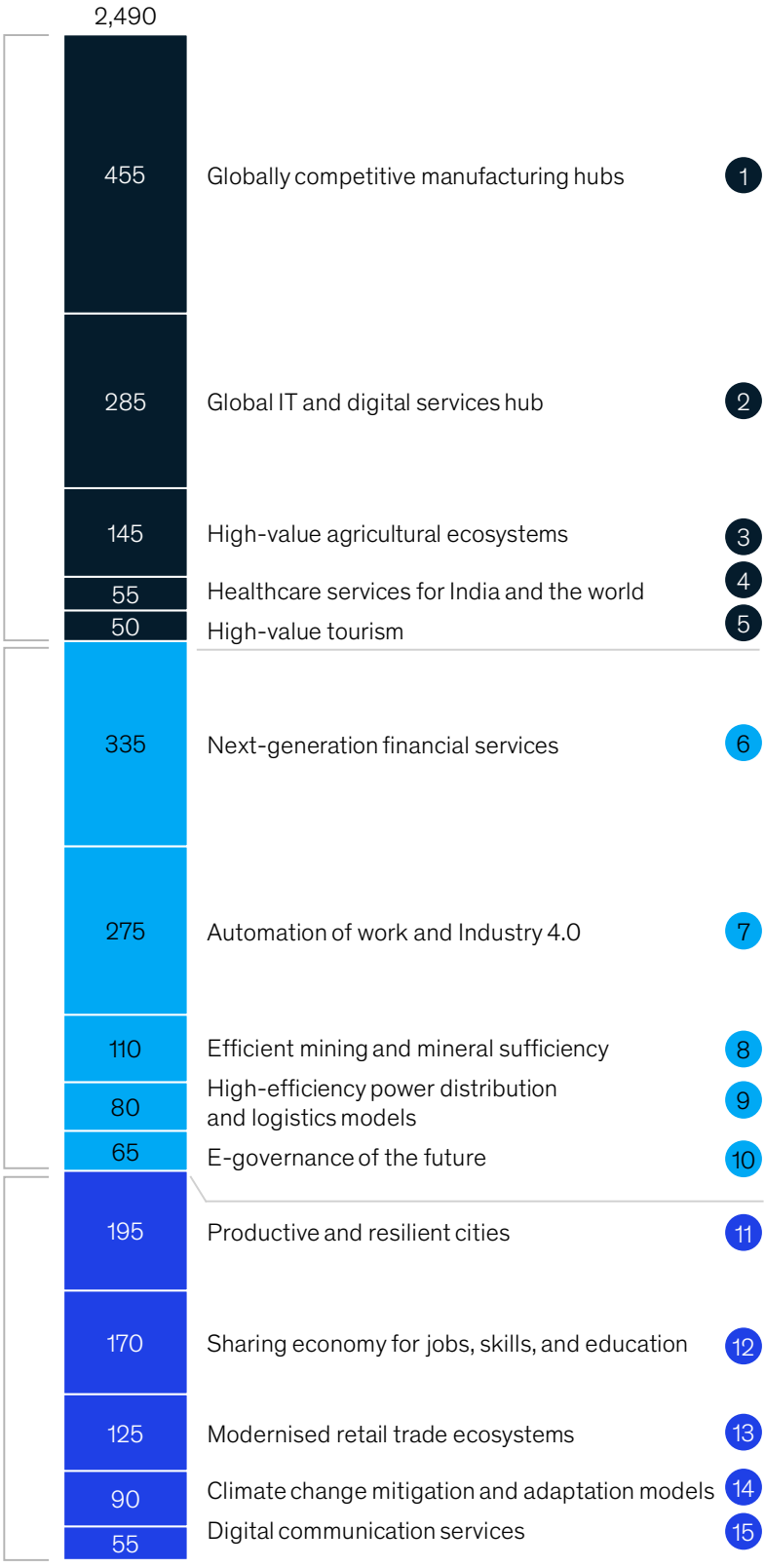
990

Efficiency engines for India's competitiveness

865

New ways of living and working

635



[1] Economic value is estimated annual value of productivity gains, cost savings, and incremental GVA; each opportunity is sized separately, and the interaction effects are not considered. For details, see technical appendix.

Source: McKinsey Global Institute analysis

Exhibit 8

Three growth boosters, spanning 15 frontier ideas and 43 high-productivity business opportunities, can contribute $2.5 trillion to the economy by 2030. (2/2)

[1] Resolution and recovery business models opportunity, digital land 2.0 opportunity, app ecosystems opportunity, and climate change adaptation technologies opportunity was not sized.

Source: McKinsey Global Institute analysis

Growth booster 1: Global hubs serving India and the world (13 frontier business opportunities)

India can step up its role in global trade in both goods and services, capitalising on shifts in global supply chains triggered by forces such as China's rising wages, trade conflicts, and companies' preferences to boost post-pandemic supply chain resiliency. The rising volume and global flows of data both point to demand for a range of offshored and nearshored services, and more scope to move up the digital value chain. Greater affluence and leisure time in advanced and emerging economies, including India, will also open up opportunities to produce and sell more manufactured goods and leisure-based services. This leads to many opportunities for India, including the following:

— **Globally competitive manufacturing hubs.** Manufacturing in a set of high-potential subsectors could create up to $455 billion of economic value, which is 7 percent of potential GDP in 2030. The subsectors include electronics and high-tech manufacturing, capital goods, auto and auto components, electric vehicles and batteries, textiles and apparel, chemicals (including plastics and rubber) and pharmaceuticals (active pharmaceutical ingredients, vaccines, and so forth) enabled by contract development and manufacturing organisations, and medical devices. These potential subsector opportunities were prioritised based on four parameters: size of the opportunity as measured by the global goods trade; India's relative growth of exports between 2013 and 2018; endowment, or the possession of or potential to develop low-cost input requirements such as resources, labour, and intellectual property, among others; and India's competitive advantage in respective subsectors as denoted by revealed comparative advantage, which is the ratio of share of the subsector in total national exports to share of the subsector in world exports. For example, the chemicals subsector was prioritised as high potential because of its large contribution of 7 percent ($1.2 trillion) to global goods trade in 2018, high relative growth of exports in India—India's chemicals export grew at 5.3 percent compared to global chemicals trade growth of 1.3 percent between 2013 and 2018—medium to high endowment, and a high revealed comparative advantage of 1.4. By contrast, the fuels subsector was not prioritised despite its large contribution to global goods trade of 10 percent ($1.8 trillion) in 2018 and a high revealed comparative advantage of 1.5, because it has low relative growth of exports—India's fuels export declined by 7 percent—and has low endowment due to the lack of resources (Exhibit 9).[136] The prioritised subsectors contributed to about 56 percent of global trade in 2018, but India's share of exports in them was just 1.5 percent (about $150 billion), while its share of imports was 2.3 percent ($220 billion).[137]

  The significant domestic demand India itself will generate in each of these product categories will bolster the potential to build export-based manufacturing hubs. For example, in the electronics sector, India could sell 400 million handsets ($80 billion) by 2025.[138] In addition, the total exports of these high-potential subsectors together could increase from about $140 billion in 2018 to $400 billion in 2030. Collectively, we estimate, they could generate up to about 30–35 percent of India's goods exports by 2030. The electronics sector overall could more than double its share over the decade, from about 5 percent of manufacturing GDP to about 13 percent. In the auto sector, India's penetration is about one-sixth that of peer countries across segments, at about 28 passenger vehicles per 1,000 population in 2018, compared with 188 for other outperforming economies like China, Indonesia, Malaysia, and Thailand.[139] In the high-growth path, domestic demand could grow at about 10 percent by volume from 2022 to 2030, compared with 2 percent from fiscal year 2015 to 2020, according to our estimates.[140] Current electric vehicle penetration in the country is less than 1 percent, a level that could rise to about 35 percent in 2030. The pharmaceuticals market could

136 World Integrated Trade Solution database, World Bank; UN Comtrade DESA/UNSD.
137 UN Comtrade DESA/UNSD.
138 *National Policy on Electronics 2019 (NPE 2019)*, Ministry of Electronics and Information Technology, Gazette of India, February 25, 2019.
139 IHS Markit, Vehicle population (Parc) database, October 2019; International Labour Organization.
140 Society of Indian Automobile Manufacturers.

reach about $105 billion by fiscal year 2030, from about $40 billion in 2020, with potential in new growth areas such as biosimilars and vaccines further accelerated due to the COVID-19 crisis. Such opportunities hold substantial promise, although they will need reforms in the form of sector-specific policies and incentives, as well as steps to ease the supply of land and labour and to reduce the cost of power, in line with globally competitive countries.

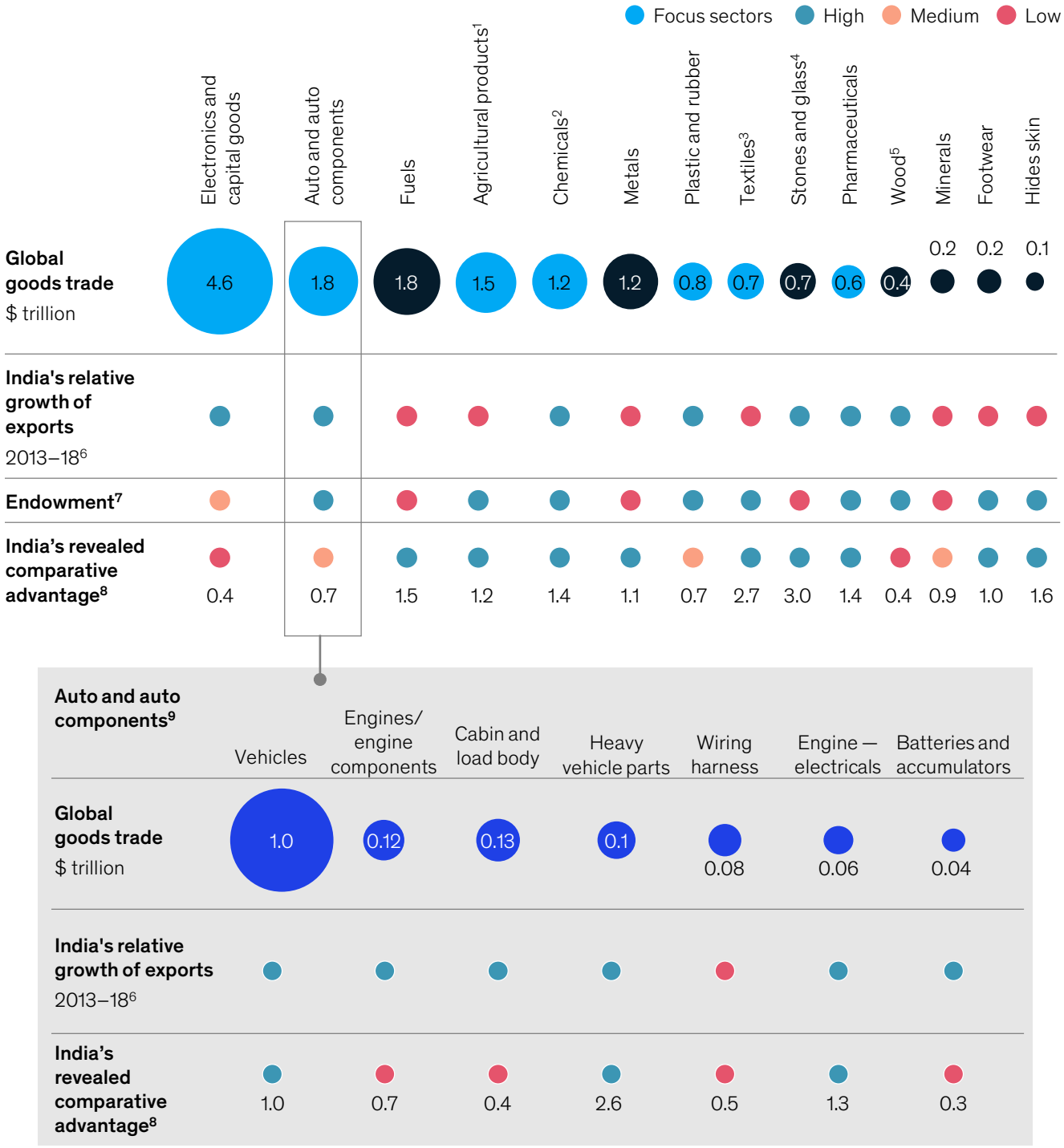
— **Global IT and digital services hub.** India's traditional strength in IT-enabled services can be augmented with modernised capabilities to reflect digital and emerging technologies like cloud computing, artificial intelligence (AI), and machine learning-based analytics and business processing services. These technologies could propel as much as 40 percent of overall revenue and 60 percent of spending in the sector by 2025.[141] In 2019, India's overall IT spend was $88 billion, which was 2.4 percent of worldwide IT spend, according to our estimates.[142] Its exports are estimated to be about $150 billion in fiscal year 2020, about 80 percent of the total revenues of the IT sector.[143] The sector revenue could grow at 8 to 11 percent from 2020 to 2030 by increasing both exports and domestic spending, setting up more data centres, and putting in place policies for data governance, data encryption, cloud adoption, and data privacy. To develop advanced capabilities in these technologies, India also needs to retrain and redeploy its talent in artificial intelligence, analytics, and cloud computing, among new and emerging digital technologies.

— **High-value agricultural ecosystems.** Agricultural products (including fruits and vegetables, horticulture, livestock, fisheries, aquaculture, and food products) accounted for 8.5 percent of global trade in 2018, but India has only a 2.9 percent share of this market.[144] We estimate that the country has the potential to grow agricultural and food product exports— livestock and fisheries; pulses like soybean, spices, fruits and vegetables; horticulture, dairy and other agricultural produce—to $95 billion by 2030, from about $35 billion in 2018. This would represent an acceleration of the current trend of the share of cereal output falling, and that of fruits and vegetables increasing from 24 in 2012 to 30 percent in 2018. In the same time period, the share of crops within sector GVA has fallen from 65 to 58 percent, while livestock, fisheries, and aquaculture has increased from 27 to 35 percent.[145] Tapping the potential of higher-value added agricultural products exports could create opportunities for firms to build integrated farm-to-exports value chains and ecosystems; thriving agricultural processing hubs requiring handling, storage, and processing infrastructure; and farmers who have access to digital services that can improve their productivity. For instance, adopting precision agriculture—providing real-time data to farmers to optimise fertiliser, pesticide, and other inputs—can increase farm productivity by up to 60 percent by digitising and making available myriad databases on soil quality, weather, crop patterns, and so on. Similarly, 60 percent of agricultural surplus can be transacted through e-marketplaces such as e-NAM, improving farmers' price realisation by 10 percent.[146] The cost of financing could be reduced by 10 percentage points compared with traditional lenders' rates by moving farmers to more organised financing from noninstitutional credit.[147]

141 *Perspective 2025: Shaping the digital revolution*, NASSCOM, October 2015.
142 Ayushman Baruah, "IT spending in India seen rising 6.6% to touch $94 billion next year", *Livemint*, November 11, 2019.
143 *India's trillion-dollar digital opportunity*, Ministry of Electronics and Information Technology, February 2019; *Technology sector in India 2020: TECHADE: The new decade strategic review*, NASSCOM, 2020.
144 UN Comtrade DESA/UNSD.
145 National Accounts Statistics, Ministry of Statistics and Programme Implementation, 2020.
146 R. Maheshwari, K. R. Ashok and M. Prahadeeswaran, "Precision arming technology, adoption decisions and productivity of vegetables in resource-poor environments", *Agricultural Economics Research Review*, 2008, Volume 21; *Doubling farmers' income*, NITI Aayog, policy paper number 1/2017, March 2017.
147 For details, see *Digital India: Technology to transform a connected nation*, McKinsey Global Institute, March 2019.

Exhibit 9

Globally competitive manufacturing hubs can be established in high-potential sectors such as electronics and capital goods, auto, chemicals, textiles, pharmaceuticals, and food processing.



1 Includes fruits and vegetables, livestock, fisheries, aquaculture, and food products.
2 Excludes pharmaceutical products.
3 Includes apparel, man made fibers, knitted fabrics, carpets, silk, cotton, and wool.
4 Precious or semiprecious stones, pearls, glass smallwares, etc.
5 Includes furniture and wood accessories.
6 India's relative growth of exports mapped as Green, Orange, and Red when India's export growth was better than, approximately equal to, or lower than global goods trade growth between 2013 and 2018, respectively.
7 Economic endowment refers to possession of or potential to develop low-cost input requirements such as resources, labour, intellectual property, etc mapped as high, medium, and low.
8 RCA is revealed comparative advantage – ratio of share of commodity in total national exports to share of commodity in world exports. Green: >=1; Orange: 0.7<x<1; Red: <=0.7.
9 Illustrative example.

Source: World Integrated Trade Solution (WITS); Trade Map; UN Comtrade DESA/UNSD; McKinsey Global Institute analysis.

— **Healthcare services for India and the world.** With its high-quality medical and health professionals, India can do more to build health infrastructure; employ innovative operating models, such as tech-enabled remote healthcare, to expand access; enable wellness and prevention therapeutics services; and harness the export opportunity in medical and care-based services. Innovative healthcare models could bring several benefits. Tech-enabled healthcare could significantly replace in-person consultations by 2030, while reallocating tasks between doctors, nurses, and health associates, enabled by law and policies, could allow doctors more flexibility in their activities and free up 20 to 25 percent of doctors' capacity.[148] This would result in better access to healthcare and savings through reducing days lost due to ill health. According to a report by Redseer, with rising income and growing awareness about healthcare, more affluent people living in urban areas are health-conscious—concerned about lifestyle-related health issues such as nutrition and exercise. That creates attractive opportunities for companies focused on wellness and preventive healthcare; the market could be as large as $60 billion in 2030, compared to $17 billion in 2020.[149] The number of medical tourists could potentially grow 4.5 times, from about 640,000 in 2018 to about three million in 2030, provided steps are taken to keep costs affordable, ensure a supply of qualified doctors, enhance India's overall reputation in healthcare, and simplify patient processes.[150]

— **High-value tourism.** In 2018, about 10 million foreign tourists visited India, far fewer than Thailand (38 million, including 10 million to Phuket alone) and China (63 million).[151] Based on these benchmarks, tourism circuits with high-quality infrastructure and services could potentially attract some 50 million foreign tourists to India in 2030. Tourism employs a large number of people and requires skills that are relatively easily acquired. The key to unlocking potential is to ensure that a significant number of additional tourists visit and are enticed to stay and spend more money. Opportunities to capture this potential include developing tourist attractions such as museums, convention centres, theme parks, and beach facilities, as well as hard infrastructure such as parking and roads. For example, Odisha, despite unique offerings such as the Konark Sun Temple (a UNESCO World Heritage site) and Bhitarkanika National Park, still has plenty of scope to expand its tourism sector.[152] We estimate that a tourist inflow of this magnitude could generate $100 billion in spending to boost local economies and create income-earning opportunities for five million low- and medium-skill service-sector workers.

Growth booster 2: Efficiency engines for India's competitiveness (17 frontier business opportunities)

With the right economic reforms and use of technology, India can build many modernised businesses that could help the economy overcome productivity-dragging barriers and enable competitiveness across sectors. Many of these business models imply disruption to the existing incumbents, often state-owned enterprises, and restructuring of fragmented and inefficient industries in the power, logistics, financial services, manufacturing, and government services sectors. Each case affords opportunities for value-creating market-based models to emerge, and they can achieve scale and be globally competitive.[153] Examples include the following:

— **Next-generation financial services.** Key opportunities include innovation in digital payment offerings and new flow-based lending products that use a variety of transaction and other types of data to underwrite loans; for example, we estimate that 80 percent of the unmet credit needs of MSMEs could be bridged by 2030 by leveraging data

148 N. Chandrasekaran and Roopa Purushothaman, *Bridgital Nation: Solving Technology's People Problem*, Gurgaon, India: Penguin Books, October 2019.
149 *Value added service—wellness and preventive healthcare*, FICCI, December 2016; *Indian habit of being healthy*, Redseer, September 2018.
150 India tourism statistics 2019, Ministry of Tourism, 2019.
151 India tourism statistics 2019, Ministry of Tourism, 2019; *International tourism highlights 2019*, UNWTO; Mastercard's Global Destination Cities Index 2019.
152 *From poverty to empowerment: India's imperative for jobs, growth, and effective basic services*, McKinsey Global Institute, February 2014.
153 For more information, see *India's trillion-dollar digital opportunity*, Ministry of Electronics and Information Technology, February 2019.

generated by platforms like the Goods and Services Tax Network to verify companies' financial status.[154] Asset resolution and recovery models could also emerge, making insolvency processes more streamlined and effective. Another opportunity is a larger range of risk capital investment vehicles such as alternative investment funds, private equity, and so forth. Products and channels that deepen the long-term contractual savings market of insurance and pensions are also emerging. For example, Ping An, one of China's leading financial institutions, transformed from an insurance provider into one of the largest digital ecosystems. It invested $7 billion in research and development for AI, cloud computing, and blockchain in the past decade and expects to invest $15 billion in the next ten years. Its digital transformation achieved remarkable results, tripling revenue between 2013 and 2017.[155]

— **Automation of work and Industry 4.0.** About 12 to 13 percent of today's work can be digitised through network and inventory optimisation, demand-based planning, and product design, according to our estimates. By 2030, as much as 60 percent of the manufacturing sector could adopt Industry 4.0 tools, for example, leveraging the Internet of Things (predictive maintenance, smart safety management, among others). This can lift productivity in plants and factories by 7 to 11 percent through greater throughput, better quality, and improved standardisation and safety.[156] For instance, sensors along a production line can provide real-time data, enabling businesses to optimise inputs, monitor processes, and maximise yield. Similarly, the IoT forewarns plant managers about potential machine failures by checking parameters like temperature and vibration levels.

— **Efficient mining and mineral sustainability.** India's geological strata are similar to Australia's, suggesting that the country is rich in minerals. Nevertheless, in 2016–17, India's import-to-production ratio was 3.7.[157] Resource access is critical to India's manufacturing growth. The requirements for energy and resources to drive this growth will make India even more heavily dependent on imports. Auctioning larger leases by amalgamating smaller resource blocks and enabling private participation could improve efficiency and increase exploration. This in turn could help India achieve resource sufficiency, in an efficient and sustainable manner, in materials like coal, with production rising from about 900 million tonnes to about 1.2 billion tonnes and zero net imports in 2030. Iron ore production could increase to more than 420 million tonnes by 2030, from about 200 million tonnes in 2018, according to our estimates, while demand could increase from about 150 million tonnes to more than 250 million tonnes, thereby generating significant exports. Similarly, bauxite production could increase from 20 million tonnes to about 35 million tonnes from 2018 to 2030, and zinc-lead ore could potentially increase from eight million tonnes to more than ten million tonnes by 2030.[158] Additionally, domestic and global action to secure access to minerals with low reserves—like nickel, cobalt, lithium, and rare earth metals, among others that are essential for manufacturing—will present new opportunities. The increase in production of these resources would need to be carried out in an efficient and sustainable manner. These business models could generate $110 billion in economic value in 2030 and support about three million jobs. They would require an average yearly investment of $35 billion.

— **High-efficiency power distribution and logistics models.** Inefficiencies in power distribution and cross-subsidisation have made India the only country in a peer set of 20 countries with industrial power tariffs higher than residential, at 7.5 to 9 rupees per kWh, making the manufacturing sector uncompetitive.[159] For example, at the time of writing, India's aggregate technical and commercial (AT&C) losses are 19 percent compared to the best-in-class figure of 10 percent. Some distribution companies even

[154] *Digital India: Technology to transform a connected nation*, McKinsey Global Institute, March 2019.
[155] Danny Mu and Meng Liu, *How Ping An Insurance embraced digital to rewrite its business*, Forrester, February 24, 2019.
[156] *A future that works: Automation, employment, and productivity*, McKinsey Global Institute, January 2017.
[157] Annual report, Ministry of Mines; Ministry of Commerce.
[158] McKinsey Basic Materials Institute; McKinsey MineSpans.
[159] Energy prices and taxes, International Energy Agency, 2016; *Report on performance of state power utilities 2018–19*, Power Finance Corporation, 2020.

experience AT&C losses of up to 50 percent.[160] Productive market-based models, like privatised or franchised distribution companies, and digitising of the power infrastructure, such as installing digital meters for all households and automating the power grid, could increase productivity by reducing energy lost due to equipment malfunction, theft, and inefficient billing and collection. This can reduce commercial and industrial (C&I) power tariffs by 20 to 25 percent and substantially reduce losses, which were about 61,400 crore rupees ($8.8 billion) in 2016–17.[161]

India's logistics costs, at 13 to 14 percent of GDP, are high by global standards, and its modal mix is skewed towards high-cost road transport—which accounts for 60 percent of logistics, compared to 37 percent in the United States.[162] India has high indirect costs due to cumbersome and redundant processes. It is ranked 40th in speed and predictability of the clearance process in the World Bank's 2018 Logistics Performance Index, while China was 31st and the United States tenth. Truck speeds are lower in India compared with other emerging economies (30 to 40 km/hour versus 60 to 80 km/hour), and delivery time is longer. In the 2018 Logistics Performance Index, India was 52nd on the timeliness parameter compared to China at 27 and the United States at 19.[163] India can optimise its modal mix by building low-cost rail and water modal infrastructure; Dedicated Freight Corridors, for example, can improve share of rail transport once they are constructed and in operation. Additionally, digital interventions such as platformisation, telematics, advanced analytics, and other digital technologies can bring significant efficiencies to logistics. For instance, they can enable better tracing, tracking, and predictive maintenance; analytics can also be used for back-office tasks, enabling efficiencies such as algorithmic pricing and automated booking. Efficient logistics models, including an optimal multimodal freight ecosystem and digital interventions, could drive down costs by 20 to 25 percent, by our estimates.

— **E-governance model of the future for government services.** Digital technologies can bring about a step change in government services, lowering both cost and time spent, through comprehensive direct benefit transfer (DBT) and portable worker benefits, government e-marketplaces, digital land services, and digital citizen and business services. For example, 80 percent of government procurement can be made electronically, leading to price efficiency gains of 10 percent. End-to-end implementation of government e-marketplace could generate annual savings of up to $35 billion by 2030 by encouraging competition among vendors and the aggregation of orders. Similarly, about 90 percent of central government subsidies (about 1.9 percent of GDP) can be transferred directly and digitally to beneficiaries' accounts after real-time verification. This could result in savings of 15 percent in reduced loss and pilferage or wastage. Estimated savings and benefits from DBT and other governance reforms that plugged leakages and removed fake and duplicate beneficiaries have been about 38,000 crore rupees ($5.5 billion) in fiscal year 2020.[164] Digitisation could also help in accelerating ease of doing business for small and medium-size enterprises; for example, it could improve the time required to incorporate a business in India, currently 18 days compared to six in Thailand and nine in China.[165]

Growth booster 3: New ways of living and working (13 frontier business opportunities)
India can leverage shifting trends in demands and preferences as its young population seeks a higher standard of living. In pursuit of safer, higher-quality urban environments, cleaner air and water, more convenience-based services, and more independent work in the new ideas economy, Indian businesses can create value in many ways, including the following:

160 Annual reports, UDAY, Ministry of Power.
161 *Report on performance of state power utilities 2018–19*, Power Finance Corporation, 2020.
162 Draft National Logistics Policy, Ministry of Commerce, February 2019.
163 Logistics Performance Index, World Bank.
164 Direct Benefit Transfer, Government of India.
165 *Doing business 2020*, World Bank, 2019.

— **Productive and resilient cities with affordable housing and infrastructure.** India's existing cities, while dense, are relatively unplanned. Slum clusters have extremely high population density, while other parts of Indian cities are sparsely built, with a maximum floor space index (FSI) ranging from 1.8 to 5.0 in most cities, while averages are lower as the minimum FSI across cities ranges from 1.2 to 3.5.[166] By contrast, the maximum FSI in New York is 12, and in Singapore, 14.[167] At the time of writing, it was not clear whether the COVID-19 pandemic might slow the pace of urbanisation or have other long-term effects on the viability of cities. In any case, India has the opportunity to put in place a robust planning approach for, say, its top 100 cities. With the city planning in place, business opportunities around this theme include mass affordable housing and leveraging modern construction practices, including prefabricated and modular construction and lightweight aluminium formwork. Such methods are five to six times more productive than the average in the construction sector and can reduce cost to the homeowner.[168] India would need 25 million affordable houses by 2030, at a low cost of at most 2,000 rupees per square foot, depending on income segment.[169] Other opportunities include urban infrastructure in public-private-partnership models (in areas such as mass transit and water). These business models can generate $195 billion in economic value in 2030 and support about 30 million jobs; they would require an average yearly investment of $75 billion.

— **Sharing economy models for jobs, skills, and education.** These models reflect changes in demographics and consumption, including online training and work platforms, education platforms, and app ecosystems to share ideas and meet all sorts of needs. The education and training ecosystem is not yet reflective of the changing needs of industry. A risk is that many educated job seekers may not have the skills needed to find employment. There is need for a demand-driven approach to forecast future skill requirements. India also relies on an informal network of relatives and local communities for job matching, which can be made more efficient by leveraging the power of digital technology. For example, efficient and transparent labour markets result in better matching, leading to 6 to 7 percent higher wages, 7 to 22 percent shorter search time, and the entry of more people to the labour force, especially women. Digital technology can help improve the quality of skill training by leveraging tools including augmented reality, virtual reality, and video lectures. Through mobile and web-based applications, it can also improve access to basic skills by removing lack of mobility as an impediment. Sixty percent of new entrants in the labour force could potentially acquire new skills using digital tools and technologies.[170] These models can potentially generate $170 billion in economic value and 10 million jobs by our estimates.

— **Modernised retail trade ecosystems.** India's share of traditional trade is high relative to peers at about 85 percent, while its modern trade and e-commerce segments account for only 10 percent and 5 percent of total gross merchandise value, respectively. Traditional trade in groceries accounts for only 14 percent of the total in the United States and 17 percent in China. In groceries and nongroceries, e-commerce accounts for 7 percent and 24 percent in the United States and China, respectively.[171] We estimate that modern trade and e-commerce are five and nine times more productive than traditional retail.[172] Following the pattern of other emerging economies, India could increase its share of both e-commerce and modern trade to 20 percent and put in place digitally enabled supply chains. New business models in retail and e-commerce benefit not only consumers, who stand to save time and gain convenience and choice, but can also help traditional

166 Prahalad Singh, "FAR/FSI 2019 updates: Floor space index in India's top cities", Common Floor, November 15, 2019; Purva Chitnis, "FSI increased for residential, commercial buildings in Mumbai", *Bloomberg Quint*, April 27, 2018.
167 *Shaping Melbourne's central city*, Department of Environment, Land, Water and Planning, Victoria State Government, November 2016.
168 See *Reinventing construction: A route to higher productivity*, McKinsey Global Institute, February 2017.
169 *Brick by brick: Moving towards "Housing for All"*, RICS and Knight Frank, 2019.
170 *India's trillion-dollar digital opportunity*, Ministry of Electronics and Information Technology, February 2019; *Independent work: Choice, necessity and the gig economy*, McKinsey Global Institute, October 2016.
171 Euromonitor International Retailing 2020 Edition; *Global growth: Can productivity save the day in an aging world?*, McKinsey Global Institute, January 2015.
172 McKinsey Corporate Performance Analytics; *Global growth: Can productivity save the day in an aging world?*, McKinsey Global Institute, January 2015.

stores. Small retailers today rely on repeat customers, referrals, and passers-by to peruse their inventory. They can leverage the online platforms as a means to scale up their business, gain insight about demand, and serve customers beyond their catchment area. The resulting revenue growth, documented in digital payment records, could be shared with lenders, making access to finance easier. Similarly, large retailers benefit from the ready pool of potential buyers and data about their purchase history and browsing. We estimate that the growth of new and alternative formats in retail has the potential to generate $125 billion in economic value by 2030 and lift the productivity of 5.1 million storekeepers in the fragmented retail sector and workers in e-commerce sectors.

— **Climate change mitigation and adaptation models.** Given the growing physical risks and rising hazards of climate change, there are opportunities in mitigation and adaptation models.[173] They include renewable solutions, energy-efficient solutions in buildings and factories, waste-to-value and wastewater solutions, and emission control solutions. For example, India could more than quadruple its renewable energy capacity, from 87 gigawatts to 375 gigawatts, and increase the share of wind and solar energy in power generation from about 7 percent in 2019 (overall renewables share excluding hydro-electric power is 8.3 percent) to best-in-class (about 30 percent) in 2030.[174] Additionally, climate risk adaptation technologies could also become opportunities. Examples include protecting a city from rising sea levels, developing early-warning systems for lethal heat waves, and installing cooling shelters to protect those without air-conditioning. We estimate that these opportunities could generate $90 billion in economic value in 2030 and support about two million jobs, for an average yearly investment of $75 billion.

— **Digital communication services.** Communication, media, and entertainment is at an inflection point, with increasing numbers of smartphone users and growing data consumption. Digital media and entertainment are spurred by universal high-speed connectivity, with mobile as the primary channel. Technologies such as augmented reality, virtual reality, artificial intelligence, and natural language processing help customise and enhance the user experience. Services with high growth potential include over the top (OTT) video streaming, with strong original content and distribution capabilities; digital classified ads in recruitment, matrimony, automotive, real estate, and other categories. Other fast-growing opportunities include digital gaming and, in particular, app development for “Indianised” games; and digital media, particularly local language news content. In all, this opportunity could generate $55 billion in economic value in 2030, with an average yearly investment of $3 billion.

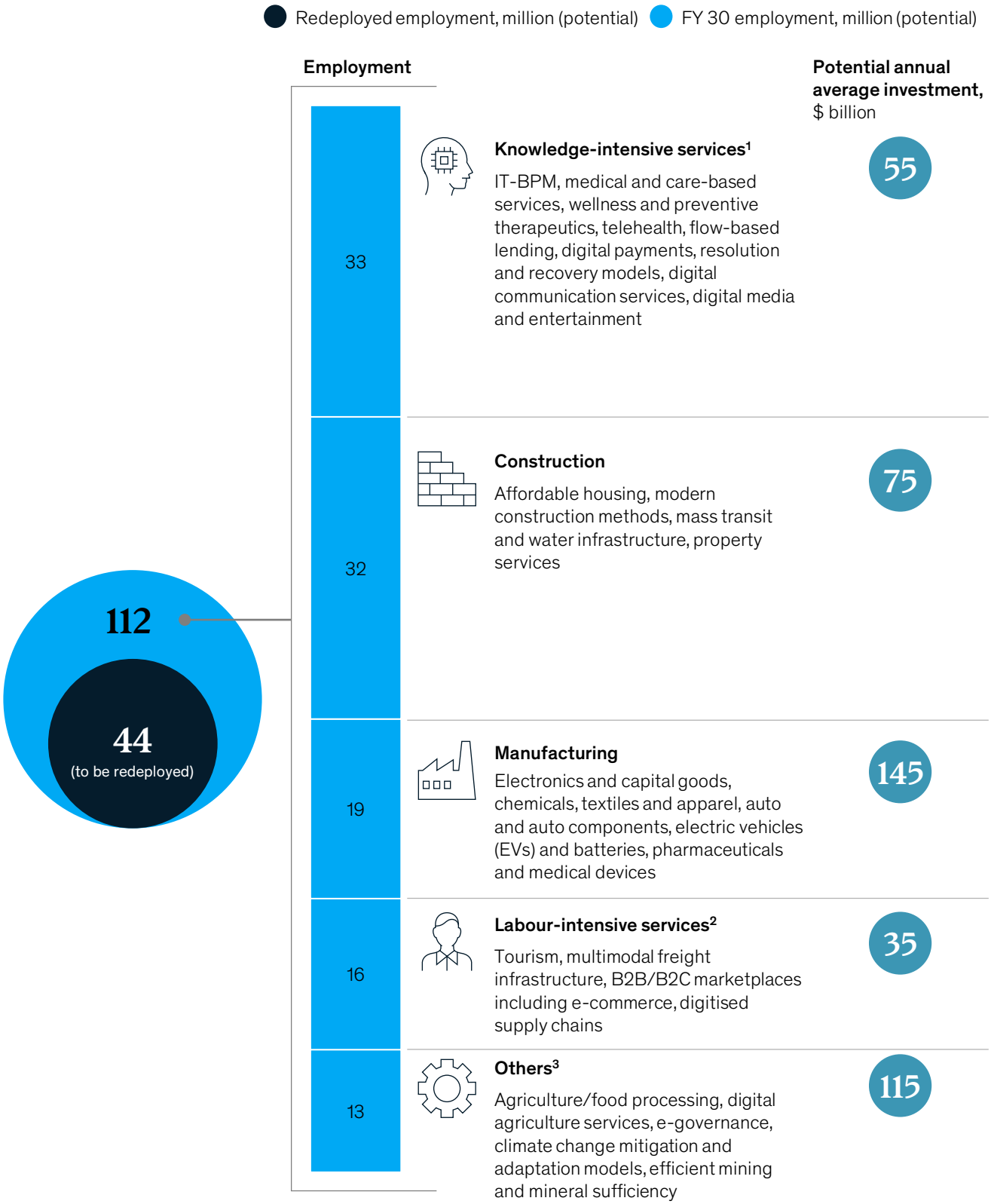
We estimate that enabling these frontier business opportunities and achieving an economic value of $2.5 trillion by 2030 will require an investment of about $425 billion on average every year; this is about half of total investments in fiscal year 2020, which amounted to about $865 billion.[175] Beyond capital, each of these business models would need an enabling policy framework, which we explore in chapter 4. Exhibit 10 details the jobs supported, and investment required by sector.

Frontier business opportunities have the potential to create $2.5 trillion in economic value in 2030.

[173] See *Climate risk and response: Physical hazards and socioeconomic impacts*, McKinsey Global Institute, January 2020.
[174] “India set to cross 100GW renewable energy capacity mark in 2020”, *Economic Times*, December 26, 2019; *Global energy statistical yearbook 2020*, Enerdata; *Energy statistics 2020*, Ministry of Statistics and Programme Implementation, 2020.
[175] National Accounts Statistics, Ministry of Statistics and Programme Implementation, 2020.

Exhibit 10

Frontier businesses could support 112 million jobs (about 30 percent of nonfarm jobs) across sectors in 2030, and require an annual average investment of $425 billion.



[1] Includes communication and broadcasting, IT-BPM, financial services, education, healthcare, and other professional services.
[2] Includes trade, transportation and storage, and hotel and restaurant sectors.
[3] Includes utilities, mining, agriculture, and public admin.

Source: McKinsey Global Institute analysis

Frontier businesses and firms can create higher-income job pathways for millions of India's workers

We see a few examples of companies in India operating at the productivity frontier along the lines of the business opportunities described earlier. As these and similar businesses scale up in size, they can lift sector-wide productivity and create higher-income earning job pathways for low- and medium-skill workers who find work in these high-productivity value chains. Examples of such beneficial effects can be found across sectors and in different settings. For illustrative purposes, we outline four of them here (Exhibit 11).

Eleven million high-productivity jobs are possible in global manufacturing hubs, of which about three million could be in auto export powerhouses by 2030. Automotive firms at the productivity frontier in India are its large export powerhouses—companies that derive more than 30 percent of total income from exports. They are 1.4 times more productive than large, domestically oriented firms and three times more productive than small and midsize firms in the sector. Companies like Bajaj Auto, the largest exporter of two- and three-wheelers in India, has achieved the productivity frontier through product and process innovation, the use of lean production methods, and a strong focus on expanding its global footprint.

However, India's automotive sector currently has fewer than ten such export powerhouses and only about 40 domestically oriented large firms. Consequently, only 2 percent of the sector's labour force is employed at the productivity frontier, while over 80 percent are employed in lower-productivity enterprises.[176] If more firms were to shift to the productivity frontier in automotive, India could add economic value of $135 billion by 2030 and create higher-wage earning opportunities for three million workers.

About 70 million farmers could reap the gains of digital agriculture services by 2030.[177] Farming enterprises at the productivity frontier in India are modern farms that employ digital agriculture services, including precision agriculture techniques. These are 1.5 times more productive than conventional large farms and 2 to 2.5 times more productive than conventional but fragmented small farms, according to our estimates.[178] Many startups have entered the precision farming arena. Some give an accurate 3-D representation of the terrain and provide solutions to optimise irrigation as well as fertiliser and pesticide application. Another startup provides farm-related intelligence, expertise, and technology to farmers, with demonstrated yield increases of about 50 percent.[179] Some precision agriculture offerings have scaled to high levels; for example, mKRISHI, a technology platform developed by Tata Consultancy Services, caters to more than 400,000 farmers in Maharashtra, Gujarat, Tamil Nadu, and Punjab.[180] It offers customised information to farmers to help them plan activities such as disease management using real-time image processing and integrated data from a network of wirelessly connected stations monitoring parameters like temperature and humidity.[181]

At the overall sector level, though, precision agriculture covers less than 5 percent of India's farms. Most Indian agricultural workers—a population forecast to be 175 million in 2030—engage in low-productivity work on small farms, with negligible access to know-how or mechanized tools. India could aspire to have 40 to 60 percent of landholdings farmed using precision agriculture methods.[182]

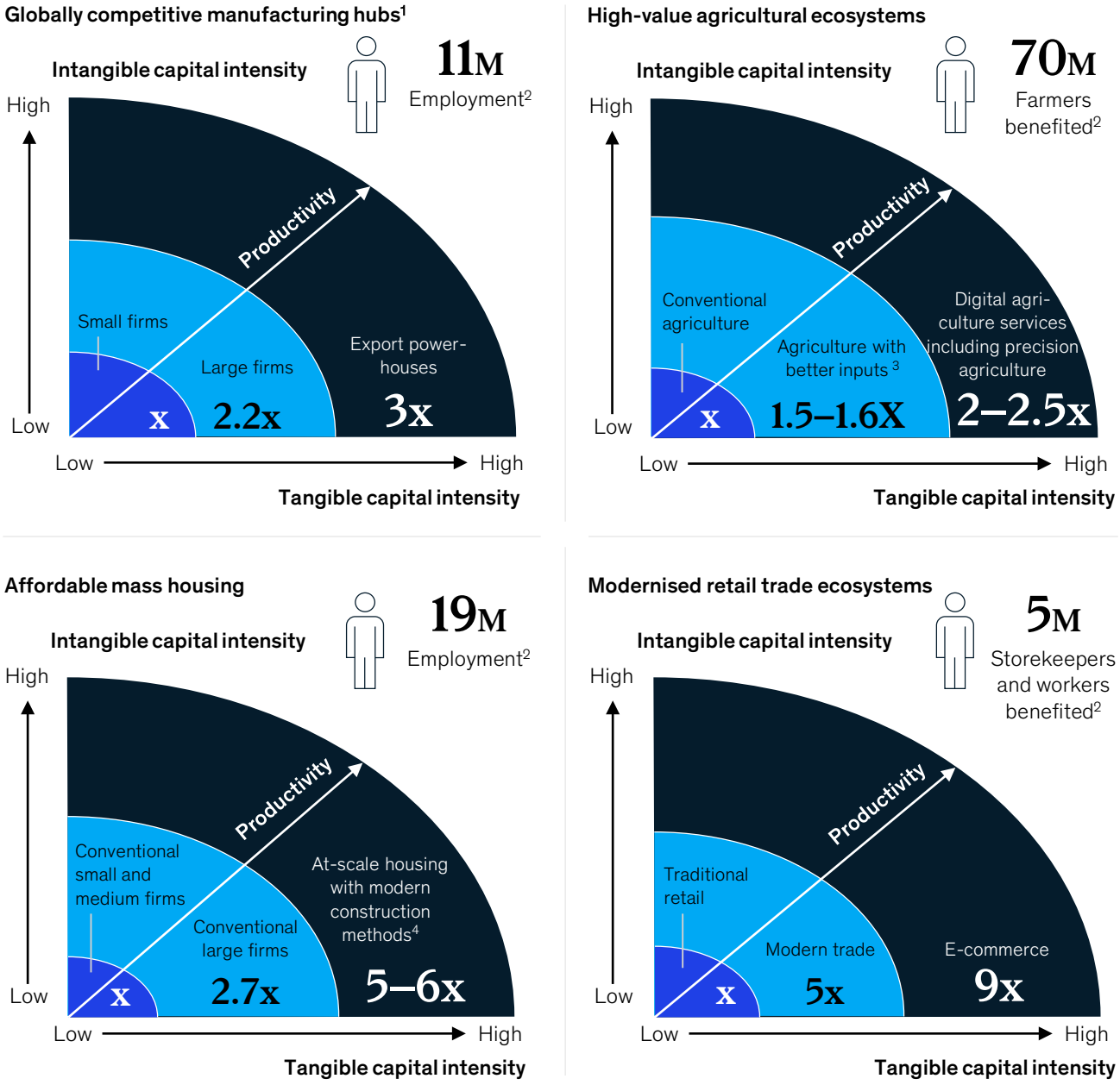
Some 19 million workers could find higher-wage work in modernised residential construction in 2030. In India's construction and real estate sector, firms at the productivity frontier are those that use modern construction practices, including prefabricated, modular, and technology-based methods. For instance, prefabricated methods are two to four times

176 McKinsey Corporate Performance Analytics; CMIE ProwessIQ.
177 Agriculture census, Phase I, Agriculture Census Division Department of Agriculture, Co-operation and Farmers Welfare Ministry Of Agriculture and Farmers Welfare Government Of India, 2015-16.
178 *From poverty to empowerment: India's imperative for jobs, growth, and effective basic services*, McKinsey Global Institute, February 2014; *Digital India: Technology to transform a connected nation*, McKinsey Global Institute, March 2019.
179 "Aibono wins ET Startup award in Social Enteprise category", *GoodTechGo*, July 25, 2017.
180 mKRISHI, Tata Trusts.
181 Enabling digital farming with PRIDE, Tata Consultancy Services.
182 *India's trillion-dollar digital opportunity*, Ministry of Electronics and Information Technology, February 2019.

more productive than conventional construction by large firms and five to six times more productive than conventional construction by fragmented, small real estate companies.[183] Frontier construction businesses in India have adopted modern practices, including using technology to raise productivity.

Exhibit 11

High-productivity business models have the potential to raise overall sector productivity, creating higher-wage jobs by 2030.



[1] Productivity example is auto sector.
[2] FY 30 potential.
[3] For example, quality seeds, irrigation, soil quality, etc.
[4] Including prefabricated, modular, light aluminum formwork construction, among other methods.

Source: CMIE ProwessIQ; McKinsey Global Institute analysis

[183] See *Reinventing construction: A route to higher productivity*, McKinsey Global Institute, February 2017.

For example, L&T was a pioneer in using tunnel formwork and aluminium system formwork in residential construction, built a precast high-rise in 2013, and employs IoT and geospatial technologies at virtually all project sites. The on-schedule construction of the Statue of Unity in Gujarat was enabled by RFID tagging each of the more than 6,500 bronze panels, rendering assembly and erection easier.[184]

Currently, however, prefabricated construction in India is nearly nonexistent, compared to 15 percent of construction output in Japan and 6 percent in China.[185] Similarly, average digitisation in India's construction sector is low compared to other sectors.[186] As a result, 99 percent of India's construction-sector labour force is engaged in low-productivity work. If more firms adopted modern construction practices and technology-based advanced construction methods, some 19 million workers, by our estimates, could be employed in India's affordable housing sector by 2030, and 400,000 of those workers could be employed in high-productivity business models. Their average incomes could rise five to six times, in line with the productivity lift. Apart from lower-skill work, such a transition would create higher-skill jobs, including design- and tech-oriented positions in the construction sector.

By 2030, 5.1 million storekeepers and workers could become part of more productive value chains. In India's retail sector, firms at the productivity frontier are the online commerce innovators, both B2B and B2C marketplaces. By our estimates, these are 1.8 times more productive than physical modern trade stores, and nine times more productive than traditional small-scale merchants (including Kirana stores). Examples include the e-commerce majors, like Amazon, Flipkart, and others, which have grown rapidly, investing heavily in logistics capabilities, especially in smaller towns. Amazon receives orders from 99 percent of serviceable postal codes, with 88 percent of new customers in small towns.[187] Flipkart offers more than 80 million products from about 100,000 sellers, and its technology enables about eight million shipments every month.[188] Beyond e-commerce, India's largest conglomerate, Reliance Industries, and startups like Udaan are digitising traditional neighbourhood merchants, combining the benefits of e-commerce with superior last-mile delivery through local merchants. Udaan brings together wholesalers, distributors, producers, and retailers onto a single platform, allowing accurate prediction of demand, sourcing from the right supplier, and meeting the working capital needs of small merchants. Reliance's hybrid offline-online model proposes to integrate its retail outlets' infrastructure with its exclusive e-commerce platform; these outlets would become the point of delivery of e-commerce orders to customers.

Currently, traditional retail business models employ more than 90 percent of the retail sector's workforce. By enabling the growth of a variety of frontier business opportunities in retail, some 5.1 million workers and shop owners could be employed in higher-productivity work in 2030, with opportunities to raise their incomes.

Global trends from automation to sustainability are altering business and society globally. India needs to harness these trends, since they will be key drivers of economic and productivity growth in the years ahead. As we discuss in the next chapter, companies will play a key role in helping to translate those trends into concrete actions—but for that to happen, the corporate sector itself will need to change.

184 Pooja Sarkar, "L&T set to build india's first pre-cast residential high rise", *Business Standard*, January 20, 2013; "Statue of Unity enters 2019 World Architecture News Awards", *Livemint*, May 28, 2019.
185 *Voices on infrastructure: Scaling modular construction*, Global Infrastructure Initiative, September 2019.
186 *Digital India: Technology to transform a connected nation*, McKinsey Global Institute, March 2019.
187 *Amazon.in Great Indian Festival first sale is its biggest celebration ever yet*, Amazon, October 4, 2019.
188 Flipkart.

3. India's company challenge: Achieving competitive scale

In our prior research on emerging economies that outperform their peers over the long term, one of the main insights concerns the critical contribution of competitive large companies. They are key actors that propel economic growth, lift productivity, and create jobs on a large scale, both directly and through the domestic supplier ecosystem that they build to support their operational expansion.[189] India has about 600 large, innovative firms with revenues exceeding $500 million, and, as is the case with other outperformer economies, the contribution of these companies to national economic growth has been significant. In 2018, their revenue contribution amounted to 48 percent of India's nominal GDP.[190]

Corporate India still has plenty of room to develop, grow, and become even more competitive. The revenue contribution of large Indian firms to GDP has actually declined in recent years, and some other outperformer economies—including China, Malaysia, Thailand, and South Korea—have a considerably greater number of large companies, adjusted for GDP size, with a higher revenue contribution.[191] One of the most significant differences with other outperformers is India's "missing middle" of dynamic smaller and midsize companies that grow fast, create many jobs, and put competitive pressure on larger incumbents. India's corporate landscape has fewer of these dynamic up-and-comers than some of its peers, and one of the consequences is that the competitive dynamics for large incumbents in India are not as strong.

If India is to achieve the high growth and large-scale job creation that our analysis suggests it may need over the next decade, the corporate landscape will need to change to allow for a burgeoning middle tier of companies. From the experience of other countries, the more these midsize firms rise, thrive, and keep larger firms on their toes, the more the country as a whole can benefit. In this chapter, we look at what it would take for India to achieve that competitive scale.

Competitive large firms play a critical role in the growth of outperformer economies, and in India, too

Outperforming emerging economies on average have twice as many large companies with revenues exceeding $500 million as other emerging economies with lower overall economic performance. The size and relevance of these large firms has grown rapidly over the past two decades. In outperforming economies, their revenue almost tripled as a share of GDP, from 22 percent between 1995 and 1999 to 64 percent between 2011 and 2016. That was double the level among other developing-economy peers.[192]

Beyond this GDP contribution, large companies contribute to outperformer economies in a variety of ways. First, they tend to be active exporters and are particularly focused on industries with a strong export orientation, such as technology, manufacturing, automotive, and energy. They can quickly outgrow their domestic markets, and this gives them the scale and talent to manage global expansion by taking associated risks.

189 *Outperformers: High-growth emerging economies and the companies that propel them*, McKinsey Global Institute, September 2018.
190 CMIE ProwessIQ; National Accounts Statistics, Ministry of Statistics and Programme Implementation, 2020.
191 CMIE ProwessIQ; McKinsey Corporate Performance Analytics; National Accounts Statistics, Ministry of Statistics and Programme Implementation, 2020; IHS Markit Comparative Industry Service.
192 Ibid.

Second, large firms play an important role in boosting wages. They pay more than SMEs—upward of 75 percent more in countries such as Indonesia and South Korea—and the presence of higher-paying firms can also translate into wage growth at other companies competing for the same labour pool. Workers at these companies often receive expanded and improved training. With the skills they have acquired, they boost productivity and raise the overall level of human capital in the economy.[193]

Third is the innovation that these companies spark, including through adoption of new technologies and competition-driven innovation. A survey that was part of our initial outperformer research suggests that large companies in outperforming economies are 12 percentage points more likely than their advanced-economy peers to encourage experimentation, ten percentage points more likely to explore new sources of profit, and eight percentage points more likely to rapidly roll out new products or services that prove successful.

Like their peers in other outperforming emerging economies, India's 600 large firms (with revenues exceeding $500 million) have also been significant drivers of growth over the past three decades. Their 48 percent contribution to the nation's nominal GDP is disproportionately large. These firms account for almost 40 percent of India's total exports and 20 percent of all direct formal employment. Their labour productivity is 11 times higher than the overall economy. These large firms are also 2.3 times more productive than midsize firms (with revenues between $40 and $500 million), while their capital productivity is 1.6 times higher, due to higher economies of scale, better talent, resources, and higher capital. Overall, they are 1.2 times as profitable as midsize companies, as measured by return on assets (Exhibit 12).[194]

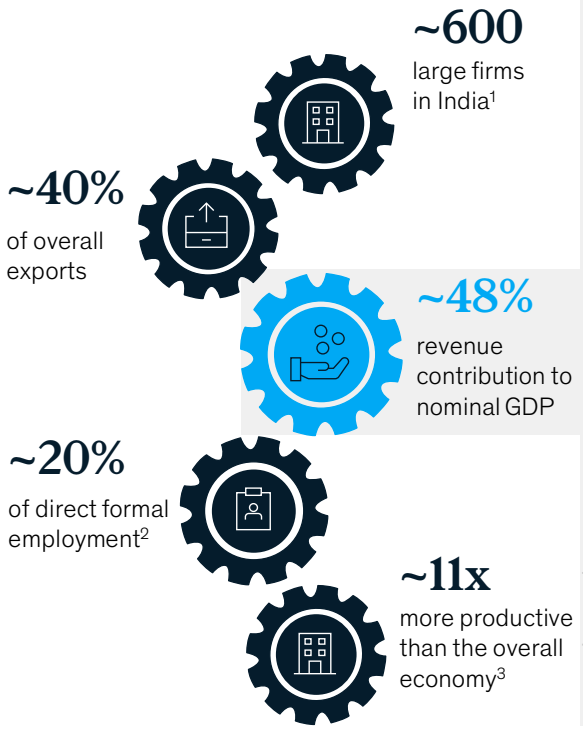
These large companies have significant impact not just directly, but also through their ecosystem effects in the economy. Large firms have enough scale to invest more in research and development, drive global expansion, train employees, and pay higher wages—all of which can create a spillover effect, especially for smaller firms in their ecosystem. At the same time, the rise of competitive large firms may be dependent on strong small and midsize firms, since they are suppliers of intermediary input in the value chain (see Box 3, "Examples of ecosystem effects of large companies").

India's large firms with revenues exceeding $500 million have been significant drivers of growth over the past three decades.

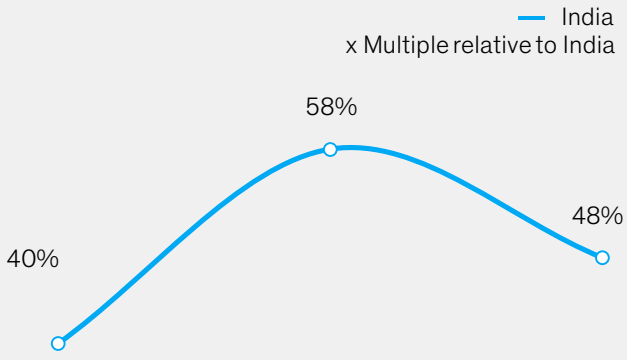
[193] *Outperformers: High-growth emerging economies and the companies that propel them*, McKinsey Global Institute, September 2018.
[194] CMIE ProwessIQ; McKinsey Corporate Performance Analytics; National Accounts Statistics, Ministry of Statistics and Programme Implementation, 2020; EPFO India.

Exhibit 12

Large firms in India have contributed significantly to domestic economic activity, exports, employment, and productivity; however, their growth has been slowing.



Revenue contribution of India's large firms to its GDP has declined, unlike in other outperformer economies



	FY 05	FY 12	FY 18
China	0.8x ↓	1.1x ↑	1.5x ↑
South Korea	3.4x ↑	2.6x ↑	3.5x ↑
Other EMs[4]	1.3x ↑	1.4x ↑	1.6x ↑

[1] Firms with revenue of more than $500M.
[2] Prorated data for companies where data was unavailable.
[3] Labour productivity defined as value added divided by number of employees.
[4] Other emerging markets (EMs) include Malaysia and Thailand (simple average).

Source: McKinsey Corporate Performance Analytics; CMIE ProwessIQ; National Accounts Statistics, Ministry of Statistics and Programme Implementation; IHS Markit Comparative Industry Service; EPFO India; McKinsey Global Institute analysis

Box 3

Examples of ecosystem effects of large companies

Examples in three sectors—tech giant Apple in China, several auto manufacturers in India, and major food producers Amul in India and Vinamilk in Vietnam—highlight the powerful ecosystem effects of large companies.

In China, Apple has spawned or scaled up several local firms. The Foxconn manufacturing facility in Zhengzhou produces about half of Apple's iPhones globally and relies on an extensive ecosystem of local component manufacturers. Of Apple's top 200 suppliers in 2018, 160 have a manufacturing base in China. Between 2013 and 2018, the number of suppliers based in mainland China almost doubled, from 16 to 31, and their revenue grew by 30 percent annually on average. In 2018, all 31 of these suppliers could be classified as large firms, with average revenue per supplier of $2.8 billion.[1] This phenomenon is not restricted to Apple in China; electronics firms in Vietnam, including Samsung, Foxconn, Nokia, and Intel, have made investments in excess of $10 billion in manufacturing facilities, with component manufacturing supply chains developing around these "mothership" companies.[2] Vietnam's exports of electronics grew at more than 20 percent annually between 2012 and 2019 and contributed more than 40 percent to total exports in 2019.[3]

In India, the automotive sector example highlights the strength of the symbiotic relationship between large companies and the smaller ones in their ecosystem. India's automotive sales grew robustly at more than 9 percent per year between 2009 and 2018, driving growth in turnover of the auto component industry, which grew at more than 12 percent per year.[4] The automotive value chain is highly complex, integrated, and interdependent, and is built around OEMs, tier-one suppliers, and tier-two suppliers. The domestic auto industry, which includes giants such as Maruti Suzuki, Mahindra & Mahindra, and Bajaj Auto, sources 80 to 85 percent of its components locally.[5] This has led to the creation of a robust supplier ecosystem: 90 of the world's top 100 auto component suppliers have a presence in India, and the country has become a global sourcing hub of auto components for major OEMs and tier-one suppliers.[6]

Take, for example, Maruti Suzuki, the largest auto OEM in the country. It has more than 4,400 tier-one suppliers with more than 550 plants, over 1,000 other vendors, 320-plus dealer partners, and about 4,200 sales outlets spread across the country. The OEM sources about 90 percent of its component requirements from local suppliers. Of the tier-one suppliers' plants, 88 percent are located within 100 kilometres of the company's manufacturing facilities.[7]

In a very different sector, that of dairy production, the ecosystem benefits of large firms can be understood with two examples: Amul, a $5.1 billion dairy cooperative society, and Vinamilk, a $2.2 billion dairy products manufacturer.

Amul is India's largest food product marketing organisation, with daily milk procurement of about 23 million litres from 18,600 village milk cooperative societies, 18 milk unions across 33 districts, and 3.6 million milk producers. About 85 percent of Amul's membership consists of small and marginal farmers.[8] The organisation helped raise its farmer members' income fourfold from 2010 to 2017.[9] It operates through 61 sales offices and has one of the largest distribution networks in India, with 10,000 dealers and one million retailers. It is also India's largest exporter of dairy products.[10]

Similarly, Vinamilk has built a strong ecosystem in Vietnam, starting with material purchase and cow farming, to production and distribution. In 2015, Vinamilk sourced more than 80 percent of its total raw milk requirement from farming households. Today, it owns 12 farms, contracts more than 6,600 farmers, and manages 80-plus raw milk collection stations. The downstream distribution network consists of more than 200 exclusive distributors and more than 251,000 retailers.[11]

These examples illustrate how ecosystem linkages reinforce virtuous cycles of growth and productivity, suggesting that the growth and success of large firms is crucial for their ecosystems, including small and midsize firms, microenterprises, and individual workers associated with those value chains.

1 Apple; Cheng Ting-Fang, "Apple's Chinese suppliers rise to record number", *Nikkei Asia Review*, March 26, 2018.
2 *The global information and communications technology industry: Where Vietnam fits in global value chains*, World Bank, December 2016.
3 UN Comtrade DESA/UNSD.
4 Automotive Component Manufacturers Association.
5 Alisha Sachdev, "India's $100 billion auto parts industry seeks lifeline for survival", *CNBC-TV18*, May 1, 2020.
6 Barathram A., Rajat Dhawan, Amit V. Gupta, Shivanshu Gupta, Ramesh Mangaleswaran, and Aurobind Satpathy, *Embracing the discontinuities in India's auto component industry*, McKinsey.com, September 2019.
7 Annual report 2019–2020, Maruti Suzuki.
8 Naren Karunakaran, "Amul 2.0: What the ongoing change means for the Rs 18,143 crore cooperative", *Economic Times*, July 31, 2014.
9 Dilip Kumar Jha, "Amul raises farmers' income four-fold in seven years", *Business Standard*, June 15, 2017.
10 Amul.
11 Annual report 2019, Vinamilk; *Corporate presentation*, Vinamilk, 2020.

India's firms have scope to grow in scale and close the productivity and profitability gap

Though large firms are vitally important for any economy, large firms in India face two major challenges, based on our analysis. First, India has fewer large firms (adjusted for GDP size) and a smaller revenue contribution of those firms to GDP than corporate peers in China, Malaysia, South Korea, Thailand, and Vietnam. Second, the productivity and profitability performance of large companies in India also lags behind that of peers.

The revenue contribution of large firms in India, at about 48 percent of nominal GDP in 2018, is smaller than in some other outperforming economies; on a like-for-like basis, in China, Malaysia, and Thailand, the GDP contribution of large firms is about 1.5 to 1.6 times larger, while in South Korea, it is 3.5 times larger.[195]

This is evident across several sectors, especially more labour-intensive ones (Exhibit 13). In 2018, for example, in consumer goods and retail trade, the overall revenue contribution of large firms was about 40 percent of sector GVA; for construction, travel, transport, and logistics, it was between 10 and 20 percent (only 0 to 5 percent in logistics); and in accommodation, food, and healthcare, it was less than 5 percent. In construction, India has 27 large firms, with a revenue contribution of only 11 percent of sector GVA, whereas China and South Korea have 2.0 to 2.6 times the number of large firms (adjusted for their larger GVA size), with eight to 12 times the revenue contribution to sector GVA. In retail trade, India has 48 large firms, with a revenue contribution of only 38 percent of sector GVA. China and South Korea have two to four times the number of large firms (adjusted for GVA size) and about five to 13 times the revenue contribution to sector GVA.

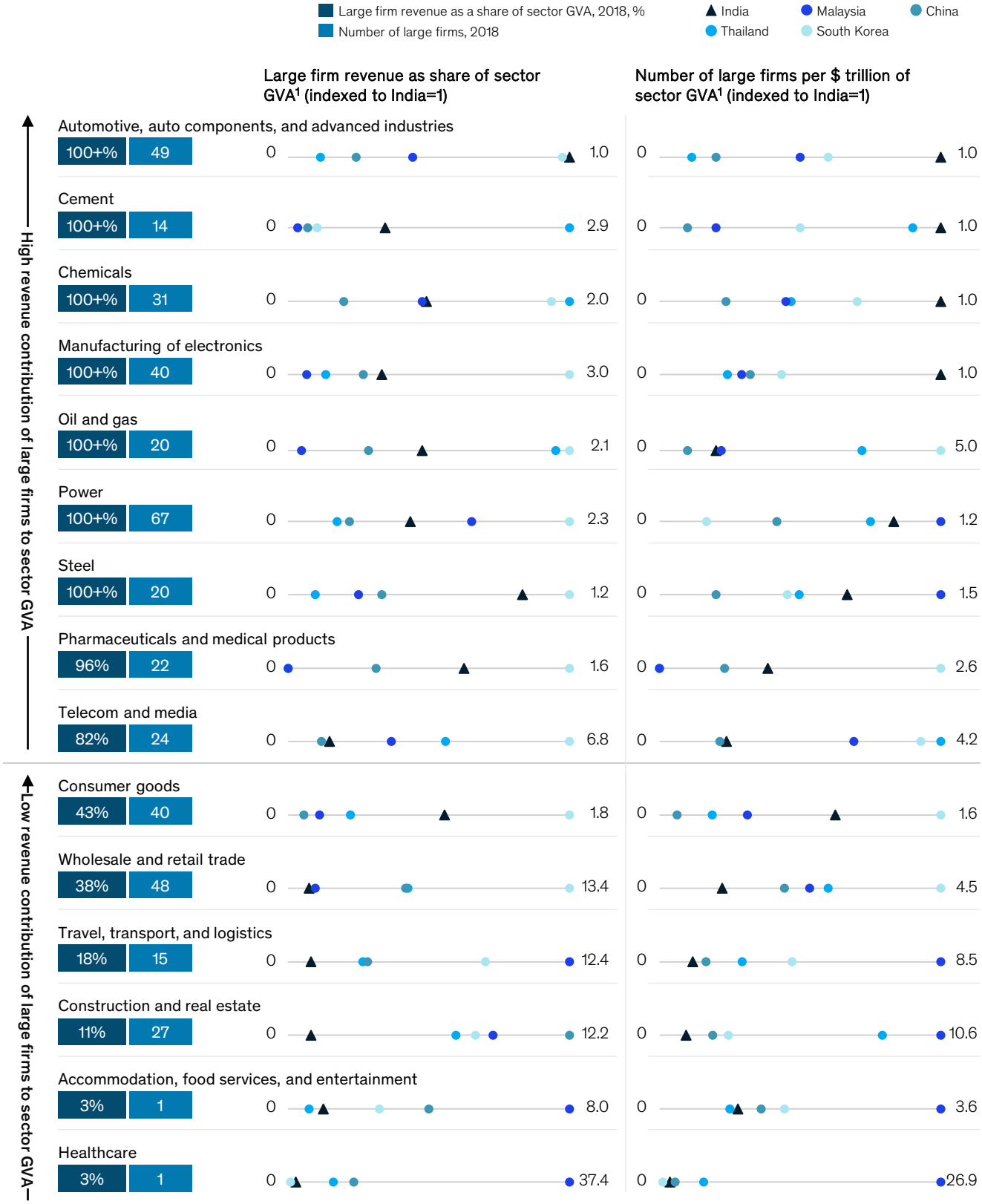
Several of India's capital-intensive sectors contribute more than 100 percent revenue to sector GVA—auto, auto components and advanced industries, cement, chemicals, electronics, oil and gas, power, and steel—and about 90 percent in pharmaceuticals and telecom. Yet India's large firms have room to grow in scale even in these sectors: for instance, large firms have the potential to more than double their contribution to sector GVA in the electronics manufacturing and chemicals sectors (compared to South Korea), raise it by 1.5 to 2.0 times in power (relative to Malaysia and South Korea), and boost it almost 7.0 times in telecom (relative to South Korea).

The revenue contribution of large firms in India was about 48 percent of nominal GDP in 2018. This could potentially grow to 70 percent.

[195] The corporate data in this chapter, including comparisons with other emerging economies, is drawn from McKinsey Corporate Performance Analytics and CMIE ProwessIQ. For national aggregate data, we also use IHS Markit Comparative Industry Service and the Ministry of Statistics and Programme Implementation's 2020 National Accounts Statistics. For details, see the technical appendix.

Exhibit 13

In several sectors, the number of large firms and their revenue contribution are lower in India than in other "outperformer" emerging economies.



[1] Value-added calculation at company level from CMIE ProwessIQ may differ from sector GVA calculation in National Accounts Statistics; Companies operating in more than one sector have been considered in the sector which contributes to maximum revenue in FY 18; Values for other countries represented as multiples of India.

[2] Analysis excludes the following sectors: basic materials, financial services, manufacturing (other than electronics), technology, textiles.

Source: National Accounts Statistics, Ministry of Statistics and Programme Implementation; McKinsey Corporate Performance Analytics; CMIE ProwessIQ; IHS Markit Comparative Industry Service; McKinsey Global Institute analysis

Moreover, the trajectory of India's corporate growth has slowed—and, as a result, India could risk falling back into the ranks of non-outperformer economies. The growth of large firms in India has slowed since 2012, with their revenue contribution to GDP falling from about 58 percent in 2012 to 48 percent in 2018. At the same time, just 77 small and midsize firms scaled up to become large firms between 2012 and 2018, compared with 93 that did so from 2008 to 2012.

Relative fragmentation and lack of scale are two factors that keep firm-level productivity lower in India than in comparable outperformer economies. Considering all firms, not just large ones, the productivity level in India is on average one-tenth to one-quarter that of other outperformer economies across sectors. For example, in the automotive sector, South Korea's productivity is 9.0 times higher and China's more than 3.0 times greater; in electronics, productivity levels in South Korea and China are, respectively, 17 and 2.5 times higher than in India; and in steel, South Korea is 26 times and China 5 times more productive.[196]

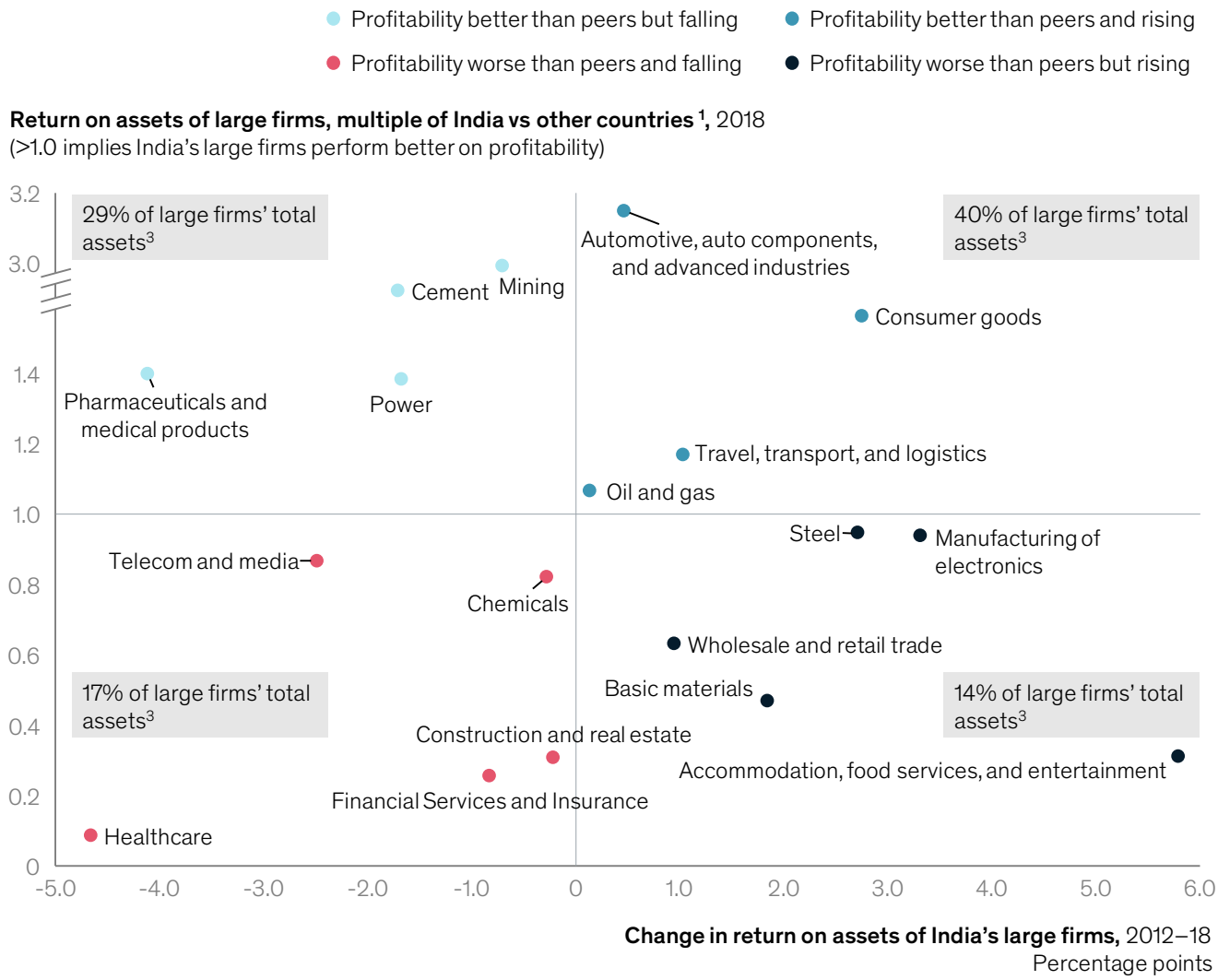
Looking at the profitability of India's large firms, the aggregate return on assets overall for India's large firms fell between 2012 and 2018, from 1.9 to 1.2 percent. A few sectors, including financial services, construction and real estate, power, and pharmaceuticals, among others, primarily drove this trend. The return on assets for India's large firms in 2018 was comparable with that in China and Malaysia, but South Korea, Thailand, and Vietnam have 1.3 to 1.6 times higher profitability than India, particularly in sectors like financial services, trade, telecommunication and media, and chemicals, among others. Some sectors perform relatively better, including automotive, consumer goods, oil and gas, and travel, transport, and logistics, where the return on assets of Indian large firms is higher than that of their counterparts in those countries and improving (Exhibit 14).[197]

Additionally, profit in India is concentrated within a small number of large firms. Our analysis shows that just 20 large firms account for 80 percent of the total profit of large firms in the country. Adjusted for GDP size, China has twice as many large firms, accounting for 80 percent of total large firm profit; South Korea has three times as many firms; and Malaysia, Thailand, and Vietnam have six to ten times as many large firms, suggesting lower concentration of profit in these economies.[198]

196 World Input-Output database.
197 CMIE ProwessIQ; McKinsey Corporate Performance Analytics.
198 Ibid.

Exhibit 14

In several sectors, large firms' profitability is lower in India than in other "outperformer" emerging economies and has been falling between 2012 and 2018.



[1] Other countries include China, Malaysia, South Korea, Thailand, and Vietnam.
[2] Analysis excludes the following sectors: manufacturing (other than electronics), technology, and textiles.
[3] Financial Services and Insurance sector contribute to ~70% of total assets, the remaining 30% of total assets is broken up across 15+ sectors.

Source: McKinsey Corporate Performance Analytics; McKinsey Global Institute analysis

One of the restraints on productivity and profitability in India's firms is the persistent share of large state-owned enterprises (SOEs) in some sectors (see Box 4, "Mixed trends in the performance of state-owned enterprises in India").

Finally, large firms provide large opportunities, but they can also lead to large risks, like a concentration of nonperforming assets (NPAs). Due to their inherent size, a large portion of NPAs come from the corporate segment; our estimates suggest that companies with revenues greater than $40 million (midsize and large and firms, according to our definition) contributed to about 70 percent of the total gross NPAs in India in 2019. Within that group, companies with revenues greater than $150 million (large and some midsize firms) showed a gross NPA share of about 18 percent, compared to 10 to 12 percent for smaller companies.[199] One factor driving this is the relative concentration of infrastructure-based lending, which has been subject to significant regulatory and policy-related risk in the past, in larger firms.[200]

[199] *Report on trend and progress in banking in India*, Reserve Bank of India, December 2019; Annual reports of companies.
[200] "The festering twin balance sheet problem", in *Economic survey 2016–17*, Ministry of Finance, January 2017; *Union budget 2017–18*, Ministry of Finance.

Box 4

Mixed trends in the performance of state-owned enterprises in India

While India's corporate sector has been progressively liberalised and more open to private-sector investment since the early 1990s, some sectors remain particularly dominated by large state-owned companies. For example, of the 20 large firms in the oil and gas sector, 16 are SOEs, which contributed more than 75 percent of large firms' revenue in the sector in 2018. Similarly, in the power sector, 43 SOEs among the 67 large firms contribute 82 percent of large firms' revenue in the sector. The share of SOEs in large firm revenue has fallen since 2012 in other sectors (such as in financial services, from 67 to 55 percent, and mining, from 69 to 58 percent, among others), but the role of state-owned enterprises is not insignificant.[1]

Overall, Indian SOEs constitute about 30 percent of total paid-up capital in the economy as of 2018. However, SOE productivity (measured as value added per employee) is only about half that of private-sector companies. This is particularly stark in sectors such as mining (where private-sector productivity is 3.5 times higher than SOE productivity), steel (5.1 times higher) and telecom and media (about 12 times higher).[2] On profitability, as measured by return on assets, private-sector companies are about six times more profitable than SOEs. The trend seems to be worsening: private-sector companies' profitability was just three times higher than that of state-owned enterprises in 2012.[3]

Some higher-productivity SOEs in India have grown to become large, successful firms and form the bedrock of their sectors. Two examples are State Bank of India and Bharat Petroleum, both companies that have shown the largest market capitalisation increase among state-owned enterprises in the past 15 years.[4] Revenue of SBI, the country's leading bank, grew 15 percent annually, from over $3 billion in 2006 to over $20 billion in 2019. As part of its digital transformation, in 2017 the bank launched an integrated digital banking platform, YONO, that now has more than 20 million users. In the oil and gas sector, Bharat Petroleum had revenue of over $48 billion in 2018, with strategically located refineries and pipeline networks. The firm has grown through product line, capacity, and geographical expansion since the early 2000s. It is a pioneer in branded petroleum products in India, with brands like Speed and MAK, holds a 26 percent market share in petroleum retail, and has 14,802 retail outlets and 123 depots/installations.

1 CMIE ProwessIQ.
2 *4th annual report on the Working and Administration of the Companies Act, 2013 year ending 31.3.2018*, Ministry of Corporate Affairs, December 2018; CMIE ProwessIQ, For information about productivity calculation, see the technical appendix.
3 CMIE ProwessIQ.
4 S&P Global Market Intelligence.

Some higher-productivity state-owned enterprises in India have grown to become large and successful firms, but SOE productivity as a whole is only about half that of private companies.

India has a "missing middle" of small and midsize firms that can climb the ladder of scale and competitiveness

One reason for the smaller scale of India's firms is that India has a "missing middle" of midsize firms that typically grow into formidable competitors for larger rivals and, as happens in other emerging economies, eventually topple some of them from their perch in the top quintile (Exhibit 15). India has a broad base of some 60 million MSMEs, most of them microenterprises, including a long tail of firms with fewer than 10 employees.[201] To analyse how firms are climbing the corporate ladder of scale and aspiring to enter the top tier, we focus on companies with revenue greater than $10 million per year. Our analysis shows that India has about the same number of firms with revenue between $10 and $40 million as peer emerging economies, including China, Malaysia, South Korea, and Thailand, relative to their GDP size. However, on the next step of the ladder, India's 1,500 midsize firms per $1 trillion of GDP, with revenue between $40 million and $500 million, are only about half the number in peer emerging economies relative to their GDP size. As a result, peer economies end up with 1.6 times the number of large firms with revenue of more than $500 million, compared to India, per $1 trillion of GDP.

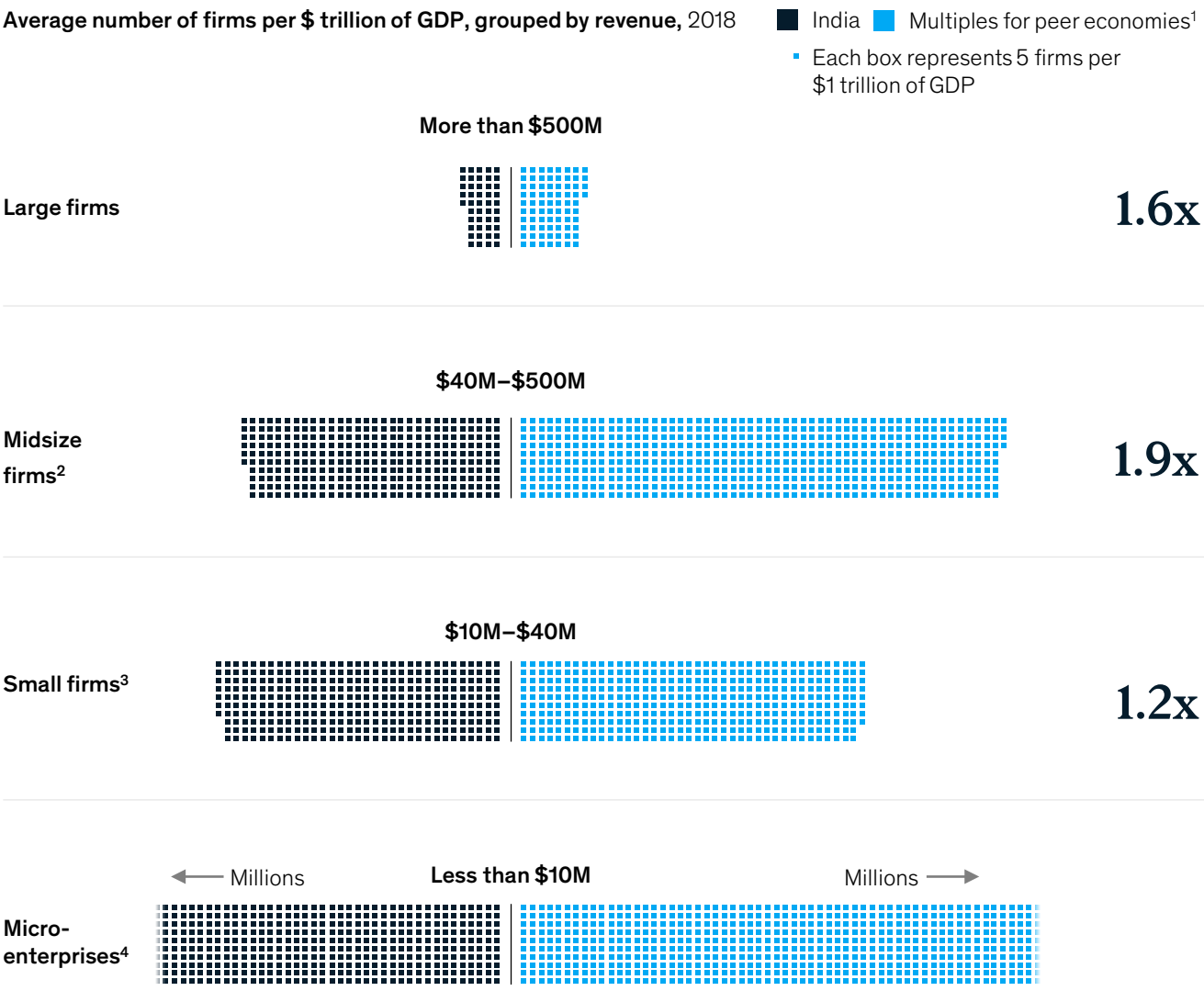
The barriers to upward mobility are reflected in low "contestability", or the degree of competitive pressure to which large firms are subjected. To analyse how India stacks up against peer outperforming economies, we measured this competitive pressure by using as a proxy the degree of churn that companies in the top quintile of economic profit experience. The higher the competitive pressure, the greater the likelihood that only the most efficient firms will survive at the top. On this measure, too, India has scope to improve as compared to other emerging economies, where it is harder for big firms to get to the top and stay there. In China, for example, 66 percent of companies in the top quintile of firms by economic profit were dislodged over the past two decades, whereas in India only 57 percent of top companies fell out of the top quintile. In some sectors, this churn was even lower. In the automotive sector, for example, only 43 percent of the top-quintile firms in India were dislodged, compared to 67 percent in China. For travel, transport, and logistics, 50 percent of Indian firms were displaced from the top quintile, compared with 73 percent for China. In chemicals, 46 percent of Indian companies churned from the top quintile, compared with 66 percent in South Korea and 87 percent in China.[202]

One reason for low upward mobility is the lack of adequate access to low-cost capital, creating barriers that keep small and midsize firms in India from toppling larger underperforming firms as much as in other economies. This is apparent in the bank-driven credit segments of capital raising as well as in the raising of equity and risk capital. For example, to grow to scale and enter the ranks of large firms, we estimate that small and midsize firms would need about six times the amount of capital currently deployed, of which about half will need to be risk capital. Achieving such a goal requires reforms to deepen capital markets and enable efficient financial intermediation.

[201] MSME annual report 2018–19, Ministry of Micro, Small and Medium Enterprises.
[202] World Input-Output database; CMIE ProwessIQ; McKinsey Corporate Performance Analytics.

Exhibit 15

India has only about one-half to two-thirds as many midsize and large firms as other "outperformer" emerging economies, per $1 trillion of GDP.



1 Peer economies refers to China, Malaysia, Thailand, South Korea, and Vietnam.
2 Midsize firms are companies with revenue of $40M to $500M.
3 Small firms have revenue of $10M to $40M.
4 Microenterprises have revenue of less than $10M; total number of microenterprises in India are estimated to be 63 million as per *Ministry of Micro, Small & Medium Enterprises Annual Report 2018–19*.

Source: McKinsey Corporate Performance Analytics; CMIE ProwessIQ; McKinsey Global Institute analysis

The second factor is India's high cost of compliance, which poses greater problems for small and midsize firms that lack the organisational resources to manage costly procedures and litigation compared to larger firms. This factor remains a bottleneck for growth, productivity, innovation, and formalisation of the MSME sector. For example, to start and run a business today, an MSME must navigate a complex landscape of compliances. Starting a business takes up to 18 days in India but half that time in peer economies such as China and South Korea. Additionally, it can be difficult for small firms to acquire real estate for expansion. Further, the complexity of obtaining construction permits (it takes 106 days in India, compared to 28 days in South Korea) or resolving contractual disputes (1,445 days to enforce a contract in India, compared to 290 days in South Korea) suggests that small firms struggle when it comes to building new plants or dealing with delayed payments and capital locked up in disputed, unproductive assets, due to limited resources and specialised employees such as in-house lawyers and company secretaries, among others.[203]

Indian firms—small and large—will need to overcome such barriers to be globally competitive and grow in scale. The on-the-ground experience of India's MSMEs, in particular, needs to improve significantly across a whole range of government-to-business services.

India could triple its number of large firms, with 1,000 or more midsize and smaller firms scaling up, and 10,000 or more small firms becoming midsized

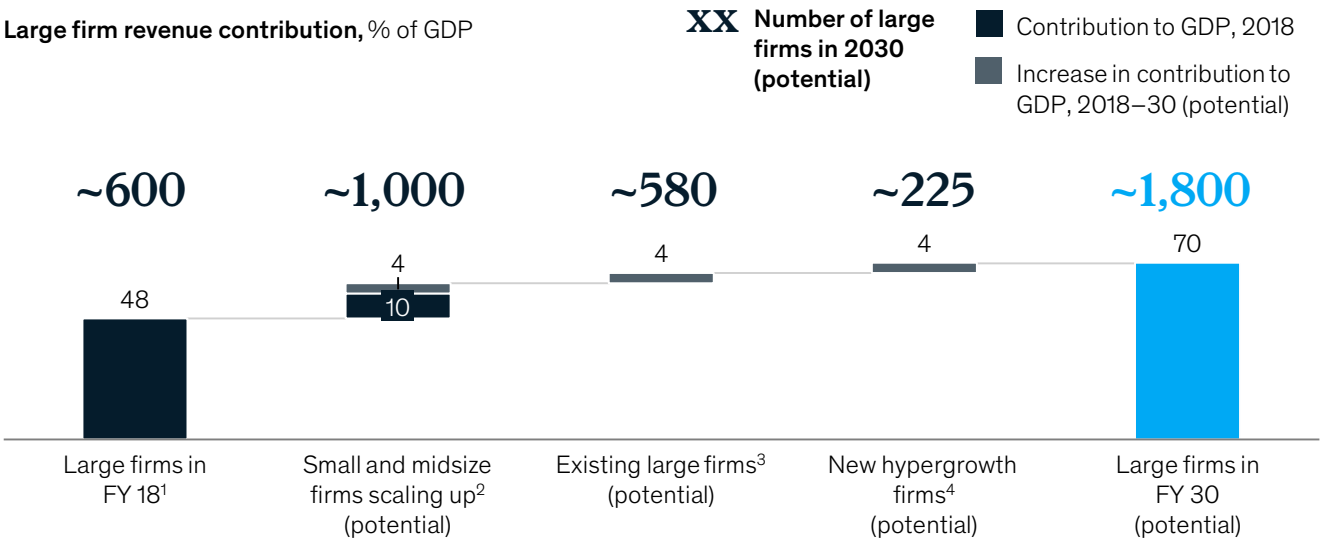
In order to achieve higher and system-wide productivity growth, India has the potential to almost triple the number of large firms (with annual revenue exceeding $500 million) from about 600 in 2018 to about 1,800 in 2030, with 1,000 or more firms scaling up from small and midsize to large, and 10,000 or more firms scaling up from small to midsize. Large firms would also need to increase their revenue as a proportion of India's GDP, from 48 percent currently to 70 percent—more in line with benchmark emerging economies. These firms would also provide about 15 million jobs in 2030. At the sector level, opportunities for more vibrant high-growth companies exist across the spectrum. Currently fragmented sectors such as trade, construction, and travel, transport, and logistics could absorb many more large firms; according to our analysis, these sectors alone could account for a quarter of the 1,000-plus firms scaling up, with a four- to six-fold increase in the number of large firms in these sectors. The manufacturing sector as a whole, including electronics, automotive, chemicals, pharmaceuticals, and textiles, could scale up 400 or more small and midsized firms to become large firms over the next 10 years. That would triple the number of large firms in this sector.[204]

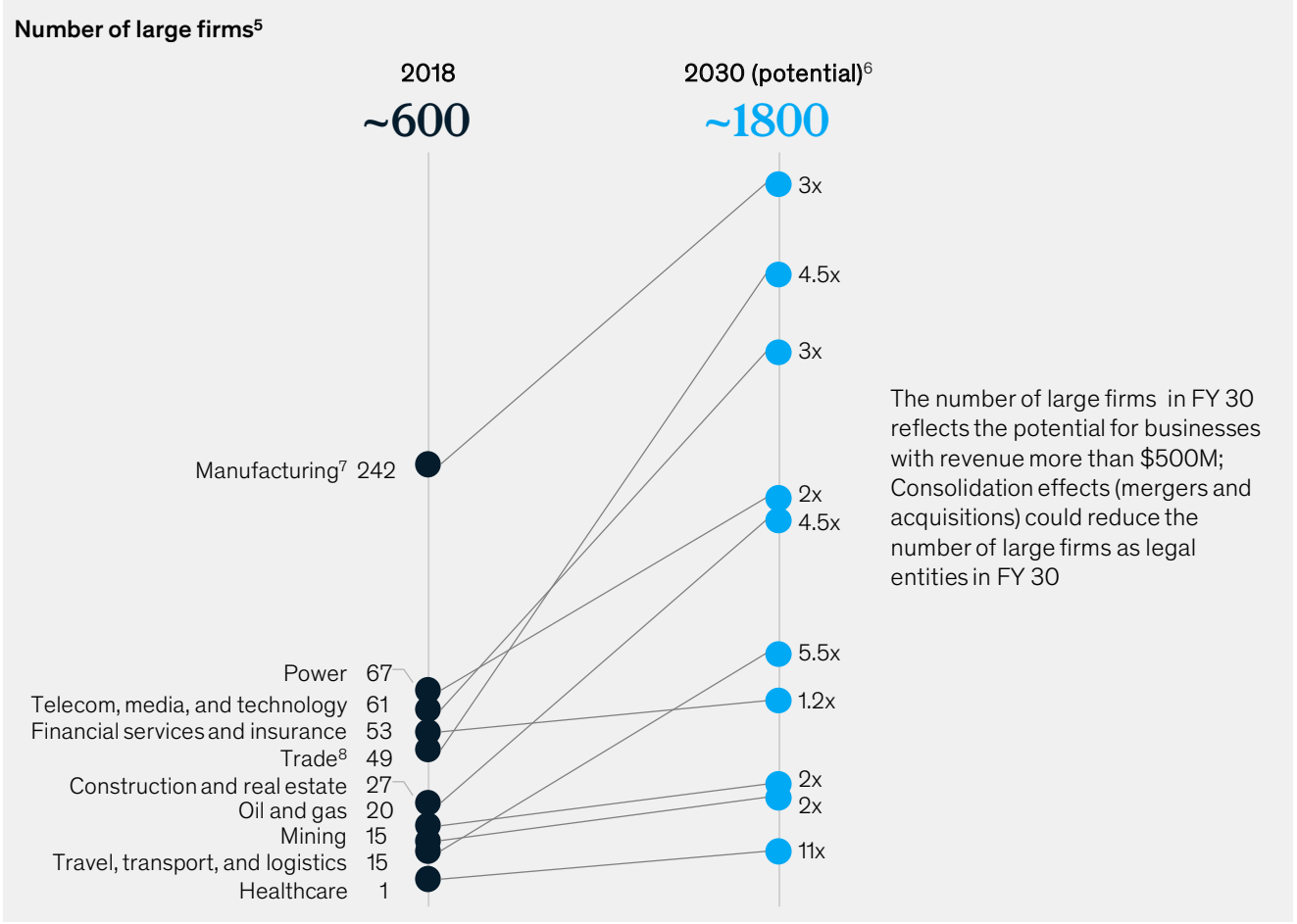
Three broad segments could account for the growth in the number of large firms if India follows the pattern of other outperformers. First, enabling rapid growth of 1,000 or more small and midsize firms would account for most of the increase in large firms. These firms can blaze a trail over the next ten years by building many of the frontier business opportunities we identified as growth opportunities. Second, existing large firms can grow faster than GDP growth, increasing their role in the economy. This pathway will likely be uneven; over time, industry structures will change, and some firms will accelerate much faster, while others—the less well-performing ones—may merge, consolidate, or fade away. Third, new firms that have yet to be established can demonstrate hypergrowth and scale up to join the ranks of large firms relatively quickly (Exhibit 16).

[203] *Doing business 2020*, World Bank, 2019.
[204] McKinsey Corporate Performance Analytics; CMIE ProwessIQ; National Accounts Statistics, Ministry of Statistics and Programme Implementation, 2020.

Exhibit 16

Large firms' revenue could rise to 70 percent of GDP in 2030 as about 1,000 smaller firms scale up; the greatest potential lies in fragmented sectors such as trade.





1 Firms with revenue more than $500M in FY 18.
2 Firms with revenue less than $500M in FY 18, but growing to more than $500M revenue by FY 30.
3 Firms with revenue more than $500M in FY 18 as well as FY 30.
4 Firms incorporated after FY 18, growing to become firms with revenue more than $500M by FY 30.
5 Excludes other miscellaneous firms not a part of the represented sectors. Companies operating in more than one sector considered in the sector that contributed to maximum revenue in FY 18.
6 Potential number of large firms by FY 30 represented as a multiple of the number in FY 18, rounded off to the nearest half.
7 Includes automotive, auto components, and advanced industries; basic materials; cement; chemicals; consumer goods; manufacturing of electronics; pharmaceuticals and medical products; steel; textiles; and other manufacturing.
8 Includes wholesale and retail trade; and hotel, restaurant, and entertainment.

Source: McKinsey Corporate Performance Analytics; CMIE ProwessIQ; National Accounts Statistics, Ministry of Statistics and Programme Implementation; IHS Markit Comparative Industry Service; McKinsey Global Institute analysis

Firms that have outperformed in India display a combination of winning mindsets and capabilities

As discussed earlier, three types of firms have the potential to raise performance and scale in India. In this section, we illustrate growth journeys by a few illustrative Indian firms of these types, and the attributes that helped propel them. First, India needs 1,000 or more midsize and smaller firms to thrive. Examples of firms in this category include Bajaj Finance, Kotak Mahindra Bank, JCB, Sun Pharmaceuticals, and Titan, which were midsize firms in the early 2000s, but achieved double-digit growth in scale and profitability between 2005 and 2018 and today rank in India's top tier and even globally in their respective sectors. Second, India needs its 600 existing large firms to show high growth momentum. Examples of such large firms include HDFC Limited, HDFC Bank, Infosys, Asian Paints, Hindustan Unilever, and Ultratech Cement, all large firms that have continued to grow their scale in the last 15 years. Third, some completely new and dynamic firms have rapidly scaled up to large size within relatively short periods of time. Since the early 2000s, examples include Bandhan Bank and Reliance Jio.

In these examples and more, we identify six interrelated mindsets and capabilities that these winning companies cultivated, which enabled them to climb the ladder of scale and competitiveness. Each company displayed a combination of these traits, but we highlight the following select aspects of their journeys:

1. Customer-centric innovation

Asian Paints, a leading paint and home decoration company, achieved strong growth on the back of customer-centric innovation in its product portfolio, retailing strategy, digital solutions, and positive word of mouth through skill development initiatives. In the early 2000s, the company expanded its product portfolio from paints to decorative coatings. Over time, it entered adjacent categories—waterproofing, wall coverings, kitchen fittings, bath fittings, and adhesives. Each category grew to about $30 million to $40 million in revenue within a period of three to four years, and the firm reinvented itself as a home decor company. It invested heavily in retail stores and used design to make its paints an aspirational consumer brand. It also used customer data to build a demand forecasting platform and offered customers a personalised experience on its digital platforms. Asian Paints also gained influencer loyalty by providing painters with specialized techniques through its "Colour Academy".[205]

JCB India, a leading Indian manufacturer and supplier of heavy construction machines, has made innovation its fundamental philosophy. The company has grown stronger in both brand influence and product range. Through its comprehensive product offerings, JCB has become the machine of choice for the Indian construction industry, selling one out of every two pieces of construction equipment in the country. Its brand is so strong that "JCB" is often used as a generic description for mechanical diggers and excavators. Innovation milestones for the company include two 2015 debuts: the EcoMAX engine, which took machine efficiency and productivity to world-beating levels, and Livelink, which used advanced telematics technology to revolutionise fleet management. The company also offers the country's largest distribution network in the industry, through 650 outlets and more than 60 dealers, ensuring product support even in far-flung areas.[206]

2. Operational excellence and scalable platforms

Bajaj Finance, an Indian Non-Banking Financial Company, was one of the first to introduce consumer durable finance in India in the 1990s and make it a customer acquisition engine. The company financed purchases of high-end watches, furniture, and digital appliances by mass-affluent customers and then used data analytics to target these customers for cross-selling and upselling. Collaboration with online firms including Amazon and Flipkart and with

[205] Sneha Jha, "How Asian Paints leveraged digital innovations to become customer centric", *Economic Times*, August 16, 2017; see also Annual report 2019, Asian Paints.

[206] JCB; Dhiyanesh Ravichandran, "JCB India anticipates strong growth this year", *MotorIndia*, November 27, 2018; *JCB's India journey: 40 years of innovation and growth*, JCB India, December 11, 2019.

retail stores helped expand sales. Bajaj Finance's revenue grew from about $60 million in 2006 to about $2 billion in 2019, an annual average increase of more than 30 percent.[207]

Hindustan Unilever Limited (HUL) is India's largest fast-moving consumer goods company, with a strong portfolio of 44-plus brands. The company, founded more than 80 years ago, prides itself on its brands being used in more than nine out of ten Indian households. HUL achieved scale and profitability through a localisation strategy of innovating product varieties aimed at local tastes; a premiumisation strategy of constantly enabling consumers to upgrade brands or explore adjacent categories, using artificial intelligence and technology to better predict product movements and stocking requirements; and organisational restructuring to encourage more agile and entrepreneurial decision making.[208]

3. Winning major discontinuities and trends

At Infosys, a leading Indian technology and business services company, annual revenue in 2000 was $200 million. By 2018, it exceeded $10 billion. The company built a frontier business in outsourced business-process management (BPM) in the early 2000s. Over the years, it created a strong digital proposition and offerings, with a focus on large transformations for clients. Infosys split its vertical-focused solutions in four large sectors—banking, financial services, and insurance; retail and life sciences; manufacturing and high-tech; and energy and utilities, communications and services—into 15 smaller units, each with a separate business head and profit-and-loss responsibilities.[209] Further, the company created multiple global centres of excellence and hubs to showcase its capabilities in areas such as IoT, testing, and master data management.[210]

Bandhan Bank is the largest microfinance organisation in India. It started in 2001 as a not-for-profit enterprise providing microloans. In 2015, it was granted a universal banking license. Bandhan Bank is capitalising on the discontinuity of financial inclusion and technology-based credit to underserved segments in India. Its revenue grew to exceed $500 million in just three years on the back of a unique business model for microlending, analytics-driven credit evaluation, customer base deepening, and robust repayment collections mechanisms. Since 2015, the bank has focused only on deposits as key source of funding to reduce the cost of funds and enable rapid growth of disbursements. It uses innovative credit evaluation techniques, including checking the regularity of payment of electric bills and feedback from neighbours to create a group-based individual lending model in the underpenetrated east and northeast parts of the country. The bank also deployed a 26,000-employee field workforce for weekly collections, leveraging analytics for early warning alerts.[211]

4. Well-executed mergers, acquisitions, and partnerships

UltraTech Cement is the largest manufacturer of grey cement, ready-mix concrete, and white cement in India and the third-largest cement company (excluding Chinese players) globally.[212] The firm rapidly grew through acquisitions before 2009 and from 2017 onward. For example, the company acquired L&T's cement business in 2004 and Jaypee Cement's business in 2017. From 2009 to 2016, the company focused on organic growth, acquiring raw material assets (such as long-term leases on limestone quarries), positioning its brand as premium cement, and focusing on the core business of cement manufacture, with little diversification. The company was one of the first in India to offer ready-mix concrete, bringing itself closer to customers.[213]

[207] Annual reports, Bajaj Finance.
[208] Annual reports, Hindustan Unilever Limited; Ajita Shashidhar, "How HUL got its mojo back", *Business Today*, August 12, 2018.
[209] Shilpa Phadnis, "Infosys splits 4 verticals into 15 smaller units", *Economic Times*, October 17, 2016.
[210] Annual reports, Infosys.
[211] Annual reports, Bandhan Bank.
[212] Peter Edwards, "Top 10 cement producer profiles", *Global Cement*, July 10, 2018.
[213] UltraTech Cement.

Sun Pharmaceuticals, an Indian multinational and the world's fourth-largest specialty generic pharmaceutical company, grew at an annual rate of more than 20 percent in the past decade to become a $4.2 billion company. It followed an organic as well as inorganic growth strategy in India and abroad. Sun Pharma made 20-plus acquisitions between 1997 and 2016, building a robust track record of turning around subsidiaries including Israel-based Taro Pharmaceuticals, US-based Dusa Pharmaceuticals, and URL Pharmaceuticals. The company acquired Ranbaxy in a $4 billion landmark transaction, aiming to benefit from an expanded product portfolio, sales network, and production base, as well as heightened procurement and supply chain efficiencies and other cost synergies.[214]

5. Strong trust-based brands that attract capital, customers, and employees

The HDFC brand is an example of how an Indian group has built distinctive recognition and pull with all stakeholders across multiple institutions and platforms. The first steps were taken by the financial services company HDFC Limited, a major housing finance provider in India. In the 1990s and 2000s, HDFC Limited pioneered the development of mortgage financing in India, making home ownership a reality for millions of members of the middle class. It built a strong brand that is widely trusted, which is evident in its low cost of funds.[215] The housing finance company diversified over the years, and the group now includes India's largest private-sector bank and its most valuable life and health insurer by market capitalisation.[216] It is also the second-largest asset manager in India by assets under management.[217]

The largest entity in the group is HDFC Bank, whose market capitalisation grew from $100 million in 1994 to over $70 billion in 2020. The bank created a highly accountable performance management and execution culture, a focused approach to sales and risk management, and a track record of digital innovation, including, for example, a 10-second personal loan using an analytically driven underwriting platform. This philosophy has enabled HDFC Bank to scale businesses in agricultural finance, auto finance, personal loans, wholesale banking, trade finance, and other segments.[218] The bank has consistently ranked as the most valued brand in India.[219]

Titan, a member of the Tata Group, is an Indian lifestyle company that mainly manufactures fashion accessories such as watches, jewellery, and eyewear. One of the largest watchmakers globally, Titan is widely known for transforming the watch and jewellery industry in India. The country's jewellery industry in particular is highly fragmented and informal. Titan is also shaping India's retail market by pioneering experiential retail. The company drove innovation that resonates with consumers' aspirations to buy a trusted brand in a high-value category. Titan leveraged the trust it built to enter new categories including eyewear, perfumes, and apparel. Over the past three decades, the company has created more than 15 lifestyle brands, including category leaders such as Tanishq (jewellery), Fastrack (youth fashion and accessories), Sonata (watches), and Titan EyePlus (optical retail).[220]

6. Performance culture and long-term mindset

Kotak Mahindra Bank is the second-largest Indian private-sector bank by market capitalisation. It has grown rapidly in the past decade—between 2011 and 2019, the branch network expanded five-fold, from about 320 locations to more than 1,600; its number of customers almost tripled, from 8.8 million to over 23 million. Over the years, the bank has demonstrated a strong owner mindset and top leadership focus on value creation, evident in its high return on equity, healthy balance sheet, and strong corporate governance.

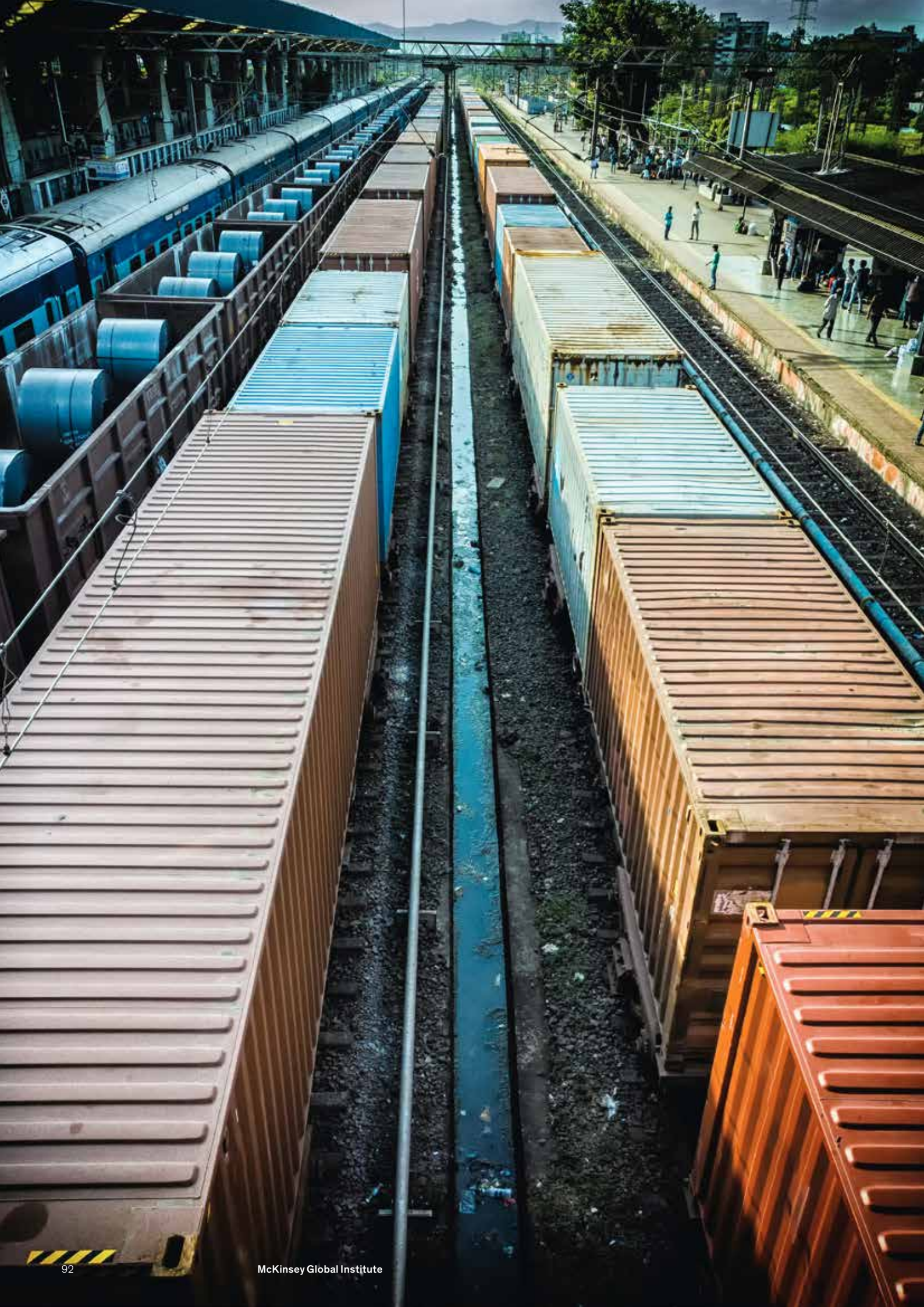
214 Annual reports, Sun Pharmaceuticals.
215 Annual reports and investor presentations, HDFC.
216 S&P Global Market Intelligence.
217 Securities and Exchange Board of India.
218 Annual reports, HDFC.
219 Sohini Das, "HDFC Bank is the most valued brand in India, LIC takes second spot: Survey", *Business Standard*, September 25, 2019.
220 Annual reports, Titan.

The bank's NPA ratios are among the lowest in the industry as a result of robust risk management practices. In 2017, the company put in place a digital-first organic growth strategy—a unique full-service digital banking ecosystem powered by rapid digitalisation of processes and systems and robust data governance. In May 2020, the bank launched India's first video-based know your customer (KYC) savings account for contactless account opening in a highly digitised post-pandemic "new normal".[221]

Reliance Jio, a telecommunications company launched in September 2016, gained about 400 million customers in just three years.[222] Its long-term mindset is evident in the shaping role it is playing in the telecom industry and related ecosystems. Jio entered the market when India had relatively modest internet penetration. It embraced the idea of "democratising the digital culture" in the country. Aggressive pricing, speed of rollout, and innovations like eKYC were the key success factors for rapid adoption. Within a year of its commercial launch, Jio had captured about 11 percent of the Indian wireless market, and in less than two years of operation, it became the third-largest telecom operator in India by market share. Jio heavily invested in its one-of-a-kind fourth generation (4G) VoLTE mobile network.[223] In doing so, it leapfrogged incumbents gradually transitioning out of older technologies. It also built strategic partnerships to achieve unmatched 4G coverage, expanded the addressable market beyond tier-one and tier-two cities through "free" Jio-branded, 4G-enabled feature phones, and offered data-centric plans with price discounts and an ecosystem of digital content and services.[224]

India's firms have a critical role to play in generating the economic growth and job creation that the country needs over the next decade. Large companies already make a major economic contribution, but more of them are needed. Given the right conditions, a cohort of small and midsized firms could scale up, bringing a new competitive dynamism to the business scene. To enable this, reforms will be critical across factor markets, product markets, and capital markets. In the next two chapters we consider measures that could achieve those ends.

[221] Annual reports, Kotak Mahindra Bank.
[222] Danish Khan, "Reliance Jio mobile subscriber base to cross 500 million in FY23: Bernstein", *Economic Times*, June 17, 2020.
[223] Promit Mukherjee, "Reliance lifts Jio investment above $30 billion after record year", *Reuters*, April 25, 2017.
[224] Annual reports, Reliance Jio.



4. Six reform themes to boost growth and competitiveness

Achieving the objectives of high productivity growth and large-scale job creation will require political determination and a clear focus on policy enablers. Which policy measures will be the most appropriate and effective? While many options are possible, in this chapter we outline six targeted themes that we see as having the greatest potential to enable the frontier business opportunities outlined in chapter 2 and usher in a new high-growth era (Exhibit 17). The themes we cover and the measures within them may not be exhaustive, but they address the most important priority areas for achieving an 8.0 to 8.5 percent GDP growth rate and adding 90 million nonfarm jobs over the next decade. These reforms also enable the frontier business opportunities, support the sectors that create the most jobs and GDP, and increase the competitiveness of India's corporate sector. We believe they are concrete steps that could be adopted relatively quickly. More than half of the outlined reforms can be implemented effectively through enacting policies and laws (Exhibit 18).

The themes are: introducing sector-specific policies, including incentives to raise productivity, in manufacturing, real estate, agriculture and food processing, retail, and healthcare; unlocking land supply to reduce the cost of residential and industrial land use; making labour markets more flexible and benefits more portable; reducing commercial and industrial power tariffs by 20 to 25 percent through new business models in power distribution; privatising the top 30 or more state-owned enterprises to double or triple their productivity; and improving the ease and cost of doing business.

More than half the reforms we outline could be implemented effectively and relatively quickly through enacting policies and laws.

Exhibit 17

Six reform themes are critical for major sectors and frontier business opportunities within each sector.

Real CAGR FY 23–FY 30, % (potential) | Nominal GDP in FY 30, $ billion (potential) | Jobs in FY 30, million (potential) | ● Critical reform area

Frontier business opportunities	❶ Select sector-specific reforms (illustrative)	Real CAGR FY 23–FY 30, % (potential)	Nominal GDP in FY 30, $ billion (potential)	Jobs in FY 30, million (potential)	Cross-cutting reforms: Land ❷	Labour ❸	Power ❹	Privatisation, asset sales ❺	EODB, CODB[1] ❻
Manufacturing		**9.6%**	**1,250**	**69**					
Electronics, high tech and capital goods	A stable and declining tariff regime and removal of inverted duty structure				●	●	●	●	●
Chemicals, plastics, rubber	Port-proximate clusters with free-trade warehousing zones, faster approval processes, flexible labour laws, plug-and-play infrastructure, low input costs				●	●	●		●
Auto and auto components					●	●	●		●
Electric vehicles (EVs) and batteries	Holistic sector-specific policy framework such as time-bound and conditional incentives, eg, production-linked incentives, capital subsidies, etc; clear, stable tech-agnostic policies to aid innovation, quality management, etc				●	●	●		●
Pharmaceuticals and medical devices					●	●	●		●
Textiles and apparel					●	●	●		●
Construction		**8.5%**	**550**	**80**					
Affordable mass housing	Large-scale housing projects; single-window clearances; reduced fees; level playing field in terms of taxes like GST; home ownership tax incentives, regulatory amendments, increased FSI in city master plans				●	●			●
Mass transit					●	●			●
Water infrastructure					●	●			●
Property services					●	●			●
Labour-intensive services		**8.4%**	**1,150**	**104**					
Modern retail and e-commerce	Level playing field, eg, business model and product agnostic FDI policy								●
B2B/B2C marketplaces									
Digitised supply chains									
High-value tourism					●		●		●
High-efficiency logistics models					●		●	●	●
Multimodal freight operations									
Logistics platforms									
Knowledge-intensive services		**9.8%**	**2,550**	**89**					
Healthcare services for India and the world	Higher primary healthcare spending: public-private-partnership models; tele-health regulations, online training in new tasks; simplified processes for medical tourists, digital portal for tourists to access professionals and infrastructure				●	●	●		●
Innovative operating models									
Wellness and prevention therapeutics									
Medical and care-based service exports									
Global IT and digital services hub					●		●		●
Digital services in automation, cloud, analytics, etc									
E-governance of the future: DBT, etc									●
Online skilling, education, and work platforms and app ecosystems					●		●		●
Universal, high-speed internet and digital media and entertainment					●		●	●	●
Next-gen financial services	Channelling household savings to capital markets; tax incentives, creating a level playing field, enabling more risk capital investment vehicles, removing product market barriers; special assets bank, privatisation of banks							●	●
Utilities and mining		**6.0%**	**300**	**6**					
High-efficiency power distribution	Franchised/privatised DISCOMS; higher renewables share; lowered cross-subsidies; targeted subsidies						●	●	
Climate change mitigation and adaptation models					●		●		●
Mitigation models: renewables, energy-efficient solutions, waste-to-value and wastewater solutions, emission control solutions	Continued interstate grid transmission access, enforcement of minimum purchase of renewables by DISCOMs , transition to secondary and tertiary ancillary services markets, grid banking, time of day tariffs, net metering								
Climate risk adaptation technologies									
Efficient mining and mineral sufficiency					●	●		●	●
Agriculture		**3.3%**	**600**	**175**					
Agriculture and food processing exports	Reforms to MSP, APMC, ECA, GST; agriculture-production clusters; viability gap funding for food processing facilities; stronger FPOs for aggregation and finance[2]				●	●	●		●
Digitally enabled agriculture services									●

[1] Ease of doing business and cost of doing business.

[2] MSP: Minimum Support Prices; APMC: Agricultural Produce Market Committee; ECA: Essential Commodities Act; GST: Goods and Services Tax; FPO: Farmer Producer Organization.

Source: McKinsey Global Institute analysis

Exhibit 18

Targeted reforms are required across six areas; more than half can be implemented through a policy or law.

Key priorities		Reform agenda	Policy	Implementation
Sector-specific pro-growth policies	Manufacturing	Stable and declining tax regime and removal of inverted duty structures	✓	
		Port-proximate clusters: Sagarmala logistics initiative expedited, with free-trade warehousing zones, faster approval processes, flexible labour laws, plug-and-play infrastructure, low input costs		✓
		Electronics: Holistic sector-specific policy framework such as time-bound and conditional incentives, eg, viability gap funding for solar cell panels, LCDs	✓	
		Autos and electric vehicles (EVs): Holistic sector-specific policy framework, eg, tax rationalization; clear, stable, tech-agnostic emissions policy; quality norms	✓	
		Chemicals: Holistic sector-specific policy framework such as incentives for plant and machinery for integrated chemical parks, integrated master of refinery and petrochemical network	✓	
		Pharmaceuticals: Holistic policy framework to boost exports and aid innovation by simplifying regulatory framework, etc	✓	
	Real estate	Large-scale projects for affordable housing; input tax credit to make prefab GST consistent with taxes on regular building (1–5%); rationalisation of stamp duty/registration fee; alignment of GST of under-construction with ready-to-move properties	✓	
		Regulatory amendments to enable greater supply in rental housing market	✓	
		Increase in tax incentives for home ownership, eg, US tax deductions on mortgages up to $750k	✓	
		Introduction of single-window clearance for all large affordable housing projects		✓
	Agriculture and food processing	Implementation of Agricultural Produce Market Committee reforms for barrier-free interstate trade; creation of strong network of Farmer Producer Organisations to enhance farmers' bargaining power		✓
		Implementation of Essential Commodities Act reforms to encourage investment in warehouses, storage, and logistics in agriculture	✓	
		Reform of Minimum Support Prices: support to farmers through alternative mechanisms (eg, direct subsidies or commodity options)	✓	
		Tax reforms and export incentives for processed food in relation to commodities to encourage value additions	✓	
		Agriculture-based clusters focused on prioritised crop value chains; extension of Mega Food Park scheme to large integrated food processing facilities and viability gap funding		✓
	Retail trade	Level playing field, eg, business model and product agnostic FDI policy, minimal regulatory intervention	✓	
	Healthcare	Investment in primary healthcare system: balance payer and provider role by leveraging public-private-partnership models		✓
		Enabling new healthcare human resource models, eg, clarification of telehealth model regulations, scaling up digital infrastructure, online training for nurses/health associates in new task allocation		✓
		Simplification and rationalisation of processes for medical tourists, eg, visa approvals; digital portal to access medical professionals, facilities, services, and medical packages		✓
Unlocking supply in land markets		Mapping and releasing 20–25% of underutilised public land for development		✓
		Increasing floor space index in city master plans, reflecting distance, accessibility		✓
		Expedition of land records digitisation, use of digital systems for title formalisation and registration		✓
		Easing land acquisition by land pooling, enhancing state land bank for industrial use, legislative reforms		✓
Flexible labour markets		Rationalisation of labour compliances and increasing flexibility in labour policies, eg, increased threshold for government permission flexible domicile requirements, etc	✓	
		Removal of migration barriers by creating a national, portable, Aadhaar-linked benefits system, subsidised rental and housing facilities, temporary housing for migrants in city planning		✓
Efficient power distribution		Model DISCOMS in top 100 cities, franchised and privatized models; expedition of cuts in cross-subsidy surcharges to commercial and industrial consumers, targeted subsidies through DBT; installation of advanced metering infrastructure		✓
		Increase in share of renewables in electricity mix via turnkey interstate grid transmission access, implementing proposed National Renewable Energy Policy, transition to secondary and tertiary ancillary services markets, grid banking, time of day tariffs, net metering	✓	
Privatization and asset sales		Increase in SOE productivity through market-based governance, continued push towards privatisation, prioritising top 2% of SOEs, which can yield 80% of value	✓	
Ease and cost of doing business		Reduction in compliance cost and improvement in EoDB through 7 key levers, eg, transparent public procurement system, streamlining compliances, and reducing duplication		✓

Source: McKinsey Global Institute analysis

Theme 1: Introduce sector-specific policies, including a select set of incentives to raise productivity

While the five other themes that we discuss in this chapter cut across sectors and the whole economy, a number of specific incentives and policies could raise productivity in key sectors, thereby creating the groundwork for a broad-based productivity boost. Several sectors stand out in this regard because of their contribution to GDP, their potential to be employment machines, and their future orientation, or any combination of the three, which make them strong contenders to build up.

Manufacturing sector. In India, manufacturing's share of GDP has barely risen over the past two decades; it was about 15.3 percent in fiscal year 2000 and about 17.4 percent in fiscal year 2020. In the same period, manufacturing's share in Vietnam more than doubled, climbing from 11 percent in 2000 to 24 percent in 2018.[225] This weakness may be due to the cost disadvantage manufacturers face in India compared with countries like China and Vietnam. For example, in the electronics sector, Indian handset manufacturers have a 10 to 20 percent cost disadvantage compared with Vietnamese and Chinese manufacturers because of a strong manufacturing ecosystem, higher costs for freight and power, and lower incentives for capital expenditure, among other factors. Consequently, India has low local value added, at about 17 percent, while in Vietnam, the share of local value added surpassed 30 percent in 2016, with net electronics exports in 2018 of some $8 billion, compared to India's net imports of $84 billion.[226]

Over the next decade, India could aspire to boost manufacturing's share of GDP from about 17 percent to 19 percent—in nominal terms, a rise from about $500 billion to $1.25 trillion. This means manufacturing needs to achieve a real compound annual growth rate of 9.6 percent from fiscal year 2023 to 2030, compared to 7.6 percent from 2000 to 2018 in India, 11 percent in China, and 10 percent in Vietnam. With four to five key sectors in particular—including automotive, electronics, chemicals, and pharmaceuticals—increasing their share, India's share of exports could rise from about 20 percent to about 30 percent of GDP. As mentioned in chapter 2, the electronics sector alone could more than double its share over the decade, from about 5 percent of manufacturing GDP to about 13 percent, increasing from $30 billion in 2020 to $165 billion in 2030, while India's share of global exports could potentially almost quadruple, from 0.7 percent to 2.6 percent. India's mobile phone ecosystem could gain up to 13 percent of global trade (similar to Vietnam's share), compared with about 1 percent currently.[227] Similarly, India's automotive sector could grow to 2 percent of overall GDP in 2030 from an estimated 1 percent in fiscal year 2020, with penetration of small cars increasing; the chemicals sector could more than double its exports to about $80 billion by 2030.[228]

To enable these shifts, a holistic policy framework that takes into account each sector's needs and priorities can be put in place (see Box 5, "A holistic policy framework will aid each manufacturing sector: Pharmaceuticals example"). It can have three components. First, a stable and declining tariff regime and removal of inverted duty structures across the board would lift competitiveness. For example, boilers and turbines can be imported at zero to 10 percent customs duty, while raw materials, including seamless alloy steel tubes, pipes and tubes, and carbon steel, carry a customs duty of 15 percent.[229] Similarly, finished personal care products like soaps and intermediate products like fatty alcohols are subject to zero percent customs duty, while raw materials like palm fatty acid distillate and crude palm stearin carry a 7.5 percent customs duty.[230]

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225 National Accounts Statistics, Ministry of Statistics and Programme Implementation; IHS Markit Comparative Industry Service.

226 Ministry of Electronics and Information Technology; *Maximizing local value addition in Indian mobile phone manufacturing: A practical phased approach*, IIM Bangalore and Counterpoint Researcher, November 2016; UN Comtrade DESA/UNSD; "Hanging up on mobile phone exports, India likely to miss 'hub' tag", *Business Standard*, January 14, 2020; Tarun Pathak, *India imported $13 billion Worth of Mobile Phone Components in 2018*, Counterpoint Research, February 22, 2019

227 Daniel Workman, "Cellphone Exports by Country," *World's Top Exports*, June 17, 2020.

228 National Accounts Statistics, Ministry of Statistics and Programme Implementation; UN Comtrade DESA/UNSD.

229 SN Roy and Abhishek Agrawal, "How to achieve self-reliance in the capital goods sector", *Hindu BusinessLine*, May 19, 2020.

230 G Chandrashekhar, "Inverted duty structure hurts soaps industry", *Hindu BusinessLine*, December 30, 2019.

Box 5

A holistic policy framework will aid each manufacturing sector: Pharmaceuticals example

The pharmaceuticals sector represents a high-potential opportunity for India, both because the COVID-19 pandemic underscores the need for strong medical capabilities all over the world and because India's traditional strengths as a pharmaceuticals export powerhouse can be leveraged to create GDP and jobs. The pharmaceuticals market revenue could reach about $105 billion by 2030 from about $40 billion in 2020 at a compound annual growth rate of 9 percent, as we noted in chapter 2. The country could also increase its pharmaceutical exports from $20 billion in 2020 to $50 billion in 2030. The key to achieving this will be for India to accelerate contract development manufacturing organisation (CDMO), and bulk drug manufacturing and build a strong innovation ecosystem.

To enable these shifts, a holistic policy framework can be put in place. First, such a framework would enable clusters that can reduce the cost of manufacturing by providing low cost inputs such as power, logistics, common infrastructure, among others. Second, targeted, time-bound, and conditional incentives to reduce cost differential due to input costs like power and logistics as compared to other emerging markets can be put in place. The government recently announced assistance in setting up bulk drug parks and time-bound, production-linked incentives for key starting materials, drug intermediates, and active pharmaceutical ingredients manufacturing, conditioned on meeting specified investment targets.[1]

Additionally, for India to unlock its full potential, it needs to move towards the more valuable innovation space. The country already has a strong foundation for innovation given its strong domestic market and technical capabilities. However, support from various stakeholders could provide an impetus to grow. This could be done in three steps.

1. **Simplifying the regulatory framework to aid innovation.** Four key measures could be put in place. One, reducing complexity in the approval process; for example, lowering the number of overlapping approvals for biologics. Two, strengthening the consistency and quality of reviews by establishing clear timelines for each stage of the process and performance management on those milestones to expedite approvals. Three, by increasing the capacity and capability of regulatory bodies, as in several other markets (such as the Pharmaceuticals and Medical Devices Agency in Japan and the National Medical Products Administration in China), India could look to significantly ramp up the regulator's capacity and capability. Four, ensuring the transparency and predictability of the intellectual property grant process.
2. **Encouraging private and public investment in pharmaceuticals innovation.** The government could provide incentives to encourage private investment; for example, reinstating the 200 percent tax exemption on research and development spend, introducing "Innovation" bonds to offer lower interest rate debt funding (in line with infrastructure bonds). Similar to practices in several markets (such as China and Israel), the government may consider setting up an "innovation fund" that provides grants linked to milestones like completion of basic research and reaching preclinical or clinical phases.
3. **Creating access and enhanced opportunities for innovative products within India.** The government may consider setting up special reimbursement mechanisms for locally developed innovative drugs for priority disease areas (as Russia has done with the Seven Nosologies program) or in partnership with industry (for example, China's partnership with Roche in oncology).

[1] *Production linked incentive (PLI) scheme for promotion of domestic manufacturing of critical key starting materials (KSMs) / drug intermediates (DIs) and active pharmaceutical ingredients (APIs) In India and scheme for promotion of bulk drug parks*, Ministry of Chemicals and Fertilizers, July 21, 2020.

Second, initiatives to boost manufacturing across the board could include building port-proximate clusters, similar to the proposed Electronics Manufacturing Clusters, and expediting the Sagarmala proposal, with free-trade warehousing zones that have faster approval processes, flexible labour laws, low input costs, and plug-and-play infrastructure with common facilities like effluent plants for specific sectors. China has more than 2,500 special economic zone clusters, including free trade zones, export processing zones, and industrial parks; major SEZs including Shenzen, Hainan, and Xiamen are port-proximate or port-linked. South Korea has eight major port-linked free economic zones. China and Korea also have about 13 to 18 nationally approved bonded or free-trade zones, with tax incentives, streamlined regulations, and selective subsidies for power, water, and effluent treatment.[231] In India, too, clusters could be created with similar benefits; we explore the concept further in chapter 6.

A final element is a select set of incentives, provided in a targeted, time-bound manner and conditioned upon meeting specific output and investment targets, among others. For example,

Electronics sector. The government announced a policy framework in April 2020 with three key time-bound incentives aimed at reducing India's cost disadvantages, increasing domestic value added, and supporting growth. These include a production-linked incentive scheme, which offers 4 to 6 percent incentives on incremental sales; a capital expenditure subsidy of 25 percent conditional on both sales and investment; and the Electronics Manufacturing Clusters 2.0 initiative, which offers financial assistance for creation of clusters with quality infrastructure on large land parcels, common facility centres, and plug-and-play facilities.[232] India could give the sector further impetus for other electronics products like solar cell panels, LCDs, and batteries by providing similarly comprehensive support. Measures could include viability gap funding and capital subsidies, among others.

Automotive sector. Domestic demand and export demand for segments where India has an inherent advantage—like two-wheelers and small cars, including electric vehicles—could be spurred by reducing the cost of ownership. Among the options to consider are goods and services tax rationalisation and phasing out import duties for components, particularly for EVs, similar to the phased manufacturing program for mobile handsets launched in 2016–17. The government may want to consider adopting a clear and stable tech-agnostic regulatory stance on emissions and quality norms. The regulations could be framed in relation to outcomes in order to foster innovation—for example, particulate matter emission standards, fleet emission norms, and safety requirements—and to maintain a level playing field for internal combustion engine vehicles, hybrid electric vehicles, and battery-electric vehicles.[233]

Chemicals sector. The government could consider providing incentives for innovation and capital expenditure, for example for plant and machinery for integrated chemical parks, or tax concessions for environmental protection facilities. Other support measures could include fast-track approvals for time-sensitive new investments and expansions, digitally enabled single-window regulatory clearance mechanisms, self-certification for changes of product mix, and creating an integrated master for India's refinery and petrochemical network to help make feedstock available for downstream activities, among others.

Some examples of incentives that could be provided in select sectors are illustrated in Exhibit 19. In addition, cross-sectoral measures could be undertaken to rationalize input costs such as land, labour, power, and logistics. Some of these measures are detailed later in this chapter.

231 *World investment report 2019: Special economic zones*, United Nations Conference on Trade and Development, 2019; Dorcas Wong, "China announces new free trade zones in six provinces", *China Briefing*, September 2019.
232 "Government notifies three incentive schemes worth Rs 48,000 crore for electronics manufacturing push", *Economic Times*, April 1, 2020.
233 Brajesh Chhibber and Rajat Dhawan, "Six ways to reignite India's auto industry", *Livemint*, December 2, 2019.

Exhibit 19

India has provided incentives for electronics manufacturing (particularly handsets) and has scope to provide similar incentives for other high-potential sectors in a time-bound and conditional manner.

Comparable with handsets Worse than handsets

Illustrative incentives of handsets in India		Electronics		Automotive				
		Medical devices	Batteries	Automotive	Electric vehicles[1]	Chemicals[2]	Pharmaceuticals[3]	Textiles
Corporate income tax	Reduced to 25.17% from 30% for corporations not seeking any incentives/exceptions Tax for new manufacturing companies reduced to 17.16% from 25%	●	●	●	●	●	●	●
Capital-expenditure subsidy	25% of capital expenditure under SPECS scheme[4]	●	●	●	●	●	●	●
R&D subsidy	Tax exemptions up to 150% for R&D expenses Zero customs and excise duty on purchase of R&D capital equipment	●	●	●	●	●	●	●
Production-linked incentives	Incentives for mobiles and electronic components manufactured in India[5]	●	●	●	●	●	●	●
Export incentives	Zero import duty on capital goods and spares used for the production of export goods	●	●	●	●	●	●	●
Other support	Financial assistance to Modified Electronics Manufacturing Clusters (EMC2.0)	●	●	●	●	●	●	●

[1] Other demand support given for electric vehicles (EVs): charging infrastructure being set up under FAME II; GST reduced from 12% to 5%.
[2] Plastic and rubber included.
[3] Critical key starting materials (KSMs), drug intermediates, and active pharmaceutical ingredients (APIs).
[4] Mobile electronics, consumer electronics, industrial electronics, automotive electronics, medical electronics, strategic electronics, power electronics, telecom equipment, computer hardware, etc; financial assistance for construction of bulk drug parks up to INR 3000 Cr;
[5] Production-linked incentive of 5–20% given for promoting domestic manufacturing of critical key starting materials, drug intermediates, and active pharmaceutical ingredients in India; production-linked incentives of 5% given for manufacturing of medical devices.

Source: Ministry of Electronics and Information Technology; Department of Pharmaceuticals; Indian Trade Portal; Goods and Services Tax Council; McKinsey Global Institute analysis

Real estate sector. With about 5.4 percent of the population living in slums, as per census 2011 estimates, and rising urbanisation, India needs 25 million affordable houses in the next 10 years.[234] To compound the problem of low home ownership, the rental housing market functions poorly. India's share of rentals in total housing was 28 percent in 2011, comparable to many other economies, but a government national survey in 2012 found that 71 percent of households living in rented homes did not have written contracts. Low rental yields, a consequence of rent control and tenancy protection laws, have translated into more than 11 million vacant houses in urban areas despite the housing shortage.[235]

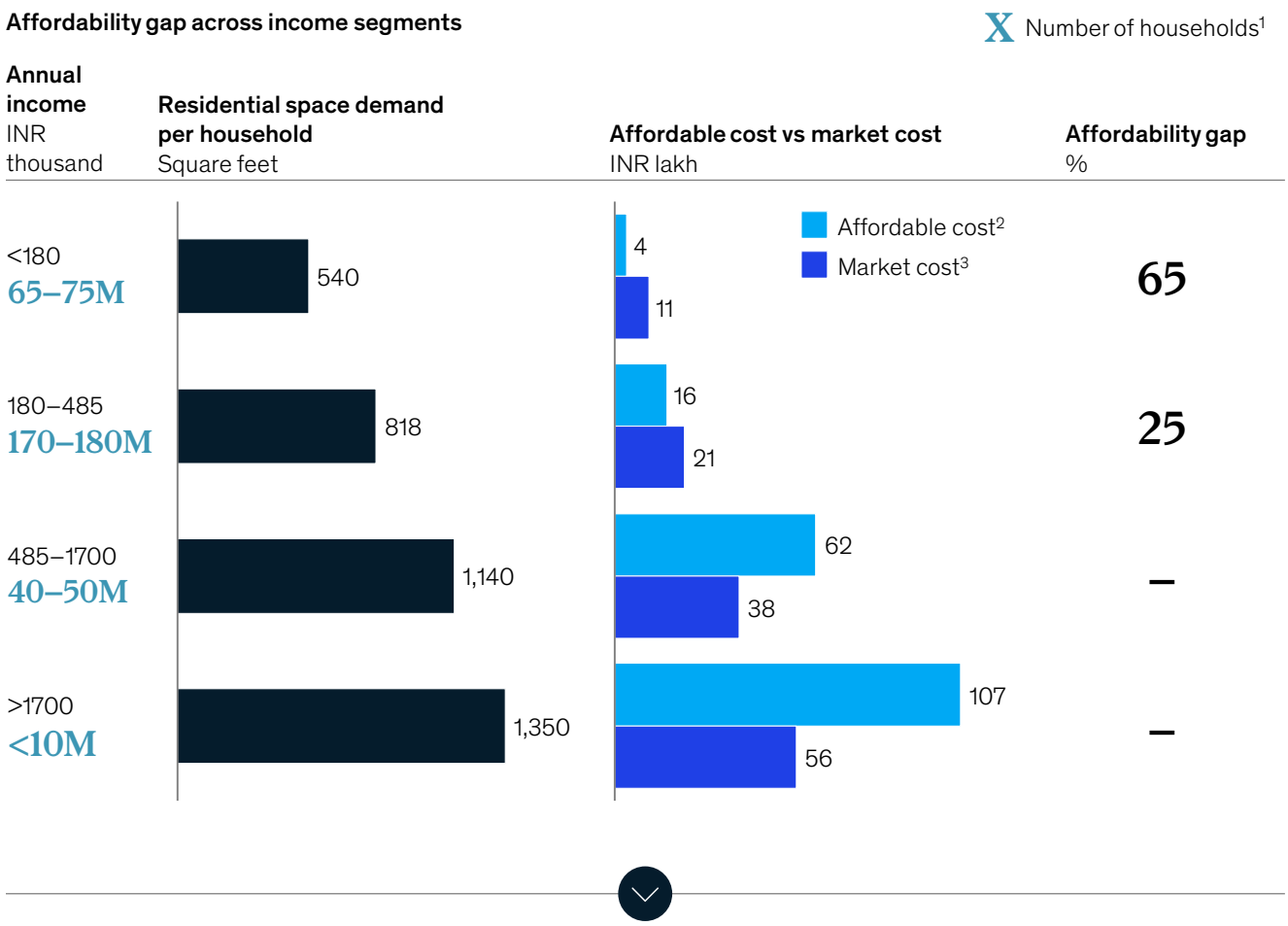
At the heart of the issue is low affordability. The ratio of cost of housing to income averages 4.3 in the eight largest Indian cities, compared to less than 1.5 in a set of OECD countries.[236] Households in the two lowest income segments are largely unable to afford to rent or purchase a home. The affordability gap—the difference between the price of home that a consumer can afford and the market price—is high. For the lowest income segment (65 to 75 million households), those earning below 180,000 rupees ($2,600) annually, the affordability gap is as large as 65 percent, while it is 25 percent for the second-lowest income segment (170 to 180 million thouseholds), those earning between 180,000 rupees and 485,000 rupees annually ($2,600 and $6,900).[237]

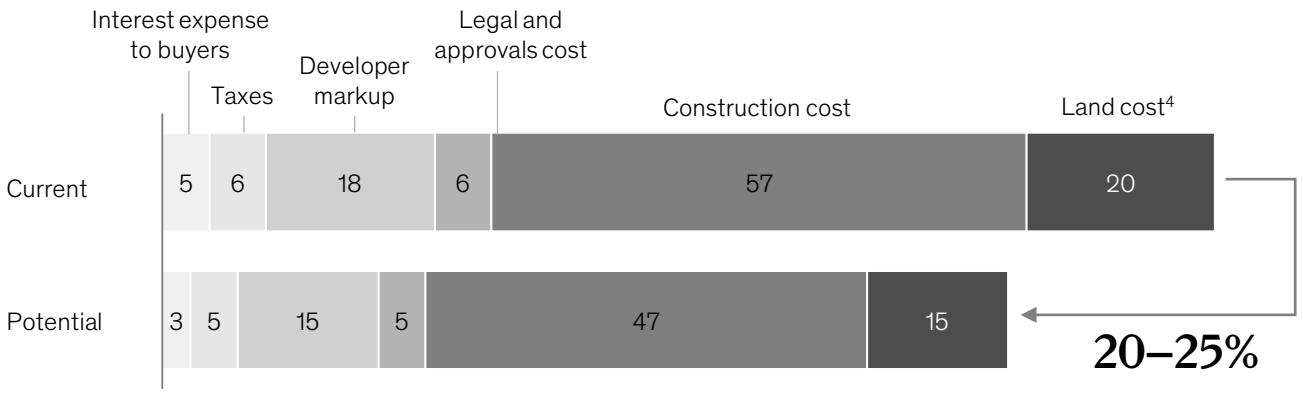
We estimate that India has the potential to improve housing affordability by 20 to 25 percent, which could raise demand for both owned and rental homes. One key lever is to make more and cheaper land available for construction (detailed further in Theme 2, later in this chapter). Here we focus on other important levers, including reducing construction costs and taxes (Exhibit 20). The typical construction time for a housing unit in India is about double that in developed economies such as the United Kingdom and the United States.[238] Productive methods like modern construction practices including lightweight aluminium formwork, prefabricated construction, and technology-based models, among others, could be used to build large-scale affordable housing and bring the cost per square foot down by 20 to 30 percent, based on examples of projects in China, the European Union, Mexico, South Africa, and the United States.[239] Yet penetration of prefabricated construction methods in India is currently negligible, compared with 6 percent in China and 15 percent in Japan, largely because of the limited scale of projects and tax policies.[240] Enabling large-scale affordable housing projects and providing input tax credits, bringing the goods and services tax on prefabricated buildings, currently 18 percent, more in line with regular buildings with rates between 1 and 5 percent, could make prefabricated construction more competitive and increase its penetration.[241]

234 Census 2011; *Brick by brick: Moving towards "Housing for All"*, RICS and Knight Frank, 2019.
235 *Institutionalising the rental housing market in India - 2019*, Khaitan & Co and Knight Frank, 2019.
236 *Institutionalising the rental housing market in India - 2019*, Khaitan & Co and Knight Frank, 2019; House-price-to-income ratio in selected countries worldwide as of 1st quarter 2019, Statista, December 2, 2019.
237 McKinsey Global Institute India Urbanization Econometric Model. For details on how the affordability gap is calculated, see the technical appendix.
238 *Current time taken for building affordable homes*, Construction World, March 2019; "Average length of time from start to completion of new privately owned residential buildings", 2019 Survey of Construction, United States Census Bureau; National Custom and Self Build Association, United Kingdom.
239 *A blueprint for addressing the global affordable housing challenge*, McKinsey Global Institute, October 2014.
240 *Voices on infrastructure: Scaling modular construction*, Global Infrastructure Initiative, September 2019.
241 "Decisions taken by the GST Council in the 34th meeting held on 19th March, 2019 regarding GST rate on real estate sector", GST Council, March 2019; "GST rates", Central Board for Indirect Taxes and Customs, Goods and Services Tax.

Exhibit 20

Low-income households in India face an affordability gap of 25 to 65 percent of the cost of a home; the gap could be reduced, with home prices falling 20 to 25 percent through targeted reforms.





[1] Estimated based on data from "Household consumption of various goods and services in India 2011–12", National Sample Survey 2011–2012 (68th round), June 2014.
[2] Calculated based on interest payable by each segment and hence loan amount that can be afforded; loan amount assumed to be 75% of cost of home.
[3] Market cost per sq ft in tier-2 city.
[4] Includes costs related to land acquisition, legal, stamp duty, and registration charges.
Note: Given that land prices in the Mumbai Metropolitan Region (MMR) are higher than in other cities, a non-Mumbai example has been considered for the home price break up.

Source: McKinsey Global Institute India Urbanization Econometric Model; Anarock; 99acres.com; JLL-Credai; Knight Frank; McKinsey Global Institute analysis

While India has recently taken steps to offer a tax boost to developers for affordable housing in the form of a 100 percent tax deduction on the profits from affordable housing projects, other tax reforms could also be considered to reduce the cost of housing to the buyer.[242] For instance, rationalising the stamp duty, currently between 5 and 7 percent, and the registration fee could bring down costs.[243] A level playing field could be created between properties under construction, currently subject to a 5 percent goods and services tax, and ready-to-move-in properties, which are exempt from the tax. Introducing a digitally enabled single-window clearance for large affordable housing projects can also help reduce time and cost overruns. Finally, higher tax incentives could be provided for home ownership. In the United States, for example, interest on mortgage loans of up to $750,000—which could correspond to two homes on average, as per our estimates—is tax deductible. That compares with India, where tax incentives of up to 3.5 lakh rupees ($5,000) cover a mortgage loan of only up to 30 lakh rupees (about $40,000) at a time, according to our estimates.[244] For developers, the United States, for example, offers a Low-Income Housing Tax Credit program under which states subsidize the acquisition, construction, and rehabilitation of affordable rental housing for low- and moderate-income tenants. State housing agencies award federal tax credits to private developers, who can then sell the credits to private investors to obtain funding.[245]

Additional regulatory amendments addressing the rental housing market in a comprehensive manner—for example, amendments to the Rent Control Act enabling decontrol in a supply-constrained market—could help attract more institutional investment and a greater supply of homes in the rental housing market.[246]

Agriculture and food processing sector. India has the potential to increase its share of exports from 2.9 percent to about 5.9 percent, in line with benchmarks, predominantly driven by livestock and fisheries; pulses like soybean, spices, fruits and vegetables; horticulture, dairy and other agricultural produce. This would mean achieving about $95 billion of exports in this sector by 2030. This aspiration would serve to make farming competitive and raise both agricultural productivity and farmer income. Steps to achieve this aspiration include a range of structural reforms that have been well documented in the past.[247]

Some critical measures have already been announced as part of the COVID-19 package of structural reforms. These include reforms to the Agricultural Produce Market Committee (APMC), which governs the sale of farm produce through restrictive local licensed markets, and the Essential Commodities Act, which allows the central government to govern the production, supply, and distribution of a commodity considered essential. Currently, the APMC framework creates a layer of intermediaries between the farmer and the final consumer, enabling high levels of commissions at every stage, disproportionate to the work involved. For example, commission agents charge 6 to 15 percent of the value of output sold for a five-minute auction.[248] Proposed reforms to the APMC framework would facilitate higher competition in the agricultural produce market by minimising controls and democratising access. Amendments to the state APMC acts will enable barrier-free interstate trade, which will encourage private entities, such as processors and modern retailers, to participate in agricultural markets. This in turn will attract investment in farm-gate infrastructure and offer farmers competitive remuneration. A strong network of Farmer Producer Organisations could enhance the bargaining power of farmers in the reformed APMC framework. Another problem is the Essential Commodities Act designed in the 1950s, when India was struggling with food scarcity, which has long since disappeared. Reforms to the act proposed by the government

[242] Kailash Babar, "Affordable housing gets further support as Budget extends tax holiday", *Economic Times*, February 1, 2020.
[243] *Housing for all: Reforms can make it happen sooner*, JLL-Credai, November 2014.
[244] "Home mortgage interest deduction", US Internal Revenue Service; Preeti Motiani, "Here's how you can claim tax benefit on a top-up home loan," *Economic Times*, February 14, 2020.
[245] *Measures to property developers to finance affordable housing construction*, OECD Affordable Housing Database.
[246] Pritika Hingorani, Rohan Shridhar, and Meenaz Munshi, "The rental housing approach for India", *Livemint*, March 29, 2017.
[247] *Doubling farmers' income*, NITI Aayog, policy paper number 1/2017, March 2017; Ashok Gulati, Devesh Kapur, and Marshall M. Bouton, *Reforming Indian agriculture*, Center for the Advanced Study of India working paper, August 2019.
[248] Ashok Gulati, *Reforming agriculture*, India Seminar, 2012.

will remove cereals, pulses, oilseeds, edible oils, onions, and potatoes from the list of essential commodities. This could encourage private-sector investments in cold storage, warehouses, processing, and export infrastructure, which in turn can help farmers realise better prices. While the central government announced its intent to implement both of these measures, agriculture has traditionally been a state responsibility, and it will be important to implement the planned reforms across all states.

Other major reforms that could be considered include changing the structure of the minimum support price system, under which the government fixes prices to protect farmers against excessive drops in prices during bumper production years. The system makes commodities costlier and distorts market prices. This in turn prevents farmers from developing effective linkages with buyers, for example retailers and processors. Various mechanisms could be used in place of minimum prices to support farmers, including increased direct subsidies and commodity options.

Tax reforms and export incentives in agriculture could also encourage value addition in food processing. For instance, the goods and services tax on commodities is currently zero, while it is up to 18 percent on processed foods. The national government may want to consider rationalising the taxes and export incentives to better encourage value-added activities.[249] A cluster-based approach could also be adopted to focus resources and capital on a prioritized set of high-potential crop value chains and markets. The Mega Food Park scheme could be extended to large integrated food processing facilities that manufacture multiple food products under one roof. Viability gap funding or incentives could be provided for necessary infrastructure, such as cold chain infrastructure development, milk chains, handling stations at airports to support international air freight for fresh produce, and establishing horticulture zones near ports.

Retail trade sector. Traditional trade, which accounts for 85 percent of total gross merchandise value, currently dominates India's retail sector. However, this is the segment with the lowest productivity: e-commerce and modern trade are nine times and five times, respectively, more productive than traditional trade, as per our estimates. India lags behind other economies in e-commerce, which accounts for just 5 percent of all retail. In China, e-commerce is about five times larger, at 24 percent, while it is 7 percent in the United States and Brazil, 11 percent in Germany, and 17 percent in the United Kingdom.[250] Lifting the e-commerce share to about 20 percent by 2030 is possible, as countries such as Australia, Germany, and the United Kingdom have shown in their pace of growth: their e-commerce share has doubled every five to six years. Modern trade's share could also rise from about 10 percent to 20 percent, in line with the 1 percent increase in share year-on-year that other emerging economies including Brazil, China, and Indonesia have achieved between 2008 to 2018.[251]

From a policy perspective, the growth in e-commerce and modern trade is hindered by, for example, restrictive foreign direct investment caps. Establishing a level playing field for all trade formats could enable growth of the highly productive trade business models. That could mean a foreign direct investment policy that is agnostic to both business models and products, minimal regulatory intervention, and clear, transparent market mechanisms to drive innovation and adoption of high productivity formats. Additionally, the competitive dynamics of the sector will need to be continuously monitored to ensure that productivity gains benefit the whole economy.

[249] GST rates for goods and services as on 30.06.2020, Central Board of Indirect Taxes and Customs.
[250] Euromonitor International Retailing 2020 Edition.
[251] Euromonitor International Retailing 2020 Edition; McKinsey Corporate Performance Analytics.

Healthcare sector. India had about 0.7 hospital beds for every 1,000 people, in 2011—far below the World Health Organization norm of three beds—and 0.86 doctors per 1,000 people in 2018, compared to the WHO norm of one doctors per 1,000 people.[252] Current spending on healthcare is only 3.5 percent of GDP, close to the level in Thailand (3.7 percent) but below China (5.2 percent) and Brazil (9.5 percent). Indeed, the public share of healthcare spending in India is only 28 percent, compared with 40 to 80 percent in other emerging economies.[253] Healthcare access is also very uneven across the country, with a gap of more than 30 points in the Healthcare Access and Quality Index between Goa (64.8) and Assam (34.0).[254] The difference may represent large variations in physical access to health facilities, health system infrastructure, and access to medical technologies.

Improving health is an essential driver of economic growth, and the healthier India's population is, the stronger its economy will be.[255] India could aspire to nearly double healthcare spending to 6.4 percent of GDP and double the government share of healthcare spending to 56 percent, in line with the average in other outperforming emerging economies like Korea, Brazil, Vietnam, Thailand, Malaysia, and South Africa.

To achieve such goals will require reforms including deployment of models such as public-private partnerships to increase access to quality healthcare and new operating models. Healthcare delivery is ripe for innovative changes in operating models; for example, the shift to telemedicine during the COVID-19 pandemic could become a durable feature. Telemedicine initiatives globally have shown that virtual consultations cost about 30 percent less than in-person appointments. Boosting telehealth will require further clarification of regulations announced. For example, Singapore formulated National Telemedicine Guidelines in 2015 to ensure patient safety.[256] The responsibilities of healthcare professionals will need to be established, their training adapted to the new system, and the digital infrastructure strengthened. For example, technology-enabled e-health centres and e-hospitals, equipped with internet connectivity and communication equipment such as tablets and mobile devices, could provide access to a network of doctors who can consult via voice calls or high-quality video. Patients in remote and rural areas can experience significant benefits by reducing their dependence on unqualified medical practitioners, saving time and money spent in travelling to the nearest city or town for expert medical advice, and improving overall wellness through sustained follow-up interventions.[257] Online certification courses could be set up for nurses and health associates to enable more productive task allocation, creating a cadre of employees who are trained to manage healthcare facilities and programmes. Enabling these operating models, by putting in place regulations and norms and adequately training health professionals, could also allow doctors—a valuable but relatively time-constrained human resource in India—to prioritize value-added tasks only they can do and address more patients[258].

More productive healthcare processes could also potentially boost medical tourism in India, capitalising on the high quality of the country's doctors. Visa approvals and other processes for medical tourists could be simplified and rationalised. Thailand, for example, has allowed 90-day visa-free stays to residents of certain countries.[259] Medical tourism will become easier to navigate through the development of a digital portal that details available healthcare

252 World Bank; "Density of physicians (total number per 1000 population, latest available year)", Global Health Observatory, World Health Organization; Shahid Akhter, "The new healthcare policy mandates a minimum of 2 beds per 1000: Sumeet Aggarwal," *Economic Times*, February 22, 2018; "India's doctor-patient ratio still behind WHO-prescribed 1:1,000: Govt," *Business Standard*, November 19, 2019.

253 World Bank; OECD.

254 *Healthcare Access and Quality Index based on mortality from causes amenable to personal healthcare in 195 countries and territories, 1990–2015: A novel analysis from the Global Burden of Disease Study 2016*, The Lancet, May 2017. It indexes 195 countries and territories from 0 (worst) to 100 (best) based on death rates from 32 causes of death that could be avoided by timely and effective medical care ("amenable mortality"). See healthdata.org/node/6446 for methodological details.

255 *Prioritizing health: A prescription for prosperity*, McKinsey Global Institute, June 2020.

256 *National telemedicine guidelines for Singapore*, Ministry of Health, January 2015.

257 *Digital India: Technology to transform a connected nation*, McKinsey Global Institute, March 2019.

258 N. Chandrasekaran and Roopa Purushothaman, *Bridgital Nation: Solving Technology's People Problem*, Gurgaon, India: Penguin Books, October 2019.

259 *Summary of countries and territories entitled for visa exemption and visa on arrival to Thailand*, Department of Consular Affairs, March 2019.

professionals, facilities, and services, and makes it possible for patients to purchase medical packages online and find useful information about travel, insurance, and so on.

Theme 2: Unlock land supply

As mentioned in the real estate section, unlocking land supply is a key to reducing the cost of residential and industrial land use. This in turn will spur demand for construction labour and building materials and make the industry—which contributes about $250 billion to GDP and currently employs 56 million workers in India—more competitive.[260] In terms of residential construction, as we note in the real estate section, the country's two lowest income segments have an affordability gap in housing. While several factors contribute to this affordability mismatch, the high cost of land is a main one.[261] Land costs in India's cities are significantly higher than in cities elsewhere. For example, the ratio of land price per square metre to per capita GDP is about 6.0 in Mumbai and 3.8 in Bangalore, versus 0.5 in Bangkok and 0.2 in Beijing.[262] Land in India contributes on average to about 20 to 40 percent of the costs of affordable housing, depending upon the location.[263]

Landownership in rural India is fragmented, and finding and acquiring large parcels of land for industrial use is a cumbersome process. Land acquisition law currently seeks to protect the rights of landowners and ensure them fair compensation. Its provisions have some implications for the cost and ease of land acquisition for industrial projects: the law mandates total compensation of up to four times the market value in villages and twice the market value in cities, public-private-partnership projects need the consent of 70 percent of affected families, and private projects need 80 percent. Only certain categories of projects are exempt from this provision, including rural infrastructure, affordable housing, industrial corridors, and infrastructure projects on government-owned land. As a consequence, private-sector industrial and infrastructure projects often get stuck at the land acquisition stage.[264]

The aspiration of this theme is to reduce land costs by 20 to 25 percent, which in turn can reduce home prices. While this in itself will not eliminate the affordability gap for many potential homeowners, it will narrow it and help make the industry more cost competitive. In addition, this will also help reduce industrial land prices. We see the following three principle sets of policy solutions as approaches that could be considered to achieve this ambition:

A first step is to map out 20 to 25 percent of suitable underutilized public and SOE land. The 13 major port trusts hold about 100,000 hectares of land in all and the Ministry of Defence holds over 250,000 hectares of land; the Airports Authority of India controls 20,400 hectares of high-value land surrounding major airports; and Indian Railways has identified 43,000 hectares of its massive landholdings as unnecessary for railway service and estimated its value at some $40 billion.[265] Such excess land would need to be made available at affordable prices, for example through leasing or land amortisation, to private builders for development. Similar measures have been used elsewhere with success. For example, Turkey released 16,000 hectares of land at marginal prices for affordable housing between 2003 and 2013.[266]

[260] National Accounts Statistics, Ministry of Statistics and Programme Implementation, 2020; Periodic Labour Force Survey 2017–18.
[261] *A blueprint for addressing the global affordable housing challenge*, McKinsey Global Institute, October 2014.
[262] Liu Yanjuan, "Analysis of Beijing Land Exchange Market", Huaxin estate group; "Bangkok land prices rise by 2.5%, revised tax law will take effect in 2020", *pinlue website*, July 22, 2019; National Accounts Statistics, Ministry of Statistics and Programme Implementation; National Sample Survey 1999–2000 (55th round); National Sample Survey 2004–2005 (61st round); National Sample Survey 2011–2012 (68th round); Periodic Labour Force Survey 2017–18; ILOSTAT; World Bank.
[263] *Brick by brick: Moving towards "Housing for All"*, RICS and Knight Frank, 2019; *Affordable Housing Climate in Mumbai*, HDFC and Quikr Realty, 2018.
[264] "The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement (Amendment) Bill, 2015", PRS Legislative Research.
[265] "India needs to manage its publicly held land holdings with more diligence and data", *Economic Times*, December 2016.
[266] Housing Development Administration of Turkey (TOKI); *A blueprint for addressing the global affordable housing challenge*, McKinsey Global Institute, October 2014.

A second step to increase the availability of land for construction would be to reform zoning regulations for floor space index. Floor space index refers to the maximum area built-up on a plot of land. It is calculated by dividing the total covered built-up area on all floors of a building by the area of the plot it stands on. In India, most parts of cities are sparsely built, with a maximum index of 1.8 to 5.0 in most cities, while averages are lower as the minimum FSI across cities ranges from 1.2 to 3.5.[267] By contrast, the maximum level in New York is 12, and in Singapore 14.[268] However, floor space index cannot be increased without the appropriate planning norms for roads, public transportation, and infrastructure. The best practices here are to make it a part of the development plan of a city or a region along with investments in water, sewage, and transportation infrastructure. Moving to a new floor space index framework, with rule-based, transparent, and increased limits, reflecting accessibility via public transport and distance from the central business district, would increase the supply of land available for construction and could consequently bring down home prices. Hyderabad, for example, has no floor space index restrictions and no premium index fees. This, in addition to other reforms like lower stamp duty and simpler approval systems, has resulted in 14 to 24 percent lower construction costs and one-half to one-tenth stalled residential units as a percentage of annual sales as compared to other cities like Mumbai and Delhi, based on our estimates.[269] Consequently, compared to the 2019 average price for the six largest Indian cities of about 5,800 rupees per square foot, Hyderabad has the lowest average price per square foot at 4,195 rupees.[270]

Third is a move to formalise informal settlements and register unregistered land. This would require expedited digitisation of land records, cadastral maps, and surveys, by incentivising private participation through streamlined contracts with interim payment systems. Other measures include computerisation of land offices, adoption of modern technologies such as differential GPS and drones, and creating an integrated digital system for land records, linked with the revenue department, banks, court records, and so on. To some extent, this has already happened in Karnataka, Maharashtra, and Andhra Pradesh. Karnataka has created a centralised land records database called Bhoomi and seamlessly integrated it with the Registration Department, Land Acquisition Offices, and banking system. Among the benefits of Bhoomi is a reduction in the time spent initiating ownership record mutations, which fell from 31 days to two days. Maharashtra developed i-SARITA, a web application that centralises the administration and implementation of the registration process, reducing registration time from days to one hour or less. Andhra Pradesh improved citizen access to digital land records with WebLand, a first-of-its-kind service; the state also accepts digital signatures on legal records.[271]

Finally, the process for land acquisition could be significantly eased. Some state governments have moved forward with measures to ease the process. Punjab's government in 2020 approved a new land pooling policy for the industrial sector in the city of Mohali. Under this policy, the government will provide landowners with a developed plot of industrial or commercial land, in lieu of cash compensation, for agricultural land they give up.[272] Karnataka in December 2018 implemented a simplified online single-window system for land-use conversion, requiring submission of significantly fewer documents. Approval is automatic if no reply has been received within 30 days.[273]

267 Prahalad Singh, "FAR/FSI 2019 updates: Floor space index in India's top cities", Common Floor, November 15, 2019; Purva Chitnis, "FSI increased for residential, commercial buildings in Mumbai", *Bloomberg Quint*, April 27, 2018.

268 *Shaping Melbourne's central city*, Department of Environment, Land, Water and Planning, Victoria State Government, November 2016.

269 A Shankar, "FSI guidelines", *Hindu*, November 9, 2018; *India real estate: Variance in construction costs: Then and now*, CBRE, September 2018;: Ashwini Priolker, "Real Estate Projects With 1.74 Lakh Homes Stalled In Top Seven Cities, Says Anarock," *Bloomberg Quint*, July 24, 2019.

270 *India residential real estate 2019 annual round-up*, ANAROCK, 2019.

271 *India's trillion-dollar digital opportunity*, Ministry of Electronics and Information Technology, February 2019.

272 "Punjab cabinet gives nod to new land pooling policy for industrial sector", *Hindustan Times*, July 22, 2020.

273 "Land conversion for industries to be simplified, expedited", *Hindu*, December 5, 2018.

In 2020, the Karnataka government introduced a legislative amendment to ease the acquisition of land for industrial purposes, subject to clearance from a high-level state committee.[274] In Uttar Pradesh, the state government has approved steps to enhance its land bank by amending the Revenue Code and simplifying the process of acquisition for land bordering expressways.[275] Such measures, amongst others, could help improve the supply of land for industrial purposes, in addition to the residential and commercial urban land unlocking measures discussed earlier.

Theme 3: Make labour markets more flexible, along with social safety nets, and invest in human capital

In the immediate term, India could help workers in search of better economic opportunities by taking steps to make the labour force more mobile, in both location and the occupations, sectors, and firms that employ workers. For example, workers could move more easily between occupations, sectors, and firms in response to evolving labour demand if India eased barriers to labour market flexibility. Workers could more easily move from rural areas to cities for better-paying jobs if India eased barriers to physical mobility. Both forms of mobility point to the need for better social safety nets for workers who are dealing with temporary dislocations. And in the longer term, India also may need to address gaps in human capital relative to several of the outperformer emerging economies.

Low labour flexibility is a problem that has affected India's manufacturing sector for decades. Labour laws can act as a disincentive for manufacturing businesses seeking to grow. For example, the Industrial Disputes Act, which dates to 1947, requires any firm with more than 100 workers to request government permission to lay off any worker. Permission is rarely granted. The 1946 Standing Orders Act requires employers to seek permission to reassign a worker from one task to another.[276]

Such legislation keeps most manufacturing businesses small and unable to generate jobs at the scale that India requires. In the manufacturing sector, companies with more than 100 workers account for only 15 percent of all organized firms by number, but their contribution to employment is 77 percent of total organized manufacturing firms' employment. They are also 2.3 times more productive than firms with fewer than 100 workers, which make up more than four-fifths of all manufacturing firms but employ just 23 percent of the total in the sector.[277] International comparisons also point to the relative lack of scale in India: an average textile firm in Bangladesh, for example, has 800 employees, more than three times the average of 240 employees in India. However, in Bangladesh, protection for workers was lowered and effectively substituted by labour market deregulation, which created jobs and economic opportunities for workers. The emphasis was on improving labour "income" instead of preventing job losses, thus affecting laws on hiring and firing, contract work, and unionising and strikes.[278]

[274] "Bill to acquire lands for industrial projects tabled", *Hindu*, March 2, 2020.
[275] "UP amends revenue code, simplifies land acquisition process to expand land bank for industries", *Financial Express*, May 29, 2020.
[276] The Industrial Disputes Act, 1947; The Industrial Employment (Standing Orders) Act, 1946.
[277] "Nourishing dwarfs to become giants: Reorienting policies for MSME growth", in *Economic Survey 2018–19*, Volume 1, Ministry of Finance, July 2019.
[278] Ameya Pratap Singh and Urvi Tembey, "India's labour reforms trying what Bangladesh, China, Vietnam did—swap income for security", *Print*, May 11, 2020.

State labour laws diverge, with some noticeable differences among states with more rigid regulations and those with more flexible ones. In states with less flexible rules, such as Bihar, Kerala, and West Bengal, the average number of workers per factory is 24 percent lower, average wages per factory are 15 percent lower, and average fixed capital is 21 percent lower than at firms in states with more flexible labour markets. Moreover, worker mobility in some states is hampered by domicile requirements for low-skill, private-sector factory jobs. In Andhra Pradesh, for example, industries must reserve 75 percent of jobs for locals. Obtaining a domicile certificate is difficult because of stringent requirements; for example, in Maharashtra, a migrant worker needs to show 15 years of residence to qualify.[279]

For companies, compliance with India's 250 labour laws comes at a high cost. Per-worker costs for firms increase by 35 percent after hiring the tenth worker due to additional compliance requirements. While states with more flexible labour markets saw a 40 percent decline in transaction costs from 2007 to 2014, states with more rigid legislation have not seen any reduction.[280]

Rajasthan is one example of how some labour reforms can translate into stronger economic activity and more work. The state amended the 100-worker limit in the Industrial Disputes Act, 1947, making it 300, in 2014–15. Following that, the average number of factories with more than 100 employees grew faster than in the rest of India. These factories grew by 3.7 percent in Rajasthan before the amendment, and by 9.3 percent afterwards, compared to growth rates of 4.6 percent and 5.5 percent, respectively, in the rest of India. The number of workers per factory in Rajasthan grew faster by 4.2 percent compared to 2.6 percent in the rest of India.[281]

Several policy solutions can create labour compliances conducive to scaling up. First is to update the provisions of the Industrial Disputes Act to reflect the size and scale of the Indian economy today. For instance, the requirement of firms to obtain government permission for layoffs, retrenchment, and closure was introduced in 1976. It was then amended to apply to all firms employing 100 or more workers, with effect from 1984.[282] Since 1984, India's manufacturing sector has grown 10 times in GVA in real terms, while the threshold has remained the same. According to the Industrial Relations Code, 2019 (yet to be enacted as law), the central or state government can increase this threshold by notification.[283] Increasing this threshold tenfold at least in line with GDP growth would reflect the modern environment and allow companies greater flexibility to shape their workforce in response to evolving demand for skills, levels of technology, and workflow processes. Another adjustment would be to exclude downsizing from the relevant provisions when it is undertaken in response to changes in demand, technology interventions, or export order seasonality. Second, domicile requirements for jobs across states could be made more flexible. This would involve simplifying and easing norms for attaining domicile status. Third, labour compliances could be streamlined by simplifying and standardising procedures across different acts. More labour laws could be covered within the newly installed self-reporting web portal, which currently incorporates 16 central acts.

279 "Andhra Pradesh passes law to reserve 75% jobs for locals in industries", *Business Standard*, November 20, 2019; Aaple Sarkar, Revenue Department, Government of Maharashtra.

280 Udit Misra and Nushaiba Iqbal, "Explained: What labour law changes by states mean", *Indian Express*, May 16, 2020; Amrit Amirapu and Michael Gechter, "Labor regulations and the cost of corruption: Evidence from the Indian firm size distribution", *Review of Economics and Statistics*, March 2020, Volume 102, Issue 1; "Nourishing dwarfs to become giants: Reorienting policies for MSME growth", in *Economic Survey 2018–19*, Volume 1, Ministry of Finance, July 2019.

281 "Nourishing dwarfs to become giants: Reorienting policies for MSME growth", in *Economic Survey 2018–19*, Volume 1, Ministry of Finance, July 2019.

282 The Industrial Disputes (Amendment) Act, 1976; The Industrial Disputes (Amendment) Act, 1982.

283 "The Industrial Relations Code, 2019", PRS Legislative Research; National Accounts Statistics, Ministry of Statistics and Programme Implementation.

Enhanced labour flexibility would need to be paired with measures to reinforce income security in case of unemployment. While India aspires to provide social protection to all of its people in a set of minimum basic needs, unemployment protection has traditionally played a small role in the approach, given the huge share of the informal labour market. As India progresses to a more formalised labour market, unemployment protection may need to be part of a nationally defined social security system, along with support to get unemployed workers back into gainful work (including employment exchanges and matching services, and vocational skill and retraining services). For example, Japan's employment insurance system has two components: an unemployment benefits scheme that offers income replacement, job counselling, and allowances for training; and the two services scheme, which provides services for employment stability and development of worker capabilities. Another example is Vietnam, which has established an unemployment insurance benefit linked to vocational training. Workers approved for receiving unemployment insurance benefits are entitled to a free job-matching service, which will assess their qualification and work experience. If workers who have taken advantage of this service are not able to find work, they are eligible to register for vocational training. The unemployment insurance scheme provides a vocational training allowance (about $14 per month in 2016) for up to six months.[284]

Another key aspect is enabling labour mobility across geographical locations in India. The rural-urban shift of labour is an inexorable driver of economic development: workers tend to move from lower-productivity geographic areas, with lower income earning potential, to higher-productivity areas in the hope of earning higher wages. Over the next decade, about two-thirds of the 90 million jobs needed are likely to be in urban areas. Achieving urban job creation of this magnitude would raise India's proportion of urban jobs to 44 percent, implying an eight percentage point shift towards urban jobs from rural jobs.[285]

While India has few legal barriers preventing physical mobility of workers such as the domicile requirements discussed earlier, the recent migrant labour crisis sparked by COVID-19 has highlighted the condition of labour that moves to cities with few safety nets.[286] Absent a portable system of migrant worker benefits, India's rural labour may be held back by fear of losing land inheritances and government entitlements, with limited or no access to social benefits such as subsidised food, health services, and education benefits. The lack of affordable housing and rental options could also result in migrants living in slums with limited access to basic utilities or spending more of their income on rent.

A number of policy solutions exist to strengthen the social safety net for the country's working migrants, building off progress made in the past decade on extending basic services to all people in India. They include linking subsidies for food, power, and fuel, among others, to Aadhaar and making them accessible across districts and states, just as the government's "one nation, one ration card" programme proposes to do. Second, we noted above the importance of digitising land records. If this were done irrespective of physical possession, it would help spur mobility. Subsidising rentals and housing facilities, for example, by implementing the scheme launched under Pradhan Mantri Awas Yojana for migrant workers, could also promote mobility.[287] As China and Vietnam, among others, have done, providing temporary housing for migrants in city planning efforts could also lead to greater mobility.[288]

[284] Celine Peyron Bista and John Carter, *Unemployment protection: A good practices guide and training package*, International Labour Organization, August 2017.
[285] *India's urban awakening: Building inclusive cities, sustaining economic growth*, McKinsey Global Institute, April 2010.
[286] Nilanjana Bhowmick, "'They treat us like stray dogs': Migrant workers flee India's cities", *National Geographic*, May 2020.
[287] Affordable Rental Housing Complexes (ARHCs) for migrants workers/urban poor, Pradhan Mantri Awas Yojana-Urban, Ministry of Housing & Urban Affairs.
[288] Andy Mukherjee, "To be the next China, India needs a new housing plan", *Print*, July 11, 2020.

Finally, India would need to take steps to address long-standing gaps in the quality of its human capital. These include spending more on basic healthcare and nutrition, on early childhood education, and on boosting the quality of education at primary, secondary, and tertiary institutions. Some progress has been made on these fronts—for example, gross elementary school enrolment rose from 81.6 percent in 2000–01 to more than 95 percent in 2015–16, and secondary enrolment from 51.7 percent in 2004–05 to 80 percent across India. These trends unfolded in response to the government's Sarva Shiksha Abhiyaan mission initiated in 2002, the midday meal scheme, and more recent efforts to improve basic sanitation and infrastructure in public schools.[289] Yet the quality of education continues to need more focus. The Annual Status of Education Report showed, for instance, that in 2018, only 50 percent of students studying in Grade 5 in rural India could read texts prescribed for Grade 2, and just 28 percent could solve a division problem.[290] The new National Education Policy announced in July 2020 aims to implement fundamental education reform to improve the quality of learning at each level; its effectiveness would need to be assessed once it is implemented.[291]

Theme 4: Reduce commercial and industrial power tariffs and make DISCOMs viable

Commercial and industrial (C&I) power tariffs in India are 20 to 40 percent higher than in other outperforming emerging economies such as China, Indonesia, Malaysia, Thailand, and Vietnam. Measured against a set of 20 countries, both emerging and developed, India was the only nation to charge industrial users more than residential users.[292] Electricity supply can be inconsistent, and this creates hidden costs for manufacturers, some of which operate diesel generators or have other captive power sources for when the power goes down. India has the potential to reduce C&I power tariffs by 20 to 25 percent and improve the reliability of coverage through new business models in power distribution (Exhibit 21).

A key challenge is the relatively poor performance and health of state power distribution companies (DISCOMs) in the economy. They are largely in the public sector, and owned by states. Aggregate technical and commercial losses in DISCOMs average about 19 percent and are as much as 50 percent for some. This compares with a target loss of 15 percent for the government's Ujwal DISCOM Assurance Yojana (UDAY) programme, and about 10 percent losses incurred by the few privatised power distribution companies like Tata Power Delhi Distribution Limited.[293] Moreover, due to mounting debt, interest expenses for DISCOMs are high, at 47,632 crore rupees ($7 billion) in fiscal year 2019; tariffs for commercial and industrial use are higher on average at 7.5 rupees to 9.0 rupees per unit, compared with 4.0 rupees to 5.0 rupees for domestic users and about 1.0 rupee for agricultural users, due to cross-subsidy surcharges.[294] The distress in the DISCOMs affects the entire power sector due to their inability to pay the generators.

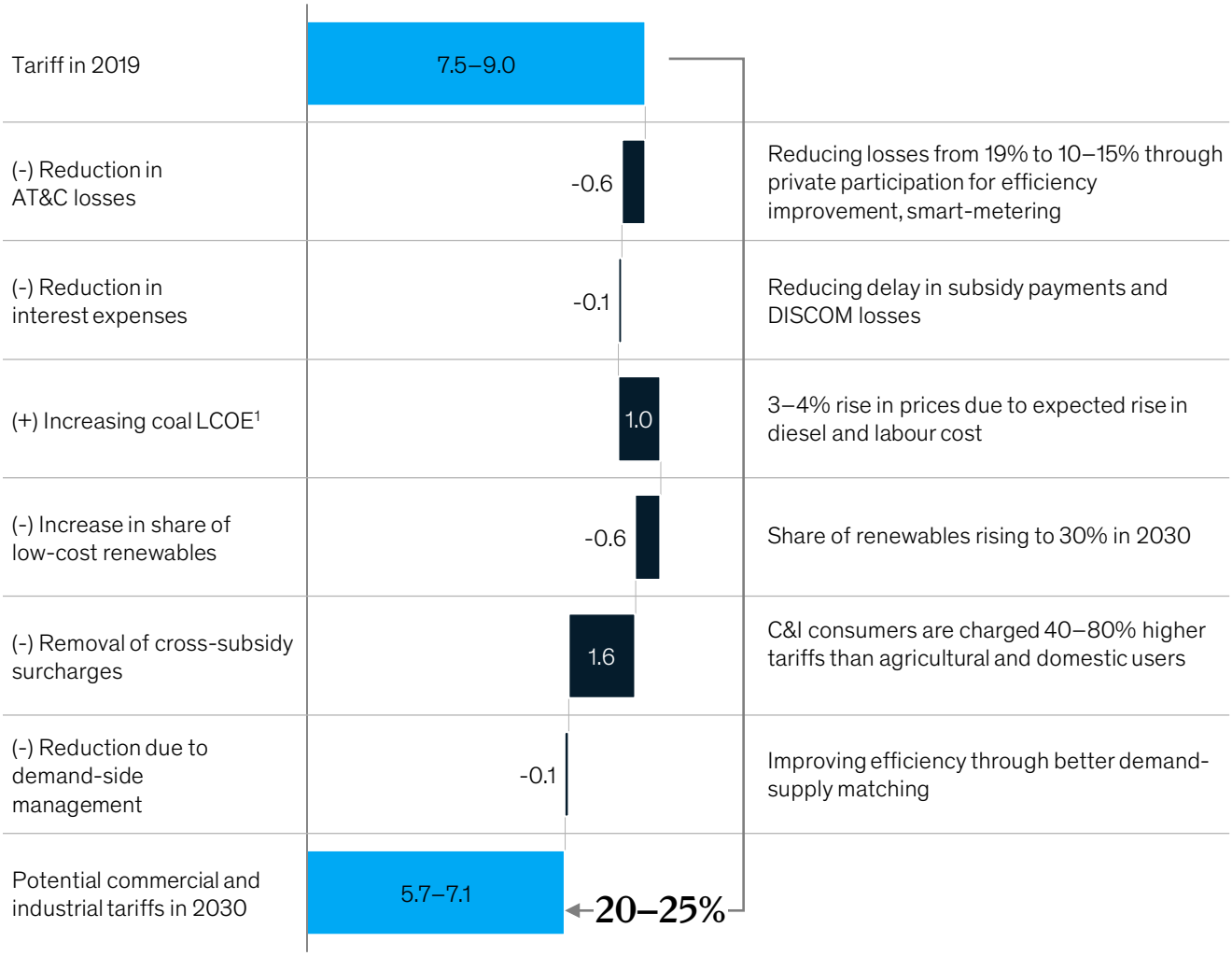
The other pressing reform agenda is that of renewables. Despite a road map to raise the installed capacity of renewables to 175 gigawatts by 2022 and significant momentum along this path, particularly with solar and wind capacity growing by 21 percent over the past four years, India is expected to miss the overall target by about 40 percent.[295] Its share of wind and solar power in electricity generation was about 7.0 percent in 2019 (overall renewables share excluding hydro-electric power is 8.3 percent), compared to about 10.0 percent in Brazil and Japan, and best-in-class (about 30 percent) in Germany.[296]

[289] *Educational statistics at a glance*, Ministry of Human Resource Development, March 2018.
[290] Annual Status of Education Report (Rural) 2019, ASER Centre, January 14, 2020.
[291] National Education Policy 2020 announced, Press Information Bureau, Government of India, July 29, 2020.
[292] Energy prices and taxes, International Energy Agency, 2016.
[293] Annual reports, UDAY, Ministry of Power.
[294] *Report on performance of state power utilities 2018–19*, Power Finance Corporation, 2020.
[295] Ministry of New and Renewable Energy; "India to miss 2022 renewable energy target by 42%, says CRISIL", *Bloomberg Quint*, October 6, 2019.
[296] *Global Energy Statistical Yearbook 2020*, Enerdata; Energy Statistics 2020, Ministry of Statistics and Programme Implementation.

Exhibit 21

Commercial and industrial power tariffs could be reduced 20–25 percent by enabling private-sector participation in power distribution, increasing the share of renewables, and reducing cross-subsidies.

Average commercial and industrial power tariffs, Rs/kWh



[1] Levelised cost of energy (includes both fixed and variable cost).

Source: Annual Survey of Industries; State-wise Performance Report on Utilities; UDAY dashboard; McKinsey Global Institute analysis

Achieving a more reliable and affordable power supply for all—one in which C&I tariffs are 20 to 25 percent less expensive—is thus a critical goal for India if it is to boost competitiveness. This could add an incremental 0.4 percentage point to average annual GDP growth, based on our estimates. The potential range of policy solutions can be grouped in two areas: first, enabling private-sector participation in DISCOMs, bringing about better governance and efficiency, and spurring digital infrastructure like smart meters; and second, acceleration of renewable energy.

For the first, India could consider creating model DISCOMs in the country's top 100 cities in power demand by enabling private-sector participation through a sublicensing model or privatisation. The government has already announced that all power DISCOMs in union territories that come under the central government will be privatised as part of the COVID-19 reforms package. The central government has also proposed, subject to state government approval, progressive reductions in cross-subsidy surcharges, as well as direct benefit transfers, simplifying open access and providing power for grid balancing and dispatch decisions to National Load Despatch Centre, rather than regional centres. These proposals would need to be effectively implemented, and the states to follow suit.

Enabling sublicensing and franchisee models could improve the efficiency of day-to-day operations, assuming that incentives are linked to a reduction in AT&C losses along with continued investment to improve infrastructure to bring down those losses even further. One example is the Torrent Power franchisee model adopted by Maharashtra State Electricity Distribution in Bhiwandi, which resulted in significant operational improvements between 2007 and 2014. AT&C losses fell from 58 to 17 percent, and accurate metering and collections efficiency increased to close to 100 percent, from 23 percent and 59 percent, respectively.[297] Another option could be to fully privatise reformed DISCOMs to further boost operational efficiency. For example, privatisation of DVB to Tata Power significantly turned around its operational and financial performance and helped make it more customer-centric. AT&C losses shrank from 53 percent to 10 percent, while the percentage of delinquent bills fell from 6 percent to 0.1 percent, and the service reliability index increased from 70 percent to over 99 percent.[298]

Market-oriented models could also expedite installation of advanced metering infrastructure, which consists of smart meters connected to the internet, allowing bidirectional communication between the consumer and the utility. While the cost of these meters is high compared to that of meters equipped for automatic reading, demand aggregation has the potential to lower the price. Distribution companies could consider having private players use build-own-operate-maintain models for smart metering to order to reduce the burden to the DISCOM to make a large investment. After a fixed period, these private players could transfer ownership to the distribution companies.[299]

Setting tariffs that reflect costs across consumer categories and rationalising cross-subsidy surcharges has the potential to decrease C&I tariffs by about 1 rupee to 2 rupees per unit, while agricultural and residential tariffs would increase. This could be offset by targeted subsidies to marginal farmers and households below the poverty line via direct benefit transfers. It could also reduce the burden on government coffers for power subsidy support.

Another area of potential reforms is to further boost the share of renewables in the energy mix. Battery and module prices are continuously falling. By 2030, the levelized cost of energy (LCOE), which includes both the fixed and the variable cost of providing electricity, could be 1.5 rupees to 2.0 rupees per unit for renewables, while the LCOE for traditional sources like coal could be 5.0 rupees per unit. Boosting the share of wind and solar energy to the current best-in-class level of about 30 percent by 2030 can bring down C&I tariffs by 0.6 rupee per unit. Continuing to allow free interstate grid transmission for renewables, implementing the proposed National Renewable Energy Policy to enforce a minimum threshold of renewable energy purchases by DISCOMs, shifting to the secondary and tertiary ancillary services markets, grid banking, time of day tariffs, net metering, and disincentives for coal power will be among the critical steps.

297 Muharhari Kele, "Torrential power flow glorifies power looms in Bhiwandi", Dr.Murhari Kele, 2014.
298 *TPDDL excellence journey,* Tata Power Delhi Distribution Limited, June 2015.
299 For details, see *Digital India: Technology to transform a connected nation*, McKinsey Global Institute, March 2019.

Theme 5: Monetise government-owned assets and increase efficiency through privatisation

India has about 1,900 state-owned enterprises at the national and state levels. We analysed companies for which data are available, some 577 of these 1,900 public-sector undertakings. They had a book value of about 20 lakh crore rupees (about $290 billion) in 2018, making up about 30 percent of the total paid-up capital in the economy.[300] On average, government ownership of these entities is 74 percent.[301] As noted in the chapter on India's corporate landscape, the overall labour productivity of private-sector companies in the same sector is at least twice as high as SOEs'. This is particularly stark in sectors such as mining (where private-sector productivity is 3.5 times higher), steel (5.1 times higher), and telecom and media (about 12 times higher). Recapitalisation spending on SOEs has risen from 0.1 to 0.5 percent of GDP over the past decade, reaching a high of 0.7 percent in fiscal year 2018. As part of the COVID-19 stabilisation package in 2020, the government declared its intention to limit the presence of state-owned enterprises in strategic sectors to between one and four, and to privatise all SOEs in nonstrategic sectors.[302] Following through on this privatisation agenda could greatly increase productivity and make India a more competitive environment for companies.

Large-scale privatisation could give a needed boost to key sectors, more than doubling or tripling productivity for the specific company, and contributing between 0.2 and 0.4 percentage point annually on average to incremental GDP, according to our estimates. This goal could only be achieved if privatisation is accompanied by an appropriate institutional framework and effective competition. This has been found to be critical in bringing about improvements in company performance because it is associated with lower costs, lower prices, and higher operating efficiency.[303]

In the past, privatisation has resulted in positive improvements in operational performance as well as increased investment, valuations, and dividend income for the government. For example, Hindustan Zinc Limited was privatised in 2002–03, with government ownership falling from 76 percent to 49 percent, then to 30 percent in 2003–04. In this period, its productivity measured in metric tons produced per employee increased from 22 MT in 2002 to about 75 MT in 2005–06. Further, the company's price-to-book valuation increased from 0.8 to 2.8 from 2001–02 to 2004–05, and dividends increased from near zero to 0.18 rupee per share. Similarly, Indian Petrochemicals Corporation Limited was acquired by Reliance Industries in May 2002. Its productivity increased from 270 MT per employee in 2002 to 467 MT in 2005, an annual average growth rate of about 20 percent. Pre-privatisation, profit after tax margins were about 1.9 percent in 2002; they increased to about 9.4 percent by 2006.[304]

Based on our analysis of the 577 SOEs for which data are available, we estimate that over the next decade, privatisation of some 400 SOEs is possible, excluding those in strategic sectors and in sectors in which the assets of state-owned enterprises are worth more than their equity, such as power transmission companies, for which the government may want to maintain control through a majority stake and realise value via an asset monetisation programme. In the 400 or so SOEs that could be privatised, the government's share of the book value was $140 billion in 2018, and they could yield up to 40 trillion rupees ($540 billion) of revenue by way of privatisation proceeds to the government. A small number of privatisations could generate large impact: our analysis suggests that just 2 percent of all SOEs could yield 80 percent of the overall proceeds from privatisation. These companies are concentrated in six sectors: oil and gas, financial services, power, manufacturing, telecom, and mining (Exhibit 22).[305]

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300 *4th annual report on the Working and Administration of the Companies Act, 2013 year ending 31.3.2018*, Ministry of Corporate Affairs, December 2018; CMIE ProwessIQ.

301 Annual report 2018, Ministry of Corporate Affairs; CMIE ProwessIQ.

302 "Atmanirbhar Bharat Abhiyaan", Press Information Bureau of India, May 12, 2020.

303 Saul Estrin and Adeline Pelletier, "Privatization in developing countries: What are the lessons of recent experience?", *The World Bank Research Observer*, February 2018, Volume 33, Issue 1.

304 Shuaib M. Fakih et al., *Acquisition of Hindustan Zinc Limited by Sterlite—a success story?*, SSRN, October 2007; Pradip Baijal, *Disinvestment in India: I Lose and You Gain*, Pearson Education India, 2008; CMIE ProwessIQ; S&P Global Market Intelligence.

305 For details, see the technical appendix.

Exhibit 22

Just 2 percent of India's state-owned enterprises, by number, have the potential to yield as much as 80 percent of total value from privatisation.

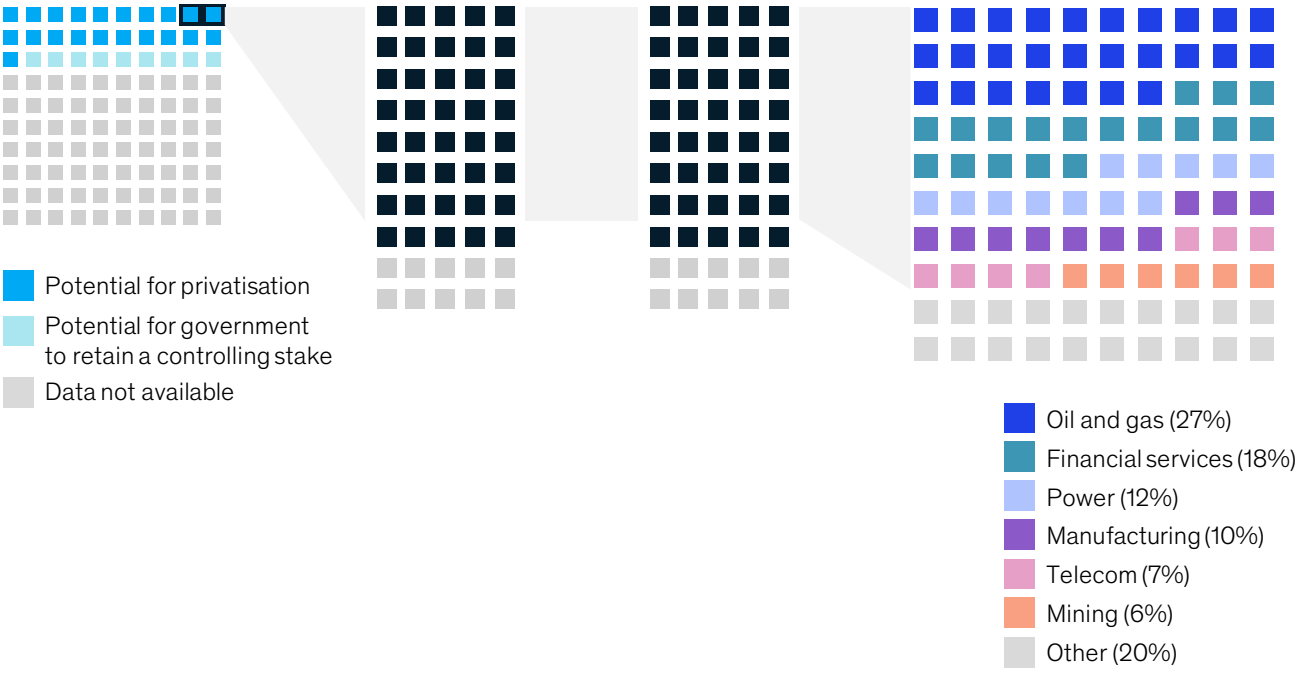
India has ~1,900 state-owned enterprises, of which…

~400 SOEs could be privatised, with…

$140B …of book value in FY 18[1], yielding…

$540B …of potential proceeds from privatization in 2020–30…

…across **10** sectors



[1] Book value of government ownership.

[2] Refers to 80% of the book value of the 400 privatized entities in 2018.

Note: Estimates of number of SOEs that could be privatised are based on 577 SOEs for which data are available. We identify ~400 SOEs from this set that could be privatised based on whether they are in strategic sectors or if value of their assets is greater than their estimated market value (in either of these cases, we assume SOE would be more amenable to asset monetisation programme rather than a privatisation programme).

Source: Ministry of Corporate Affairs database; CMIE ProwessIQ; Annual reports; McKinsey Global Institute analysis

Theme 6: Improve the ease and reduce the cost of doing business

In international rankings, India is scoring better than previously on the ease of doing business. In the World Bank rankings, India's overall position rose to 63rd in 2020 from 130th in 2016, earning the country a citation as one of the ten economies that had made the most improvement across three or more dimensions. The World Bank singled out India's reforms making it easier to start a business, to deal with construction permits, to trade across borders, and to resolve insolvency.[306] For all of its progress, India can still advance considerably across a range of dimensions—and, in fact, will need to focus on improving the business climate if it is to create the conditions for a high-growth, high-employment spurt over the next decade.

Several areas remain significant bottlenecks (Exhibit 23). Government payments could be streamlined; as of fiscal year 2019, the government owed private-sector firms about 5 trillion rupees ($70 billion) in delayed payments.[307] Duplication is a common problem with central and state government, which require multiple submissions of the same or similar information. For example, the FDI approval process requires documents (such as a Memorandum of Association and Article of Association) to be submitted to the Ministry of Corporate Affairs that were also needed at the time of incorporation; hence, requiring them again during FDI approval can be eliminated. To start and run a business today, an MSME must navigate a complex landscape of compliances. A typical MSME is responsible for about 23 registrations and licenses, more than 750 compliances, and about 120 filings per year; labour regulations alone account for more than 50 percent of these filings.[308]

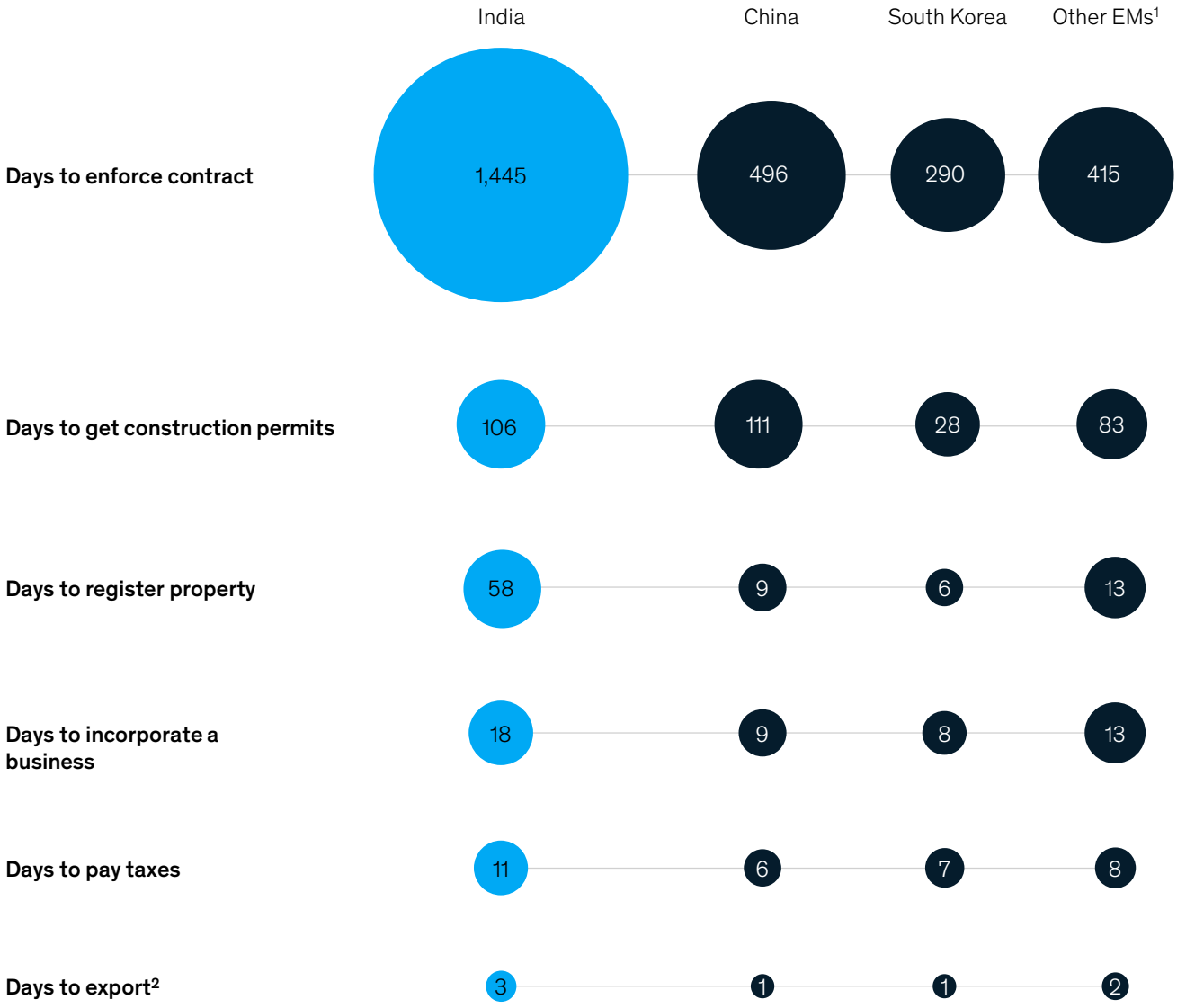
The process of obtaining construction permits is slow. Although cities like Delhi and Mumbai have made progress in the past, other cities are still lagging behind compared to peers. On average, getting a construction permit in India takes about 106 days; in Malaysia, it takes only half that time, and in South Korea it takes about 28 days.[309] Time to export, including border and document compliance, is 64 hours in India, roughly twice as long as in peer countries China, Malaysia, South Korea, and Thailand. The lack of sufficient judicial capacity and strain on the system mean that contract compliance is low. Compliance costs for taxation, in particular, are high; GST compliance involves about 100 different sets of compliance for the national and state governments, which together requires about 140 hours to compile.[310] IP protection and enforcement are weak because of a lack of sufficient specialized IP courts as well as resource constraints; at IP appellate boards, the pendency rate can be more than 60 percent of cases.[311] Finally, bankruptcy resolution mechanisms had a low recovery rate of 43 percent in 2019 compared to Indonesia at 66 percent and Malaysia at 81 percent.[312] Issues in the process include long extensions, and resolution times average about 1.6 years, compared with Indonesia at 1.1 years and Malaysia at about 1.0 year, as a result of constrained capacity and expertise.[313]

In addition to taking steps to improve the quality of legal and policy-related drafts, India can boost the ease and reduce the cost of doing business by using digital solutions to break through the red tape and overcome procedural hurdles.

306 *Doing business 2020*, World Bank, 2019.
307 Prasanta Sahu, "Govt owed Rs 5L crore to industry at FY19-end: Niti Aayog estimate", *Financial Express*, October 29, 2019.
308 *India's Road to a $5 trillion economy: Reducing regulatory cholesterol*, TeamLease.
309 *Doing business 2020*, World Bank, 2019.
310 Ibid.
311 *Ease of Doing Business' Next Frontier: Timely Justice*, Economic Survey 2017–18.
312 "Recovery through insolvency process better compared to other options: IBBI chief M S Sahoo", *Economic Times*, March 2, 2020.
313 *Doing business 2020*, World Bank, 2019.

Exhibit 23

India has potential to improve the ease and reduce the cost of doing business, to match peer economies.



[1] Includes Malaysia, Thailand, and Vietnam (Vietnam not included in getting construction permits, registering property and paying taxes).
[2] Includes border and document compliance.
Note: Metrics available in number of hours were converted into days by dividing by 24 and those available in years were converted to days by multiplying with 365.

Source: *Doing Business 2020*, World Bank, 2019; McKinsey Global Institute analysis

Among potential measures, largely based on best practices elsewhere, India could consider the following:

— **Speeding up payments for public procurement via regulations mandating on-time payments.** The United Kingdom, for example, implemented Public Contract Regulations in 2015, which mandated that at least 90 percent of all undisputed and valid invoices from SMEs needed to be paid within five days and 100 percent within 30 days.[314] Transparent public procurement can also help, providing information on payments to contractors. South Korea, for example, has an e-procurement system that features real-time updates of all vendor-related information.[315]

— **Streamlining compliances and clearances.** India could consider digitising compliances and moving towards e-signatures to reduce paperwork and rationalising all compliances to reduce duplication and decriminalise specific compliances. It would be considerably easier to incorporate a business if all of the steps were integrated into a single online window. This would cover all relevant agencies in the central and state governments, and use a single common application form to provide a complete business license package. China and South Korea currently provide a single portal for business licenses.[316] Similarly, an execution cell could be set up that would act as a single point of contact between companies and the government for providing time-bound, single-window clearances for critical processes.

— **Streamlining construction permits.** India could consider establishing a one-stop shop integrating central, state, and municipal governments as well as city departments, similar to peer countries, to reduce the number of procedures and time required for construction permits. Malaysia has streamlined their process by eliminating specific inspections—for example, road and drainage—while Hong Kong established a one-stop center that brings together six local departments and two private utility companies under the same roof.[317]

— **Streamlining contract enforcement.** This could include an automated case management system featuring e-filing of complaints, automatic assignment of cases to judges, and optimised scheduling. South Korea, for example, has a robust e-courts system with e-case processing, a decision support system, and 24/7 document access. Resolution is rapid, less than 300 days on average, and costs are low, at about 13 percent of the claim. This compares with 1,445 days and 31 percent in India. Another measure involves expanding the judicial network to set up dedicated courts for commercial and small claims cases, including expert benches and tribunals for specialized fields. Finally, alternative modes of dispute resolution, such as mediation, could be strengthened. Singapore, for example, introduced regulations to apply for mediation outcomes, enforced as court orders.[318]

— **Streamlining tax payments.** Payments of both direct and indirect taxes could be coordinated and consolidated across various departments, thereby easing the compliance burden. South Korea, for example, combined four taxes into a single payment, while China expanded its e-filing system to include stamp duties.[319]

314 "Prompt payment policy", UK government, November 2015.
315 Korea ON-line E-Procurement System.
316 Gidon Gautel, "China launches new 'Three-in-One" business license', *China Briefing*, March 2016.
317 *Doing business 2020*, World Bank, 2019.
318 e-Court System, Supreme Court of Korea; *Doing business 2020*, World Bank, 2019.
319 "Business reforms", in *Doing business 2020*, World Bank, 2019.

— **Increasing the capacity of the patent regime.** Raising the number of examiners in the Indian Patent Office would help reduce the time needed to file patents and improve India's innovation potential. As an example, it takes 24 months to grant a patent in the United States. China and the European Patent Office require 22 months. India takes 64 months. India also ranks low—40th out of 53 countries on the Global Innovation Policy Center Intellectual Property Index in 2020, compared with peers ranked between 13th and 27th.[320] Technology could improve process efficiency and a strong network of specialized IP courts or tribunals with expert judges given sole jurisdiction over IP cases would also accelerate the process. China, for example, has more than 20 specialized IP courts with more than 350 expert judges.[321]

— **Strengthening insolvency resolution.** The Insolvency and Bankruptcy Code was overhauled in 2016, prompting plaudits from the World Bank. The scope of the IBC could still be extended and some remaining loopholes closed, including regulations for personal bankruptcy, group insolvency, and cross-border insolvency. In addition, extensions or adjournments for IBC cases could be restricted. Raising the number of National Company Law Tribunal benches nationwide from 15 currently would increase case disposal rates.[322] Adopting an e-court management system and allowing e-bidding on bankrupt assets, similar to coal mines and solar and wind power assets auctions, would help streamline the process.

An "e-governance for business" mission at the state government-level would be required to improve the ease of doing business at the local level across a large number of cities and towns within each state.

India could adopt a range of policy options and measures with the goal of accelerating GDP growth and job creation. Many of the ideas within the six themes we outline have the merit of being relatively simple to implement, and many of the measures have proven their worth elsewhere, in both developed and developing economies. Embracing these themes as a pro-growth agenda will go some way towards bringing about the more competitive environment needed for high growth and large-scale job creation over the next decade. But one critical ingredient is missing from this list: finance. In the next chapter, we focus on the investment needed to fuel the growth agenda, and what the sources of that investment could be.

320 World Intellectual Property Organization.
321 "China's Intellectual Property Courts: A Procedural Overview," *China Law Blog*, September 20, 2019; AFD China Intellectual Property Law Office, "Updates On China's Specialized IP Courts And Tribunals," Mondaq, January 29, 2019.
322 National Company Law Tribunal.

5. Financing the high-growth agenda

Financing will be a critical enabler of a high-growth agenda for India, and significant reforms will be needed to generate the amounts of investment that are needed. In the pre-COVID-19 fiscal year 2020, investment (measured as gross capital formation) was 33 percent of GDP, its lowest level in over a decade. If India is to meet the challenge of accelerated GDP and productivity growth and large-scale job creation, investment will need to rise to about 37 percent of GDP, which is about the level India has achieved in high-growth periods in the past.[323] This implies the need to raise capital of almost $2.4 trillion in fiscal year 2030 and $1.5 trillion in 2025, compared to $865 billion in 2020. We estimate that, in the corporate sector, large and small companies alike would need to increase their share of capital formation from about 50 percent in fiscal year 2018 to over 60 percent—that is, about $1.4 trillion of capital. MSMEs alone would need about $800 billion in capital, or about six times the amount of capital currently deployed to support their growth, in 2030.

Boosting investment to this level would require reforms that rest on three pillars. First, significantly more household savings will need to flow into financial products, particularly in the capital markets. Second, the cost of credit intermediation in the banking sector will need to fall, so that it comes down to a level closer to that of other outperforming emerging economies and enables firms that borrow to be more competitive with their global counterparts. Third, public finances will need to be streamlined, with rationalised government expenditure and improved government revenue lines, so that capital is allocated more efficiently across the economy.

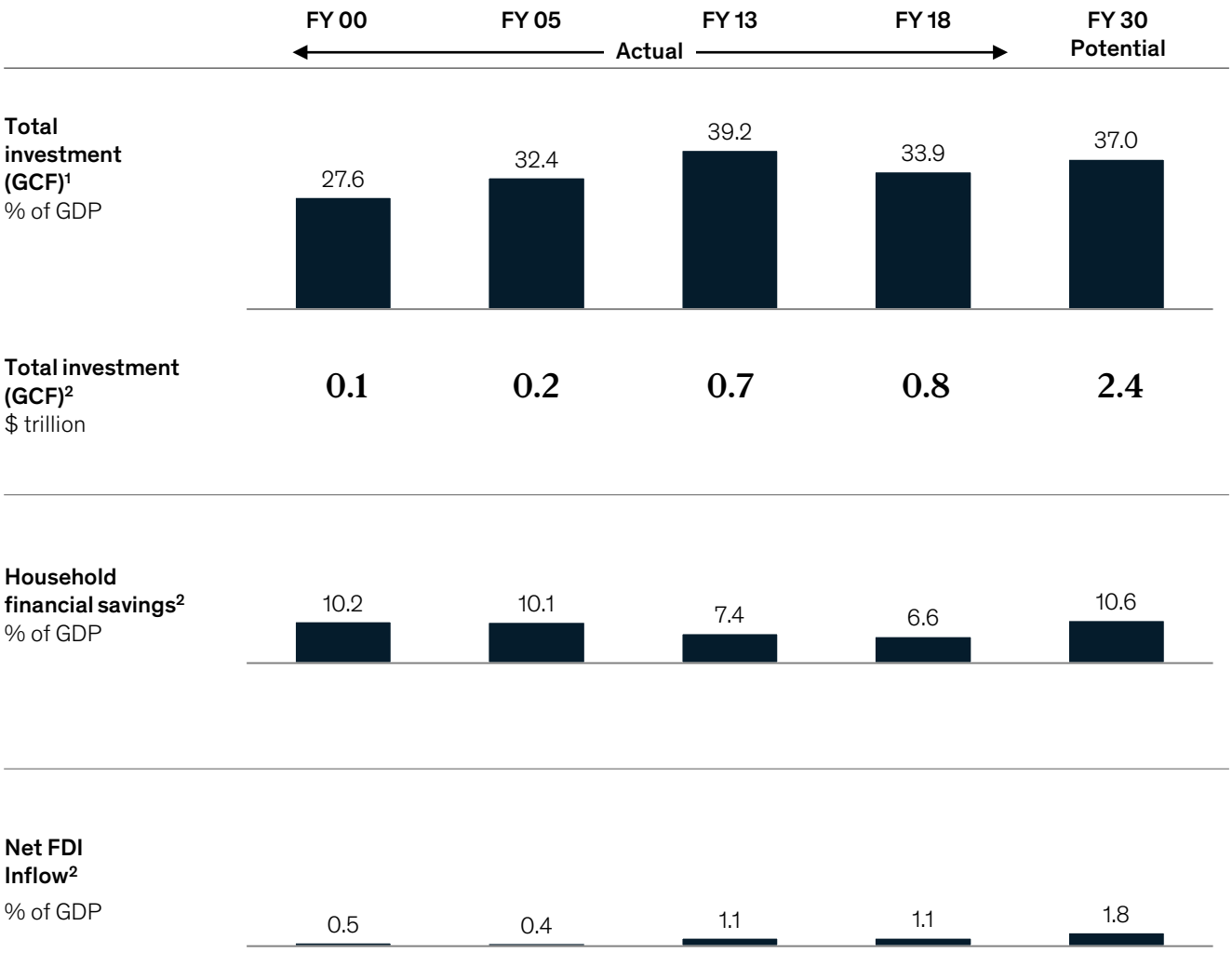
Reform pillar 1: Channelling more household savings into capital markets

India's gross domestic savings rate has been falling, especially household savings, which dropped from 22 percent of GDP in fiscal year 2013 to 17 percent in 2018. Within household savings, the share of financial savings is lower than the historical trend, at just 6.6 percent of GDP in fiscal year 2018 (lower than the historical average of 10.6 percent between 2000 and 2012). To finance growth, India needs to raise investment from 33 percent to 37 percent in 2030, while household financial savings would need to rise to 11 percent of GDP, in line with the past. Net foreign investments (with outflows subtracted from inflows) would also need to rise to 3 percent of GDP in 2030, from about 1.8 percent in 2018, or to about $200 billion from $50 billion. Of this, net foreign direct investment would need to rise from 1.1 percent to 1.8 percent, in line with peers like China, South Korea, Malaysia, and Thailand (Exhibit 24).[324]

[323] National Accounts Statistics, Ministry of Statistics and Programme Implementation.
[324] National Accounts Statistics, Ministry of Statistics and Programme Implementation; Balance of payments, Reserve Bank of India, June 2018; World Bank.

Exhibit 24

To support growth, India will need to achieve $2.4T of annual investment, or 37 percent of GDP, in fiscal year 2030.



[1] Gross Capital Formation in real terms.
[2] In nominal terms.

Source: National Accounts Statistics, Ministry of Statistics and Programme Implementation; Reserve Bank of India; World Bank; McKinsey Global Institute analysis

On the domestic savings front, a large fraction of the wealth of Indian households is in the form of physical assets. The average Indian household holds 95 percent of its wealth in physical assets, which include real estate, gold, and other physical goods. The residual 5 percent is in financial assets, compared to about 60 to 70 percent in the United Kingdom and United States.[325] Physical savings as a percentage of total household savings increased to 62 percent in fiscal year 2018 from a historical average of 54 percent between fiscal year 2000 and 2012, with a lower portion being allocated by households to financial savings and capital market instruments.[326] Indeed, India's capital markets are relatively shallow and underdeveloped, in comparison with capital markets in other outperforming emerging economies. For example, overall depth of financial markets in India, as measured by outstanding equity, corporate

[325] Tarun Ramadorai et al., *Report of the Household Finance Committee*, Reserve Bank of India, July 2017; Ila Patnaik and Radhika Pandey, *Savings and capital formation in India*, National Institute of Public Finance and Policy working paper number 271, June 2019.
[326] National Accounts Statistics, Ministry of Statistics and Programme Implementation.

bonds, and government bonds, and cumulative five-year issuances of securitised products, amounts to just about 140 percent of GDP. That compares with financial market depth of about 240 percent of GDP among a set of peer outperformer economies in Asia: China, Malaysia, Singapore, South Korea, and Thailand. India lags behind significantly in bond markets; corporate bonds outstanding account for just 15 percent of GDP compared to peers at 63 percent.[327] India also underperforms in the same group on other dimensions of financial market activity, such as the amount of mutual fund assets under management, private equity assets, pension coverage (measured as a percentage of the working-age population), and life density (measured as premium per capita) (Exhibit 25). The turnover ratio (measured as the value of domestic shares traded as a proportion of their market capitalisation and used as an indicator for trading volumes) of the Indian stock market has fallen from 143 percent in 2008 to 58 percent in 2018 and further to 29 percent in 2019. In comparison to peers, the ratio for India is among the lowest: this ratio for China in 2019 was 224 percent, 130 percent for South Korea, 87 percent for Brazil, and 64 percent for Thailand. The low turnover ratio for India could be attributed to high trading costs due to high margin requirements and securities transaction tax (STT), as per an analysis by the Association of National Exchanges Members of India.[328]

A number of reform measures could be considered to help India attract more financial savings and deepen capital markets.

First, existing products and channels could extend their reach through coherent incentives and a level playing field across products. For example, taxes on capital market instruments could be reduced and rationalised. Singapore has 0 percent taxes on long-term capital gains, while India taxes the gains at 20 percent for unlisted corporates and 10 percent for listed corporates and structured products like real estate investment trusts. In India, dividends are taxed at the marginal income tax rate, for example, at different tranches of 31 to 43 percent, including surcharges, for segments of the population with annual income more than 15 lakh rupees ($21,400). That compares with dividend withholding tax rates of 10 percent in Thailand and 0 percent in Malaysia. Across capital market instruments, varying tax rates could be evened out. For example, for REITs, the short term for the purposes of short-term capital gains taxes is considered to be 36 months, whereas for other instruments the short term is just 12 months. The rates differ, too: long-term capital gains from alternate investment funds (AIFs) are taxed at 20 percent for domestic residents but half that, 10 percent, for foreign investors.[329] Other measures could be taken to make equity trading more attractive, such as lower transaction cost, and simplifying compliance requirements for trading in stock exchanges.

Insurance and pension products with clarity and simplicity in design and strong incentives could be provided.[330] The insurance sector has a 49 percent cap in foreign direct investment; allowing a higher threshold could increase competition in the sector and help accelerate the inflow of capital required to expand insurance reach and penetrate deeper into semiurban and rural savers. Multiple oversight bodies sometimes overlap, including the Pension Fund Regulatory and Development Authority in the National Pension System, the Insurance Regulatory and Development Authority for pension products, the Securities and Exchange Board of India and the Ministry of Labour and Employment for the Employees' Provident Fund Organisation, and so on. Creating a unified regulatory body could speed up decisions.

[327] World Bank; Debt securities statistics, Bank for International Settlements, June 2020; Securities and Exchange Board of India; Korea Treasury Bond, Ministry of Economy and Finance; Dealogic.

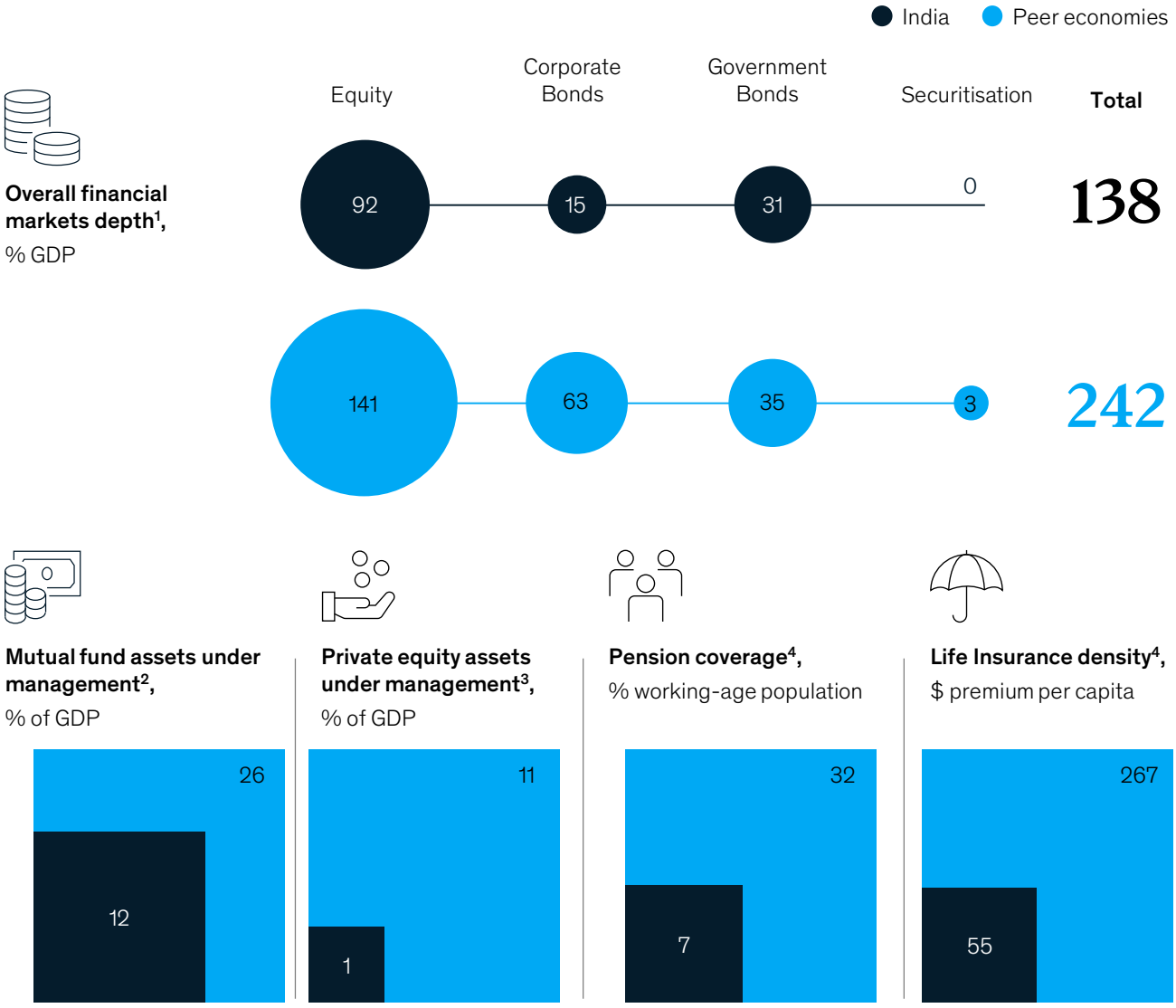
[328] *World Federation of Exchanges database*, World Bank; "Stock brokers body meets FM; demands measures to boost equity investment," *The Hindu Business Line*, August 12, 2019.

[329] *Capital gains tax*, Mazars, Singapore; *Taxation on equities investment*, Stock Exchange of Thailand; *Simple tax guide for Americans in Malaysia*, Tax for Expats; *Union budget 2019–20*, Ministry of Finance; "Real estate investment trust (REITs) and infrastructure investment trust (InvITs) in India", *Financial Foresights*, FICCI, Q3 FY 14–15, Volume 5, Issue 2; T E Narasimhan, "IVCA seeks tax parity, approval for AIFs to invest in NBFCs ahead of budget", *Business Standard*, January 25, 2020.

[330] Tarun Ramadorai et al., *Report of the Household Finance Committee*, Reserve Bank of India, July 2017.

Exhibit 25

Capital markets in India are underdeveloped compared with peer economies across both equity and debt instruments, as well as long-term contractual savings products.



1 Depth = Outstanding equity, corporate bonds, and government bonds, and sum of 5-year issuances of securitised products from 2013–2017; Peer economies considered include China, Malaysia, Singapore, South Korea, and Thailand.
2 In 2017; Peer economies considered include China, Malaysia, South Korea, and Thailand.
3 Peer economies include United States and China; In 2018 for India and China, 2016 for United States.
4 In 2017; Peer economies include China, Malaysia, and Thailand.

Source: World Bank; Debt securities statistics, Bank for International Settlements, June 2020; Securities and Exchange Board of India; Korea Treasury Bond, Ministry of Economy and Finance; Dealogic; The Global Human Capital Report 2017; World Economic Forum; *World insurance in 2017: solid, but mature life markets weigh on growth*, Swiss Re Institute, 2018; McKinsey Global Institute analysis

The bond market could be deepened by charging uniform stamp duties on debentures across states, with an overall cap on duty. Additionally, a uniform approach for valuation of corporate bonds can be established by all regulated entities, through a central agency, and daily pricing could be provided.[331] More risk capital investment vehicles like private equity will also be important. For example, India has about 100 private equity firms, while the United States with 7.5 times the GDP has 33 times the number, at 3,300.[332] Providing tax incentives for this

331 H. R. Khan et al., *Report of the Working Group on Development of Corporate Bond Market in India*, Reserve Bank of India, August 2016; Dr. R. H. Patil et al., *Report of High Level Expert Committee on Corporate Bonds and Securitisation*, Securities and Exchange Board of India, December, 2005; *The development of India'scorporate debt market*, City of London, February 2008.
332 *India private equity firms*, Crunchbase; *United States private equity firms*, Crunchbase.

class of investments, as in the United Kingdom, and removing tax disincentives, for example, the distinction in capital gains tax rates for publicly listed and private companies could enable more such firms domestically, and increased availability of risk capital.

Second, existing product-market barriers such as investment restrictions on a range of instruments could be reduced to channel household savings efficiently.[333] For example, investments in AIFs and bonds with ratings lower than AA are restricted for institutional investors like banks, insurance companies, and pension funds. Insurance and pension funds are also required to invest a proportion of assets in government instruments—50 percent in the case of life insurers—and they have a limit for exposure in corporate instruments (about 45 percent for NPS and EPFO). About 70 percent of life insurance funds in India currently are invested in government securities.[334] Such restrictions predominantly do not exist in developed economies.

Third, more financial instruments and channels could be introduced. For example, a government-backed mortgage securitisation organisation like Fannie Mae in the United States could be set up. Fannie Mae provided over $650 billion in liquidity to the mortgage market in 2019 through its purchases and guarantees of mortgage loans, which enabled the financing of approximately three million single-family home purchases, single-family refinancings, and multifamily rental unit purchases.[335]

Beyond domestic capital, foreign sources of capital can be tapped to a greater extent. Foreign participation in Indian capital markets is low compared to peers: foreign portfolio investment as a percentage of total equity and bonds outstanding was 14 percent for India in 2017, compared to 22 percent in Indonesia, about 30 percent in Singapore, and about 50 percent in Germany.[336] If India were to be incorporated into the global bond index, this could increase flows of foreign investment. In addition, a harmonized and hassle-free investment process is needed for foreign investors by streamlining the registration process, KYC documentation, and investment permissions.[337]

Apart from these three broad measures, it may be important to consider additional avenues of capital access for small and midsize firms. Development finance institutions (DFIs) have traditionally played an important role in delivering strategic, long-term finance to target sectors and priorities, including exports and infrastructure, in many emerging economies. Yet it is also the case that such forms of lending can result in market distortions and rent capture. India disbanded its DFIs, with the conversion of leading institutions such as ICICI Ltd and IDBI into universal banks, in 2002 and 2004 respectively.[338] The global discourse on DFIs is evolving, however, in the wake of the global financial crisis. Some policy experts say DFIs are needed now more than ever, given their countercyclical role and their ability to bridge infrastructure financing gaps and address failure in the allocation of risk capital by capital markets.[339] Certain outperforming economies have built-in measures to limit the potential distortion of their interventions. For example, South Korea's Development Bank had a strict loan ceiling on project costs to assure co-investment, risk sharing, and aligned incentives.[340]

[333] Ila Patnaik and Radhika Pandey, *Savings and capital formation in India*, National Institute of Public Finance and Policy working paper number 271, June 2019.

[334] IRDA Annual Report 2018-19; IRDA (Investment) (Amendment) Regulations, 2001; Navneet Dubey, "NPS schemes can now invest more in debt: Move aimed at improving scheme performance", *Economic Times*, April 5, 2019; "EPFO reduces equity, debt investment by half as lockdown hurts inflows", *Times Now News*, June 19, 2020.

[335] Annual report, Fannie Mae 2019.

[336] *Coordinated Portfolio Investments Survey*, International Monetary Fund, 2017.

[337] H.R. Khan et al., *Report of Working Group on redrafting the SEBI (Foreign Portfolio Investors) Regulations 2014*, Securities and Exchange Board of India, May 2019.

[338] *Report of the Working Group on Development Financial Institutions*, Reserve Bank of India, May 29, 2004; IDBI Bank website.

[339] Jiajun Xu, Xiaomeng Ren, and Xinyue Wu, "Mapping development finance institutions worldwide: Definitions, rationales, and varieties", NSE Development Financing Research report number 1, Peking University, Institute of Structural Economics, May 2019.

[340] For details, see *Outperformers: High-growth emerging economies and the companies that propel them*, McKinsey Global Institute, September 2018.

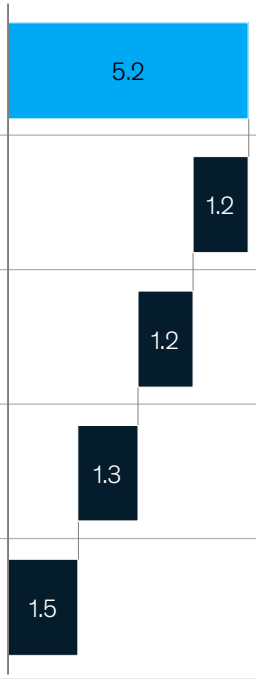
Reform pillar 2: Reducing the cost of credit intermediation

Financing costs in India are high: in 2019, lending rates (fund- and non-fund based) were more than five percentage points in nominal terms above rates in peer emerging economies, driven by several factors. India could reduce the financing costs by about 3.5 percentage points, by taking steps to reduce the cost of credit intermediation in the banking system (Exhibit 26).[341]

Exhibit 26

The average financing cost to commercial borrowers in India is structurally higher by an estimated 5.2 percentage points than in comparable economies.

Drivers of difference in the cost of commercial loans in India vs other emerging economies Percentage Points	Average nominal rates, 2019[1] % India	Other emerging economies[2]	Potential levers to reduce cost of commercial loans
Fund and fee-based charges paid by borrowers[3]	10.7	5.5	
Crowding-out effect of government borrowing[4]	1.2		Streamlining public finances, market-linking small-savings rates, rationalising SLR[5] requirement, focusing PSL[6] obligations on key priorities
Credit risk provisions due to nonperforming loans	1.8	0.6	Special Asset Bank or AMC[7], strengthening Insolvency and Bankruptcy Code processes to reduce NPAs[8]
Operating expenses	2.7	1.4	Building operational efficiency through privatisation, digitisation, and automation, among others
Residual effects	5.0	3.5	



[1] Nominal rates considered; estimates based on a sample of commercial banks in each country.
[2] Simple average of China, South Korea, and Thailand.
[3] Assumes borrowers pay all fund-based and fee-based (non-fund-based) charges.
[4] Estimated based on yield curve for government securities in India relative to those in sample countries.
[5] Statutory Liquidity Ratio.
[6] Priority Sector Lending.
[7] Asset Management Company; Special assets bank or AMC can address the NPA overhang issue, but the fundamental project and entity risk would need to be addressed by reforms, for example, improving ease of doing business, improving cost competitiveness, among others.
[8] Nonperforming asset.

Source: World Bank; International Monetary Fund; Reserve Bank of India; Bloomberg; McKinsey Corporate Performance Analytics; McKinsey Global Institute analysis

One of the reasons that interest rates are high for India's firms is that the government crowds out funding for commercial enterprises; we estimate that financing costs are higher by 1.2 percentage points due to this effect. About half of all household financial savings in India, across banks, pension funds, insurance, and direct claims on government, are either used by the government to finance a structurally high fiscal deficit or for other directed lending objectives (Exhibit 27). In the banking sector, for example, only about half of all deposits—representing 24 percent of household financial savings—are available for commercial lending. Of the other half, roughly 40 percent is invested in government securities under statutory

[341] International Financial Statistics and data files, International Monetary Fund; monetary policy statements, Reserve Bank of India, 2018–20; Bloomberg.

reserve requirements, while the rest represents mandated lending by the government to largely noncommercial "priority" sectors like agriculture and weaker sections such as small and marginal farmers, scheduled castes and scheduled tribes, among others as defined by the Reserve Bank of India. The government also finances its borrowing needs directly from households, through small savings schemes that offer higher interest rates than bank deposits. The combined effect of this public-finance structure is an effective floor for bank deposit rates and corporate lending rates, keeping both higher than in other comparable economies because of the government's extensive presence as a perpetual borrower.

It is possible to reduce these crowding-out effects. At the heart of the issue, public expenditure and debt levels would need to be rationalised in line with the steps from the third financial reform pillar, discussed below. This would make a higher proportion of funds available for commercial lending. Statutory reserve ratios, now at a required regulatory minimum of 21 percent across both government securities and cash reserve requirements, could be reduced further, up to as much as half, in line with steps taken in the early 1990s, when they reduced from 38.5 percent in 1992 to 25 percent in 1997.[342] Rationalising public borrowing would also help link interest rates on small savings schemes closer to market rates, thereby reducing the floor effect on interest rates created by the government's own borrowing needs. A steep reduction in small savings interest rates of 0.7 to 1.4 percentage points was announced in April 2020 and could contribute towards reducing the crowding-out effect.[343]

Another opportunity to reduce the cost of crowding out is to realign directed lending based on evolving considerations that include cost of disbursement and the changing needs of the economy. The evidence on the effectiveness of directed lending programmes in countries like Brazil, China, Japan, Korea, and Thailand suggests that such programmes might not always be efficient in making financing available to certain sectors because of the high costs of implementing the programmes.[344] The Raghuram Rajan report recommends that the priority sector lending obligations established by the Reserve Bank of India be streamlined to focus solely on the sectors that need access.[345] For example, the definition of "priority" sectors could be updated to reflect pressing imperatives for India in the coming decade, including, for example, risk capital for small and midsize companies.

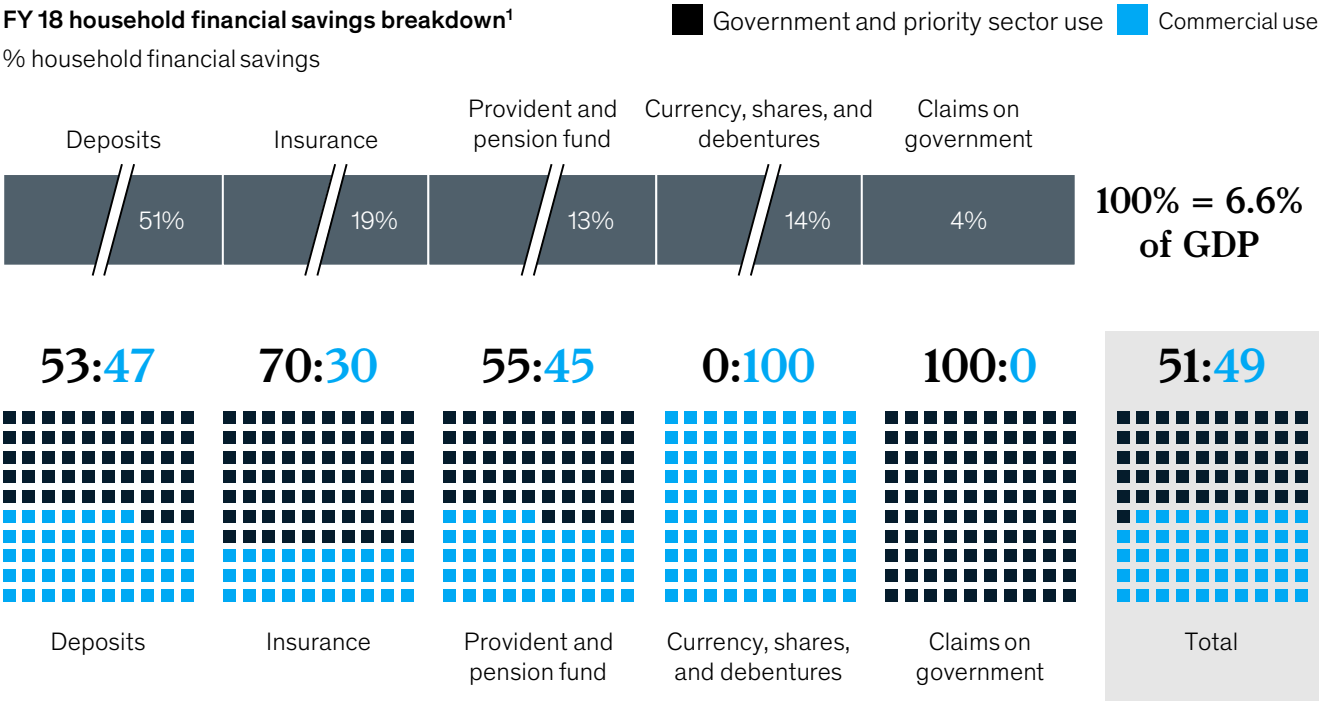
A second factor that keeps the cost of commercial credit high is the carrying cost of a large burden of NPAs in the banking system. The overall gross nonperforming assets ratio tripled from 3.1 percent of total loans in 2012 to 9.1 percent in 2019, lowering the banking sector's profitability and its ability to grant further credit.[346] The annual provisioning costs in India in 2019 were 1.2 percentage points higher than in peer economies. In the post-pandemic era, the provisioning costs will likely increase and hence, steps need to be taken to tackle the burden of NPAs systemically. A significant step forward would be the establishment of a special assets bank or asset management company to help with resolution of nonperforming loans. This is in line with the recommendations of the Sunil Mehta panel in 2018, which called for establishing an asset reconstruction company, along the lines of similar agencies operating in countries from Sweden and Norway to the United States and Spain.[347] The special assets bank could be set up as an independent legal entity with a governing committee of industry, ministry of finance, and regulatory experts, overseeing the resolution of NPAs. This entity would need funding of about 2 percent of GDP, of which less than half can be provided by the government, by diverting recapitalisation expenditure on public-sector banks. The remaining 50 percent or more could be solicited from the private sector through AIFs,

342 *Chronology of Bankrate, CRR and SLR Changes,* Reserve Bank of India.
343 Preeti Motiani, "PPF to fetch 7.1%, NSC 6.8% as govt slashes small savings schemes interest rates", *Economic Times*, April, 2020.
344 Ila Patnaik and Radhika Pandey, *Savings and capital formation in India*, National Institute of Public Finance and Policy working paper number 271, June 2019; *Re-prioritising priority sector lending in India: Impact of priority sector lending on India's commercial banks*, Nathan Associates Inc, December 2013.
345 Raghuram Rajan, *A Hundred Small Steps: Report of the committee on financial sector reforms*, Planning Commission, Government of India, SAGE Publications, 2009.
346 "Trends in Non-performing assets – Bank Group-wise", *Report on trend and progress in banking in India*, Reserve Bank of India, November 2012 and December 2019.
347 Project Sashakt: Mehta committee recommendations; Dominic Barton, et al., *Dangerous Markets: Managing in Financial Crisis*, John Wiley and Sons Ltd., 2002.

with banks also given the option to invest. Alongside this new institution, the Indian Bankruptcy Code framework and implementation would need to be streamlined. Options to be considered include providing additional personnel and financial resources; creating the digital infrastructure for e-filing of cases and supporting documents; enabling e-bidding on bankrupt assets, similar to coal mines and renewable power assets auction; setting up rule-based adjournment processes; and expanding the scope of the bankruptcy code to include personal and group insolvency. While a special assets bank could address issues due to the NPA overhang, fundamental project or entity risk would need to be addressed through reforms, for example, improving ease of doing business and cost competitiveness, as described in Chapter 4.

Exhibit 27

Crowding-out effect: Currently only about 50 percent of household financial savings are available for commercial use.



[1] Basis average FY 05–FY 16 split from Ministry of Statistics and Programme Implementation.

Source: Reserve Bank of India; National Accounts Statistics, Ministry of Statistics and Programme Implementation; Annual Report 2018–19, Insurance Regulatory and Development Authority (IRDA); IRDA (Investment) (Amendment) Regulations, 2001; McKinsey Global Institute analysis

Finally, the operating expense ratios of India's banks are also higher than in emerging economy peers, by about 1.3 percentage points. There is scope to streamline the expense base through operational efficiency from privatisation, digitisation, and automation, along with more streamlined processes. Public-sector banks have typically shown higher cost-to-income ratios than private-sector banks—54 percent compared to 46 percent in fiscal year 2019.[348] Private-sector banks have outperformed public-sector banks as a group, and the performance of public banks has further deteriorated versus private banks. Private-sector banks are about twice as profitable as public-sector banks. Public-sector banks have seen a decline in return on assets (ROA) since 2012 of more than 150 basis points, as well as a fall in the growth rate of current and savings deposits, and have needed considerable budgetary support in the form of government capital infusion over the past eight years.[349]

[348] "Earnings and Expenses of Scheduled Commercial Banks", *Statistical Tables Relating to Banks in India: 2018–19*, Reserve Bank of India, December 2019.

[349] "Trends in Non-performing assets – Bank Group-wise" and "Consolidated balance sheet of scheduled commercial banks", *Report on trend and progress in banking in India*, Reserve Bank of India, November 2012 and December 2019; CMIE ProwessIQ; *Union budgets 2012–20*, Ministry of Finance.

Privatisation and bringing market-based governance and performance management practices to all banks could be one powerful way to spur much of these interventions. The government has declared its intention to limit the presence of state-owned enterprises in strategic sectors to between one and four and to privatise all public-sector undertakings in nonstrategic sectors.[350] Implementing a privatisation agenda in banking in line with this declaration could help to reap the efficiencies of consolidation and usher in more market-based incentives for performance. One or two banks could remain state owned in order to drive the government's development agenda and undertake financial system stabilisation as needed.

Reform pillar 3: Streamlining public finance for more efficient allocation of government resources

The third reform pillar concerns government spending. As noted earlier, the government's expenditure base is not fully supported by tax and other revenues, leading to a structural shortfall that is financed through household savings. This keeps the cost of financing high for commercial borrowers.

Efforts have been made to trim the structural fiscal deficit since 2012, after the fiscal expansion following the global financial crisis. One key initiative that has consistently driven down the fiscal deficit is the implementation of Direct Benefit Transfer (DBT), which reduced the subsidy spend by about 1.5 percentage points over fiscal years 2013 to 2018.[351] However, COVID-19 will have significant implications for government finance, raising both the central and state government deficits and the level of government debt relative to GDP. India's overall fiscal deficit, accounting for central, state, and off-budget liabilities, is likely to rise to as much as 11 to 13 percent of GDP in fiscal year 2021, on account of COVID-19-related reductions in tax and other revenues and increased expenditure from stabilisation and stimulus interventions. This compares unfavourably with India's Fiscal Responsibility and Budget Management Act, which requires the overall fiscal deficit to be kept within about 6 percent.[352] Meanwhile, government debt could rise from roughly 68 percent of GDP in 2018 to more than 80 percent, by our estimates.[353]

The annual impact of higher spending and increased debt and interest expense could be as much as 2.1 percent of GDP, estimated on average over fiscal years 2021 to 2030. Some of this spending is related to COVID-19, including the cost of announced measures and short-term increases in borrowing. At the same time, liabilities including pension and defence expenses will continue rising despite the pandemic-related contraction of GDP. If avenues for savings are not identified and implemented, this could result in higher interest rates flowing through the economy over the coming decade.

The likely increase in the fiscal deficit and debt-to-GDP ratio will need to be counterbalanced by more efficient allocation of budgetary resources—and by identifying additional sources of revenue. Our analysis suggests that India has the potential to save about 3.6 percent of GDP on an annual basis, on average over the next decade. This could be redeployed as growth-oriented spending in infrastructure and sector-specific incentives and policies, among others (Exhibit 28). We also see potential, after a brief spike, to bring government debt back down to 68 percent, about the 2018 level, by 2030.

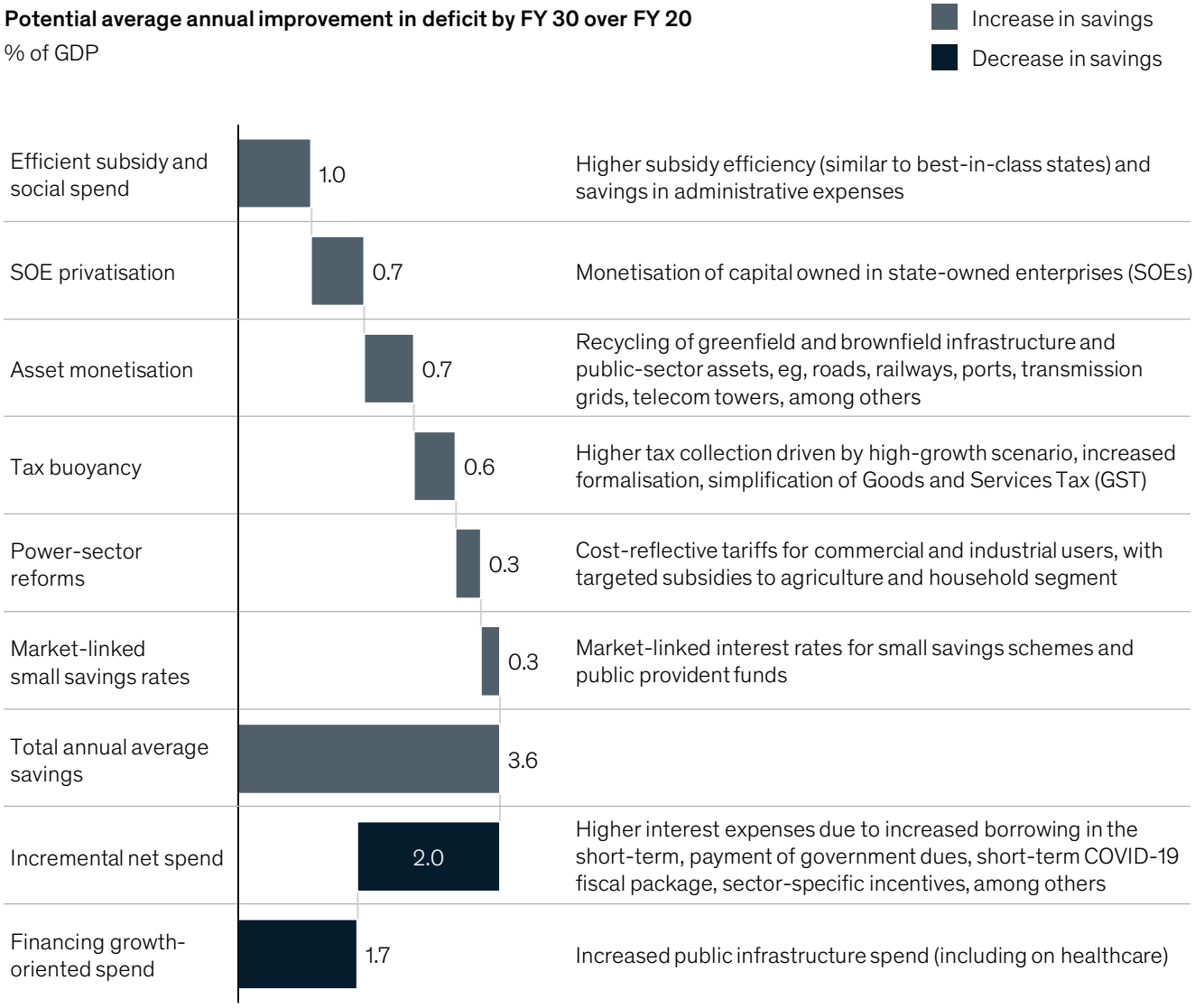
[350] "Atmanirbhar Bharat Abhiyaan", Press Information Bureau of India, May 12, 2020.
[351] *Union budgets 2013–18*, Ministry of Finance; *State finances: A study of budgets*, Reserve Bank of India, 2012–2018.
[352] *Responsible growth: A debt and fiscal framework for 21st century India*, Volume I, FRBM Review Committee, January 2017; *State finances: A study of budgets*, Reserve Bank of India, 2019–20.
[353] "Select debt indicators of the central and state governments", Reserve Bank of India, 2018–19.

Exhibit 28

With reform, India could release up to 3.6 percent of GDP on average per year, to finance additional spending, including on infrastructure.

Potential average annual improvement in deficit by FY 30 over FY 20

% of GDP



Source: Ministry of Statistics and Programme Implementation; Reserve Bank of India; Annual reports of SOEs; Union Budget documents; Ministry of Corporate Affairs database; CMIE ProwessIQ; McKinsey Infrastructure Stock & Spend Analyzer; *Performance Report of State Power Utilities 2018–19*, Power Finance Corporation Limited; *Seventh Annual Integrated Ratings of State DISCOMs,* Power Finance Corporation Limited; *Annual Survey of Industries 2017–18 and 2016–17,* Ministry of Statistics and Programme Implementation; World Bank; Income Tax Return Statistics Assessment Year 2018-19; *India's path from poverty to empowerment,* McKinsey Global Institute, 2014; McKinsey Global Institute analysis

Potential policy measures that could be considered to bring this about include the following:

1. **Increasing subsidy and social services expenditure efficiency.** The switch to a system of full-fledged direct benefit transfers could play a significant role in reducing leakages and improving the efficiency of public spending, as the experience with food subsidy has shown. This could yield average annual savings of about 1 percent of GDP. In addition, a 10 to 15 percent saving in administrative expense is possible, as DBT reduces the need for on-the-ground government machinery and thus personnel costs.[354] To enable this, a few measures can be considered. They include implementing full-fledged DBT for food, fuel, and fertilizer; for example, farmers rather than fertilizer firms being paid the subsidy directly. Revamping the public distribution system could also help. This could take the form of computerised allocation of food grains at fair-price shops, the use of GPS technologies and SMS monitoring of dispatch and arrival of grains, adopting outcome-based incentives for teachers as part of education spending, and improving access to remote healthcare, among others.

2. **Monetising government-owned assets.** Public capital and assets could be sold down and the proceeds used to finance growth-oriented spending, to the tune of incremental 4.6 trillion rupees ($65 billion) or 1.4 percent of GDP on an annualised average basis over the next decade. This comprises two components. First, 40 trillion rupees ($540 billion) over ten years, or an incremental 0.7 percent of GDP, on an annual average basis over the next decade, compared to fiscal year 2020, could come from privatising approximately three-fourths of all central and state government SOEs. As noted in chapter 4, just 2 percent of these 1,600 SOEs could yield up to 80 percent of potential sales proceeds, assuming benchmark levels of valuation.

   A second, and related, opportunity is to realise the value of public assets without privatising whole entities. India's government could sell down operational assets it has built, including greenfield and brownfield infrastructure, such as telecom towers, power transmission lines, transport infrastructure like roads, railways, airports, stations, ports, and land, to pension funds and other long-term investors or infrastructure operating companies. The proceeds of such sales, 27 trillion rupees ($387 billion), or an incremental 0.7 percent of GDP on an annual average basis over the next decade, by our estimates, could be recycled—that is, reinvested in infrastructure.

3. **Simplifying and rationalising taxes, improving compliance to achieve tax buoyancy.** We estimate that India could save about 0.6 percent of GDP through tax buoyancy resulting from the GDP growth of 8.0 to 8.5 percent. This highlights the virtuous cycle that can be created as faster growth bolsters corporate profitability, employment, wages, consumption, and formalisation. In addition, indirect taxes could be rationalised to enable buoyancy in demand. For example, India's effective tax rate on vehicles is 40 percent in 2020, considerably higher than in China (27 percent) and Malaysia (12 percent). China has periodically reduced sales taxes to boost consumption, for example in 2009 and 2015, when it cut sales tax from 10 percent to 5 percent for cars with an engine size smaller than 1.6 litres. This resulted in much higher vehicle penetration, an increase from 11 to 145 cars (4-wheelers) per 1,000 people over the period 2005 to 2018. By comparison, in India, vehicle penetration has risen to just 28 cars per 1,000 people from about 10 in 2005.[355] Similarly simplifying the tax structure, notably GST in segments in which sales volumes can significantly increase due to reduction in tax, could help public finances improve through growth alone.[356] Continued measures to improve formalisation and tax compliance can also lead to tax buoyancy.

[354] *Jobs lost, Jobs gained: Workforce transitions in a time of automation*, McKinsey Global Institute, December 2017.
[355] IHS Markit, Vehicle population (Parc) database, October 2019; Mark Bake and Markus Hyvonen, *The emergence of the Chinese automobile sector,* Reserve Bank of Australia, March 2011; Shuli Ren, "China cut auto tax to boost sales: Can the same trick work twice?", *Barron's,* October 5, 2015.
[356] Rakesh Mohan, *Moving India to a new growth trajectory:* Need for a comprehensive big push, Brookings, June 2019; Ila Patnaik, "Cutting income tax is not the fix India needs. It's slashing GST rates", *Print,* December 2019.

4. **Power-sector reforms.** As discussed in chapter 4, state power distribution companies (DISCOMs) have faced significant losses over the past few years, amounting to 1.8 trillion rupees (about $26 billion) over fiscal years 2016 to 2019. DISCOMs have also seen mounting debt and dues to generation companies, at about 4.78 trillion rupees ($68 billion) and 600 billion rupees ($8 billion), respectively, as of fiscal year 2019.[357] Consequently, state governments have been recapitalising these companies over years. Improving operational efficiency of DISCOMs by leveraging measures suggested in chapter 4 and providing targeted subsidies can save 0.3 percent of GDP on average, annually, based on our estimates.

5. **Market-linking small savings scheme.** As mentioned in the discussion of the second reform pillar, the government offered artificially high interest rates—about 8 percent, post-tax on several small savings scheme instruments like pension funds and post office savings schemes, among others, compared to bank term deposit interest rates of about 7.5 percent, pretax. The government has already announced a steep reduction of 0.7 to 1.4 percentage points in interest rates, which could have a substantial impact on government coffers. We estimate savings of up to 0.3 percent of GDP on average annually.[358]

   In total, these policy measures to save public finances or raise additional revenue could add up to about 3.6 percent of GDP on average annually over the next decade. Net of the anticipated higher spending needs of about 2 percent of GDP per year, it would imply that India's government has the potential to save, on a net basis, about 1.7 percent of GDP on average each year, or approximately 5.7 trillion rupees (about $80 billion) per year. This represents a sizable opportunity to transform the infrastructure landscape of India, spanning both hard infrastructure, like road and rail, and soft infrastructure, like healthcare and education, and to greatly further the goal of boosting economy-wide productivity.

Finance is the lifeblood of the economy, and India's high-growth, high-productivity agenda over the coming decade will need a big surge in investment to become reality. India's challenge will be to unlock fresh sources of finance. It is indeed possible through concerted efforts to end the crowding out of household savings, by improved credit intermediation and through astute reforms to make government spending more efficient. Many of the ideas in this chapter have been floating around for some time, written about in government reports, and discussed at length in knowledgeable circles. The time for talk is over. Faced with the imperative of high growth, India can move to action. In the final chapter, we discuss the roles and responsibilities of the central and state governments and of business leaders in spearheading and implementing a powerful high-growth reform drive.

[357] *Report on performance of state power utilities 2018–19,* Power Finance Corporation, 2020; *Payment ratification and analysis in power procurement for bringing transparency in invoicing of generators* (PRAAPTI) portal, Ministry of Power.

[358] Preeti Motiani, "PPF to fetch 7.1%, NSC 6.8% as govt slashes small savings schemes interest rates", *Economic Times,* April, 2020.

6. Committing to a new high-growth era

India has shown in the past that it can embrace reform and put the country onto a high-growth track. Today it must do so again, in admittedly complicated circumstances, at a time when COVID-19 has sapped the global economy as well as India's. Yet, as we have outlined in this report, India's demographics require a hat-trick return over the next decade to high GDP growth, high productivity growth, and high employment growth. We have laid out a number of ideas for achieving that goal. Whatever paths are chosen, it will be essential for the country to take them quickly—and stay on them with energy and determination in the years ahead. In this chapter, we focus on the key roles of the three principal actors who can construct and navigate these paths together: India's central government, its state governments, and the business community. They will need to collaborate to ensure a sound near-term recovery from the COVID-19 crisis and, at the same time, commit to the long-term growth that is needed to create at least 90 million jobs over the next decade.

The central government will need to commit to a high-growth reform agenda and deploy effective means to implement it

A central government commitment to the reform agenda is an essential starting point for ushering in a new high-growth era. The good news is that several of the reforms outlined have been announced by the central government, establishing an intent to move forward. Also, India's government has demonstrated that it can successfully execute ambitious national initiatives, provided there is strong conviction around the vision and goal. Examples include the mass financial inclusion programme, Jan-Dhan Yojana, that succeeded in doubling the share of Indian adults with at least one bank account since 2011, to 80 percent in 2017. Similarly, Swachh Bharat, the 2014–19 campaign to eliminate open defecation and improve solid waste management in urban and rural areas, succeeded in increasing access to basic sanitation to almost 100 percent of the population.[359] The first step, therefore, is for government leaders to build on existing commitments and establish an agenda of broad economic reforms over the next 24 months that can get India back to the trajectory of 8.0 to 8.5 percent economic growth.

Having committed to a reform agenda to achieve the target, the government will need to execute it. This report outlines six reform themes in chapter 4 and three pillars for financing growth in chapter 5. The first step is to align on key priorities at an early stage and establish target outcomes. The next step is to detail the policies and changes required in a rapid but focused three- to six-month process. Next, the vision has to be cascaded to all tiers of government, starting with the states, along with a range of incentives, both financial and nonfinancial. Performance management tools will be needed to monitor progress, identify bottlenecks, and find ways to work through them. A "war room" approach can be adopted, also involving private-sector participation where relevant, so that industry feedback can be provided to help tackle bottlenecks in policy and public-private initiatives.

[359] As of July 2019. Swachh Bharat Mission dashboard; Asli Demirgüç-Kunt et al., *The Global Findex Database 2017: Measuring financial inclusion and the fintech revolution,* World Bank, April 2018.

Finally, and critically, an institutional framework needs to be created to make these efforts endure beyond the initial moment. Such an institutional role could encompass policy making, prioritisation and sequencing, resource allocation between important national and state priorities, and mechanisms to coordinate between the central government and the states and between the private and public sectors. This institutional architecture would help ensure that the reform journey progresses over multiple years, across successive government regimes, with constantly evolving priorities. Policies agreed upon could thus be kept stable and predictable, with major changes only after broad consultation.[360] A related measure is to improve the technical and domain-specific expertise available with policy makers. In the immediate term, the solution might lie in structures like task forces with experts from outside government, including academia, civil society, and the business sector. However, steps could also be taken to augment the technical and domain-specific skills of policy makers within the government itself, adopt nontraditional hiring and career paths within government, and promote more specialisation amongst the ranks of the bureaucracy.[361]

International examples show how countries have gone through this journey successfully. Singapore's iN2015, operational from 2006 to 2015, had the vision to create an "intelligent nation" focused on developing IT infrastructure, a strong local information and communication industry, and a workforce with requisite skills. Target outcomes included 90 percent home broadband usage, doubling the value added of the industry, and tripling information communications export revenue.[362] The proportion of households with internet access increased to 81 per cent in 2009, up from the 66 percent in 2005.[363] The proportion of households having broadband access has also increased to 80 per cent in 2009 from 54 percent in 2005. Some other countries with decentralised political systems have successfully implemented programmes across various government tiers.

In Canada, for example, after the government made a national commitment to reduce greenhouse gas emissions along the lines in the Copenhagen accord, each Canadian province followed up by setting individual targets backed by their own climate action plans.[364]

South Korea set an example of effective war room strategy in the 1960s, with export promotion meetings that brought together government agencies and private-sector participants to drive key growth projects. The objective was to propel export-driven industrial growth, and the government established a policy of export incentives and targets. The country's president chaired the meetings, and ministers and civil servants from key ministries attended alongside business representatives. These regular monthly meetings monitored export performance and compared it to export targets, identifying obstacles and looking for solutions. The Korea Trade Promotion Agency was given charge of building overseas networks, helping the marketing activities of domestic firms, and collecting market information. In turn, exports as a proportion of GDP rose from 5 percent in 1963 to 28 percent in 1973.[365]

The United Kingdom Prime Minister's Delivery Unit, operational from 2001 to 2010, helped strengthen and monitor progress on the government's delivery of key priorities. Sir Michael Barber, an educational consultant from the private sector, was chosen as the first head of the Unit, for the tenure 2001 to 2005. The panel acted like a task force, coordinating with relevant government departments to design concrete interventions across priorities, drive delivery through execution engines to achieve target outcomes, assess and report performance across the priorities, and provide support in clearing bottlenecks from key delivery challenges.[366]

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360 Devesh Kapur, "Why does the Indian state both fail and succeed?" *Journal of Economic Perspectives,* Winter 2020, Volume 34, Number 1.

361 Devesh Kapur, "Why does the Indian state both fail and succeed?", *Journal of Economic Perspectives,* Winter 2020, Volume 34, Number 1; Ramachandra Guha, "The real meaning of second generation reforms—ideas of public service", *Telegraph,* July 11, 2015.

362 *Singapore iN2015 masterplan offers a digital future for everyone,* Infocomm Media Development Authority, Government of Singapore, 2006.

363 *Realising the iN2015 vision,* Official website of Singapore government technology agency, January 2015.

364 *Canada's emission trends,* Environment and Climate Change Canada, Government of Canada, July 2011.

365 *Note on export promotion in trade policy,* K-Developedia.

366 *GET note: Center of government delivery units 'Recently Asked Questions' series,* World Bank, November, 2010.

In India's case, we highlight the following three broad approaches to near-term execution (Exhibit 29):

— **Central-government-led reforms.** Policies that can be implemented through framing a new policy or enacting a new law by the central government, can be executed in a rapid, time-bound manner through a set of focused committees, each headed by an eminent expert. The committee would gather inputs and frame draft laws and policies, as well as the target outcomes and plans required to meet national objectives. Experts from various institutions would participate in these committees to provide research-backed guidance, and private-sector leaders would enable extensive business engagement.

— **Central-government-supported, state-led reforms.** Policies that need to be implemented by the states may require a set of model laws, policies, and incentives from the central government to spur action. Some of the incentives will flow directly from achieving the policy goal, such as a reduction in the cost of power through power-sector reforms, along with support from the central government for direct benefit transfers, for example. Other incentives could be indirect, such as giving states the ability to raise their borrowing limit if they implement the reform agenda and meet specific priorities, something the government has suggested as part of the COVID-19 stimulus package.

— **State-led reforms.** Elements of the reform agenda that require the state government to act as an implementer will need a different approach. Examples include investing in building a manufacturing exports cluster, and bidding out specific parcels of government land for affordable housing projects. In such cases, state government could put in place a mission or SPV, led by a CEO-style technocrat, empowered to make cross-ministerial and cross-functional decisions. We explore details of this approach in the section below on state governments.

The execution of the entire reform agenda can be monitored through an institution under the chairmanship of the prime minister, supported by data dashboards and analysis. The model that India has adopted to monitor major infrastructure and state-level projects, the PRAGATI programme, is one potential approach. It looks at projects flagged by state government or marked for review by developers, and also examines grievances raised by the public.[367] The prime minister chairs these meetings, and state and national civil servants attend. Data on project performance is provided by a project monitoring group as well as the Ministry of Statistics and Programme Implementation, which can play a regular role in gathering data and feeding the insights back into programme and policy design. PRAGATI has seen some success in clearing bottlenecks from infrastructure projects, and similar principles could be used to monitor and expedite across all suggested reforms.[368] As mentioned earlier, institutionalising these mechanisms within a permanent body led by the prime minister would help them endure. The Government of India has instituted the Development Monitoring and Evaluation Office (DMEO), as a part of NITI Aayog, to actively monitor and evaluate the implementation of government initiatives. This organization or a similar High-Level Group led by the Prime Minister could be strengthened to enable the execution.

An illustration of how the reform agenda can be executed is detailed further below (see Box 6, "Executing the reform agenda: An illustration").

[367] "PM Narendra Modi launches PRAGATI platform for redressal of grievances", *Economic Times,* March 2015.
[368] "PM launches PRAGATI: A multi-purpose, multimodal platform for pro-active governance and timely implementation", Indian Prime Minister's Office, March 2015.

Exhibit 29

About 60 percent of the reform agenda requires action at the state level, and more than half can be implemented through a policy or law.

Real sector reforms - government as policy maker | Real sector reforms – government as implementer | Financial system reforms – government/regulator as policy maker

Central-government-led reforms 40%	Central-government-supported, state-led reforms 40%	State-led reforms 20%
Sector-specific pro-growth policies		
Manufacturing		
• Stable and declining tariff regimes, removal of inverted duty structures • Time-bound and conditional incentives to electronics, automotive/EVs[1], chemicals and pharmaceuticals		• Port-proximate clusters: expedite Sagarmala
Real estate		
• Increase in tax incentives for home ownership	• Large-scale affordable housing projects; rationalisation of stamp duty/registration fee • Regulatory amendments to enable greater supply in rental housing market • Introduction of single-window clearance for all large affordable housing projects	
Agriculture and food processing		
• Reform of minimum support prices	• Implementation of APMC[2] reforms announced • Implementation of ECA[3] reforms announced • Tax reforms and incentives for processed food • Extension of Mega Food Park to large integrated food processing facilities and viability gap funding	
Retail trade		
• Level playing field, eg, model/product agnostic FDI policy		
Healthcare	• Enabling new healthcare human resources models • Simplification of processes for medical tourists	• Investment in primary healthcare system: balance payer and provider roles
Unlocking supply in land markets		
• Mapping and releasing underutilised public land for development		• Mapping and releasing underutilised public land for development • Increasing FSI[4] in city master plans • Expediting land records digitisation • Easing land acquisition by land pooling, etc
Flexible labour markets		
	• Reduction in labour compliances, flexible policies • Removal of migration barriers	
Efficient power distribution		
	• Model DISCOMs in top 100 cities, franchised and privatized models; cost-reflective tariffs • Increase in renewables' share in electricity mix	
Privatization and asset sales		
• Increase in SOE productivity through privatisation and asset sales	• Privatisation of state DISCOMs	
Improving ease and reducing cost of doing business (EODB and CODB)		
• E-governance, direct benefit transfer		• E-governance, direct benefit transfer
Financial system reforms		
• Deepen capital markets[5] • Reduce cost of credit intermediation[5] • Streamline public finances[5]	• Streamline public finances[5]	

1 Electric vehicles.
2 Agricultural Produce Marketing Committee.
3 Essential Commodities Act.
4 Floor-space-index.
5 Reforms include incentives and levelling the playing field, rationalising product market barriers, enabling new instruments and channels, rationalising reserve, priority sector requirements, establishing special assets bank, increasing subsidy efficiency, privatisation, asset sales, power sector reforms, market-linking small savings.

Source: McKinsey Global Institute analysis

Box 6

Executing the reform agenda: An illustration

In the spirit of a thought experiment, here we lay out a potential reform and implementation architecture for India to move towards while achieving its high-growth vision.

For a reform agenda to endure across multiple years, and even multiple government regimes, it would ideally be designed by domain experts, and accepted within the framework of government institutions. One approach could be to nominate an existing body chaired by the Prime Minister, like NITI Aayog, or a High-Level Group within the Prime Minister's Office, to steward the reform process, as part of its official mandate. For effective execution of reforms, the Development Monitoring and Evaluation Office (DMEO), instituted by the government as part of NITI Aayog, could be empowered to actively monitor and evaluate implementation of reforms, or this role could be similarly played by a High-Level Group within the Prime Minister's Office. Either body may need to be strengthened with appropriate resource allocation powers and technical and domain expertise to enable effective execution. Such a stewarding body has two prerequisites if it is to work effectively: the right level of empowerment, including for resource allocation; and the right level of talent and technical- and domain-specific expertise, created on a permanent basis within the organisation, including through external, nontraditional senior-level appointments.

Keeping the urgency of reforms in mind, it is important to get started and ensure momentum over the next 12 months. For this, in addition to NITI Aayog or the High-Level Group, a set of committees could be established to frame the right policies in a time-bound manner. Each committee may be headed by an eminent thought leader with relevant technical and domain expertise, such as an academic, a former civil servant with relevant experience, or a respected private-sector leader with a public-service orientation. Other experts from the business sector, academia, think tanks, or industry bodies could be invited to serve on each committee. These committees would have a charter of two years and an explicit time-bound mandate to create a strategic vision for the nation with an executable plan, milestones, and outcomes clearly outlined within a defined three- to six-month time frame. The policies proposed by the committees would be subject to broad external consultation and revision, to make the process transparent. Recommendations of each committee would be vetted by the stewarding body mentioned earlier, and then presented to the Union Cabinet for approval, action, and legislation, where required.

As an illustration, five such committees could be set up, with subgroups within each. For example,

1. **Manufacturing Policy and Reform Committee,** to frame an overall national policy for manufacturing, with subgroups for specific subsectors including, for example, electronics, high tech, and capital goods; chemicals; auto and auto components (including EVs); and pharmaceuticals.
2. **Financial Sector Reform Committee,** to frame the next generation of financial system reforms, with subgroups for specific areas, including banking reforms and capital market reforms.
3. **Public Finance Reform Committee,** including subgroups in areas such as public expenditure reform, privatisation, and asset monetisation.
4. **Central Government–State Sectoral Policy and Reform Committees** for sectors on the concurrent/state list (power, agriculture, affordable housing), where the central government could frame policies as well as an incentives and penalties framework, which the states could take forward. Subgroups could include agricultural trade and food processing, power distribution, real estate and affordable housing, and urban infrastructure.
5. **Central Government–State Reform Committees** in other cross-cutting areas such as land supply and land markets, labour market flexibility and safety nets (including migrants), and ease and cost of doing business (including e-governance for businesses).

For some of these committees, the policies and incentives framed at the central level could be driven at the state level. A similar architecture might be set up at the state level for relevant areas, for example, attracting investment in several of the sectors like electronics, auto, or chemicals; implementation of state power-sector reforms; and affordable housing projects in key cities. In each of these areas, the state-level committee, under the chairmanship of the Chief Minister of various states, could set its own strategic vision, priorities, and outcomes, and move into monitoring execution. A "war-room" approach could be used at the state level as well, with the implementation progress monitored by the Chief Minister in a monthly meeting, for example, PRAGATI at state level.

Several initiatives may require on-the-ground implementation by state governments acting as principals, rather than just policy setters. In a two-year time frame, each state could aim to set up seven "demonstration clusters", or successful models of the state driving implementation, often co-investing resources to attract private-sector investment. For this, CEO-led special purpose vehicles may be set up by each state government. Examples of seven such SPVs that each state may consider are:

— One manufacturing demonstration cluster

— One agricultural-processing demonstration cluster

— A land supply unlock mission and a set of affordable housing projects in two to three major cities

— A state power distribution restructuring mission

— A multi-modal logistics infrastructure mission

— An "e-governance for business" mission

— A tourism mission

In the implementation phase of reforms, the government-instituted DMEO (which is a part of NITI Aayog), or a High Level Group under the Prime Minister could monitor progress, and solve implementation problems and bottlenecks. This group would meet with data and dashboards on a monthly basis to review outcomes and deliverables, steer both central government–state coordination and public-sector–private-sector coordination as needed, and resolve implementation issues. The monthly review process could include members of the committee that framed the policies to ensure some continuity and accountability.

State governments can drive about 60 percent of the reforms, creating powerful demonstration effects by executing against select opportunities

We estimate that about 60 percent of the reforms outlined in this report would require state government action. Like the central government, states will also need to set a vision and action plan that focuses on pro-growth priorities. At a high level, the states' involvement will be three-fold: first, each state will need to commit to a target of high GDP growth of, say, more than 8 percent, high productivity growth, and corresponding job creation. Second, each state will need to select from among the 43 frontier business opportunities the ones that are most pertinent. The third thrust will concern execution. Here we see considerable scope for three execution engines: CEO-led missions to guide and assist with implementation, an expert-led committee with both inter-ministerial and private-sector participation which will be necessary for initiatives that require new laws or policies, as well as Chief Minister-led war rooms for monitoring."

The choice of which frontier business opportunities to adopt as growth engines for the future will vary by state. It will depend on a range of factors including local endowments, such as agricultural resources, the presence of sufficient educated professionals, and port-proximate land. States will likely pick those that build on existing strengths. But the choice will also depend on how much ground each state has to make up and the urgency of bridging the gap, for example, in the case of states with high logistics costs, or where the quality of urban infrastructure is poor. Based on these considerations, a set of ten to 15 business models could be picked as high-priority opportunities. In addition to these state-specific opportunities, most states could also pursue a common agenda of frontier business opportunities, for example, e-governance of the future, high-efficiency power distribution models, building productive and resilient cities, climate change mitigation, and adaptation models.

As an illustration of the possible choices, we use the states of Maharashtra, Uttar Pradesh, and Odisha to demonstrate a number of frontier business opportunities that could be adopted and the districts that could champion them (Exhibit 30). We explore them in greater detail for Maharashtra (see Box 7, "Maharashtra's illustrative agenda to capture frontier businesses opportunities").

Like the central government, states will also need to set a vision and action plan that focuses on pro-growth priorities.

Box 7

Maharashtra's illustrative agenda to capture frontier businesses opportunities

Economic growth takes place through grassroots actions, and India's 730 districts form the microcosms within which state government policy is translated into action. To illustrate how a state government can identify its potential opportunities, we look at the state of Maharashtra as an example, with the districts within it as the planning and execution zones.

In Maharashtra, the Mumbai–Thane–Raigad districts currently account for 5 percent of India's GDP and 13 percent of financial services GDP. They form a highly productive group of districts, with about three times India's average productivity. Even so, the potential to raise productivity remains high; other large cities in the world such as New York and Shanghai are 24 and three times more productive than Mumbai, respectively. To raise productivity and growth further, the three districts could, for example, become potential global manufacturing hubs, particularly in electronics, chemicals, and textiles. Thane already has large warehousing hubs for e-commerce players like Amazon, Flipkart, IKEA, and others, and it could build on that strength to establish itself as a world-class logistics and warehousing hub. Affordable housing and urban infrastructure planning can also make Mumbai a significantly more productive city. Mumbai could likewise continue to build on its trajectory as a financial centre to become a next-generation financial services hub by deepening capital markets; the area already accounts for 70 percent of India's capital transactions. It should be noted that alignment on opportunities between the central and state governments would greatly improve their chances of success; for instance, Mumbai's potential aspiration to become a financial hub would be aided by supportive financial system regulations and policies from the relevant central government ministry.

Pune could also become a global manufacturing hub, in addition to becoming an IT services hub. Manufacturing in Pune contributes to 15 percent of state sectoral GDP and attracts about 20 percent of industrial investment in the country. Automobile and durable goods manufacturing are most prominent here. The city's proximity to Mumbai and its strength in research and development—Pune has nine universities and multiple educational institutions—have already attracted domestic and foreign investment. Pune is the third-largest contributor to India's IT exports and a prominent engineering and R&D hub, with more than 3,200 active startups.

Among other cities in Maharashtra, Nagpur could champion world-class efficient logistics models and manufacturing, particularly electronics and aeronautics. Solapur could become a manufacturing hub; it is already a centre for textiles and apparel, the home of the handloom and power-loom weaving industry, but it could also develop food products and beverages. Nashik could champion high-value tourist circuits and hubs, while Sindhudurg can become a new coastal tourist hub and Ratnagiri can champion high-value agricultural ecosystems and corresponding agriculture-based manufacturing. Finally, Ahmednagar and Jalgaon could also champion high-value agricultural ecosystems. Ahmednagar is the biggest district of Maharashtra by area and population, and 26 percent of its cultivatable land is under canal and well irrigation. Major cultivated crops include cereals such as pearl millet, wheat, and sorghum as well as sugarcane, cotton, soybeans, red gram, bengalgram, and onions. In Jalgaon, land utilisation is currently 90 percent, with cotton and bananas the major crops. Maize and soybean are emerging crops, as are cotton and bananas.[1]

In addition to these district-specific opportunities, Maharashtra can also pursue other common frontier business opportunities across the state, for example affordable housing, large-scale power distribution reforms, adopting India's best and efficient e-governance models for subsidies, and improving the ease of doing business.

[1] National Accounts Statistics, Ministry of Statistics and Programme Implementation; National Sample Survey 1999–2000 (55th round); National Sample Survey 2004–2005 (61st round); National Sample Survey 2011–2012 (68th round); Periodic Labour Force Survey 2017–18; ILOSTAT; US Bureau of Economic Analysis; US Bureau of Labor Statistics; US Census Bureau; CEIC China Economic Database; World population review; IndexMundi; "From Pune to Chennai: These are India's best manufacturing hubs", CNBC TV18, May 20 2020; *Brief industrial profile of Solapur district,* Ministry of Micro, Small and Medium Enterprises; *Ahmednagar district profile,* Krishi Vigyan Kendra–Pravara; *Jalgaon district overview,* Department of Agriculture; *Industrial development*, District of Nagpur, Government of Maharashtra; Sagarmala, Ministry of shipping.

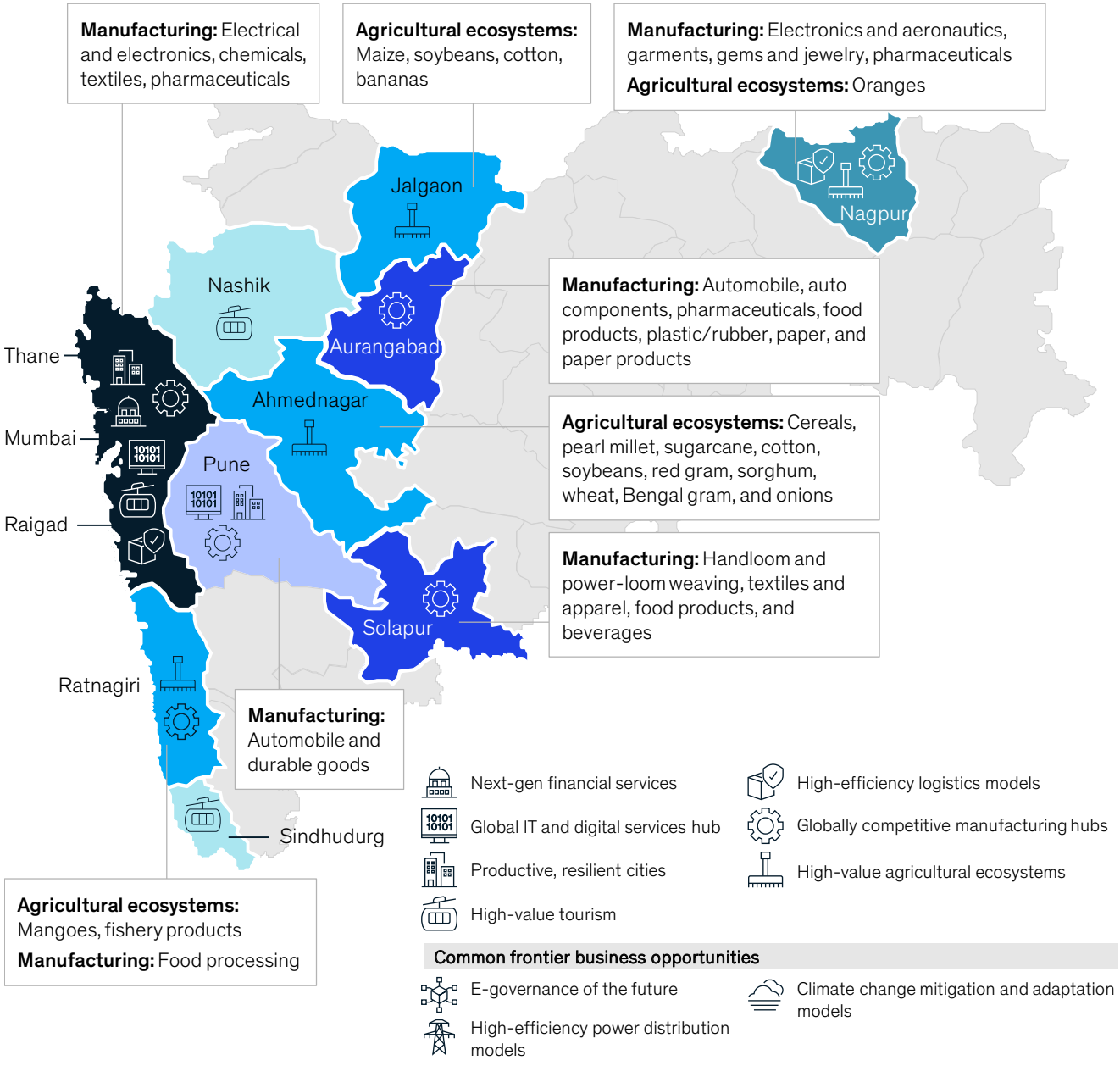
Exhibit 30A

Maharashtra: The choice of frontier business opportunities varies by state.

Illustrative only

FY 19

402B	3,325	121M	50%
Total GDP, $	GDP per capita, $	Population	Urbanisation



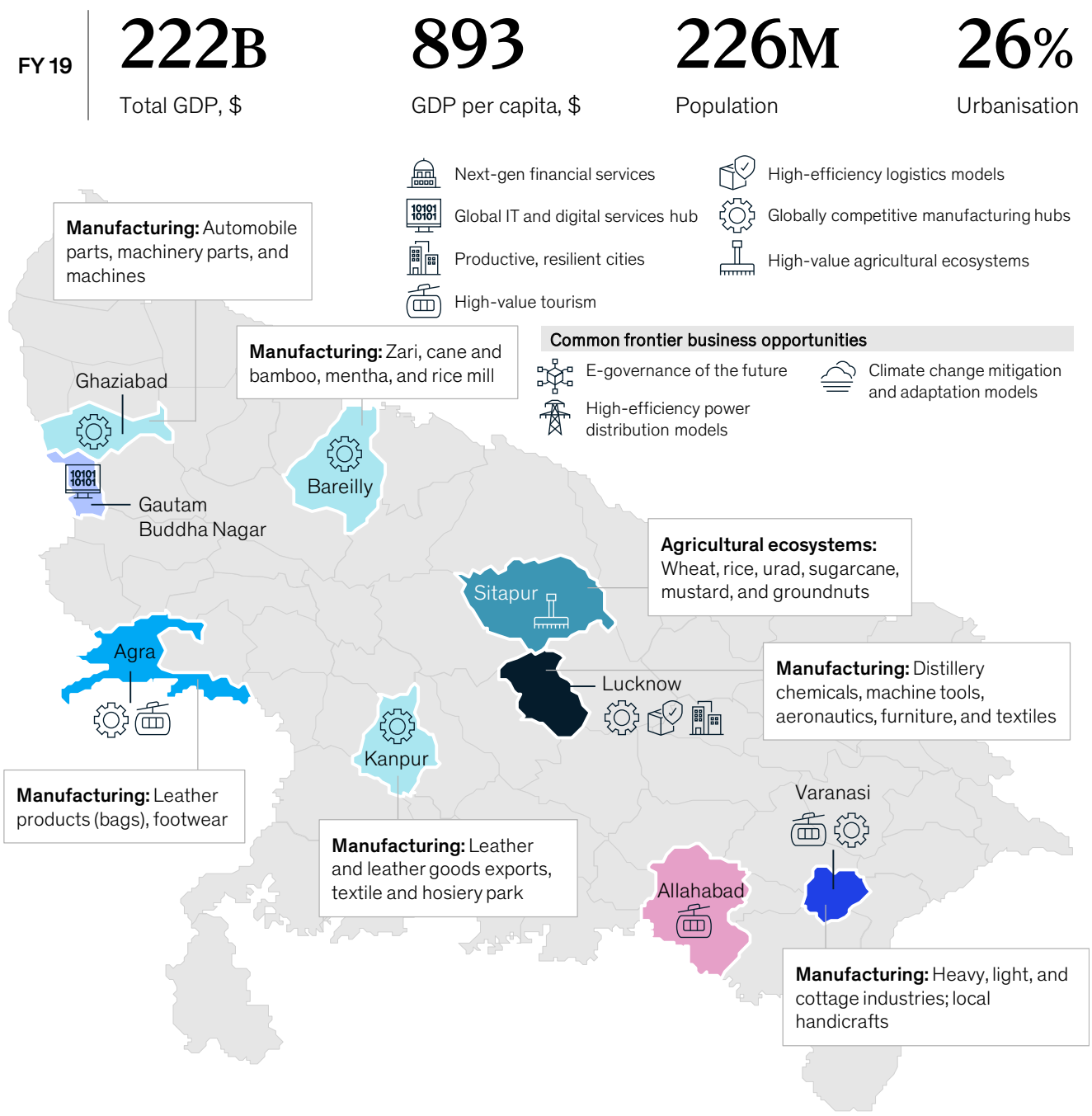
Note: The exact type and location of opportunities needs further study.

Source: National Accounts Statistics, Ministry of Statistics and Programme Implementation; National Sample Survey 2011–12 (68th round); Periodic Labour Force Survey 2017–18; ILOSTAT; *Brief industrial profile of Solapur district*, Development Commissioner, Ministry of Micro, Small and Medium Enterprises; Ahmednagar district profile, Krishi Vigyan Kendra, Pravara; Jalgaon district overview, Department of Agriculture, Government of Maharashtra; *Brief industrial profile of Ratnagiri district*, Development Commissioner, Ministry of Micro, Small and Medium Enterprises; *Brief industrial profile of Aurangabad district*, Development Commissioner, Ministry of Micro, Small and Medium Enterprises; *Industrial development*, district of Nagpur, Government of Maharashtra; Sagarmala, Ministry of Shipping; McKinsey Global Institute analysis

Exhibit 30B

Uttar Pradesh: The choice of frontier business opportunities varies by state.

Illustrative only



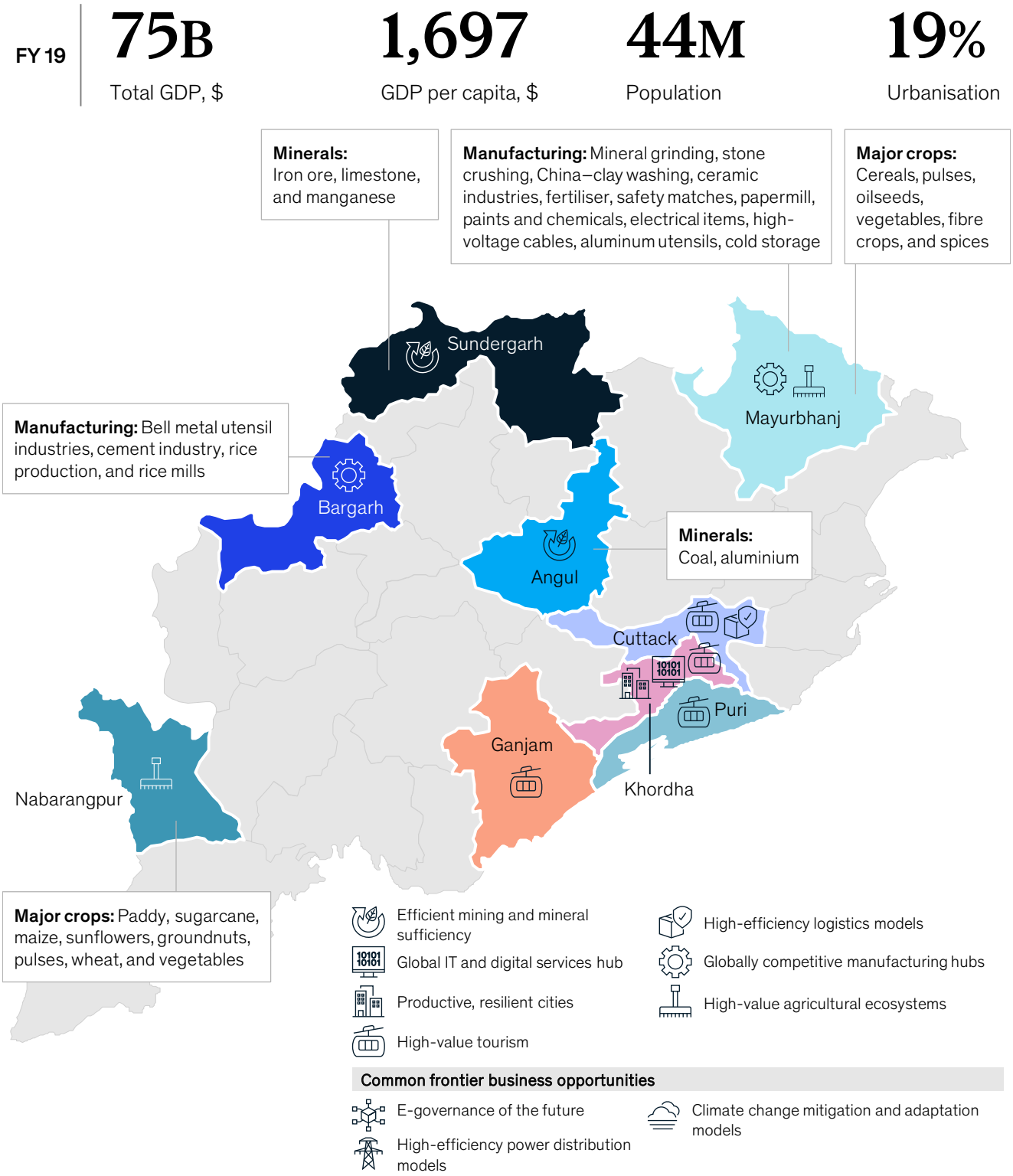
Note: The exact type and location of opportunities needs further study.

Source: National Accounts Statistics, Ministry of Statistics and Programme Implementation; National Sample Survey 2011–12 (68th round); Periodic Labour Force Survey 2017–18; ILOSTAT; *Brief industrial profile of Agra district*, Development Commissioner, Ministry of Micro, Small and Medium Enterprises; *One district One product summit*, PHD Chamber of Commerce and Industry, August 2018; *State profile of Uttar Pradesh,* Government of India Ministry of Micro, Small and Medium Enterprises, 2015–16; Varanasi district, Government of India; *Brief industrial profile of Bareilly district,* Development Commissioner, Ministry of Micro, Small and Medium Enterprises; Sitapur district, Government of India; *Investing in Lucknow – A leading tier II city in India*, India briefing, 2016; McKinsey Global Institute analysis

Exhibit 30C

Odisha: The choice of frontier business opportunities varies by state.

Illustrative only



Note: The exact type and location of opportunities needs further study.

Source: National Accounts Statistics, Ministry of Statistics and Programme Implementation; National Sample Survey 2011–12 (68th round); Periodic Labour Force Survey 2017–18; ILOSTAT; Angul district, Government of India; Bargarh district, Government of India; *Brief industrial profile of Bargarh district*, Ministry of Micro, Small and Medium Enterprises Development Institute; Mayurbhanj district, Government of India; Nabarangapur district, Government of India; *Indian Minerals Yearbook 2018, Volume I*, Indian Bureau of Mines; McKinsey Global Institute analysis

CEO-led missions can be appropriate and effective tools for state governments to implement complex projects, such as developing manufacturing clusters and agricultural hubs, privatising power, and constructing affordable housing. The objective of such missions is to define policy execution strategy and coordinate with state and local governments to ensure smooth implementation. The missions are characterised by several design principles, starting with empowered leadership; the head of the mission could be a technocrat, with a cabinet minister rank and reporting directly to the chief minister at the state level or prime minister at the national level. This is needed to ensure effective delivery of priorities, especially when working across ministries and state governments. In general, the missions involve strong partnerships between the public and private sectors to tap the appropriate expertise, and they also have broad public outreach, as public acceptance can help expedite delivery.

Examples of CEO-led missions in India include the UIDAI (Aadhaar) project headed by Nandan Nilekani, former CEO of Infosys, which brought in both veteran government officials and private-sector experts to work through details, and used a hub-and-spoke model to deal with multiple partners in states and central government. The Swachh Bharat mission, headed by Parameswaran Iyer, a long-time government official and World Bank expert on water and sanitation, enlisted technical experts and worked with private agencies to monitor implementation. It also ran numerous workshops for state governments and used well-known personalities including Amitabh Bachchan and Virat Kohli for its public outreach, to help drive the changes in behaviour that were essential for the mission's success. Best practices elsewhere include the AI Singapore programme, headed by a prominent behavioural scientist and provost at the National University of Singapore, Ho Teck Hua. Charged with leading the country's AI strategy, the mission worked effectively across government agencies and other initiatives and with tech and other private companies.[369]

Each state will need to decide where CEO-led missions could be an appropriate path forward. Taking manufacturing hubs as an example, states could create powerful demonstration effects by making several projects work at scale in select areas. For example, a state could select a port-proximate cluster to develop and then invite large companies and MSME supply chains to set up factories and offices there, providing land, plug-and-play infrastructure, common utilities like effluent treatment plants, skill development centres, and low-cost input factors like power tariffs.

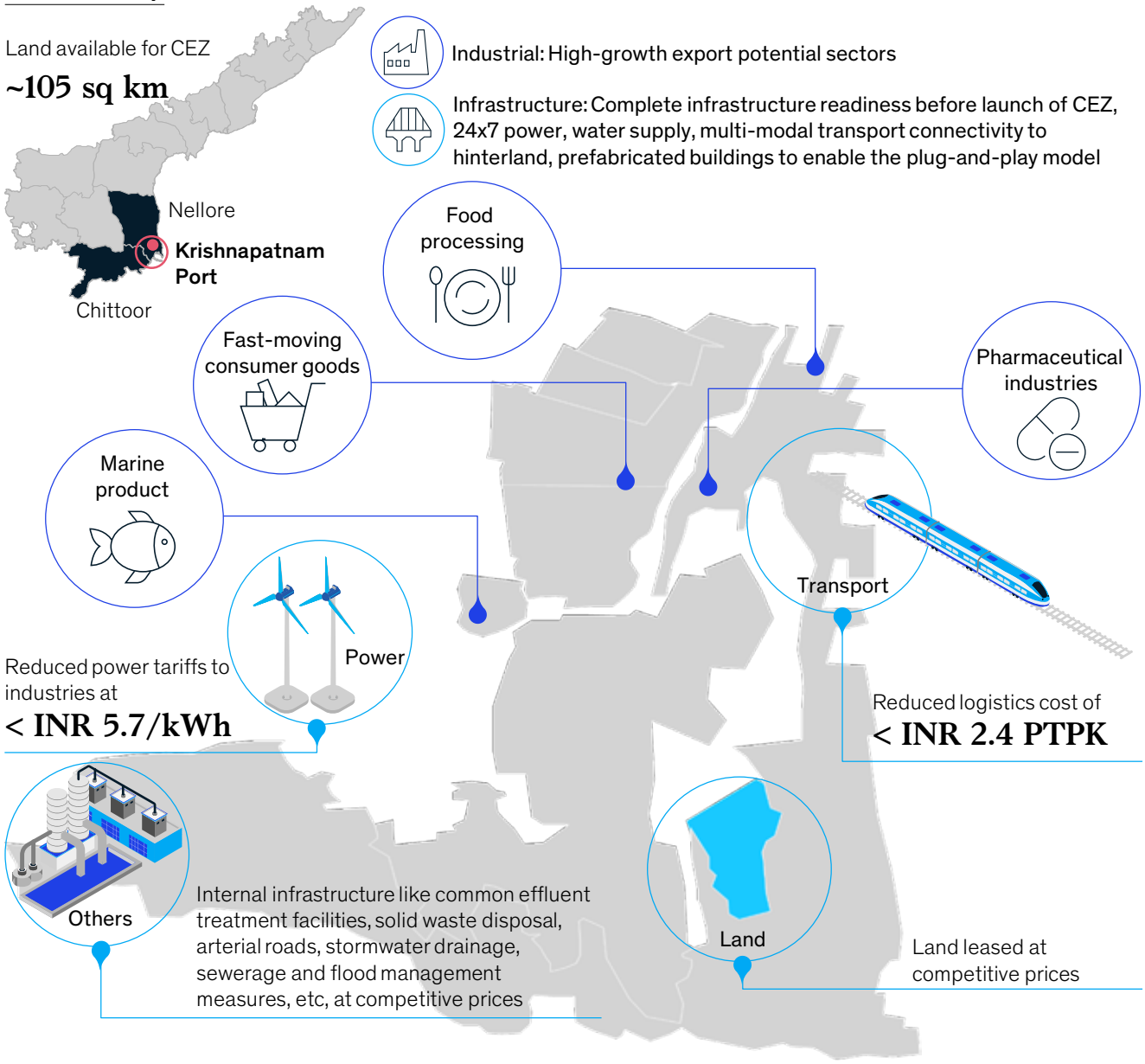
Such clusters in other economies have contributed significantly towards export manufacturing. The Bangladesh Export Processing Zones Authority, which has Export Processing Zones in eight locations including Chittagong, generated $7.2 billion of exports in 2017–18, primarily of apparel; its value is equivalent to 20 percent of Bangladesh's national exports.[370] Something similar could work in India. For example, in Andhra Pradesh state, a coastal economic zone around the Krishnapatnam port area could potentially be established, featuring sectors such as food processing, fast-moving consumer goods, marine products, and pharma-related industries. In this and other possible similar examples, states could provide benefits to show the effectiveness of a cluster approach in growing manufacturing output and to make the cluster area attractive for companies to set up their factories. Benefits could include complete infrastructure readiness before launch, encompassing power, water supply, multimodal transport connectivity, prefabricated buildings to enable the plug-and-play model and other infrastructure including land improvement, solid waste disposal, arterial roads, storm water drainage, and so on. Moreover, such clusters could become models for ease of doing business, with features including special dispensation for approvals, a single-window system for paperwork and clearances, flexible labour laws, and access to tax breaks (Exhibit 31).

[369] Artificial Intelligence Singapore (AISG).
[370] Annual report 2017–18, Bangladesh Export Processing Zones Authority.

Exhibit 31

Demonstration cluster: South Andhra Pradesh Coastal Economic Zone around Krishnapatnam port.

Illustrative only



Ease of doing business	**Single-window system for approval, clearance** processes and inspections, eg, pollution control certificates, registration, etc
Labour flexibility	**Flexibility in labour laws** for companies to shape the size, composition, and skills of the work force, and in domicile requirements **Strong social infrastructure:** Subsidised housing, education, and healthcare facilities
Financial incentives for cost competitiveness	Access to tax breaks, free/low import duties on imported equipment and production materials, depreciation allowances **Co-located** domestic tariff area, free trade warehousing zone, and special economic zone attracting players to serve both domestic and export markets
Governance	**Empowered special purpose vehicle formed by Port, Sagarmala Development Company, relevant state government entities, and private players:** SPV will manage search for partners, tender processes, contracting, and ongoing performance management of private operators

Note: The exact type and location of opportunities needs further study.
Source: Sagarmala, Ministry of Shipping; McKinsey Global Institute analysis

Business leaders will need to raise their aspirations, adapt to greater competition, and build capabilities needed to return India to a high-growth path

Business leaders have a critical role to play in driving India's economic and employment growth over the next decade and beyond. The reforms to be put in place would make it easier for companies to operate productively, obtain access to the funding they need, and build out their business both domestically and internationally. In return, they will need to raise their aspirations, enable and embrace the more competitive domestic environment that emerges, and develop capabilities to grasp the opportunities arising from frontier business opportunities. There is potential for more than 1,000 currently small and midsized firms to scale up to become large, and more than 10,000 small firms to become midsized. That will require a focus on the following three key themes:

First, raise aspirations and commit to productivity growth through a set of frontier business ideas. Companies need to aspire to world-class productivity, competitiveness, and scale, and set themselves a clear goal across these parameters. To achieve their goals, they can make productivity-enhancing investments in a prioritised set of frontier business opportunities that they wish to shape, from amongst those identified in chapter 2. This could take the form of driving productivity in core sectors and entry into relatively new businesses, expansion of capabilities and resources into adjacent ones, and engaging in partnerships that can generate synergies and support building high-productivity businesses, among others.

Second, develop a long-term value creation mindset coupled with a strong performance-oriented culture. Companies both large and small can take a forward-looking approach to investment and develop an organisational culture that generates stakeholder value in the long term. A necessary step includes creating a shared vision and purpose with increased accountability and engagement with all stakeholders. This needs to go hand-in-hand with outcome-based performance management and a systematic approach to managing the performance of teams and individuals.

Finally, build the winning capabilities essential to be a large, high-growth, globally competitive firm. Some capabilities have proven successful historically, as noted in chapter 3. These include customer-centric innovation; operational excellence and scalable platforms; ability to win in discontinuities; well-executed mergers, acquisitions, and partnerships; and the ability to build a strong, trust-based brand.

- **Customer-centric innovation.** Innovation is a powerful tool for growth. Large firms and digital native startups will need to focus on investing and developing expertise in next-generation ideas and focus on increasing localisation in India. But small firms across sectors will be able to make their mark if they can harness innovation.
- **Operational excellence and scalable platforms.** Firms of all sizes have considerable room to achieve operational excellence, ramp up their digital operations and use of data to create scalable platforms, and cut unnecessary operating costs. The potential covers all sectors, from installing digital architecture for back-office handling in banks to digitising inventory in traditional retail stores and moving their offerings online. Automation technologies are already a powerful reality, especially in manufacturing, while AI is gaining ground in some sectors and functions. Indian businesses need to be a part of this wave, and increasingly at its forefront. That will require a focus on the use of the full gamut of Industry 4.0 techniques, including assembly-line automation, use of IOT to help generate data for AI use, modular construction techniques in industries such as automotive, 3-D printing, and so on.
- **Ability to be ahead of the curve and win in discontinuities.** Companies have room to emulate pioneers in a broad range of sectors. This could range from reshaping established business practices, fostering creativity and nimbleness, creating customer-centric business models, developing the capability to understand needs of different markets, designing nuanced products and services, and making bold decisions and investments.

— **Well-executed mergers, acquisitions, and partnerships.** As we have noted, India's corporate landscape is highly fragmented, particularly in sectors such as retail, logistics, and construction. Economies of scale and consolidation will be key to regaining a competitive advantage. Consolidation will create new efficiencies as scale enables adoption of more sophisticated business models and global best practices. Large firms will need to build their mergers and acquisition muscle and begin consolidating disaggregated and distributed players. Among the benefits for India more broadly will be greater formalisation in the economy. Discerning effective partnerships can also play a key role in value creation in the long term.

— **Finally, strong corporate governance and trust-based brands that attract capital, customers, and employees.** Clear reporting, strong accountability, transparency, a focus on ethical values, and brands built based on trust and purpose will become even more important in the decade ahead. The COVID-19 pandemic is just the latest in a line of events that have focused public attention on how companies behave. Exemplary performance together with exemplary behaviour will provide a powerful base for firms in India to compete and thrive, and to attract capital, customers, and employees. One of the key challenges for India in attracting employees in the decade ahead is to raise skill levels both for new entrants to the labour market and for midcareer workers. Companies have a critical role to play in helping workers gain and upgrade their skills. A second challenge for companies will relate to diversity and inclusion. To generate the high growth that India needs, firms will be able to harness the energy of all sections of the population, including those who are currently underrepresented. As noted in the first chapter, as many as 55 million Indian women could join the workforce over the next decade if sufficient jobs are created that match their skills.

India is at a turning point. A powerful high-growth reform agenda that creates tens of millions of jobs is urgently needed. Together, government, both central and state, and businesses have the power and the tools to launch and sustain such an agenda. An ambitious vision and its successful execution are needed to fulfil the aspirations of all Indians for economic growth, gainful employment opportunities, and greater prosperity. India has successfully put in place large-scale reform agendas in the past. Now it is time to do so again.

Technical appendix

In this section, we describe the methodology used for the following analyses:

1. 2020–30 growth scenarios for India
2. State-level performance analysis
3. Frontier business models
4. Firm-level performance analyses
5. Key analyses across reform themes
6. Availability, cost, and efficiency of capital allocation

This report continues and adapts the methodology and findings of the September 2018 McKinsey Global Institute report *Outperformers: High-growth emerging economies and the companies that propel them*. A full methodology of that work is detailed in its technical appendix; for methodology adapted from the previous work, we provide a brief summary here and explain how it is applied in this report.

1. 2020–30 growth scenarios for India

In chapter 1, we analysed two scenarios, high growth and low growth, for fiscal years 2020 through 2030 for GDP growth in India and estimated related variables such as required investment. We also decomposed the GDP growth into productivity and employment growth at the sector level. For projections during the COVID-19 crisis, which we have assumed for the purposes of this research covers fiscal years 2020 to 2022, we used proprietary McKinsey Global Institute–Oxford macroeconomic projections, as estimated in May 2020. For the growth projections for fiscal years 2023 to 2030, we relied on the McKinsey Global Growth Model, a proprietary supply-side econometric macroeconomic model that takes into account the dynamic interactions of multiple variables, including population, employment, capital formation, and productivity. The McKinsey Global Growth Model uses different sources to build the historical and forecast scenarios. Its main sources are the World Bank's World Development Indicators and Global Financial Development Database, Oxford Economics, the IMF's World Economic Outlook and International Financial Statistics, the Economist Intelligence Unit, the UN Population Division, and the McKinsey Global Institute Financial Asset database, as well as some other UN and OECD databases. In addition, we made assumptions on macroeconomic metrics like exchange rate and inflation based on historical benchmarks. We assumed an annual depreciation of 2 percent in exchange rate over 2020 to 2030 based on the long-term average annual depreciation rate over 2001 to 2019. We also assumed an average inflation rate of 4 to 4.5 percent based on the monetary policy committee's long-term inflation target.

Sectoral decomposition of GDP. To decompose the GDP growth estimates into sector-level GDP growth, productivity, and employment growth rates, we leveraged sector-level historical productivity growth and employment growth elasticity to GDP growth benchmarks for India and peers such as China, Malaysia, South Korea, Thailand, and Vietnam. Based on these benchmarks, we estimated sector-level productivity and employment growth for six categories of sectors. They are manufacturing, construction, labour-intensive services (trade, transportation), knowledge-intensive services (financial services, information technology, business process management, communication, broadcasting, education, healthcare, and others), utilities and mining, and agriculture.

We estimated the total investment required in 2030 by using incremental capital-output ratio estimates by sector. The ratio estimates by sector were calculated based on historical benchmarks and the capital intensity of gross value added (GVA) opportunities by sector.

Estimation of jobs needed to be created. We estimated the need for creation of new jobs based on the potential demographic surge, the shift in employment from farm jobs to nonfarm sectors, and potential increases in labour force participation. We used data from the International Labour Organization (ILO) for the expected population of India in 2030 and potential labour force participation rate by age group and gender. Using the population data, we estimated the increase in working-age population (above 15 years of age). We used the potential labour force participation rate data to estimate the number of net jobs that will need to be created. To estimate the total number of jobs required, we calculated the potential movement in employment from farm jobs to nonfarm sectors. To estimate this, we leveraged two approaches. One, we used benchmarks of the share of agricultural-sector employment in other peer economies at the corresponding periods of time in which their GDP per capita was the same as India's projected GDP per capita; and two, India's historical trend in shedding farm jobs. In addition, we estimated a potential increase in the labour force participation rate driven by increased female participation. To estimate the potential increase in female participation in the labour force, over and above ILO estimates for 2030, we leveraged benchmarks of labour force participation in the prime age group for low-income neighbouring countries including Bangladesh and Sri Lanka.

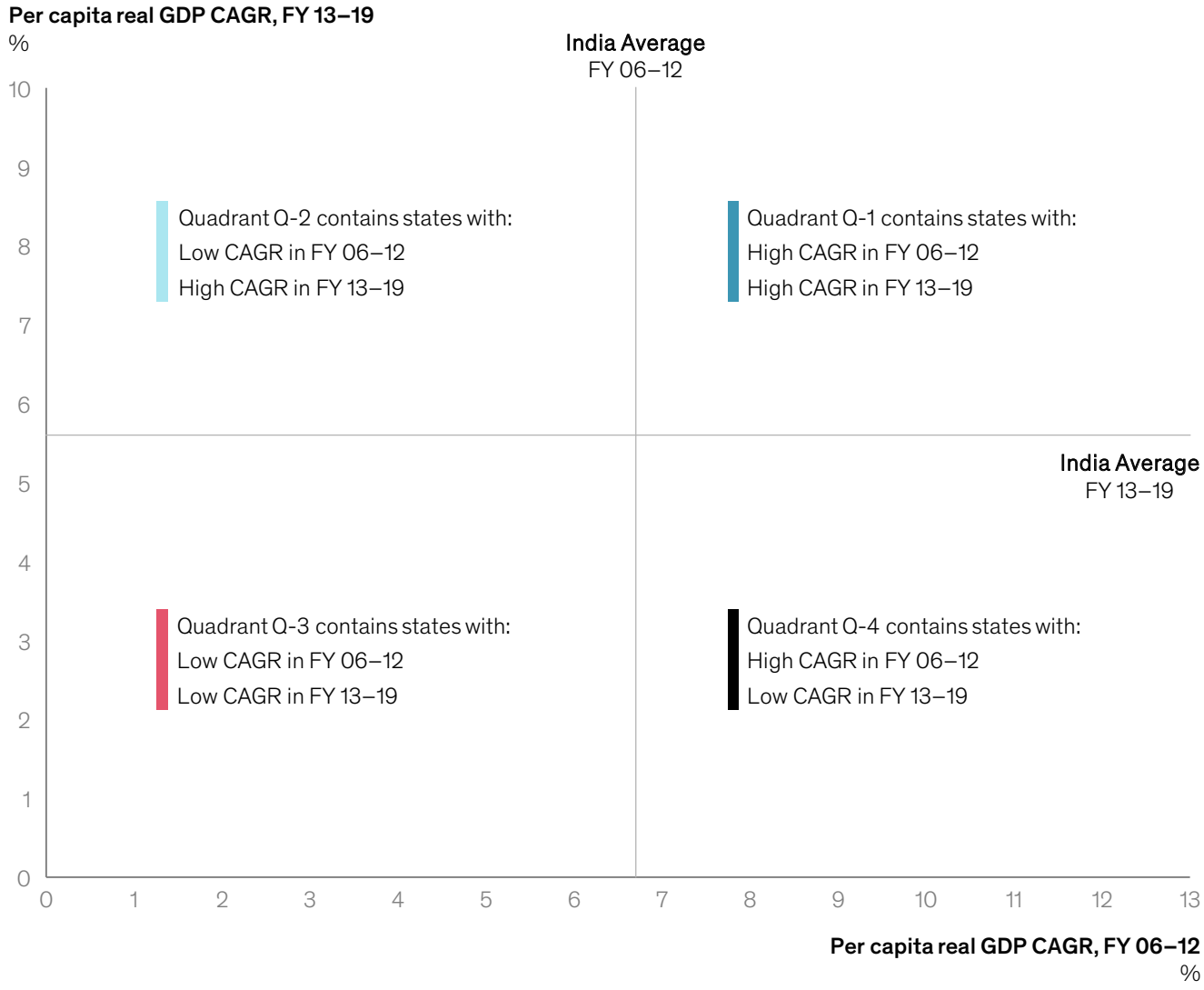
2. State-level performance analysis

In chapter 1, we analysed state-level historical performance of 21 major states for their economic size, per capita GDP growth, and productivity growth. Within the GDP growth analysis, we examined state-level GDP growth and state-level, sector-level GDP growth. This enabled us to identify outperforming and underperforming sectors in each state. Within our productivity growth analysis, we examined productivity growth within sectors and productivity growth due to employed labour force shifts between sectors. For the analysis, we used real GDP and GVA data from the Government of India's Central Statistics Organization, Ministry of Statistics and Program Implementation. For population data, we used statistics from the International Labour Organization and McKinsey Insights India. We used employment data from the National Sample Survey 2011–12 (68th round) and Periodic Labour Force Survey 2017–18.

State-level GDP growth analysis. To understand each state's performance over the years, we used the GDP per capita for each state and calculated the compound annual growth rate (CAGR). We considered FY 06–12 for historical growth and FY 13–19 for recent growth. We then plotted the per capita GDP CAGR for FY 06–12 on the X-axis and the per capita GDP growth CAGR for FY 13–19 on the Y-axis. We also evaluated India's average per capita GDP CAGR for both time frames and plotted it on the same graph, to evaluate states' growth trajectory compared to India's average (Exhibit A1).

Exhibit A1

Individual states' GDP growth trajectories diverge from the national average.



We classified states according to the quadrants they are in and sorted them into the following four archetypes:

— States with higher growth than the national average in both time frames were classified as “consistently faster”. An example is Gujarat, which had a per capita GDP CAGR of 7.7 percent in FY 06–12 (compared with India’s average of 6.7 percent) and 8.0 percent in FY 13–19 (versus the India average of 5.6 percent).

— States with lower growth in FY 06–12 but higher growth than India’s average in FY 13–19 were classified as “historically slower, now faster”. For example, Karnataka had a per capita GDP CAGR of 6.0 percent in FY 06–12 (compared with 6.7 percent) and 7.8 percent in FY 13–19 (compared with of 5.6 percent).

— States with lower growth than the Indian average in both time frames were classified as “consistently slower”. Uttar Pradesh, for example, had a per capita GDP CAGR of 5.0 percent in FY 06–12 (compared with 6.7 percent) and 4.6 percent in FY 13–19 (compared with 5.6 percent).

— States with higher growth in FY 06–12 but lower growth than the national average in FY 13–19 were classified as "historically faster, now slower." One example is Maharashtra, which had a per capita GDP CAGR of 7.8 percent in FY 06–12 and 5.4 percent in FY 13–19 (compared with 6.7 and 5.6 percent, respectively).

Productivity growth analysis. In chapter 1, we analysed states' productivity growth to understand the composition of productivity growth due to shifts in the employed labour force between sectors and in productivity growth within sectors. Productivity is defined as the value added per employee. We collated GVA data and employment data for 21 states at the sector level. The 11 sectors for this analysis were agriculture, manufacturing, mining, utilities, construction, retail and accommodation, transport and communication, finance, professional services, government services, and other services.

Productivity was defined as the ratio of GVA to employment. We first calculated state-level, sector-level productivity for FY 13 and FY 19. Then we calculated productivity growth as a compound annual growth rate percentage between these time frames. To calculate productivity growth due to the shift between sectors of a particular state, we considered sector-level productivity numbers and sector-level employment numbers for the earlier time period but sectoral employment mix for the later time period. Keeping sector-level productivity and employment constant and changing only the employment mix, we isolated the impact of growth on employment and real productivity. This enabled us to arrive at productivity growth due to shift in employment mix between different sectors in a state. We then subtracted this productivity growth shift between sectors from actual productivity growth to arrive at productivity growth within sectors.

3. Frontier business models

We used a value-impact approach to calculate the economic value of frontier business models. Economic value is the potential GVA estimated for each high-productive frontier model. Where GVA is not applicable, economic value is productivity gains from cost savings, time savings, and other efficiency. We identified benchmarks of other countries already employing the higher productive models and discrete use cases and estimated their potential impact, in greater output, time, share, or cost saved, to establish a macro picture of potential economic gains. For the core digital economy sectors such as IT-BPM and newly digitised sectors such as agriculture and financial services, among others, we used the methodology and findings in the March 2019 McKinsey Global Institute report *Digital India: Technology to transform a nation*. Four business models—asset resolution and recovery models under next-generation financial services; digital land 2.0 opportunity under e-governance of the future; app ecosystems opportunity under sharing economy for jobs, skills, and education; and climate change adaptation technologies were not sized.

Each of these frontier models unlocks productivity that can create more jobs as well as redeployment of labour into productive work. For each model, to estimate how many jobs could be created in 2030 as a result of the value creation, we divided the total economic value created in 2030 by the potential productivity. Some digital applications such as business automation and digital payments have the effect of freeing up workers and redeploying them to other types of work through efficiency gains such as cost and time savings. To estimate the investment required, we used the incremental capital-output ratio of each industry mapped to the frontier models. Sectors for each model are decided using factors like capital intensity. The ratio along with the growth rate of the individual models gives an investment rate, which is then used to calculate year-on-year investment.

4. Firm-level performance analyses

In chapter 3, we analysed firm-level performance using McKinsey & Company's Corporate Performance Analytics Tool (CPAT). This is a financial analytics solution based on McKinsey's valuation framework that provides insights and identifies trends in company peer groups, industries, and whole economies. CPAT integrates data from the world's leading data houses, such as S&P Global Market Intelligence, Moody's, and Thomson, to provide coverage of over 120,000 public companies worldwide (more than 95 percent of all global market capitalisation). CPAT provides more than 1,000 indicators for these companies, adjusting existing indicators using proven methodology developed by McKinsey experts to ensure comparability and consistency, and estimating more complex indicators such as weighted average cost of capital and economic profit. We also used CMIE ProwessIQ for the financial

performance information of Indian companies. The database contains information on all listed companies as well as a larger set of unlisted companies. The database is built from the audited annual reports of companies and information submitted to the Ministry of Company Affairs. In the case of listed companies, the database also includes company filings with stock exchanges and prices of securities listed on the major stock exchanges.

To analyse the behaviours of large firms, we filtered companies by revenue size in current prices as of fiscal year 2018. We defined large companies as those with more than $500 million revenue in fiscal year 2018. We also compared the performance of large firms in India with peer outperformer economies including China, South Korea, Malaysia, Thailand, and Vietnam. For Indian companies' financial information, we used both the Prowess database and CPAT. For comparing financial performance of companies in India's peer economies, we primarily used the CPAT database.

To compare country-level economic data such as GDP, we used the IHS Markit Comparative Industry Service database covering more than 200 countries, which mines data from over 1,000 local sources and international data sources including the IMF, OECD, and World Bank. For India, we also gathered macroeconomic aggregates from the Ministry of Statistics and Programme Implementation's National Accounts Statistics.

Across the different data sources, we mapped the varying industry classifications to 22 industries, more in line with the Global Industry Classification Standard: accommodation, food services, and entertainment; agriculture, forestry, and fishing; auto, auto components, and advanced industries; basic materials; cement; chemicals; construction and real estate; financial services and insurance; consumer goods; healthcare; manufacturing of electronics; manufacturing (other than electronics); mining; oil and gas; pharmaceuticals and medical products; power; steel; technology; telecom and media; textiles, travel, transport, and logistics; and wholesale and retail trade.

Scale and contribution to the economy. To analyse the scale (presence) of large firms in India and in peer countries, the first metric we looked at was the number of large firms (that is, firms with revenue of more than $500 million in fiscal year 2018) in each country. For comparison across countries, we divided the total number of large firms in the country by the economy size, measured as the nominal GDP of the country in trillion dollars in that year.

The second metric we analysed was the revenue contribution of large firms to the GDP of the country. For that, we used the following general formula:

$$Large\ firm\ revenue\ contribution = \frac{\sum Large\ firm's\ total\ revenue\ for\ the\ year}{Overall\ nominal\ GDP\ for\ the\ year}$$

For sector-level analysis, we used nominal GVA for each sector as the denominator. GVA helps measure the contribution of an individual sector to the economy. The general formula for GVA is:

$$Gross\ value\ added = Gross\ value\ of\ output - Value\ of\ intermediate\ consumption$$

We also classified the sectors into two categories in terms of large firm revenue contribution to sectors' gross value add. Sectors with more than 48 percent revenue contribution of large firms to sector GVA were classified as sectors with high revenue contribution of large firms to sector GVA.

For both these analyses, we included China, Malaysia, South Korea, and Thailand in the set of peer countries. When comparing, the value (metric) for all countries was indexed to 1, with India's value being equal to 1. Thus, the values for peer countries were represented as a multiple of India.

Productivity and profitability. To compare the productivity of Indian firms with that of peers as well as across sectors, we used the following formula:

$$Productivity = \frac{\sum Firm's\ value\ added\ for\ the\ year}{\sum Total\ number\ of\ employees}$$

where value added was defined as the difference between the company's total revenue (sales) and the cost of goods sold in the year. For this analysis, we considered China, Indonesia, and South Korea in the peer set. The values for these countries was indexed to 1, with India's value being equal to 1.

We used return on assets as a profitability ratio to measure the amount of profit made by a company per dollar of its assets. We used this for comparing India's large firms' performance with peer countries, at the sector level, and over a period of time (fiscal year 2012 to 2018) to study the trend. For this analysis, the peer set included China, Malaysia, South Korea, Thailand, and Vietnam. Again, for of both the above analyses, the values for peer countries were represented as a multiple of India.

Scale and competitiveness. To analyse the scale (size) of firms, we looked at the number of firms in different revenue categories. Microenterprises are firms with revenue of less than $10 million per year. Small and midsize enterprises (SMEs) are firms with revenue between $10 million to $40 million per year. The next category is midsize firms, whose revenue is between $40 million to $500 million per year. We further divided the large firms category into two subcategories: firms with revenue between $500 million and $5 billion per year, and firms with revenue of more than $5 billion per year. We divided the total number of firms in each category by the nominal GDP of the country in that year in trillion dollars, for comparison across countries. The values for peer countries (that is, China, Malaysia, South Korea, Thailand, and Vietnam) were represented as multiples of India.

To analyse the degree of competitive pressure to which large firms are subjected, we studied the degree of "contestability" or churn that companies in the top quintile of economic profit experience, as a proxy. We looked at the average economic profit of each company between 2000 and 2004, and considered the top quintile of companies. We then analysed whether these companies remained in the top quintile of average economic profit between 2013 and 2017. We analysed this degree of churn at the sector level for China, India, and South Korea. Churn was defined as the percentage of companies that were replaced from the top quintile between 2000 and 2017.

2030 growth model for large firms. We built a model to estimate the number of large firms that India would need by 2030 to meet the productivity growth targets. We first established a target for large firms' revenue contribution to GDP for 2030, in line with that of peer economies today. Then we analysed this growth in three broad segments: small and midsize firms scaling up, existing large firms, and new hypergrowth firms. This analysis was again done at the sector level, leveraging the GDP projections for the sector and for the country overall.

First, we defined the small and midsize firms scaling up category as firms with revenue less than $500 million in fiscal year 2018 and expected to grow to more than $500 million by 2030, based on the historical growth rate of the company's revenue and the expected growth rate of sector GDP. Second, for modelling the growth in revenue contribution of existing large firms (with revenue of more than $500 million in fiscal year 2018), we looked at the elasticity of the growth rate of large firms' revenue in peer economies relative to GDP growth, historical growth rate of the company's revenue, and expected growth of sector GDP. Third, we estimated the new firms that are yet to be established but can demonstrate hypergrowth, based on the historical benchmark of new firms that were established between 2005 and 2018, became large by 2018, and had an approximate revenue contribution to GDP in 2018 of 4 percent.

5. Key analyses across reform themes

Affordability gap in real estate. We constructed a model to determine the affordability gap in India. We used methodology from the April 2010 McKinsey Global Institute report *India's urban awakening: Building inclusive cities, sustaining economic growth*. We first assessed demand for affordable housing in urban India. We based our analysis on households having access to a minimum area in a formal housing settlement. To do this, we estimated the market value of a housing unit for each income segment based on price per square feet for different areas of a tier-two city.

We then estimated the maximum value affordable by a household. This was defined as the housing loan value serviceable by the households deploying a stipulated fraction of its gross monthly household income towards loan instalments (with a defined interest rate and tenure) and considered a loan-to-value ratio. Tenure for the loans is given as 20 years, the higher end of terms usually seen in the Indian mortgage market. For example, for the income group earning between 180,000 rupees and 485,000 rupees per year, we assumed an outlay of 30 percent of monthly income and an interest rate of 12 percent further reduced by 6.5 percent as the subsidy provided by the government under the Pradhan Mantri Awas Yojana initiative. A loan-to-value factor of 75 percent was considered. Households for which the maximum affordable value was less than the market price of an 818-square-foot housing unit were considered unable to afford housing.

To estimate the home price reduction, we used industry reports to break the home price into land cost, construction cost, overhead, financing cost, and return of about 20 percent to the developer. Land cost on average is about 20 percent of home price but varies for different cities; for example, in Mumbai, land cost is as high as 40 percent. The potential reduction in land prices enabled by unlocking land supply and rationalising stamp duty was estimated at 20 to 25 percent; construction cost was reduced by a lower interest rate and penetration of high-productive models such as prefabrication, which are about 20 to 30 percent more economical than standard construction techniques. Based on our analysis of financing cost to borrowers, we assumed the financing cost could reduce by about three percentage points for this analysis.

Privatisation of SOEs. For analysis of which state-owned enterprises (SOEs) to privatise and the yields of privatisation, we leveraged data from Ministry of Corporate Affairs and CMIE ProwessIQ. India has about 1900 SOEs, according to the MCA. Individual evaluation of about 170 companies for which ownership data are available indicates that, on average, the government holds 74 percent of the total book value. Estimates of the number of SOEs that could be privatised are based on the 577 SOEs for which financial data are available; we identify approximately 400 SOEs from this set that could be privatised based on whether they are in strategic sectors or if the value of their assets is greater than their estimated market value (in either of these cases, we assume the SOE would be more amenable to an asset monetisation programme rather than a privatisation programme). Control was retained in strategic sectors such as defence and sectors such as power transmission in which assets are more valuable than equity. For the companies privatized, 95 percent by book value were assumed to be diluted down to a 26 percent holding and the remaining 5 percent down to a 0 percent holding.

Valuation multiple assumptions, defined as market price to book value, were based on historic valuations of privatised SOEs. For example, equity in Hindustan Zinc was diluted to 26 percent at a valuation multiple of 3.6 times; based on other examples, average multiples for each category were determined similarly.

Reduction in C&I tariffs. In this analysis, we sought to identify the levers to reduce C&I tariffs. The current commercial tariffs of 9 rupees per kWh and the industrial tariffs of 7.5 rupees per kWh were provided in the *Report on performance of state power utilities 2018–19*. The levers include:

— Reduction in AT&C losses: Standard aggregate technical and commercial (AT&C) losses in India on the UDAY portal as of June 2020 was 19 percent. It is assumed that this can be reduced to 10 percent, Tata Power's best-in-class post-privatisation figure. The average revenue realised in 2017–18 was 5.3 rupees per unit. The estimated reduction in price per kWh is derived from the incremental income due to reduction of losses by 9 percent.

— Reduction in interest expense: With a reduction in state power distribution company (DISCOM) losses and better subsidy payments, working capital funding of these losses would fall to zero. This indicates potential to save on reduced interest expense.

— Increase levelized cost of energy for coal and share of low-cost renewables: Coal prices are assumed to increase by 3 to 4 percent while renewables prices could halve. Additionally, with the increase in share of renewables, overall power tariffs would go down. We first estimated the effect of all three levers on power tariffs, then calculated the impact of the renewables share increase and cost reduction while keeping coal prices constant. By adding the two numbers, we derived the impact of coal cost rising.

— Removal of cross-subsidy surcharges: This was calculated based on the Maharashtra tariff order. There is a difference between the billing rate and the cost of supply of high-load and low-load industries. The weighted average billing rate and cost of supply were calculated, and the difference was assumed to be the potential reduction in tariff due to removal of cross-subsidy charges.

6. Availability, cost, and efficiency of capital allocation

Requirement and sources of capital. In chapter 5, we furthered the analysis for investment (gross capital formation) projections for 2030 from chapter 1 and built a model to estimate the growth of different components of the investment equation. Investment, measured as gross capital formation, is equal to gross domestic savings plus net inflow of foreign investment.

We started with projections for net inflow of foreign investment, or the financial account components of the equation. Net foreign direct investment (FDI) as a percentage of GDP was assumed to move towards the historical best and in line with benchmarks for peer economies (including China, Malaysia, South Korea, and Thailand). To determine the growth in net foreign portfolio investments (FPI) as a percentage of GDP, we looked at the average historical ratio between FDI and FPI and assumed it will hold true in the future. The other components of financial accounts, including financial derivatives, reserve assets, and other investments, were assumed to be maintained at average historical rates as a proportion of GDP.

The residual growth in investments was assumed to come from gross domestic savings. Public-sector savings growth was based on projections of government fixed expenditure and government revenue through 2030. The residual was split between the remaining two components—corporate-sector savings and household savings—in the same proportion as in fiscal year 2018. Within household savings, we expect household financial savings to move towards the historical best as a percentage of GDP.

We also estimated the amount of investment that will be needed by the corporate sector to support growth in 2030. The average gross assets addition by large firms in 2030 was assumed to be in line with the average in 2018, with the residual capital formation to be contributed by SMEs.

Financing cost to borrowers. In chapter 5, we estimated the difference in lending costs between India and peer economies. For this, we built a model to estimate the lending costs in India and in China, South Korea, and Thailand and to understand the different components that lead to higher lending costs in India. We looked at the lending rates of the top five banks by assets in each of these countries, estimated fund-based and non-fund-based (fee) income as a percentage of net interest-earning assets, and then broke this down into four different cost categories. We first estimated the "crowding out" effect of government borrowing based on the difference in the yield curve in government securities and the repo rate (central bank policy rate) for India relative to those of the peer countries. Second, we looked at the difference in credit risk provisions (loan loss provisions) and, third, at operating expenses as a percentage of interest-earning assets for India and the peer countries. Finally, the difference in interest expenses was considered as a percentage of interest-earning deposits. The analysis was based on the averages for a sample of top commercial banks in each country, and the values for India were compared with the average values of the peer economies.

Public finance. In chapter 5, we estimated the potential annual average fiscal savings. For this, we estimated all expenditures and revenue lines for the central and state governments. Some expenditures and revenue lines were assumed to grow in line with historical growth; some others were estimated based on the impact of suggested policy reforms, such as privatisation of state-owned enterprises, among others.

Assumptions and estimation methodologies for expenditure lines include the following:

— We estimate savings in subsidies and social spend on food, fertiliser, fuel, education, healthcare, housing, social security, drinking water and sanitation, and power utilities based on improved efficiency of the subsidy spending mechanism, increasing from an estimated 65 to 70 percent in 2020 to about 75 percent in 2030. For estimating reductions in power subsidies, we also assume targeted subsidy transfers only to vulnerable, below-poverty-line households and low-income farmers as defined by the Pradhan Mantri KISAN programme.

— We estimate savings in expenditure due to recapitalisation of SOEs to the extent of privatisation of SOEs.

— We estimate that pension and defence expenditures will grow over fiscal years 2021 to 2030, in line with historical growth rates for fiscal years 2012 to 2020.

— While administrative expenditure estimates are also expected to increase in line with the size of the economy, we estimate a 10 to 20 percent reduction in expenditure over the 2030 baseline, assuming that e-governance of future frontier business models are put in place. A 10 to 20 percent reduction in expenditure represents productivity gains due to adoption of digitisation in governance.

— We estimate that other expenditures like payment of government dues to businesses are paid out in equal proportions over the course of the next five years, as well as an incremental fiscal expenditure due to COVID-19 response from 2020 to 2022. We estimated the fiscal impact of announced COVID-19 relief measures at about 2.5 to 3 percent over that period, based on details announced by the government on potential out-of-pocket expenditures.

Assumptions and estimation methodologies for revenue lines include the following:

— We estimate that disinvestment income will increase from privatisation of SOEs, as described in the "Key analyses across reform themes" section. We estimate a reduction in dividend income to the extent of the privatisation.

— We estimate an immediate reduction in corporate income tax due to an estimated fall in revenue of corporates in 2020–21 due to the impact of the COVID-19 pandemic as well as the reduction in corporate tax instituted by the government beginning in fiscal year 2020–21.[371] We estimate the fall in revenue based on sector-level estimates of fall in gross value added by the proprietary McKinsey Global Institute–Oxford macroeconomic model and the historical GVA-output ratio from the National Accounts Statistics published by the Ministry of Statistics and Program Implementation. Following pandemic uncertainty, we estimate an increase in corporate income tax driven by growth in corporate income, in line with the historical best five-year period of 2003–08, driven by the reform agenda and growth in the economy, in addition to the longer-term effects of increased investment due to cuts in the corporate income tax rate implemented beginning in 2020–21. Similarly, we also estimate a buoyancy in income tax and goods and services tax revenue. In addition, we assume improved income tax compliance in line with historical growth over the next decade from 13 percent in 2018 to about 26 percent in 2030. Income tax compliance in 2018 is calculated as the number of income tax returns filed as a percentage of total employees in the labour force. The number of income tax returns was provided by the Income Tax Department and the number of employees in the labour force by the National Sample Survey 2017–18.

— We estimate that revenue from economic services, loan recoveries, customs and excise tax, and other miscellaneous income will grow over fiscal years 2021 to 2030 in line with historical growth in fiscal years 2012 to 2020.

[371] "Corporate tax rates slashed to 22% for domestic companies and 15% for new domestic manufacturing companies and other fiscal reliefs", Press Information Bureau of India, September 20, 2019

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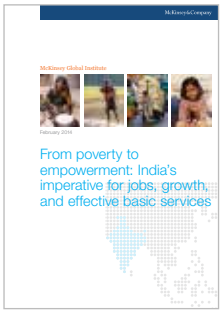

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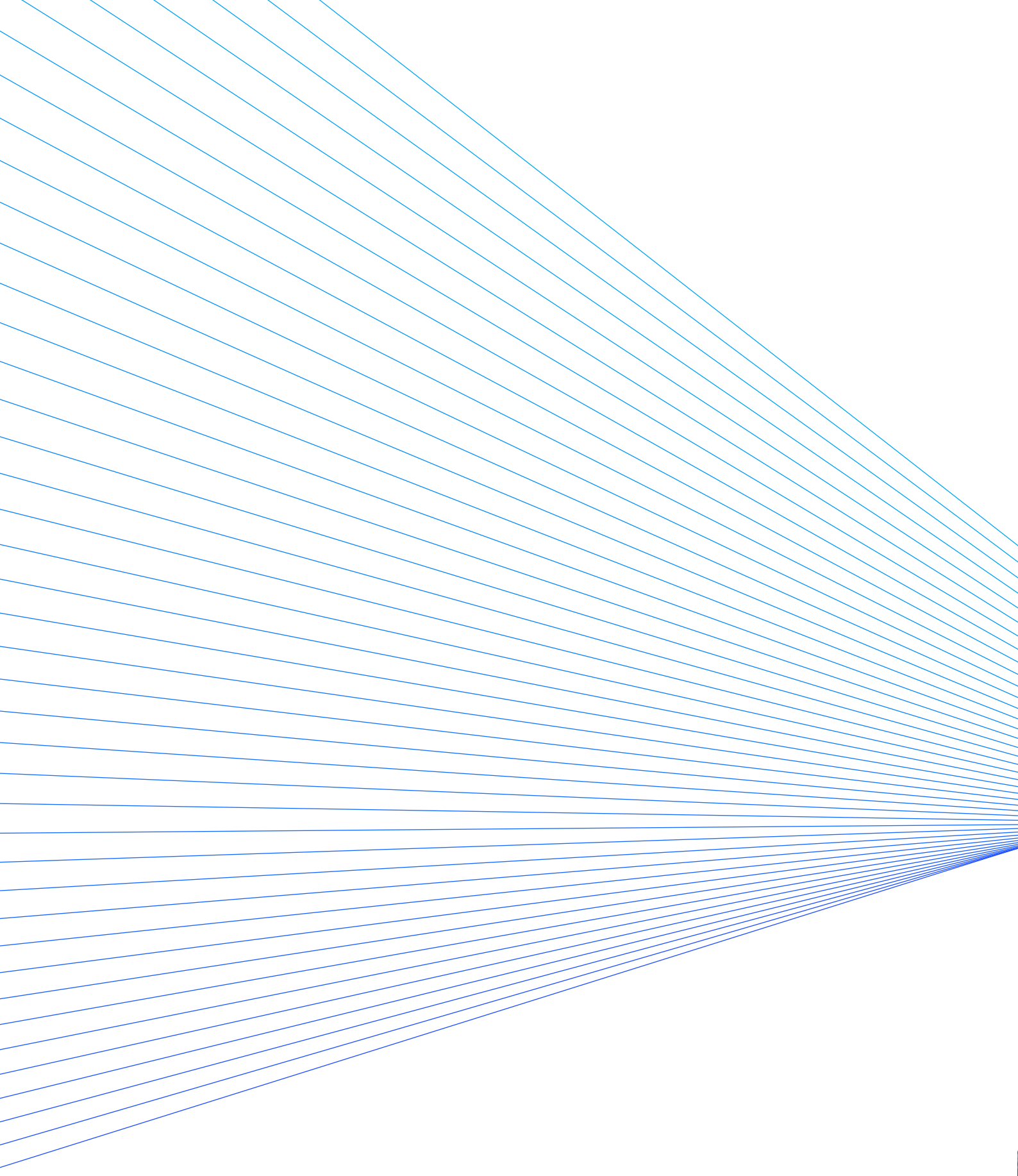

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