

McKinsey Global Institute



February 2014

# From poverty to empowerment: India's imperative for jobs, growth, and effective basic services



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# From poverty to empowerment: India's imperative for jobs, growth, and effective basic services

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# Preface

More than two decades have passed since India embarked on major economic reforms—and although official poverty rates have declined sharply since then, millions of Indians continue to face significant deprivation in terms of quality of life and access to basic services. India's youthful and increasingly vocal population is demanding more, and today the country's leaders have an opportunity to set higher aspirations. Not all of the options being considered are feasible in the face of India's current economic slowdown, however, and even well-conceived plans seem beset by execution challenges.

Yet there is a set of choices India can make to accelerate the process of bringing acceptable living standards to the vast majority of its population in the relatively short time span of a decade. This path, if adopted, could have profound consequences for the nation's future economic growth and human development. We believe it is within India's grasp to ensure that all of its citizens can fulfil their inherent rights to food, shelter, health care, basic dignity, and economic opportunity.

In this research, MGI presents a new analytical measure, the Empowerment Line, to assess what constitutes a meaningful, economically empowered standard of living. We also introduce the Access Deprivation Score, a tool to measure the availability of basic services across different parts of India. Our research analyses recent history to understand what successfully drove improvements in living standards in the past—and it looks ahead to quantify the relative potential of various growth strategies that can create a better quality of life for the average Indian citizen by 2022. We highlight critical reforms that are precursors to achieving these outcomes and draw on more than 350 case examples to present a host of innovations that can be used to deliver affordable basic services to the poor more effectively.

This year-long research effort was led by Anu Madgavkar, a senior fellow of MGI, along with McKinsey directors Shirish Sankhe and Rajat Gupta and MGI directors Richard Dobbs and Jonathan Woetzel. Ashwin Hasyagar managed the project team, comprising Subhashish Bhadra, Tarun Bhambra, Subramanian Chidambaran, Azeez Gupta, Liesbeth Huisman, Mekala Krishnan, Resham Mansharamani, Rahul Nath, Rafael Rivera, Joy Sharma, and Matt Stone. Shishir Gupta and Sunali Rohra added urbanisation insights, and Rishi Arora and the analytics team of McKinsey Knowledge Centre provided economic data modeling support. MGI senior editor Lisa Renaud provided editorial support, while Marisa Carder, Margo Shimasaki, and Joanne Willis provided graphic design support. We thank the MGI communications and operations team (Tim Beacom, Deadra Henderson, Julie Philpot, Gabriela Ramirez, and Rebeca Robboy) and the McKinsey India External Relations team (Aparna Malaviya, Lotika Mehta, Fatema Nulwala, and Ava Sethna) for their contributions.

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This report reflects the insights and guidance of our distinguished academic advisory group. We sincerely thank Richard N. Cooper, the Maurits C. Boas Professor of International Economics at Harvard University; Subir Gokarn, director of research of Brookings India and former deputy governor of the Reserve Bank of India; and Vijay Kelkar, chairman of the India Development Foundation, former chairman of India's Finance Commission, and former finance secretary, Government of India.

We are indebted to many experts in the fields of economics, development, law, public policy, and governance for their generous contribution of thought and insight in the course of our research. While our views have been independently formed and articulated in this report, we benefitted greatly from the variety of perspectives we gathered from them.

We are grateful to distinguished leaders in government who shaped our understanding of issues and prioritisation of solutions: Montek Singh Ahluwalia, deputy chairman of the Planning Commission of India; Arun Maira and B. K. Chaturvedi, members of the Planning Commission of India; Rakesh Mohan, India's executive director at the International Monetary Fund; Nandan Nilekani, chairman, Unique Identification Authority of India; S. Ramadorai, adviser to the Prime Minister, National Council on Skill Development; and Soli Sorabjee, former attorney-general of India.

We deeply appreciate the contribution of several eminent global academicians who kindly shared their perspectives with us: Sabina Alkire, director, Oxford Poverty & Human Development Initiative, Oxford Department of International Development; Abhijit Banerjee, Ford Foundation International Professor of Economics at the Massachusetts Institute of Technology and co-founder of the Abdul Latif Jameel Poverty Action Lab; Peter Timmer, Thomas D. Cabot Professor of Development Studies, Emeritus, at Harvard University; and Ashutosh Varshney, Sol Goldman Professor of International Studies and the Social Sciences and director of the Brown-India Initiative at Brown University.

We would like to thank officials from central and state governments who shared their insights and experiences with us: K. Desiraju, secretary, Ministry of Health and Family Welfare, Government of India; J. Satyanarayana, secretary, Department of Electronics and Information Technology, Government of India; Madhav Lal, secretary, Ministry of Micro, Small and Medium Enterprises, Government of India; B. K. Gairola, mission director of e-Governance, Department of Electronics and Information Technology, Government of India; Dinkar Gupta, additional director-general of police, Government of Punjab; B. B. Mahajan, former secretary for food, Government of India; and Vini Mahajan, principal secretary, Department of Health and Family Welfare, Government of Punjab.

We benefitted greatly from gathering the views of experts in the fields of development, social transformation, governance, and law: Ramesh Chandran, director, Governance and Public Policy Initiative, Centre for Policy Research; Mirai Chatterjee, director of Social Security of the Self Employed Womens Association and member of the National Advisory Council; Zeena Johar, CEO, SughaVazhvu; Smita Kaushal, CFO, Akanksha Foundation; Rajiv Lochan, director, SughaVazhvu; M. R. Madhavan, president and co-founder, PRS Legislative Research; Zia Mody, founder and managing partner, AZB; Bibhu Prasad Mohapatra, senior fellow and director, India Development Foundation; Nachiket Mor, Director, Central Board of the Reserve Bank of India and Chairman of the Reserve Bank of India Committee on Comprehensive Financial Services for Small Businesses and Low-Income Households; Parth Shah, founder president, Centre for Civil Society; and Bahram N. Vakil, founder and managing partner, AZB.

We conducted discussions with leading economists and researchers and would like to thank them for their valuable input: Poonam Gupta, senior economist, World Bank; Rana Hasan, principal economist, Asian Development Bank; Rajat Kathuria, director and chief executive, Indian Council for Research on International Economic Relations; Reetika Khera, assistant professor, Humanities and Social Sciences, Indian Institute of Technology, Delhi; Kalpana Kochhar, chief economist, South Asia, World Bank; David Kucera, senior research economist, International Labour Organisation; Santosh Mehrotra, director-general, Institute of Applied Manpower Research; Arup Mitra, professor, Institute of Economic Growth; Ajit Ranade, chief economist, Aditya Birla Group; Shekhar Shah, director-general of the National Council of Applied Economic Research; and Rajesh Shukla, former director of the National Council of Applied Economic Research-Center for Macro Consumer Research.

Finally, we offer our sincere thanks to the more than 30 leaders of private- and social-sector companies, foundations, funds, and other organisations who generously shared their time and expertise in interviews. All references to specific companies in this report, however, are from public sources.

This report contributes to MGI's mission to help business and policy leaders understand the forces transforming the global economy, identify strategic locations, and prepare for the next wave of growth. As with all MGI research, we would like to emphasise that this work is independent and has not been commissioned or sponsored in any way by any business, government, or other institution. We welcome your emailed comments on the research at [MGI@mckinsey.com](mailto:MGI@mckinsey.com).

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**680 million** Indians  
cannot meet their essential needs

**~50%** of public  
spending on basic services  
does not reach the people

**46%** of basic services  
are not within reach for the  
average household

**3/4** of the potential  
impact will come from jobs  
and productivity growth

**580 million**  
people can be economically  
empowered by 2022

**115 million**  
additional non-farm jobs  
needed over the next decade

**70%** increase  
needed in agricultural  
yields over the next decade

**50%** of public social spending  
is needed for health care, water, and  
sanitation, up from 20% today



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# Executive summary

Long considered an immutable fact of life in India, extreme poverty is finally in retreat. India launched its first wave of economic reforms in the early 1990s, resulting in a decline in the official poverty ratio from 45 percent in 1994 to 37 percent in 2005. Over the next seven years, a period in which India achieved the fastest rate of economic growth in its history and also implemented a number of policies aimed at helping the poor, extreme poverty declined rapidly to 22 percent of the population, or some 270 million people.

This is an achievement to be celebrated—and yet now is an opportune time to set higher aspirations. The government's poverty line sets a fair benchmark for extreme poverty, but it counts only those living in the most abject conditions. Even a cursory scan of India's human development indicators suggests more widespread deprivation in terms of quality of life and access to basic services. Above and beyond the goal of eradicating extreme poverty, India can address these issues and create a new national vision for helping more than half a billion people build a more economically empowered life.

This topic has been the subject of a national debate that has stretched well beyond academic and policy circles. To advance the thinking around this issue, the McKinsey Global Institute (MGI) has created a new analytical framework—one rooted in sound economic methodology and utilising published government data—to define a minimum acceptable standard of living. The result is the Empowerment Line, a holistic measure of income-based deprivation, which this report applies to the Indian context.

While India's official poverty line focuses on extreme poverty, the Empowerment Line poses an entirely different question: what is the level of consumption required for an individual to meet the necessities of human development? To answer this, we estimate the cost of fulfilling eight basic household needs (food, energy, housing, drinking water, sanitation, health care, education, and social security) at a level sufficient to achieve a decent, if modest, standard of living rather than just bare subsistence.

In applying this metric for 2011–12, we find that 56 percent of India's population lacks the means to meet their essential needs. By this measure, some 680 million Indians are deprived—more than 2.5 times the population of 270 million below the official poverty line. Hundreds of millions have exited extreme poverty, but their lives are still marked by a continuous struggle to achieve a modicum of dignity, comfort, and security. The Empowerment Gap, or the additional consumption required to bring these 680 million people to the level of the Empowerment Line, equates to 4 percent of GDP. The cost of bridging this gap is seven times higher than the cost of eliminating poverty based on the official poverty line.

The Empowerment Line is a measure of individual consumption, yet the ability or willingness to spend money is not wholly sufficient to guarantee a decent quality of life. In addition to having sufficient income, households need physical access

to affordable basic services of acceptable quality. Their own purchasing power can meet some needs, such as food and energy, but they also require access to community-level social infrastructure such as health clinics and schools. Therefore, to complement the Empowerment Line, we introduce a second parameter to measure this: the Access Deprivation Score (ADS), which captures the availability of basic services at the national, state, or even the district level. The ADS metric reveals that, on average, Indian households lack access to 46 percent of the basic services they need.

In seeking solutions, a look at the past is revealing. Three-quarters of the reduction in the Empowerment Gap achieved from 2005 to 2012 was due to rising incomes, while one-quarter was due to increased government spending on basic services. The contribution of rising incomes could have been even higher, however, if India had created non-farm jobs at a faster pace and boosted agricultural productivity—and the recent economic slowdown has stalled further progress on these fronts. Although government spending on basic services increased rapidly during this period, its impact was also dampened by inefficient programme delivery. In fact, by our estimates, half of what was spent did not produce better outcomes for the poor. India's ability to further increase social spending is also coming under pressure, as slowing economic growth limits the available fiscal resources.

If India's recent weak economic momentum persists in the coming decade, in what we have termed the "stalled reforms scenario", some 470 million people, or 36 percent of India's population, would remain below the Empowerment Line in 2022 and as much as 12 percent would remain below the official poverty line.

But our research outlines a more ambitious yet economically sound path of "inclusive reforms"—one based on a vision for delivering a better life to the average Indian citizen by 2022. This scenario can be achieved by launching a virtuous cycle of job creation and productivity growth that raises incomes and generates resources for public spending; it also involves making the delivery of basic services more effective. This has the potential to leave 100 million people (7 percent of the population) below the Empowerment Line in 2022, and just 17 million (1 percent of the population) below the official poverty line. All told, more than half a billion Indians could cross the threshold of consumption required for an economically empowered life. Access to basic services, too, would vastly improve, with access deprivation falling from 46 percent in 2012 to just 17 percent in 2022.

Merely increasing government subsidies can achieve only a fraction of this goal, however. Our estimates indicate that as in the past, almost three-quarters of the potential impact of raising people above the level of the Empowerment Line depends on unlocking investment, job growth, and productivity. More public spending alone, without addressing issues of waste and inefficiency, is likely to deliver at most 8 percent of total potential impact.

The importance of this message cannot be overstated. Government spending is critical to ensure access to basic services, but simply channelling more money into the same programmes without addressing their operations and outcomes will deliver very little. It is within India's grasp to bring the share of the population below the Empowerment Line to single-digit levels and virtually eradicate extreme poverty by 2022—but doing so will require policy makers at all levels of government to focus on an agenda that emphasises job creation, growth-

oriented investment, farm sector productivity, and more innovative delivery of social programmes.

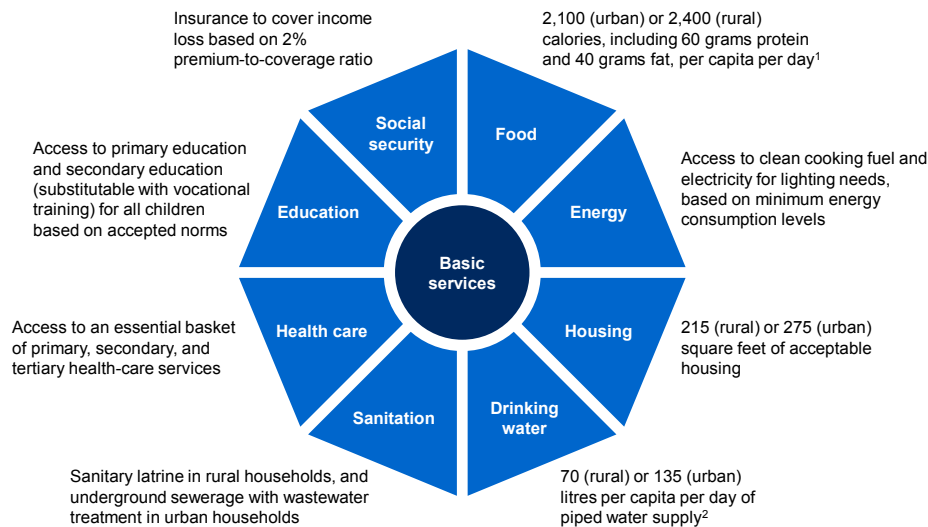
While the framework and funding would fall to the central government, many of the specific initiatives that would make this agenda a reality can be implemented at the state level. The only requirements are political will and a relentless focus on results—and with these building blocks in place, India could realise its long-held goal of providing all its citizens with basic dignity and economic opportunity.

## The Empowerment Line reveals that 56 percent of India's population lacks the means for a minimum acceptable standard of living

A new and more holistic measure of income deprivation, the Empowerment Line is an estimate of the minimum economic cost for a household to fulfil eight basic needs: food, energy, housing, drinking water, sanitation, health care, education, and social security (Exhibit E1). This research calculates the level of consumption required to meet these needs in India, assuming that infrastructure and access points are available at an efficient cost. This measurement can form the basis for a new national vision of a better standard of living for all citizens.

### Exhibit E1

#### Eight basic services contribute to a minimum acceptable standard of living



1 Protein and fat norms for adults.

2 Drinking water encompasses water for household uses as well as for personal consumption.

SOURCE: McKinsey Global Institute analysis

In looking at what constitutes an acceptable living standard, the Empowerment Line considers human development and applies externally defined norms to set the standards for each basic need. Overall, the Empowerment Line's minimum standards of consumption are approximately 1.5 times higher than those implicit in the official poverty line. Consumption requirements for health (including drinking water and sanitation) and education are 5.5 and 3.8 times higher, respectively, reflecting the minimum cost of meeting these essential needs. After taking into account the value of government spending on basic services that already

reaches the people, we calculate India's Empowerment Line at Rs. 1,336 per capita per month, or almost Rs. 6,700 for a family of five per month.<sup>1</sup> As of 2012, the consumption levels of almost 680 million people across both urban and rural areas of the country fell short of this mark. This far outstrips the 270 million Indians below the official poverty line.

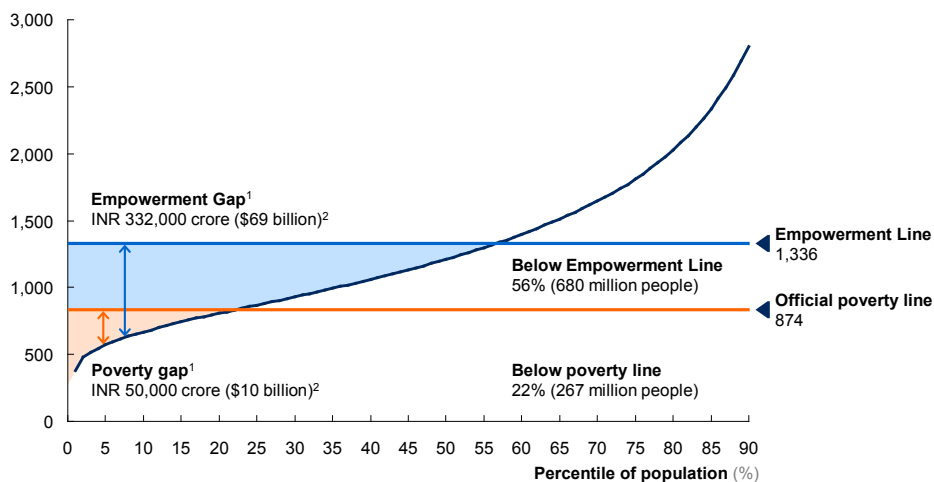
At a more detailed level, the Empowerment Line is set some 38 percent higher for urban India than for rural India. Based on this benchmark, 171 million urban residents (or 44 percent of the urban population) were below the Empowerment Line, compared with 509 million rural residents (or 61 percent of the rural population).

The Empowerment Line reveals that the challenge of improving people's lives in a fundamental and more lasting way is much greater than the challenge of eradicating official poverty. The Empowerment Gap, or the difference between each person's current consumption and the levels called for in the Empowerment Line, is about Rs. 332,000 crore (\$69 billion) per year, or 4 percent of GDP. This is seven times larger than the Rs. 50,000 crore (\$10 billion) poverty gap (that is, the difference between the current consumption of India's officially poor and the level implicit in the government's poverty line, shown in Exhibit E2).

### Exhibit E2

#### The Empowerment Gap, at Rs. 332,000 crore (\$69 billion), is seven times larger than the poverty gap

Average monthly consumption expenditure  
INR per capita per month, 2011–12, in 2011–12 prices



1 The Empowerment Gap and the poverty gap are defined as the aggregate differential between actual private consumption expenditure and the consumption requirements of the Empowerment Line and the poverty line, respectively.

2 Using average exchange rate of \$1 = INR 48.0769 for April 2011–March 2012.

SOURCE: National Sample Survey Office survey, 68th round; McKinsey Global Institute analysis

But the challenge of bridging the Empowerment Gap is more complex than simply raising public spending by an additional 4 percent of GDP. In reality, it will require investing substantially more in order to fill gaps in infrastructure and access to basic services over a sustained period of time—and these basic services will have to be operated more effectively to extend their benefits to the maximum number of people. We estimate that on average, Indians lack access to 46 percent of the services they need and that just 50 percent of government spending actually reaches the people.

1 All Empowerment Line figures are given in 2011–12 prices.



## Rising incomes drove three-quarters of India's past reduction in the Empowerment Gap, while more government spending drove the rest

From 2005 to 2012, the head count of people below the Empowerment Line fell by 183 million, as India's economy grew at a rapid pace of 8.5 percent per year. Rising personal incomes associated with economic growth produced three-quarters of the drop in the Empowerment Gap. The remaining one-fourth was driven by an expansion of public spending on basic services. Even for those below the official poverty line, who typically reap greater benefit from public spending, rising incomes drove 66 percent of the reduction in the Empowerment Gap. But both of these trends could have delivered much more impact.

Despite rapid GDP growth, the majority of India's labour force remains engaged in low-productivity activities. Almost 60 percent of those who live below the Empowerment Line derive most of their livelihood from agriculture, but India's land productivity is just half that of other emerging Asian countries. A faster shift of labour from farm to non-farm jobs (matching China's pace) could have lifted 100 million more people above the Empowerment Line from 2005 to 2012. Today there are too few job opportunities outside the farm sector, a factor that limits the economic opportunities available to women in particular. In fact, just 57 percent of India's working-age population participates in the labour force—well below the norm of 65 to 70 percent in other developing countries.

India's labour productivity also lags due to the high prevalence of unorganised and sub-scale businesses.<sup>2</sup> Enterprises with fewer than 49 workers accounted for 84 percent of India's manufacturing employment in 2009, compared with 70 percent in the Philippines, 46 percent in Thailand, and a mere 25 percent in China. Tiny enterprises in India, across both manufacturing and services, typically have just one-eighth the productivity of larger enterprises with more than 200 workers (Exhibit E3).

Meanwhile, government spending on basic services rose at 11 percent per year in real terms, faster than GDP, from 2005 to 2012, but it did not fully translate into benefits for the poor. Our estimates, based on published government data, indicate that approximately half of India's total public spending on basic services did not produce the desired results, with much of it lost to inefficiency or corruption (Exhibit E4). Some 35 percent of India's food subsidy, for instance, did not reach consumers, and the poorest population segments received less than 40 percent of the subsidy intended for them despite the fact that they account for 80 percent of the hunger gap.

Apart from leakage and waste, the quality of services is also lacking. State-run schools and health centres produce weak learning and health outcomes—in fact, our analysis of relative efficiency across India's states indicates that the same outcomes could have been achieved with half the level of spending on education and about one-third of the spending on health. These inefficiencies represent a tragically lost opportunity: if subsidies and social programmes had been 75 percent effective in reaching the poor, approximately matching the level

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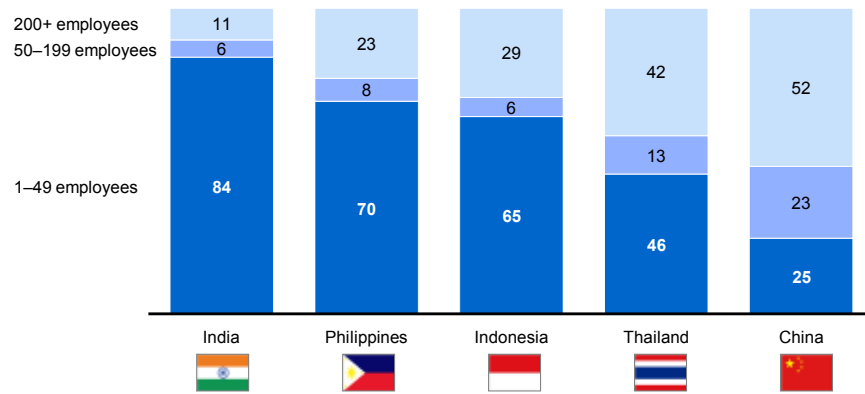
2 Enterprises in the government, public sector, private limited or public limited companies, cooperative societies, and other enterprises employing more than ten workers, are considered organised enterprises in India.

of effectiveness already achieved in India's best-performing states, an additional 85 million people (7 percent of the population) could have moved out of extreme poverty from 2005 to 2012.

**Exhibit E3**

**India's manufacturing sector is characterised by a glut of sub-scale, low-productivity enterprises**

Share of manufacturing employment by firm size, 2009  
%



Value add per worker, 2005<sup>1</sup>  
\$ thousand per year



1 Both manufacturing and services businesses.  
2 Productivity data is only for small enterprises (i.e., 5-49 employees) and does not include micro enterprises (i.e., 1-4 employees).

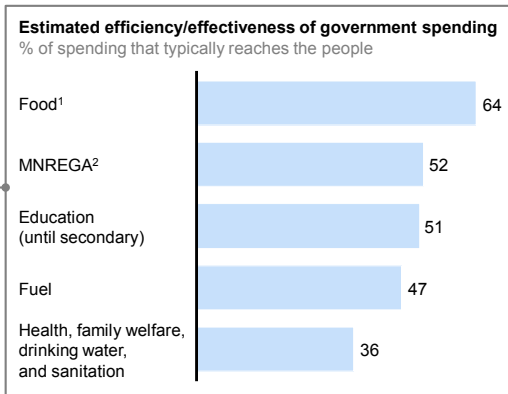
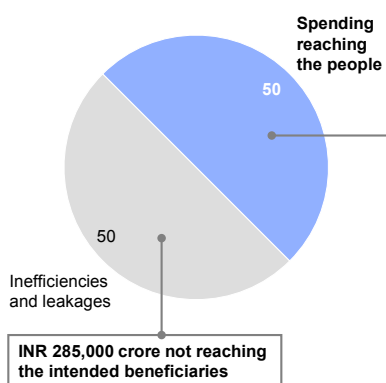
NOTE: Numbers may not sum due to rounding.

SOURCE: Asian Development Bank, *Key indicators for Asia and the Pacific*, 2009; McKinsey Global Institute analysis

**Exhibit E4**

**Currently, some 50 percent of public spending on basic services does not reach the people because of inefficiencies in governance and execution**

Public spending on basic services, 2012  
100% = INR 570,000 crore



1 For people below official poverty line, only 36% of food subsidy reached the intended beneficiaries in 2009-10.  
2 Mahatma Gandhi National Rural Employment Guarantee Act.

SOURCE: National Sample Survey Office; government fiscal statistics; McKinsey Global Institute analysis

## While health care is a critical gap across the board, hunger is a dominant issue for the poorest and housing is a growing need in urban areas

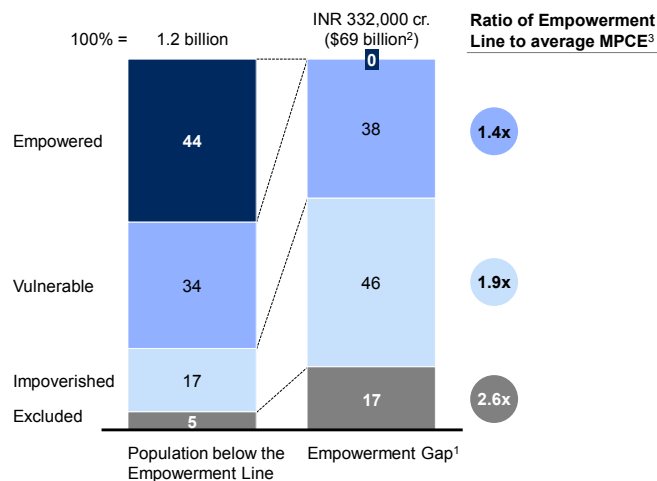
Because the poor cannot be painted with a single brush, the Empowerment Line offers a more nuanced view of how deprivation is experienced. We define three segments of the population according to their depth of poverty (Exhibit E5). Some 57 million Indians are classified as “excluded”; they are the poorest of the poor, unable to afford minimal food, shelter, and fuel. An additional 210 million are “impoverished”, with consumption above bare subsistence levels but still below the official poverty line. Just above the official poverty line, some 413 million Indians are “vulnerable”. They have only a tenuous grip on a better standard of living; shocks such as a lost job or a bout of illness can easily push them back into extreme poverty.

### Exhibit E5

#### There are three distinct segments below the Empowerment Line

India's population and Empowerment Gap by segment, 2011–12<sup>1</sup>

%



1 The Empowerment Gap is defined as the aggregate differential between actual private consumption expenditure and the Empowerment Line.

2 Using average exchange rate of \$1 = INR 48.0769 for April 2011–March 2012.

3 Monthly per capita expenditure.

NOTE: Numbers may not sum due to rounding.

SOURCE: National Sample Survey Office survey, 68th round; Oanda; McKinsey Global Institute analysis

The needs of all three segments are critical to address. The excluded are in desperate circumstances and require immediate help. The impoverished, who represent almost half of India's Empowerment Gap, would benefit from better management of existing programmes targeted to those below the official poverty line. Finally, designing policies to address the needs of the vulnerable segment will become increasingly important over time, as more people exit extreme poverty but find themselves stuck in the ranks of the vulnerable.

Health care, clean drinking water, and sanitation are critical gaps for all of these groups, whether in urban or rural India. These basic services make up the largest share (39 percent) of the cumulative Empowerment Gap of Rs. 332,000 crore (\$69 billion). However, the pattern of needs varies by segment. The most urgent unmet needs of the excluded and impoverished are hunger and health, while health, education, and housing are major issues for the vulnerable. Urban Indians,

while less prone to being impoverished or excluded, are almost as likely to fall into the vulnerable category as rural residents, and affordable housing is a significant unmet need for them.

## Apart from income-based deprivation, India's people also lack access to 46 percent of the basic services they require

When it comes to the availability of social services, geography is destiny for those below the Empowerment Line. Patterns of deprivation are more complex and multi-dimensional than what is implied by income or consumption measures alone. Even for households of similar income levels, the actual experience of poverty varies dramatically based on where they live. The availability of well-run social infrastructure and free or low-cost services in the vicinity of the poor is a crucial determinant of their quality of life. MGI has constructed the Access Deprivation Score (ADS) to capture this factor. It supplements the income-based measure of the Empowerment Line by highlighting geographical gaps in access to basic services.

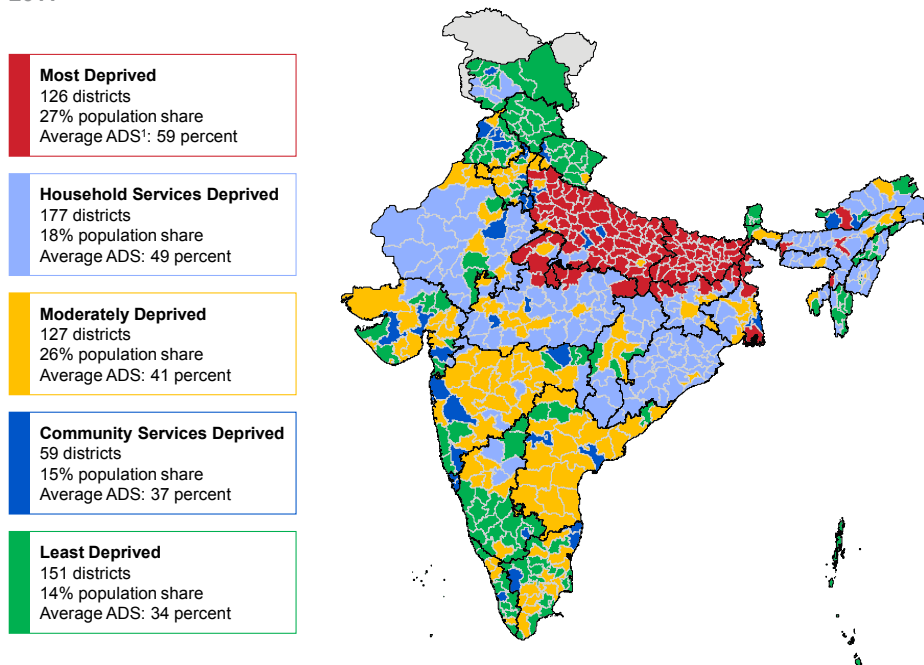
Using the ADS, we map India's 640 districts into five distinct archetypes based on their relative levels of access to schools, health centres, drinking water, sanitation, and improved energy sources (Exhibit E6). The ADS for each district measures the extent to which these basic services are absent relative to the aspired levels of coverage. Nationwide, the gap is 46 percent, but the range is wide: people living in the Most Deprived Districts may lack access to almost 60 percent of basic services, while those in the Least Deprived Districts lack access to about 34 percent.

Based on cross-sectional data for 640 districts in 2010, we find that residents of India's more prosperous districts are more likely to be able to afford household-level services that they can purchase themselves (by building toilets in their homes, drilling tube wells, or using liquefied petroleum gas-based cooking stoves, for instance). However, the positive effect of income is muted when it comes to education and health care. In India's largest and most crowded cities (which are classified as Community Services–Deprived Districts), residents have higher purchasing power, but that does not mitigate the difficulty of obtaining affordable medical care and quality education. The expansion of social infrastructure has not kept pace with growing population density.

The utilisation of health and education services, as measured in the ADS, seems to go hand in hand with greater levels of grassroots community involvement, especially by women. In fact, some of the poorest districts by income fare significantly better on access to health care and education than would be expected at their income levels if they also post stronger indicators for women's empowerment.

**Exhibit E6****Each of India's districts falls into one of five categories based on the extent and pattern of deprivation found there**

2011



1 Access Deprivation Score: distance of each district from the point of no deprivation.

SOURCE: Census 2011; District-level Health Survey, 2007–08; District Information System for Education, 2009–10; National Sample Survey Office survey, 2011–12; *India state of forest report 2011*, Ministry of Environment and Forests; McKinsey Global Institute analysis

## India can bring more than 90 percent of its people above the Empowerment Line in just a decade by implementing inclusive reforms

We have developed two scenarios to see how rapidly India can raise people to the standards of living implied by the Empowerment Line. The first, which we call “stalled reforms”, assumes that no bold policy measures are taken and that slow economic growth continues. The second considers an alternative path of “inclusive reforms”.

In the stalled reforms scenario, poverty is likely to maintain its grip on a large share of India's population. India's economic engine has been sputtering since 2011, and there has been a growing sense of legislative and administrative paralysis. In the absence of major reforms, the scenario assumes that India's GDP grows at just 5.5 percent from 2012 to 2022 and that the effectiveness of social spending remains unchanged.

In such a scenario, some 470 million Indians (36 percent of the population) would remain below the Empowerment Line in 2022, and 12 percent of the population would still be trapped below the official poverty line. At this rate, the goal of eliminating extreme poverty would not be reached until the mid-2030s. The lack of decisive reforms also makes it unlikely that India would convincingly address gaps in access to social infrastructure. Lower GDP growth implies lower fiscal

resources, limiting public spending for basic services. As a result, India's access deprivation would only come down to 26 percent by 2022.

The path of inclusive reforms envisages a far more positive alternative, one in which the nation takes steps to stimulate investment, job creation, and farm productivity, as well as dramatically improve the delivery of basic services. These reforms could potentially allow India to achieve an average GDP growth rate of 7.8 percent between 2012 and 2022. This could lift 580 million people above the Empowerment Line, leaving 100 million (7 percent of the population) below it in 2022 and 17 million (just 1 percent) below the official poverty line—virtually eliminating extreme poverty in just a decade.

The higher GDP growth inherent in the inclusive reforms scenario generates more tax revenue that can be ploughed back into spending for basic services—and it simultaneously ensures that India meets its fiscal objectives more quickly. To achieve this goal, India will need to increase its investment rate from nearly 36 percent of GDP since 2005 to an average of 38 percent over the next ten years. The combination of higher investment, faster economic growth, and increased tax revenue could allow India to bring its fiscal deficit to 6 percent of GDP from 2017 onward while enabling a moderate but steady increase in social spending, in line with GDP growth, that could bring access deprivation in basic services down from 46 percent to just 17 percent. Although these goals are aspirational, they are feasible based on successes already demonstrated by India's better-performing states.

#### **FOUR CRITICAL ELEMENTS ARE KEY TO THE PATH OF INCLUSIVE REFORMS**

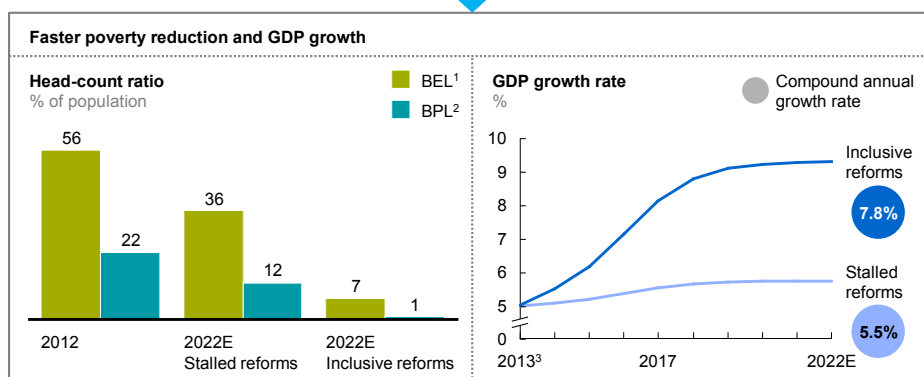
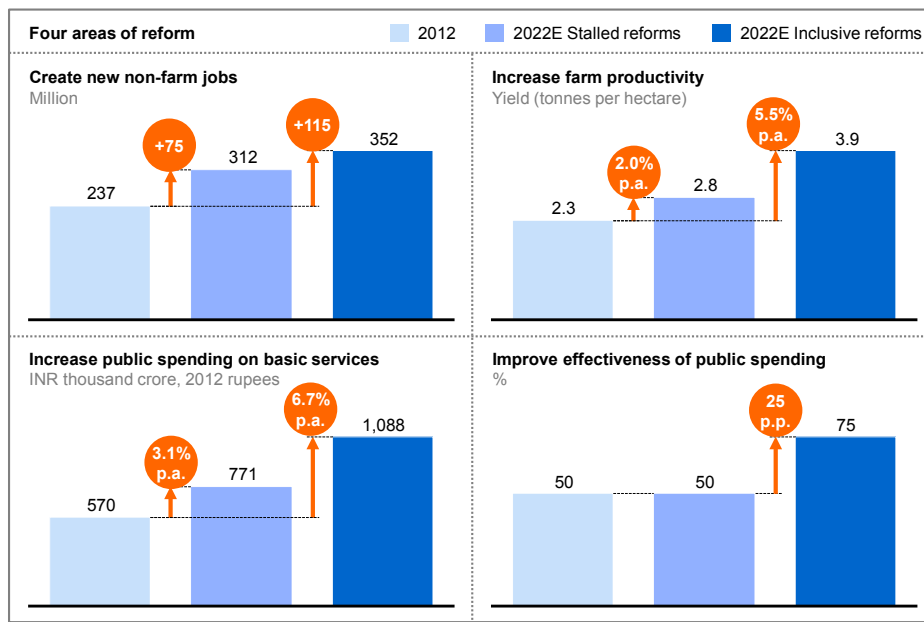
The inclusive reforms scenario hinges on four key elements (Exhibit E7):

- **Accelerating job creation.** India needs reforms that unlock the economy's potential to add 115 million non-farm jobs by 2022 (about 40 million more than the stalled reforms scenario would generate). This would absorb the expected growth of 69 million in the working-age population, raise the labour force participation rate by some 2 to 3 percentage points, and reduce the share of farm jobs from 49 percent of total employment in 2012 to 37 percent in 2022. Construction will need to be the biggest contributor, adding some 50 million jobs. The manufacturing sector will need to accelerate growth to create some 21 million to 27 million jobs, while some 35 million to 40 million jobs will need to come from the services sector.
- **Raising farm productivity.** Increasing investment in agricultural infrastructure, research, and extension services can help raise the average farm yield per hectare from 2.3 tonnes in 2012 to about 4.0 tonnes in 2022. This would bring India's yields in line with those in other emerging Asian countries. Gains in agricultural productivity would also accelerate the transition of labour to more productive non-farm jobs.
- **Increasing public spending on basic services.** India cannot fully realise the potential of its human capital until its population has wider access to affordable basic services. In absolute, real terms, public spending on social services needs to nearly double from Rs. 570,000 crore (\$118 billion) in 2012 to Rs. 1,088,000 crore (\$226 billion) in 2022 to fill critical gaps in social infrastructure. This entails an annual real growth rate of about 6.7 percent in

public spending for basic services (which is actually lower than the 11 percent annual rate of increase from 2005 to 2012). If India can achieve the higher rates of economic growth assumed in the inclusive reforms scenario, this would continue to represent about 6 percent of GDP. The share allocated to health, water, and sanitation services, however, needs to increase from 21 percent in 2012 to nearly 50 percent of total social spending in 2022. Just as expanding access to primary education was given top priority in the past decade, India needs a concerted push to build more extensive health-care infrastructure in the decade ahead.

- Making basic services more effective.** The impact of higher public spending on basic services is magnified if more of that spending reaches its intended beneficiaries. The inclusive reforms scenario assumes that the nation as a whole can raise the effectiveness of social spending from 50 percent to at least 75 percent by 2022, matching the levels already demonstrated by India's best-performing states. If India increases funding for basic services

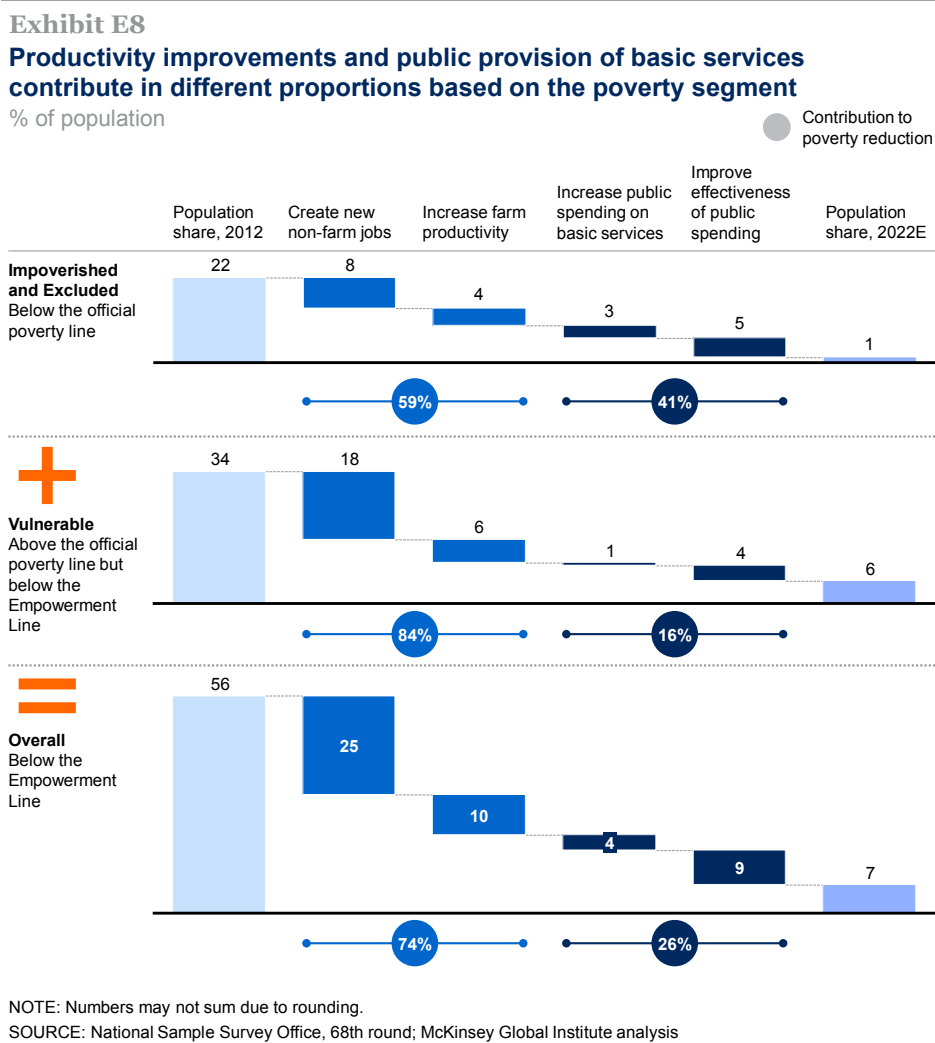
**Exhibit E7**  
**Pursuing inclusive reforms in four key areas can achieve faster GDP growth and unprecedented poverty reduction**



1 Below Empowerment Line.  
 2 Below official poverty line.  
 3 GDP growth of 5% in 2012–13 based on provisional estimates.  
 SOURCE: McKinsey Global Institute analysis

but does not improve on this current performance, nearly Rs. 545,000 crore (\$113 billion) of social service spending will fail to reach intended beneficiaries in 2022, up from about Rs. 285,000 crore (\$59 billion) today. Best practices and innovative examples from around the world (and from pilot programmes within India itself) show how this can be done. Some of the most promising strategies include forming partnerships with the private and social sectors, mobilising community participation, and using technology to streamline and monitor operations.

While all four of the levers are essential, a surge in job creation would make the largest potential contribution to poverty reduction. In fact, job growth in non-farm sectors combined with productivity growth in agriculture would directly contribute to lifting more than 400 million people above the Empowerment Line, or more than 70 percent of the total impact in the inclusive reforms scenario. The impact is even more pronounced for the vulnerable segment, but even for the impoverished and the excluded, jobs and productivity growth are the most powerful drivers of higher living standards (Exhibit E8). Raising public spending alone, without improving the effectiveness of delivery, would contribute less than 10 percent of the potential impact across segments.





## India needs to create 115 million non-farm jobs through cross-cutting reforms and targeted public investment

India needs 115 million new non-farm jobs over the next decade to accommodate a growing population and to reduce the share of agriculture in employment. The manufacturing and construction sectors can form the backbone of this effort, as these sectors are well-suited to absorbing lower-skilled labour moving out of farm jobs (Exhibit E9). Labour-intensive services—such as tourism, hospitality, retail trade, and transportation—will also need to add 35 million to 40 million jobs.

The government can catalyse job creation by rebalancing its spending pattern to increase public investment in the economy. The subsequent uptick in growth and investor sentiment would crowd in private investment. Put together, the overall investment rate would rise from an average of 36 percent since 2005 to an average of 38 percent over the next decade in the inclusive reforms scenario.

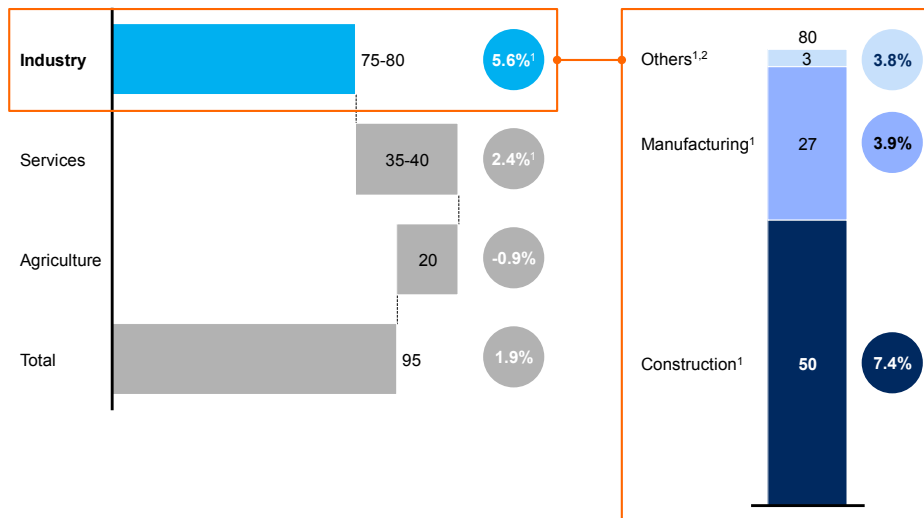
### Exhibit E9

#### India's industrial sector will need to lead the way on job creation, especially in construction and manufacturing

Incremental job creation in inclusive reforms scenario, 2012–22E

Head count, million

● Compound annual growth rate



1 Calculated assuming 80 million new industry and 35 million new services jobs.

2 Includes mining and quarrying, electricity, gas, and water supply.

NOTE: Numbers may not sum due to rounding.

SOURCE: McKinsey Global Institute analysis

Almost half of the required jobs will need to be generated for the workforce in states with particularly difficult starting conditions (including challenges with the quality of education, which exacerbates skills shortages, as well as low levels of urbanisation). Uttar Pradesh's labour force, for example, will need some 23 million non-farm jobs (approximately one-fifth of the national requirement), although the state is largely rural and organised enterprises account for only 9 percent of its employment. Some 11 million workers from Bihar will need to be absorbed into the non-farm sector in an even less advantageous climate. India's job-creation strategy must provide broad-based reforms that invigorate job growth both in these regions and across the entire country.

As China moves up the value chain, India and other emerging economies with low labour costs have an opportunity to capture a larger share of labour-intensive industries by integrating domestic manufacturing with global supply chains. But today an array of barriers limits the ability of Indian businesses—both large and small—to invest and become more competitive, scale up, and create jobs. Revitalising India’s job-creation engine will require decisive reforms and a laser focus on implementation in six high-priority areas:

- **Accelerate critical infrastructure for power and logistics.** Infrastructure gaps, especially in power and transportation, hinder economic growth, particularly in manufacturing. For better execution of projects, the government could establish a high-level National Infrastructure Delivery Unit in the prime minister’s office to build an integrated view of the country’s infrastructure needs, coordinate across ministries and functions, set and monitor schedules, and address bottlenecks. This unit could work with the Cabinet Committee on Investment to expedite infrastructure projects. A State Chief Minister’s Office could also set up a State Infrastructure Delivery Unit for the same purpose.
- **Reduce the administrative burden on businesses.** Complex and archaic regulations pose a significant cost, especially for micro-, small, and medium-sized businesses, discouraging both investment and their move into the formal economy. India can reduce this burden in a phased manner, starting with quick wins that require simple changes in administrative rules and procedures rather than new legislation. In the medium term, the rollout of e-government platforms and “one-stop shops” supported by automated government processes can be accelerated, with more fundamental improvements such as selective outsourcing to private-sector providers and extending the Right to Public Services laws to business services as the third phase.
- **Remove tax and product-market distortions.** India’s many taxes result in high compliance costs, and differences across states and sectors balkanise the national market, harming the ability of businesses to achieve economies of scale. If implemented, the proposed goods and services tax, a harmonised consumption tax across nearly all goods and services, represents a step towards reducing complexity and lowering the tax burden. In addition to cross-cutting tax reform, India can spur growth by removing tax and duty distortions in individual sectors—especially those that will be the most significant sources of non-farm job creation, such as garment manufacturing and tourism.
- **Rationalise land markets.** In 2013, India enacted the Land Acquisition, Rehabilitation and Resettlement Bill, which was intended to create a framework to deal fairly with the displaced. However, inefficient land markets remain a major impediment to economic growth, as property rights are sometimes unclear and the process for land acquisition is time-consuming. India can reinforce property rights by demarcating land holdings through geospatial surveys and providing standardised title to landowners through digitising records, as Karnataka has done. Similarly, restrictions on monetising land can be loosened or eliminated to facilitate private transactions for major projects and encourage the farm to non-farm shift.

- **Take phased steps to make labour markets more flexible.** At least 43 national laws—and many more state laws—create rigid operating conditions and discourage growth in labour-intensive industries. But ironically, they secure rights for only a tiny minority of workers. India can make its labour market more flexible in a phased manner, and states that have begun this process have higher job-creation rates on average than those that have not. A multitude of rules that restrict terms of work and work conditions can be simplified or eliminated. In the medium term, India could rationalise laws governing dismissal, pairing this with measures to reinforce income security for the unemployed.
- **Help poor workers build skills with government-funded mechanisms.** Vocational education is needed most acutely by the poorest workers—those with little or no education and those who live in rural areas. There are 278 million Indians of working age in these segments, but they are under-served. Providers such as IL&FS Skills have built effective models that focus on providing low-cost delivery, fostering interactive learning, and teaching skills that are in demand. The government can scale up this approach by giving poor workers vouchers that can be redeemed for vocational training with accredited providers that are subject to monitoring and certification. Workers in informal sectors and the self-employed (for example, caregivers, cooks, nursing aides, hairdressers, shop assistants, plumbers, and electricians) can raise their incomes through skill building. Short training courses of a few months' duration, along with certification systems, could help.

### **INVESTMENT IN “JOB-CREATION ENGINES” CAN PROMOTE MORE GEOGRAPHICALLY BALANCED GROWTH AND BE SELF-SUSTAINING**

Along with making broad-based reforms to improve the business environment, India can invest in stimulating specific “job-creation engines”. Our research finds that investing in 70 to 100 sites, such as industrial townships or service hubs, tourism circuits, and food-processing parks, can add 11 million incremental jobs within a decade, and many more as these sites grow in scale. To be successful, they would need to be located in areas with potentially high competitive advantages (where natural endowments, traditional skills, and some base of entrepreneurs already exist, for example)—and there are hundreds of such locations in India across most states.

These job-creation engines would need to be seeded by public investment in infrastructure and services, including reliable and low-cost power, road and rail connections, and affordable housing and schools for workers' families. By our estimates, launching 35 industrial townships over a decade could require capital expenditure for infrastructure averaging some Rs. 30,000 crore (\$6 billion) annually for the first eight years, after which cash flows turn positive. (Launching tourism circuits or food-processing zones is significantly less capital-intensive.) Such investments can be self-sustaining, yielding internal rates of return to the government in excess of 25 percent per year and generating funds for additional investment. Creating thriving new job centres across the country would encourage more geographically balanced economic growth, raising the share of population in small and medium-sized cities. This could alleviate some of the pressures on basic services in India's largest cities.

## India can raise farm yields by rebalancing investment and making targeted reforms in the agricultural sector

Focusing on the productivity of the agricultural sector to lift the incomes of smallholder farmers is one of the most direct routes to addressing rural poverty. Yet agriculture has not kept pace with growth in India's broader economy. Today the nation's yield per hectare is half the average of China, Indonesia, Malaysia, and Thailand. But India has the capacity to raise its yield growth from 2.0 percent, its historical level, to 5.5 percent annually over the next ten years—and this can raise approximately 10 percent of the nation's population above the Empowerment Line.

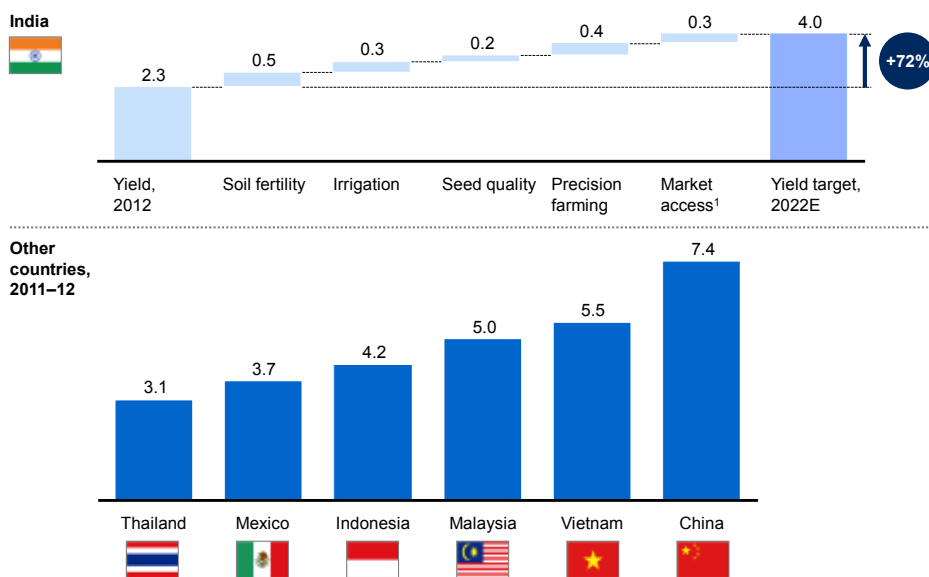
A range of technical levers can help to achieve productivity gains of this magnitude. These include fertiliser and manure use to improve the quality of the soil, more efficient water management (for example, through decentralised water harvesting and micro-irrigation), research-driven improvements in seed quality, technology-based "precision farming", better market access, and improved post-harvest logistics to reduce crop waste (Exhibit E10).

### Exhibit E10

**By 2022, India can increase farm yields to 4 tonnes per hectare, which would be comparable to current yields in other emerging economies**

Yield

Tonnes per hectare



<sup>1</sup> Includes post-harvest infrastructure and rural roads.

NOTE: Numbers may not sum due to rounding.

SOURCE: UN Food and Agriculture Organization; McKinsey Global Institute analysis

In the past, India's spending on agriculture has focused on input and output price support rather than investment in agricultural infrastructure, scientific research, and extension services (which educate farmers on new technologies and best practices). In 2010–11, the government spent Rs. 86,000 crore (\$18 billion) on input subsidies (primarily fertiliser), but less than half that amount (Rs. 34,000 crore, or \$7 billion), on building storage and irrigation systems, as well as scientific research and extension services. Along with rebalancing this investment profile, policy makers can focus on reforms in nine high-priority areas of the agriculture sector:

- **Enable private trade by reforming APMC acts.** India's agricultural produce market committees (APMC) place severe restrictions on private trade in farm produce. APMC reform could introduce a greater degree of competition and enable farmers to obtain sufficient value for their output. Some states have excluded certain agricultural products from APMC coverage, but these are piecemeal solutions at best. The Model APMC Act issued by the central government in 2003 facilitates private trade in more comprehensive way, but the states have varying track records for implementation. To create a sense of accountability and urgency for state-level reforms, India can strengthen transparency and awareness among farmers by keeping a digital record of the prices and quantities at APMC auctions; organising annual *krishi mahotsav* gatherings; and improving direct interaction among farmers, traders, corporations, bureaucrats, and the agriculture minister. A greater role for the private sector, including modern retail, can also enable the agricultural produce market to flourish.
- **Use technology for better price discovery.** Poor price information reduces farmers' bargaining power with traders and prevents them from selling their product in the most lucrative market if multiple options are available. Fee-based price dissemination services can help: Esoko, which operates across Africa, provides automatic and personalised price alerts and buy and sell offers by SMS to farmers. In India, IFFCO Kisan Sanchar Ltd. provides information on market prices via voice messages in local languages.
- **Rationalise price supports for agricultural produce.** The government's minimum support price for a wide range of crops distorts the efficient allocation of resources. For example, it deters farmers from diversifying to higher-value crops such as fruits and vegetables, which are six times as productive per hectare as cereals. The government can rebalance minimum support prices to reflect consumer preferences and the true cost of production, within fiscal boundaries. The creation of an independent regulatory agency to set support prices within a fixed fiscal framework, responsive to consumer needs and preferences, could help.
- **Introduce hybrid public-private crop insurance programmes.** Only 17 percent of India's farmers are insured. The National Agriculture Insurance Scheme, the government's flagship crop insurance programme, needs to become more responsive to their needs. A hybrid model, such as the one that prevails in France (where private-sector companies offer crop insurance, with premiums subsidised by the government) could boost utilisation. With the introduction of competition, market forces, and better administration, public insurance providers would be forced to respond by improving technology and introducing new products and pricing strategies.
- **Provide financial incentives to adopt new technology.** More can be done to encourage farmers to adopt the latest technologies. Under the National Mission on Micro Irrigation, for example, the central government funds 40 percent of the cost of a micro-irrigation system, while the state government contributes 10 percent. Andhra Pradesh has set up special-purpose vehicles for micro-irrigation subsidies.

- **Overhaul the public extension network and enhance private-sector participation.** A holistic approach to extension across various divisions and departments has been successful in some states. In Gujarat, for example, *krishi raths* (mobile vehicles) visit village after village to share information on agricultural best practices. Fee-based private extension services (such as those offered by Mahindra Subhlabh Services Ltd.) can boost extension support to medium-size and large farms with the capability to pay. Public extension will need to play an important role for poor farmers and those in remote geographies, and the focus will need to shift to mobile-based innovations (such as disseminating weather forecasts, new seed information, and improved farming tips through phones).
- **Improve farmers' access to credit.** Regional disparities in access to credit can be addressed by complementing commercial bank lending with channels such as cooperative banks. Technology and delivery innovations such as business correspondents (third-party, non-bank agents who extend banking services right to people's doorsteps) can be deployed in areas with low conventional banking penetration. Targets can be set on the basis of cropped area and level of technology to ensure more equitable access to capital.
- **Reform land markets and create an institutional framework to promote leasing.** Land markets in several parts of rural India are dysfunctional, as mentioned above. Creating more modern and comprehensive landownership records is a crucial first step in addressing this issue. The leasing market could also be strengthened by the introduction of public land banks that allow absentee landowners to "deposit" their land and receive rent for its use. Small and marginal farmers could be encouraged to borrow and cultivate the land, knowing that they have secure tenancy for a fixed period. This would utilise more arable land and allow farmers to increase their output.
- **Integrate governance of agriculture at a grassroots level.** Gujarat has achieved an impressive agricultural turnaround, and at its core is good inter-ministerial coordination. But in most of India, the organisational bureaucracy overseeing the farm sector is overwhelming, with separate ministries for agriculture, chemicals and fertilisers, food processing, water resources, and rural development at the centre, and an even greater multiplicity of authorities at the state level. A formal structure such as a Delivery Unit could be considered to coordinate ministries and departments. Similarly, agricultural missions could empower a team of bureaucrats and domain experts to make decisions and allocate financial support.

## Public spending will need to increase by about 7 percent per year to expand access to basic services

Access to basic services remains extremely weak and fragmented across most of India. To bridge the gaps, India would need to increase social spending by 6.7 percent per year in real terms (as compared to 11 percent annual growth between 2005 and 2012). Total public spending for basic service would need to almost double, rising from Rs. 570,000 crore (\$118 billion) in 2012 to Rs. 1,088,000 crore (\$226 billion) in 2022. The pace of economic growth will

determine whether government revenue will be sufficient to support this increase. Under the inclusive reforms scenario, this higher level of spending would continue to represent about 6 percent of GDP in 2022, approximately the same as at present. In the stalled reforms scenario, however, maintaining funding for basic services at 6 percent of GDP would mean that only about 70 percent of the required amount of spending would be possible due to fiscal constraints.

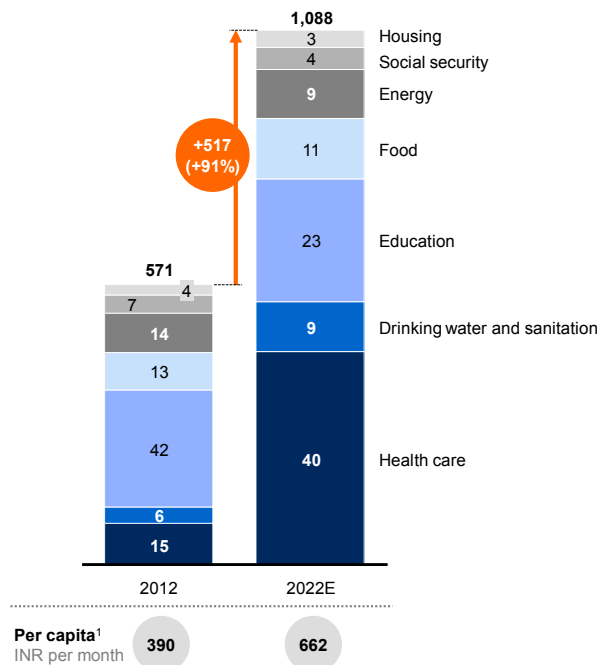
Much of the incremental spending in the inclusive reforms scenario will need to be channeled into health care, clean drinking water, and sanitation, where deprivation is deep and broad-based (Exhibit E11). These services account for about 39 percent of the Empowerment Gap. In addition, our cross-district analysis indicates that improvements in access to health care are not very responsive to increases in individual income, thus necessitating higher public spending. Health care, drinking water, and sanitation would require up to 49 percent of total social spending in 2022, an increase from 21 percent in 2012. Future allocation decisions should consider the areas with the most serious gaps, both in terms of geography (building health centres in the Most Deprived Districts, for instance) and in terms of recipients (targeting nutritional support to reach more of the bottom three deciles of the population by income, who feel the need most acutely).

**Exhibit E11**

**Public spending on basic services needs to almost double, with more resources allocated to health care, drinking water, and sanitation**

Public spend on basic services

%; INR thousand crore, 2011–12 rupees



1 Not accounting for inefficiencies and leakages.

NOTE: Numbers may not sum due to rounding.

SOURCE: Indian Public Finance Statistics; McKinsey Global Institute analysis

## India can transform the delivery of basic services, matching the results already achieved in its best-performing states

Providing all Indian citizens with the basic services they need will require not only an increase in public spending but also fresh thinking about the best ways to deploy resources to achieve maximum results.

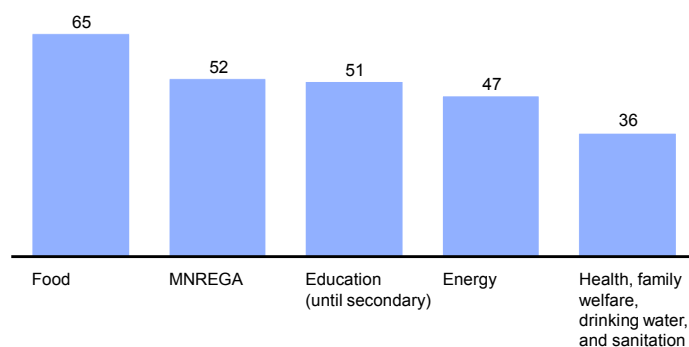
One key initial step in making social spending more effective is selecting the right delivery model. There are two main types: in-kind transfers, in which the government provides the service, and financial transfer models, in which the government transmits benefits directly to consumers and enables them to go directly to the service provider of their choice. To deliver nutritional support, for instance, the government can provide in-kind aid as it does through the Public Distribution System (PDS), which is relatively well-managed in some states (such as Tamil Nadu and Chhattisgarh) but not in others (such as Uttar Pradesh and Bihar). Or it can give consumers electronic transfers that can be redeemed at a variety of shops (the model employed by Oportunidades, Mexico's successful conditional cash transfer programme). Each model can be successful if the right enablers are in place.

Above all, India's public services need an uncompromising push for better outcomes. The focus must shift from simply spending more to spending more effectively. Bringing the entire nation up to the standards already achieved in the best-performing states for food and fuel subsidy distribution, health, and education services would result in a 50 percent increase in the effectiveness of national social spending (Exhibit E12).

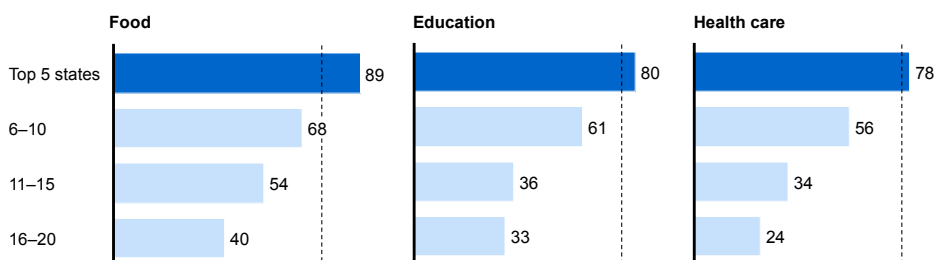
### Exhibit E12

#### At a national level, India can match the effectiveness of spending on basic services currently achieved by its best-performing states

**Current estimated efficiency/effectiveness of government spending, 2012**  
% of spend reaching people



We set a modest target of 75% efficiency in 2022, based on best-performing states



SOURCE: McKinsey Global Institute analysis



External agents—from the private and social sectors—can inject new thinking and new operational approaches to basic service delivery. They can be deployed in a variety of ways, whether by having an outside entity run an entire system funded by the government (for example, public-private partnership schools in which the government provides infrastructure while management is handed over to third parties) or by contracting out specific parts of the process (for example, utilising nongovernmental organisations to run some parts of government health-care systems). In all these approaches, it is critical to have clear and airtight contracts, service-level agreements, and stringent monitoring by the government and other stakeholders.

Engaging local communities, especially women, can have a dramatic effect on improving public services. India is starting to see encouraging developments on this front. In Chhattisgarh, *gram panchayats* (village councils) are monitoring food subsidy recipients. Cooperatives and women's self-help groups in Tamil Nadu are running fair price shops, the point of contact for subsidised food distribution. This kind of involvement transforms the poor from beneficiaries to active participants in the system.

Continuous measurement and tracking of key metrics can make a big difference to the effectiveness of any service provider. Pratham, the largest educational NGO in India, has implemented a systematic national measurement process to evaluate children's learning outcomes, which is creating pressure on schools to improve performance. In Maharashtra, villagers are using pictorial report cards to track doctor and nurse absenteeism and audit the availability of medical supplies. Technology is one of the most promising avenues for transforming the delivery of services. SMS-enabled systems are being used to build stronger communication with beneficiaries, while digital checks and balances (using simple computerisation, electronic transfers of funds, or RFID tracking tags and smart cards) can help guard against corruption.

India also needs a more dynamic and creative approach to augmenting human resources; social franchising models, for example, can transform community members into "basic service entrepreneurs". SughaVazhvu, a health-care service provider in rural Tamil Nadu, operates clinics run by local health extension workers and people with degrees in traditional medicine. CARE Rural Health Mission provides primary health care in Andhra Pradesh using local workers who are trained as "village health champions" and equipped with electronic devices to connect with professionally trained doctors.

Today a host of interesting ideas, models, and experiments are being tried around the world and across India. Based on an analysis of more than 350 case studies, we have identified a range of promising approaches to redesigning the delivery of basic services, with a focus on three critical areas: food and nutrition, education, and health care, all highlighted below.

### **FOOD AND NUTRITION: SIMPLE INTERVENTIONS CAN SIGNIFICANTLY REDUCE HUNGER AND MALNUTRITION**

Hunger is a daily reality for India's impoverished and excluded segments, who rely on subsidised cereals for food security. The government-run PDS manages an elaborate machinery for procurement, storage, and distribution, and there is ample scope to improve its efficiency. India could consider selectively moving from its physical food transfer model to one involving cash transfers in cities, thus

providing consumers with greater choice and also potentially reducing waste and leakage in the supply chain. However, in rural areas, there are significant challenges to rolling out cash transfers at present due to low penetration of banking services and of private food shops that stock cereals in bulk quantities. The physical transfer of subsidised grain through government channels is likely to continue to be an important channel of subsidy delivery in such parts of the country.

The state of Chhattisgarh has shown that simple interventions, such as computerising and regularly updating beneficiary lists, can yield considerable results. Communities are actively involved: fair price shop management has shifted from private dealers to community-based organisations such as *gram pachayats*, women's self-help groups, and cooperatives. The government sends SMS alerts to villagers to inform them when shipments of grain are on the way, converting entire communities into watchdogs. Similarly, surprise checks and audits by the Tamil Nadu government are proving helpful to monitor irregularities in food distribution across the supply chain.

Beyond increasing the overall calorie consumption of the poor, it is crucial to diversify their diet to combat widespread micronutrient deficiencies. New manufacturing technologies can fortify food items with vital micronutrients—and a variety of creative approaches can be used to deliver these to the poor. Widely consumed local staples such as rice, oil, and salt are potent vehicles for micronutrients, and the Philippines and Bangladesh, for example, have launched large-scale production of golden rice, which adds beta carotene that the body converts to vitamin A. Enriched foods can be integrated into existing nutritional programmes, through the PDS, maternal centres, or school meals. For-profit companies and NGOs can also play a role. For example, Britannia has developed iron-fortified Tiger biscuits that are distributed by the Naandi Foundation to 150,000 schoolchildren in Hyderabad, and fortified yogurt is distributed house to house by local “Grameen ladies” in the Grameen Danone Bangladesh project.

### **EDUCATION: INNOVATIVE APPROACHES CAN PRODUCE BETTER LEARNING OUTCOMES**

India's education system is ripe for innovation, and our case studies have yielded a number of interesting ideas and models that could play a role in improving primary and secondary schools. Outcome-oriented educational systems, such as US charter schools, can promote greater accountability for performance. Performance pay for teachers has also proven to be effective. The use of vouchers (currently being piloted by the Centre for Civil Society in Delhi, Uttarakhand, Rajasthan, and Uttar Pradesh) introduces competitive pressure on participating schools to improve performance in order to gain enrolment share. Hiring teachers from the local community enables them to better connect with the students and puts reputational pressure on the teacher to deliver. Some communities may not have a sufficient pool of potential teachers, but this can be overcome through focused training and ongoing support.

School leaders can be powerful change agents. Africa's Bridge International Academies, for example, employs a franchise model through which each school's manager is responsible for its performance, with salaries and bonuses linked to outcomes. Bridge also extensively trains and supports school leadership and management with detailed standard operating procedures for financial and operational management, dashboards, and tracking of performance metrics.

This model incorporates the use of mobile phones, tablets, and customised text messages to reduce the costs of teaching, training, assessments, outreach, and school management. Bridge has lowered costs by 80 percent through this “academy in a box” approach.

New digital learning tools could play a role in transforming teacher training and student engagement. Standardised high-quality content (such as Khan Academy's video tutorials) can allow students to follow lectures at their own pace at home, giving teachers leeway to help each student in a tailored way in the classroom. In Brazil, Minas Gerais has pioneered the use of technology to generate assessments regularly and chart each student's progress.

### **HEALTH: TECHNOLOGY AND INNOVATION TO BRIDGE HUMAN RESOURCE GAPS CAN EXPAND ACCESS**

India's 12th Five Year Plan set out the objective of universal health coverage, but the nation is starting with wholly inadequate health infrastructure and a shortage of trained medical professionals. Given the magnitude of the current gaps, there is ample room—and a strong need—for multiple models to proliferate, and many of them can complement the existing government system.

One of the most urgent priorities is training more skilled health-care professionals at all levels. Sughavazhvu, as mentioned above, solves this problem by tapping into the large human resources pool of alternative medicine practitioners and offering them a three-month training and certification programme, supported by strong protocols. Overseas, Zambia's home-based care model for HIV/AIDS and tuberculosis has mobilised teams of community nurses and health workers to care for patients at home and train family members to provide additional care themselves, thus relieving some of the pressure on the overburdened formal health-care system. A standardised approach to diagnosis and adherence to treatment protocols is vital to maintain standards of care and address a lack of highly trained practitioners.

Using the latest in technology has a direct impact on improving outcomes. For example, Mexico's Medicall Home provides remote care to people in rural areas through the use of mobile phones. Healthpoint Services offers video-conferencing services with urban doctors in more than 70 health points (micro-clinics) in Punjab. The new Swasthya Slate (health tablet) has been introduced in India to perform diagnostic tests (such as blood pressure or blood sugar readings) remotely, at a fraction of the cost of traditional diagnostics. Operation ASHA has treated more than 30,000 tuberculosis patients in India and Cambodia and prevented millions of additional cases. Its eCompliance tracking system verifies patient enrolment and treatment against records from government labs, hospitals, and medicine warehouses. A portable biometric identification system using fingerprints is employed every time the patient receives a dose of medication, and programme managers receive a text message to follow up whenever a patient misses a dose.

## Better governance is the key to implementing inclusive reforms

A failure to execute well on vital programmes has prevented India from achieving its full economic potential. The government's performance in all its roles—from regulatory oversight to providing services to businesses and citizens—is too often marked by inefficiency, unresponsiveness, or even outright corruption. Today, however, there is growing conviction across India that the time has come to demand greater accountability.

The problem of poor governance can be overcome by efforts on two parallel tracks: building stronger institutional capabilities and strengthening systems to ensure accountability in the public sector. Institutional capabilities can be improved by creating appropriate organisational structures, attracting the right talent to government roles, managing performance, and streamlining processes. Accountabilities can be strengthened by creating multiple checks and balances—whether democratic, reputational, legal, or regulatory—for government agencies and institutions. Six promising ideas, outlined below, can set this process in motion:

- **Empowered agencies for high-priority initiatives, given operational flexibility but held strictly accountable for outcomes.** These agencies (led by externally recruited “change agents” or high-performing civil servants) can be set up with a specific mandate—perhaps building a health-care or drinking water system or creating a tourism circuit. The Unique Identification Authority of India, for example, is a quasi-independent agency mandated to issue personal identification numbers to citizens; it has significant flexibility in running its operations while reporting to a high authority. Such empowered agencies in the central and state governments, focused on the most important priorities, could dramatically improve outcomes and governance in focus areas. Similar efforts, with “chief executive”-style leadership, have been employed in Singapore, the United Kingdom, Chile, and elsewhere.
- **Public transparency.** The Right to Information Act was an important start on the journey to greater public transparency. The next steps are more voluntary government disclosure (by, for instance, putting draft policies and legislation online for public debate) and a massive digitisation effort to get government data into open, shareable form. The imperative for more openness and transparency in government can be strengthened by extending the Right to Public Services, now enacted in 17 states, to a host of citizen and business services. Using this framework, performance metrics can be defined and ongoing feedback loops (such as digitised public scorecards at the state, local authority, and specific desk/office levels) can be instituted.
- **Decentralisation.** Through the 73rd and 74th Constitutional Amendments in 1992, India sought to devolve powers to *gram panchayats*. In several areas, such as the PDS in Chhattisgarh, panchayats have played a constructive role. Giving them substantial independence in revenue and expenditure, greater autonomy over how to implement programmes, and more training can strengthen their capabilities; the same point applies to local bureaucracies.

- **Talent and performance management in government.** Performance management systems can ensure that public officials fulfil their duties. Government commissions on administrative reform have pointed out that India's bureaucracy tends to be more focused on internal processes than on results. To reverse this, bureaucrats should have incentives for good performance and penalties for consistently poor performance. Teacher absenteeism in public schools, for instance, can be reduced if the consequence is strict disciplinary action. Senior bureaucratic positions can be filled through a competitive application-based process, even from within the civil service, to create incentives for delivering outcomes.
- **A robust anti-corruption framework.** India ranked 94th among 174 countries in Transparency International's 2012 Corruption Perceptions Index. Mass protests against corruption culminated in the Lokpal and Lokayuktas Act of 2013. While the impact of this move remains to be seen, more can be done (such as establishing whistle-blower protection). International best practices, such as the model set by Hong Kong's Independent Commission Against Corruption, can be used as a template in India.
- **Simplifying laws and building legal and judicial capacity.** Speedy access to justice at a reasonable cost is critical to empowering households and enterprises economically. To achieve this, India would need to increase the number of courts and judges, review a host of archaic laws, and build greater institutional capacity in its legal and regulatory arms. This will create an ecosystem in which citizens can claim their rights.

### **CENTRAL AND STATE GOVERNMENTS, THE PRIVATE SECTOR, AND CITIZENS CAN ALL PLAY A PART IN MAKING IT HAPPEN**

Pursuing an agenda of inclusive reforms will require considerable political will and a laser focus on implementation and outcomes—but it holds the promise of tangibly improving the lives of more than half a billion Indians.

Political leaders at the central and state levels can shape a new agenda focused on the four priorities outlined here: job creation, growth in farm yields, expanded access to basic services (especially health, water, and sanitation) through moderate spending increases, and more effective basic service delivery. Engaging civil society as well as the private sector and the social sector will be crucial to building a broad national consensus around this approach.

Once the strategic direction is set, the central government can drive momentum by making funding commitments that match these national priorities and putting the enablers in place that will support broad economic growth: infrastructure for power and logistics, the right taxation structure, investment in job-creation engines, and measures that expand financial and digital inclusion.

For their part, state governments could start implementing various reforms and governance ideas almost immediately. Many of them do not require new legislation and can be achieved by simplifying and rationalising existing procedures and programmes. Chief ministers can further critical initiatives in their own states by bringing "change agents" into government, defining and monitoring outcomes clearly, and creating implementation offices that are charged with tracking progress and breaking through departmental silos.

The government's efforts to create a business climate that is more conducive to growth will be critical to building greater confidence among the companies, investors, and entrepreneurs who ultimately will have to drive most of the job creation and productivity gains that can raise incomes. It will also be important to find ways to work with the private sector—along with the social sector and NGOs—to bring in innovations and new operating models that can better deliver basic services. And above all, citizens can do their part by exercising their voices in the demand for greater accountability that can push through comprehensive reforms.

□ □ □

Fulfilling the fundamental rights of all Indians to economic opportunity and basic dignity is a daunting challenge in the face of such overwhelming need. But if the central and state governments adopt an agenda built around inclusive reforms, convert it into well-designed programmes, and follow through with execution, India could be poised to make unprecedented gains in living standards. In the decade ahead, the world's largest democracy will prove to be a crucial testing ground in the fight to eradicate extreme poverty worldwide. But the nation can set its aspirations even higher—and if they are met, the result could be a profound and historic step forward in India's economic and human development.







# 1. The Empowerment Line: A new measure of poverty in India

The once-elusive goal of eliminating extreme poverty is finally within the world's reach—and 2030 appears to be a realistic target date, given the unprecedented momentum of the past two decades. There is undeniable progress to celebrate, but above it looms a hard question: is ending extreme poverty enough to achieve a decent standard of living and sense of dignity for the poor?

This question has particular urgency in India, the world's largest democracy and home to one-third of the world's poor. While the nation has made encouraging progress in reducing poverty, its human development indicators suggest that there is no room for complacency—and in fact, it is time to set higher aspirations for delivering a better standard of living to all citizens. To achieve this vision over the next decade, policy makers need a more comprehensive benchmark to measure the gaps that must be closed and better target available resources.

MGI has created the Empowerment Line as a new and more holistic measure of poverty and deprivation in India. We calculate what it would take for an Indian household to fulfil its essential needs and then compare these benchmarks to actual consumption data to determine the degree to which these needs are going unmet.

In applying this standard for 2011–12, we find that 56 percent of the population, or 680 million Indians, lack the means to achieve a minimum acceptable quality of life. This total is some 2.5 times the official poverty count of 270 million—and it implies that providing better living standards to India's entire population will be a much stiffer challenge than the goal of eradicating extreme poverty.

The Empowerment Line begins with the simple premise that every household in India should be able to attain a fundamental sense of economic security, opportunity, and dignity.<sup>3</sup> Setting a benchmark for consumption based on a package of basic needs reveals the dimensions of today's problem and provides a framework for designing interventions that could deliver on the vision of a better quality of life for the majority of India's citizens.

## From 1981 to 2010, the world lifted some 700 million people out of extreme poverty

It is helpful to view India's progress on poverty reduction in a global context. In the past three decades, the world has made unprecedented strides in lifting large populations out of "extreme poverty". This terminology refers to people living on less than \$1.25 a day, a benchmark set by the World Bank Group and commonly

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3 In economic development, "empowerment" is the concept of expanding the narrow options currently available to the poor and increasing their ability to fulfil their potential. See, for example, *Empowerment and poverty reduction: A sourcebook*, World Bank, May 2002.

used for international comparisons.<sup>4</sup> In 1981, 1.9 billion people, or 52 percent of the population of developing economies, struggled to survive on even less. By 2010, however, that number had fallen to 1.2 billion, or 21 percent.<sup>5</sup>

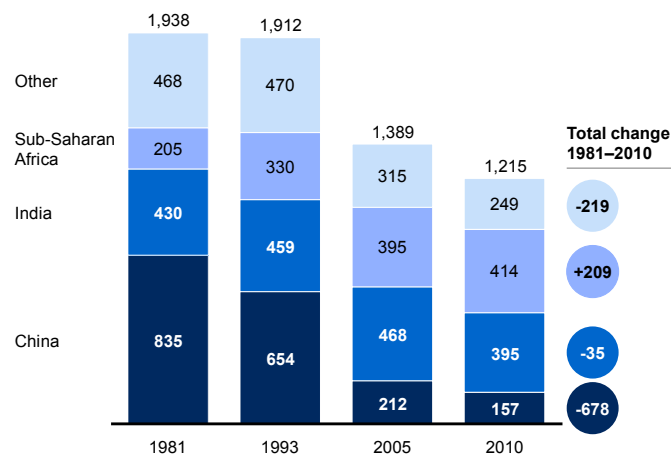
The pace of improvement has been accelerating. From 1981 to 1990, just 29 million people exited extreme poverty, hardly registering a dent in the ranks of the world's extremely poor. In the following decade, that number rose to 167 million people. Momentum grew sharply from 2000 to 2010, when 527 million people were lifted from extreme poverty.<sup>6</sup>

But these gains have been uneven. In fact, China accounts for 94 percent of the world's progress, having reduced its extreme poverty head count by 678 million from 1981 to 2010 (Exhibit 1). As the nation's remarkable economic rise unfolded, China's GDP per capita grew by an average of 10 percent per year. Meanwhile, the number of people in extreme poverty fell by 168 million in the rest of East Asia and by 62 million in South Asia (including India); these are substantive gains but on a far smaller scale than China's transformation. Sub-Saharan Africa actually added more than 200 million to the ranks of the extremely poor over these three decades.

### Exhibit 1

#### China accounted for 94 percent of the decline in extreme poverty between 1981 and 2010

Population below the \$1.25-per-day poverty line  
(in purchasing power parity, at 2005 international prices)  
Million



NOTE: Numbers may not sum due to rounding.

SOURCE: World Bank; McKinsey Global Institute analysis

- 4 In this chapter's discussion of global poverty, the "extremely poor" are those living below the World Bank Group's \$1.25-a-day line (at 2005 international prices). Within India itself, however, we use the terms "officially poor" and "extremely poor" to refer to the population below India's official or national poverty line (which is estimated based on the recommendations of the Tendulkar Committee and is sometimes referred to as the Tendulkar poverty line).
- 5 The global estimates of extreme poverty discussed in this section are from World Bank Group data.
- 6 Throughout this report, "lifting populations out of poverty" refers to reducing the poverty head count, which accounts for population growth as well as people exiting poverty.

The positive shift in trajectory since 2000 has been apparent across regions, however, raising hopes that the rest of the world could someday match China's rapid gains. From 2000 to 2010, East Asia (excluding China) raised 113 million people from extreme poverty, posting gains three times faster than in the previous decade. South Asia (including India) also raised 113 million from extreme poverty from 2000 to 2010, marking the first decade in which the number of people living below the \$1.25-a-day line did not increase. Even though 37 million people were added to the ranks of extreme poverty in sub-Saharan Africa during this period, this represents less than half of its net additions in the preceding decade.

## The world may be poised to eliminate extreme poverty in the next 15 years

The goal of eliminating extreme poverty was enshrined as one of the eight Millennium Development Goals (MDGs) adopted by the United Nations. Working from the starting point of 1990, when 43 percent of the developing world's population was living on less than \$1.25 a day, the MDGs set an intermediate target of cutting this proportion in half by 2015. The rapid progress achieved after 2000 met this benchmark even faster than envisaged, as the share had dropped to 21 percent by 2010.

This positive momentum has prompted the world to consider adopting a more ambitious goal for the future. In June 2013, the World Bank Group set new targets to reduce the global rate of extreme poverty to single-digit levels by 2020 and to virtually eliminate it by 2030.

Several studies indicate that realising this goal is possible. A recent World Bank report found that even in a pessimistic scenario, global poverty would fall from 19 percent in 2012 to 12 percent by 2027—but a more hopeful outlook would reduce it to 9 percent by 2022 and 3 percent by 2027, lifting nearly one billion people out of extreme poverty well before 2030.<sup>7</sup> Other studies have also found that based on “optimistic” economic growth assumptions (in line with the International Monetary Fund's economic forecasts), it would be possible to reduce the global rate of extreme poverty to about 4 to 5 percent of the population in developing countries by 2030 (Exhibit 2).<sup>8</sup>

India is home to one-third of the global population living below the \$1.25-per-day line—and as a result, much of the world's hope for eliminating extreme poverty now rests there. If India can implement effective policies over the next decade to raise living standards, it can turn the tide in the global fight against poverty.

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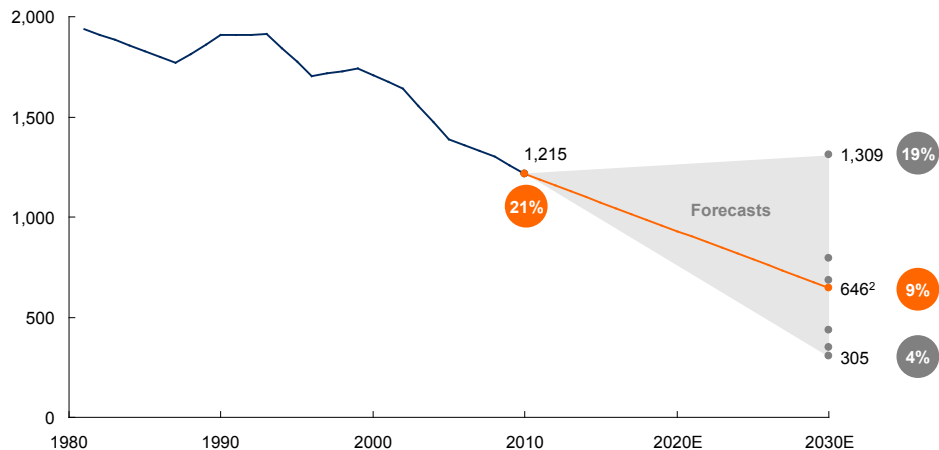
7 Martin Ravallion, *How long will it take to lift one billion people out of poverty?* World Bank policy research working paper number 6325, January 2013. The more optimistic scenario assumes that over the next decade developing economies maintain the faster trajectory of economic performance and poverty reduction they have achieved since 2000.

8 See Peter Edward and Andy Sumner, *The future of global poverty in a multi-speed world: New estimates of scale, location, and cost*, International Policy Centre for Inclusive Growth working paper number 111, June 2013; Laurence Chandy, Natasha Ledlie, and Veronika Penciakova, *The final countdown: Prospects for ending extreme poverty by 2030*, Brookings Institution policy paper number 2013-04, April 2013; and Homi Kharas and Andrew Rogerson, *Horizon 2025: Creative destruction in the aid industry*, Overseas Development Institute, July 2012.

**Exhibit 2****Extreme poverty is forecast to fall to approximately 9 percent globally by 2030**

Population of developing economies below \$1.25-per-day poverty line<sup>1</sup> (in purchasing power parity, at 2005 international prices)

Million



<sup>1</sup> Forecasts use survey methodology and include two economic growth scenarios and three income distribution scenarios.

<sup>2</sup> Simple average of six scenarios.

<sup>3</sup> Based on medium variant population forecast.

SOURCE: World Bank; Peter Edward and Andy Sumner, *The future of global poverty in a multi-speed world*, 2013; UN Population Division; McKinsey Global Institute analysis

## India contributed to the world's progress by halving the share of people in poverty from 1994 to 2012

India has made significant strides in reducing poverty: the share of people living below the government's official poverty line dropped from 45 percent to 37 percent during the post-reform period of 1994 to 2005, even as the absolute number remained static at about 400 million.<sup>9</sup>

From 2005 to 2012, India's GDP grew at a more rapid clip of 8.5 percent per year. Suddenly, India was among the ranks of the fastest-growing developing economies in the world—and simultaneously, the government made a strong commitment to faster poverty reduction through increased spending on social welfare programmes. India also endeavoured to create a rights-based framework for development through the Mahatma Gandhi National Rural Employment Guarantee Act (MNREGA) in 2006, the Right to Education Act in 2009, and, most recently, the National Food Security Act in 2013.<sup>10</sup>

This confluence of events ought to have yielded tremendous benefits for India's poor. And indeed, from 2005 to 2012, India's pace of poverty reduction accelerated. The share of the population below the official poverty line fell from 37 percent in 2005 to 22 percent in 2012—the fastest rate of poverty reduction

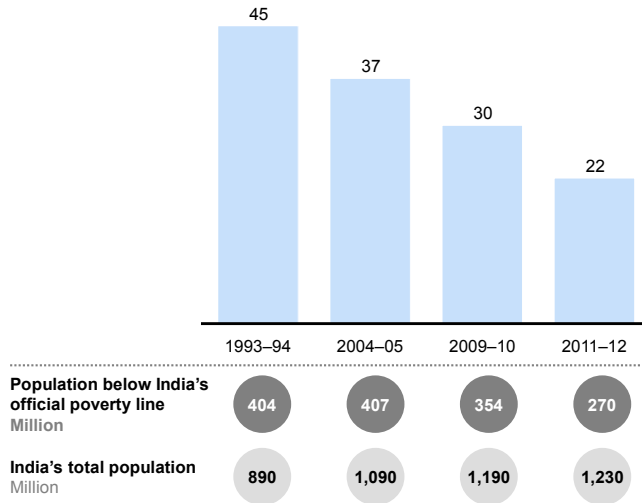
<sup>9</sup> Throughout this report, we refer to periods in the Indian context based on accounting year conventions in India. Thus 1994 refers to the accounting period 1993–94, running from April 1, 1993, to March 31, 1994.

<sup>10</sup> See Appendix F for a list of major government programmes.

India has achieved since the economic reforms of the early 1990s—as an impressive 137 million people rose above this threshold (Exhibit 3).

**Exhibit 3**  
**Since 1994, India has halved the share of those in extreme poverty**

Head-count ratio of people below India's official poverty line  
 %



SOURCE: Planning Commission of India; McKinsey Global Institute analysis

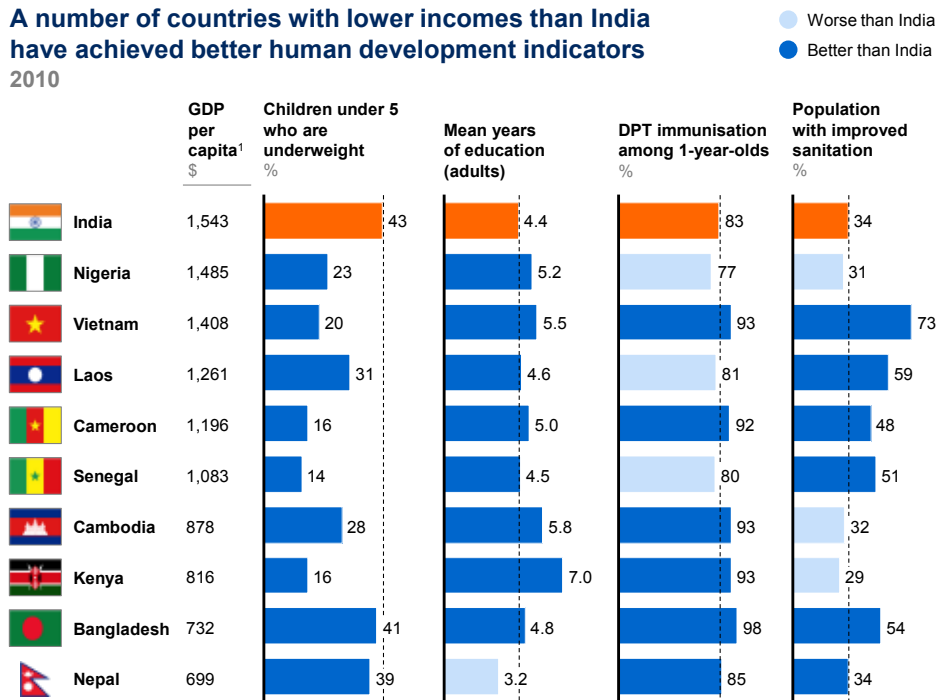
Even as we acknowledge this achievement, it is time to question whether exiting poverty is enough to guarantee a decent life. Answering this requires an understanding of the extent and nature of the needs—both met and unmet—of India's people. It requires exploring whether achieving the official poverty benchmark enables the poor to obtain nutrition, health, education, and economic security.

**India's official poverty line does not fully account for human development, making a more holistic measure necessary**

India's human development indicators show that deprivation extends well beyond the 22 percent of Indian who live below the official poverty line. Forty percent of the nation's children under the age of 3 suffer from malnutrition. Fifty percent of its households have no access to improved sanitation facilities. Seventy percent of those between the ages of 15 and 65 have only a primary school education—or no education at all. These statistics are symptomatic of the broader issue of poor living standards experienced by a significant portion of India's population. India's human development indicators do not compare favourably to those of several other countries at similar or lower levels of income (Exhibit 4).

**Exhibit 4****A number of countries with lower incomes than India have achieved better human development indicators**

2010

<sup>1</sup> 2011 data.

SOURCE: United Nations Development Database; World Bank Group; McKinsey Global Institute analysis

A focus on these aspects of poverty led MGI to consider whether there is a way to create a more comprehensive measurement using the currently available government data sets and estimates of what it would take for the average Indian household to meet its full range of fundamental human development needs. The result is the Empowerment Line, which is an expenditure-based poverty measure—one that takes into account what constitutes a “minimum acceptable standard of living” as defined by the ability to meet eight basic needs.

In addition, poverty goes beyond incomes and the affordability of basic services—it also involves lack of access to those services. This is especially relevant in education and health care, which depend on shared social infrastructure such as schools and hospitals. For example, India has only 1.3 hospital beds per thousand people, well below the world average of 3.0 and the recommended norm of 3.5 set by the World Health Organization. The shortage of medical facilities is compounded by absenteeism among doctors, nurses, and other health-care professionals. Even in India’s cities, where the density of hospital beds is much higher, it is often difficult to obtain affordable health care. Poor human development outcomes reflect weak levels of access to basic services, compounded by much of the population’s inability to afford these services even where they are available.

Effective poverty reduction that can lift human development requires addressing the issue from both of these angles (see Box 1, “The need to measure poverty beyond expenditure and income”). Therefore, to complement the Empowerment Line’s focus on household purchasing power, we also build an assessment of availability of basic services and social infrastructure from a geographic perspective, using more current district-level (rather than household-level) data. See Chapter 4 for more on MGI’s Access Deprivation Score.

### Box 1. The need to measure poverty beyond expenditure and income

Where there is deprivation, there are barriers to the advancement of human development, which economists Mahbub ul Haq and Amartya Sen defined for the United Nations Development Programme as “a process of enlarging people’s choices. The most critical of these wide-ranging choices are to live a long and healthy life, to be educated, and to have access to resources needed for a decent standard of living. Additional choices include political freedom, guaranteed human rights and personal self-respect”. Designing a rigorous economic metric that can integrate this multitude of aspirations is no easy task.

Expenditure-based (or income-based) poverty measures view deprivation through a single lens: consumption expenditure (or income). But this approach has proved inadequate in capturing the multiple deprivations that are part and parcel of a life lived in poverty, including education, health care, drinking water, and housing, all of which are fundamental to the concept of human development.<sup>1</sup> Someone living above the poverty line in terms of expenditure may still be deprived if he cannot access medical care, is illiterate, or finds it difficult to get safe drinking water despite the ability to pay. The limitations of expenditure-based metrics have prompted researchers and scholars to develop alternate measures of poverty.

The Multidimensional Poverty Index (MPI), a household survey-based assessment devised by the Oxford Poverty and Human Development Initiative (OPHI), is a strong push in this direction. It was developed to complement the \$1.25-a-day measure created by the World Bank Group. The MPI goes beyond the traditional focus on expenditure or income to reflect the multiple deprivations that a poor person faces in three key areas: education, health, and living standards.<sup>2</sup> It takes into account ten indicators (such as child mortality, school enrolment, and access to electricity) and arrives at a measure of poverty that captures the hardships experienced by the poor.

Based on the MPI, 1.6 billion people worldwide (or 31 percent of the population in the 104 countries analysed) lived in poverty in 2013. This is far higher than the 1.2 billion people (or 21 percent of the developing world’s population) living in extreme poverty as defined by the \$1.25-a-day line. Just over half (51 percent) of those considered poor by the MPI benchmark live in South Asia and 29 percent in sub-Saharan Africa. The MPI identifies at least 400 million people who are not “extremely poor” but are poor in the practical and tangible sense of doing without the basics.

The MPI was estimated for India in 2005–06 (based on National Family Health Survey data). It indicated that 48.5 percent of India’s people were deprived on multiple indicators—compared with government figures showing that 37 percent of the population was officially poor in 2004–05. This suggests that India’s official poverty count, which stood at just 22 percent of the population in 2012, may also fail to measure the true extent of deprivation. Unfortunately, the OPHI has not been able to update India’s MPI since 2006 due to limitations in the current data sets available.

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1 Sudhir Anand and Amartya Sen, “Concepts of human development and poverty: A multidimensional perspective”, in *Human development papers 1997*, United Nations Development Programme.

2 Sabina Alkire and Maria Emma Santos, *Multidimensional poverty index*, Oxford Poverty and Human Development Initiative, July 2010.

## The Empowerment Line reveals that 680 million Indians lack minimum acceptable standards of living

MGI's Empowerment Line is a new metric that takes into account the needs of hundreds of millions of citizens who are above the threshold of the official poverty line but continue to face multiple deprivations. We start by defining an economically empowered household, in the Indian context, as one that is able to fulfil eight basic needs at a minimum acceptable level: food, energy, housing, drinking water, sanitation, health care, education, and social security. Meeting these requirements would guarantee a decent if modest quality of life.

Using the cost-of-basic-needs approach, MGI's Empowerment Line is an expenditure-based measure of poverty that builds on the thinking of leading welfare economists (see Box 2, "The cost-of-basic-needs approach").<sup>11</sup> We estimate the cost to each family of obtaining the goods and services required to meet these needs, assuming that infrastructure and access points are available at an efficient cost. We then subtract the estimated value of public goods and services that are already being delivered to them, free of cost.<sup>12</sup> This formula yields the Empowerment Line, or the level of private household consumption needed to achieve minimum acceptable standards of living (Exhibit 5).

### Box 2. The cost-of-basic-needs approach

Between poverty and empowerment lies a continuum of incomes and expenditures. Poverty lines aim to define in a relatively precise yet simple way the threshold of income, consumption, or well-being above which a person is no longer "poor", in order to shape policy responses.

The cost-of-basic-needs approach employed in the Empowerment Line estimates the normative cost of a minimum threshold of consumption across the most basic human needs. First used in a study of poverty in York, England, by Seebohm Rowntree in 1899, the cost-of-basic-needs method has the advantage of anchoring the definition of poverty in the day-to-day economic realities of the poor. But it does elicit some criticism, since it requires some judgment to define what constitutes "basic needs" and the minimum amount of consumption across each one to no longer be "poor". It is also difficult to use this approach to make consistent comparisons over time, given incomplete pricing data and changes in what constitutes the appropriate bundle of goods and services that make up basic needs.

Nevertheless, the cost-of-basic-needs approach can more accurately assess the extent of unmet needs and guide programmes that attempt to bridge these gaps. The Empowerment Line we propose for India is a starting point that can be further refined in terms of the essential components of a "minimum acceptable standard of living". Richer data can also be used to identify regional price variations and better estimate the cost of service delivery in different parts of India.

11 See Jonathan Haughton and Shahidur R. Khandker, *Handbook on poverty and inequality*, World Bank, 2009, and Martin Ravallion, *Poverty lines in theory and practice*, Living Standards Measurement Study working paper number 133, World Bank, 1998.

12 Where goods are partially subsidised by the government (as in the case of subsidised food), we subtract the subsidised component.

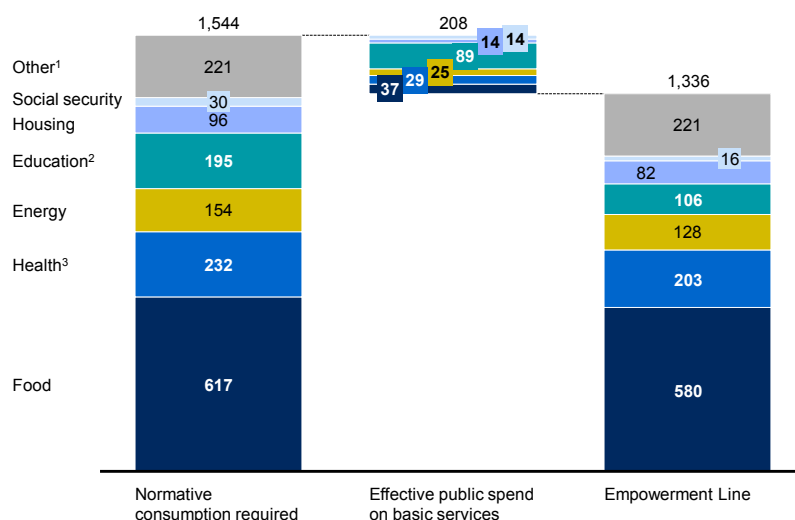


**Exhibit 5**

**The Empowerment Line calculates the cost of meeting eight basic needs, minus the value of government services that reach the people**

**Normative consumption requirement and Empowerment Line**

INR per capita per month, 2011–12; 2011–12 prices



1 Includes clothing, footwear, travel, entertainment, communication, and domestic appliances.

2 Includes costs of primary education and secondary education (or vocational training).

3 Includes health care, drinking water, and sanitation.

NOTE: Numbers may not sum due to rounding.

SOURCE: McKinsey Global Institute analysis

To estimate the number of people who live below the Empowerment Line, we use the National Sample Survey Office's (NSSO) household consumption survey, which is also the base data set used by the government to estimate the number of people living below India's official poverty line.<sup>13</sup>

The Empowerment Line thus presents a more holistic picture of deprivation in India using the most current and credible data sets available, and we believe it can serve as a helpful starting point for a larger debate on how India can finally break the grip of poverty.

Determining India's Empowerment Line at the national level, as well as for urban and rural India, involves the three steps outlined below, which are described in further detail in Appendix A.

**STEP 1: THE COST OF MEETING EIGHT BASIC NEEDS IS ESTIMATED AT RS. 1,544 PER CAPITA PER MONTH FOR THE AVERAGE INDIAN**

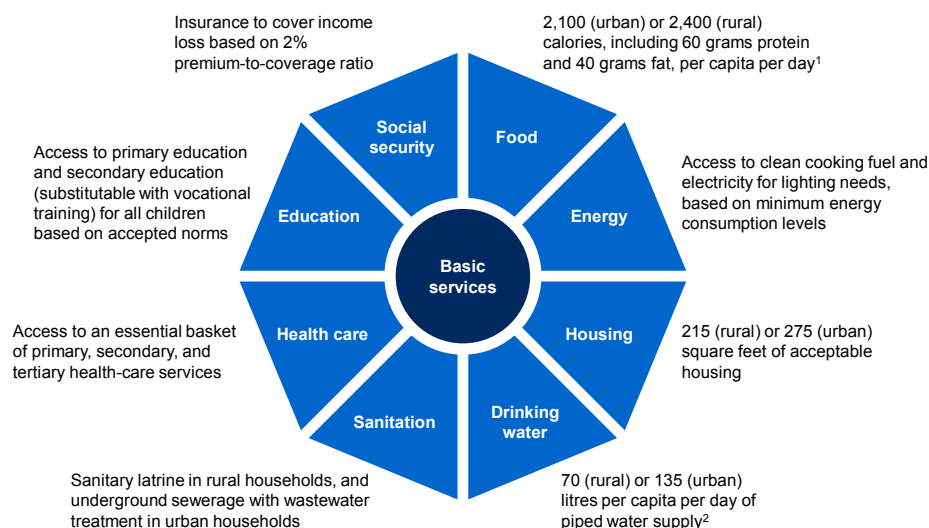
We prioritise eight basic needs as core elements: food, energy, housing, drinking water, sanitation, health care, education, and social security (Exhibit 6). We also make a modest allowance for additional consumption such as clothing, transportation, communication, and recreation. We include only consumption

13 The accuracy of the NSSO surveys has been widely debated. However, we have used statistics from the NSSO, as it is the most accurate and extensive household-level expenditure database available. For a detailed discussion of this issue, see Arvind Panagariya and Megha Mukim, *A comprehensive analysis of poverty in India*, World Bank, Policy research working paper 6714, December 2013, or Surjit S. Bhalla, *Inclusion and growth in India: Some facts, some conclusions*, London School of Economics Asia Research Centre working paper number 39, 2011.

requirements in the basket, while acknowledging that issues such as the expectation of physical security or the right to self-expression are essential parts of human development but are harder to quantify in economic terms.

### Exhibit 6

#### Eight basic services contribute to a minimum acceptable standard of living



1 Protein and fat norms for adults.

2 Drinking water encompasses water for household uses as well as for personal consumption.

SOURCE: McKinsey Global Institute analysis

For each basic need, we define minimum acceptable standards of consumption in physical terms, at an individual or a household level, using goals and norms established by the Indian government and expert bodies. Physical standards of consumption in food, for instance, set the requirements of 2,400 calories per day for an individual in rural areas and 2,100 in urban areas (validated for the carbohydrate, fat, and protein mix and for gender, ages, and occupations). For energy, we use estimates of the value of minimum non-discretionary rural and urban fuel consumption per person. For housing, we take a minimum space of 215 square feet for rural areas and 275 square feet in urban areas. For water, government estimates indicate that individuals in rural areas require at least 70 litres per day and urban individuals require 135 litres per day to cover both personal consumption and household uses. For sanitation, we assume every rural household should have access to a latrine, and every urban household needs access to sewerage and a solid waste management system. For health care, we use the cost of providing universal coverage, which is estimated by constructing a package of basic health-care interventions. Educational needs are pegged at a minimum of primary and secondary schooling for all children (with vocational training as an acceptable substitute for the high school component). See Appendix A for details on the various sources used.

For each component of consumption, we develop estimates of a normative cost (that is, the cost at which each need can be met), assuming there are efficient models of delivery available to all households. We develop variations of these costs for urban and rural areas and for each state. We add the cost of each element together to arrive at the total economic cost of achieving a minimum acceptable standard of living.

Using this methodology, the national average normative consumption required to meet the minimum acceptable standard of living is Rs. 1,544 per capita per month (in 2011–12 prices). For a family of five, this would mean a cost of living of Rs. 7,720 per month. The average normative consumption required in urban India is Rs. 1,922; in rural India, it is Rs. 1,420.

### **STEP 2: THE VALUE OF GOVERNMENT SERVICES REACHING THE PEOPLE IS ESTIMATED AT RS. 208 PER CAPITA PER MONTH**

Part of an individual's normative cost of living may be borne by the government. Hence, we lower the total cost of an acceptable standard of living by the amount of public spending on these goods and services that actually reaches the people. The public spending for each basic need is the total of expenditure by India's central and state governments towards addressing that need (for example, the money spent to subsidise food and fuel, run health-care centres and schools, or pay wages under MNREGA). In 2012, India's annual government spending on the eight basic services in our basket totalled Rs. 570,000 crore<sup>14</sup> (\$118 billion)—or Rs. 390 per capita per month.<sup>15</sup>

Not all this spending translated into benefits delivered to citizens, and the Empowerment Line is adjusted to reflect only the portion that did. This share is estimated using data from the government's National Sample Survey for food, fuel, and employment guarantee wages, and government statistics on health and education outcomes vs. spending across India's states. Overall, we estimate that just half of government spending—or Rs. 208 per capita per month<sup>16</sup>—helps people achieve their basket of eight essential needs (see Chapter 2 and Appendix B for further details). We deduct this adjusted amount of public spending from the normative consumption requirement to reach the Empowerment Line.

### **STEP 3: AT RS. 1,336 PER CAPITA PER MONTH, THE EMPOWERMENT LINE IS MORE THAN 1.5 TIMES THE OFFICIAL POVERTY LINE**

The nationwide Empowerment Line is estimated at Rs. 1,336 per capita per month (\$27.80 in 2011–12 prices). A family of five would need about Rs. 6,700 per month of private consumption to reach this threshold.<sup>17</sup>

The Empowerment Line's minimum standards of consumption are more than 50 percent higher than those implicit in the official poverty line (Exhibit 7). Food costs are 23 percent higher, for example, although food accounts for a smaller share (43 percent) of the consumption embedded in the Empowerment Line than its share (54 percent) to meet the official poverty line. Non-food elements, notably health and education, are given greater weight in the Empowerment Line basket of consumption than in that of the official poverty line.

14 One crore is equal to ten million.

15 There are two types of public spending: substitutes for private expenditure (such as electricity subsidies or the cost of running a school) and spending that boosts private incomes (such as cash transfers through work programmes). Because of the empirical difficulty of separating out the two, we include both types of public spending.

16 The estimated average government spending on basic services that reaches a person in the bottom seven deciles of the population by expenditure.

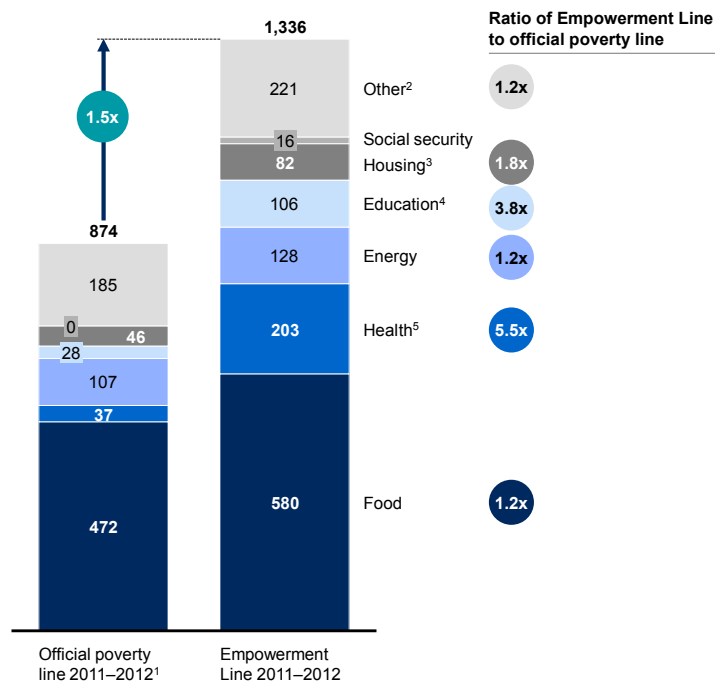
17 All Empowerment Line figures are given in 2011–12 prices.

### Exhibit 7

## The Empowerment Line is more than 50 percent higher than the official poverty line, with substantial variation in requirement by service

### Official poverty line and Empowerment Line

INR per capita per month, 2011–12; 2011–12 prices



1 Subcomponents calculated based on Tendulkar poverty estimation methodology used in 2004–05.

2 Includes clothing, footwear, travel, entertainment, communication, domestic appliances, etc.; corresponding category in official poverty line does not include travel.

3 Corresponding category in official poverty line includes travel costs.

4 Includes primary and secondary education costs; corresponding category in official poverty line includes all education costs.

5 Includes health care, drinking water, and sanitation; corresponding category in official poverty line includes health care only.

NOTE: Numbers may not sum due to rounding.

SOURCE: Report of the Expert Group to Review the Methodology for Estimation of Poverty, Planning Commission, 2009; McKinsey Global Institute analysis

As expected, there are significant variations across urban and rural India, reflecting different physical norms and costs of living. The urban Empowerment Line is set at Rs. 1,692 per capita per month, and the rural Empowerment Line is estimated to be Rs. 1,228.

## 680 MILLION PEOPLE LIVE BELOW THE EMPOWERMENT LINE, 2.5 TIMES THE OFFICIALLY POOR

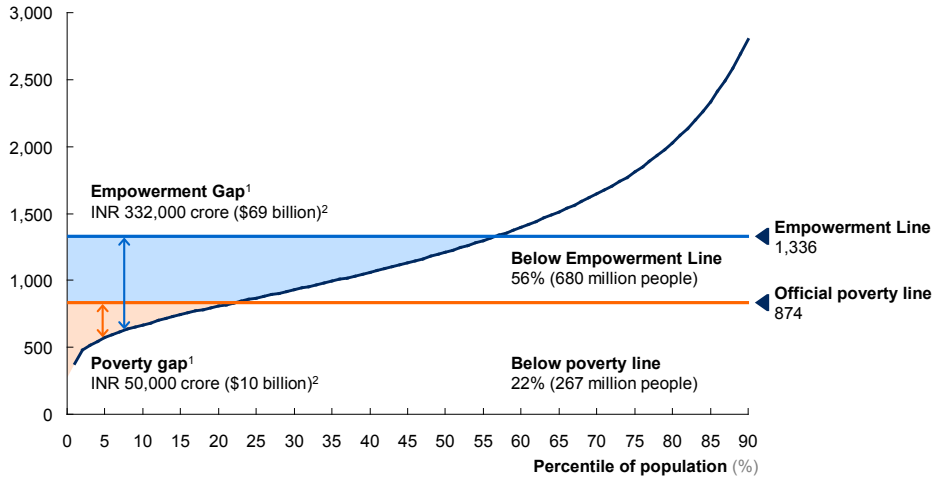
As of 2012, almost 680 million people (56 percent of India's population) had consumption levels below the Empowerment Line. This is 2.5 times the number of Indians who fall below India's official poverty line—and it indicates that a majority of citizens lack the ability to meet their basic economic needs.

The cost of bridging the gap between the population's current consumption and the levels called for in the Empowerment Line in 2012 was about Rs. 332,000 crore (\$69 billion) per year or about 4 percent of GDP. We call this the "Empowerment Gap"—and it is seven times the cost of bridging the poverty gap, or the difference between the current consumption of India's officially poor and the consumption level implicit in the official poverty line (Exhibit 8).

**Exhibit 8**

**The Empowerment Gap, at Rs. 332,000 crore (\$69 billion), is seven times larger than the poverty gap**

Average monthly consumption expenditure  
INR per capita per month, 2011–12, in 2011–12 prices



1 The Empowerment Gap and the poverty gap are defined as the aggregate differential between actual private consumption expenditure and the consumption requirements of the Empowerment Line and the poverty line, respectively.  
2 Using average exchange rate of \$1 = INR 48.0769 for April 2011–March 2012.

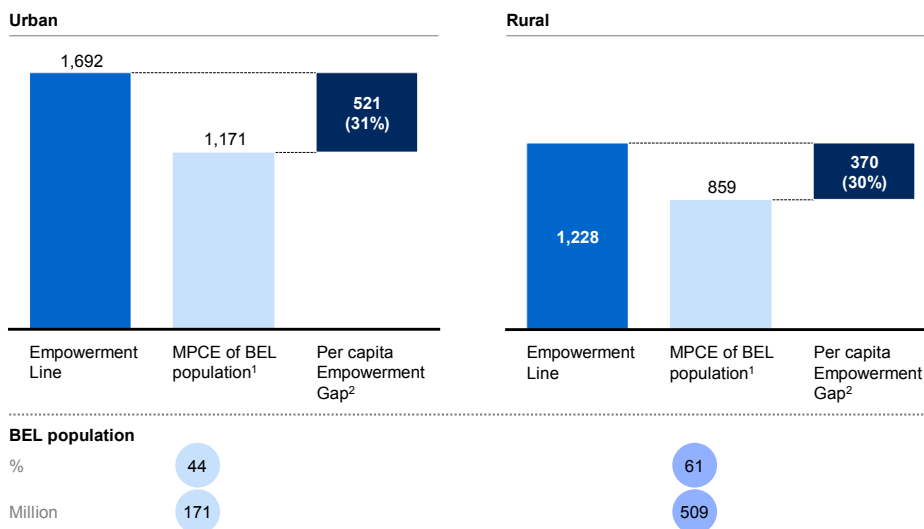
SOURCE: National Sample Survey Office survey, 68th round; McKinsey Global Institute analysis

Urban India is home to 171 million people below the Empowerment Line, while the remaining 509 million live in rural areas. However, the depth of deprivation, as measured by the per capita Empowerment Gap as a proportion of the Empowerment Line, shows that people below the Empowerment Line are equally disadvantaged regardless of whether they live in urban or rural India (Exhibit 9).

**Exhibit 9**

**The per capita Empowerment Gap is similar in urban and rural India on a relative basis**

Empowerment Line and per capita Empowerment Gap, 2012  
INR per month



1 MPCE = Monthly per capita expenditure, average; BEL = Below Empowerment Line.  
2 The Empowerment Gap is defined as the monetary value of the difference between actual private consumption expenditure and the consumption requirements of the Empowerment Line.

NOTE: Numbers may not sum due to rounding.

SOURCE: McKinsey Global Institute analysis

The Empowerment Line therefore magnifies the economic challenge of alleviating poverty by a factor of seven. Bridging the Empowerment Gap will be significantly more challenging than simply raising public spending by an additional 4 percent of GDP, however. In reality, it will require investing substantially more in order to fill gaps in social infrastructure and access to basic services over a sustained period of time—and these services will need to become more effective to ensure that the maximum number of people can derive real benefit from them. As we will discuss in greater detail in the chapters that follow, we estimate that on average, Indians currently lack access to 46 percent of the services they need and that just 50 percent of government spending actually reaches the people.

□ □ □

India has made tangible strides in alleviating extreme poverty, but even the millions who have risen above the official poverty threshold continue to struggle for a basic sense of security and dignity. The Empowerment Line, as a new measure of what constitutes a minimum acceptable standard of living, quantifies their needs and creates a framework for addressing their aspirations for a better life. In magnifying the challenges facing India's policy makers, this framework also points to the need for a broader set of solutions beyond a simple increase in subsidies.







## 2. What keeps India poor

Since independence, poverty reduction has been the focus of successive governments in India, as encapsulated in the 1971 *Garibi hatao* (“Abolish poverty”) campaign. Yet the cost-of-basic-needs lens adopted by the Empowerment Line highlights the fact that the vast majority of Indians still do not have minimum acceptable living standards. They lack both adequate incomes and access to a range of effectively delivered basic services.

To understand what keeps India poor, a look at the recent past is revealing. Productivity growth that led to rising incomes and private consumption has driven the major share of recent poverty reduction. However, its impact could have been greater if India had created more and better non-farm jobs and raised agricultural yields faster. Public spending on basic services, the other lever, contributed much less to poverty reduction. Not only has India under-invested in critical areas such as health care, but across all areas, just half of what is spent actually reaches the people. Addressing these shortcomings is critical to solving India’s poverty challenge.

### Some three-quarters of past reduction in the Empowerment Gap was due to rising incomes

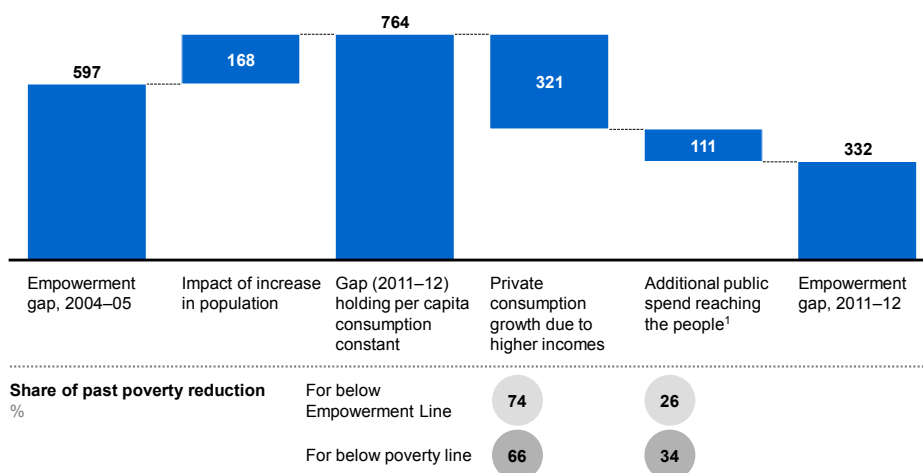
Productivity growth is the key to raising incomes and living standards. This is evident when we look back in time to identify factors that led to past improvements in the Empowerment Gap. Between 2005 and 2012, India’s share of people below the Empowerment Line fell from 78 percent of the population to 56 percent. During the same period, the Empowerment Gap fell by 44 percent, from Rs. 597,000 crore in 2005 to Rs. 332,000 crore in 2012 (in 2011-12 prices).

This progress was driven by two factors: rising incomes and personal consumption on the one hand, and rising public spending on basic services on the other. To quantify the impact of the first lever, we rely on NSSO estimates of the per capita private consumption of people who were below the Empowerment Line in 2005, adjusting for population growth in the seven years to 2012. To quantify the second lever, we rely on published fiscal data, assuming constant effectiveness of spending over this period.

Based on these broad estimates, we conclude that rising incomes and private consumption growth contributed an estimated 74 percent of the reduction in the Empowerment Gap achieved from 2005 to 2012 (Exhibit 10). Increased public spending had a much smaller effect, driving 26 percent of the reduction in the Empowerment Gap for those below the Empowerment Line in 2005. Its impact was greater for the poorest segments of the population, contributing 30 to 35 percent of the improvement experienced by those below the official poverty line, though rising incomes drove the bulk of the impact for them, too.

**Exhibit 10****About 75 percent of recent reduction in the Empowerment Gap was attributable to higher incomes, the rest to more public spending****Empowerment Gap from 2004–05 to 2011–12**

INR thousand crore, 2011–12 prices



<sup>1</sup> Public spending reaching the people is about 20% of monthly per capita expenditure for the population below the Empowerment Line in 2012.

NOTE: Numbers may not sum due to rounding.

SOURCE: National Sample Survey Office, household consumption survey, 61st (2005) and 68th (2012) rounds; McKinsey Global Institute analysis

The contribution of private consumption to the narrowing of the Empowerment Gap was high due to productivity growth. As India experienced rapid GDP growth of 8.5 percent annually from 2005 to 2012, household incomes increased.<sup>18</sup> But more broad-based economic growth driven by additional non-farm job creation could have reduced the Empowerment Gap to an even greater extent.

India has raised public expenditure on social welfare programmes aggressively since 2005, but the impact has been muted—in large part because much of that spending never reached its intended beneficiaries. An estimated Rs. 285,000 crore (\$59 billion), or some 50 percent of public resources meant for improving the lives of average citizens, did not actually reach the people as real benefits in 2012, as we will discuss in further detail later in this chapter.

## Broad-based income gains were limited by weak non-farm job creation

Improvements in productivity—both within individual sectors and due to the movement of labour into higher-productivity sectors—lead to higher incomes. Although India has made strides on this front, the most meaningful productivity improvements have been concentrated in capital- and skill-intensive sectors. Three factors have contributed to a relatively poor productivity performance in the broader economy: the slow pace of non-farm job creation, a high share of unorganised and sub-scale enterprises, and a skills shortage in the labour force.

<sup>18</sup> Government employment guarantee programmes may have also had an indirect impact on household consumption due to an increase in rural minimum wages, but the impact is hard to quantify, and we have not disaggregated this component of total consumption growth.

## NON-FARM JOB CREATION HAS BEEN INADEQUATE, RESULTING IN LOW PRODUCTIVITY

Nearly half of India's workforce (and 60 percent of the "working poor"<sup>19</sup>) is employed in agriculture—but the sector's labour productivity is one-third to half the levels in unregistered manufacturing<sup>20</sup> and construction, which are themselves among the lowest-performing sectors in the economy (Exhibit 11).

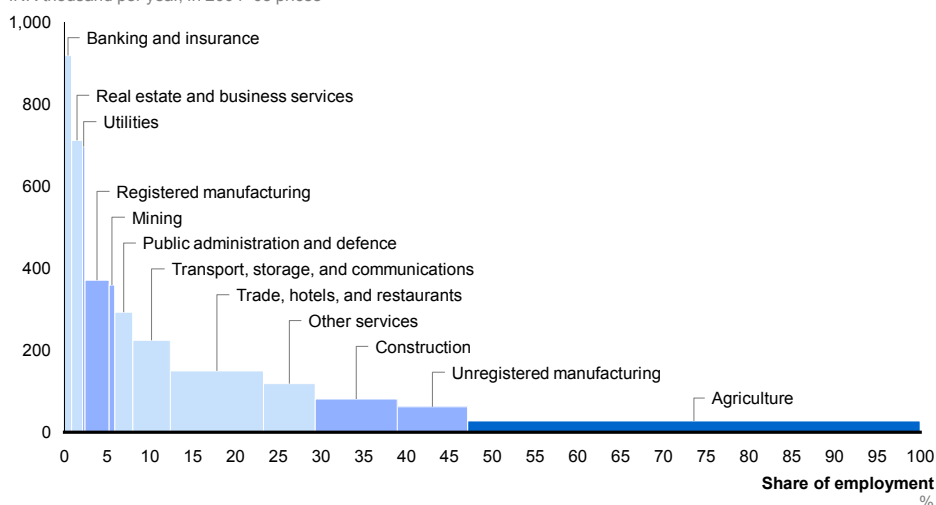
### Exhibit 11

**More than half the workforce is concentrated in agriculture, where productivity is far below that of other sectors**  
**Productivity and employment by sector, 2010**

■ Agriculture  
 ■ Industry  
 ■ Services

#### Productivity per worker

INR thousand per year, in 2004–05 prices



SOURCE: National Sample Survey Office survey, 66th round; Ministry of Statistics and Programme Implementation; McKinsey Global Institute analysis

Job growth in non-farm sectors has a doubly favourable impact on poverty reduction. These higher-productivity jobs offer workers higher wages—and they also raise the labour productivity of those left on farms, as fewer workers are employed per unit of land. But India's shifting of labour out of agriculture has moved too slowly to have a great impact on poverty reduction. India created just 65 million non-farm jobs in the past decade (China, by comparison, generated 120 million non-farm jobs over this period). This was just enough to keep pace with growth in India's labour force, but not enough to move workers out of agriculture. In addition, India's labour force participation rate remains low by international standards (see Box 3, "India's missing female workforce").

19 The "working poor" are defined as employed persons with monthly household consumption expenditure below the official poverty line.

20 The registered sector of manufacturing covers all factories employing ten or more workers and using power; those employing 20 or more persons but not using power; and bidi and cigar establishments registered under the Bidi and Cigar Workers' Act of 1966 employing ten or more workers using power and 20 or more workers but not using power.

### Box 3. India's missing female workforce

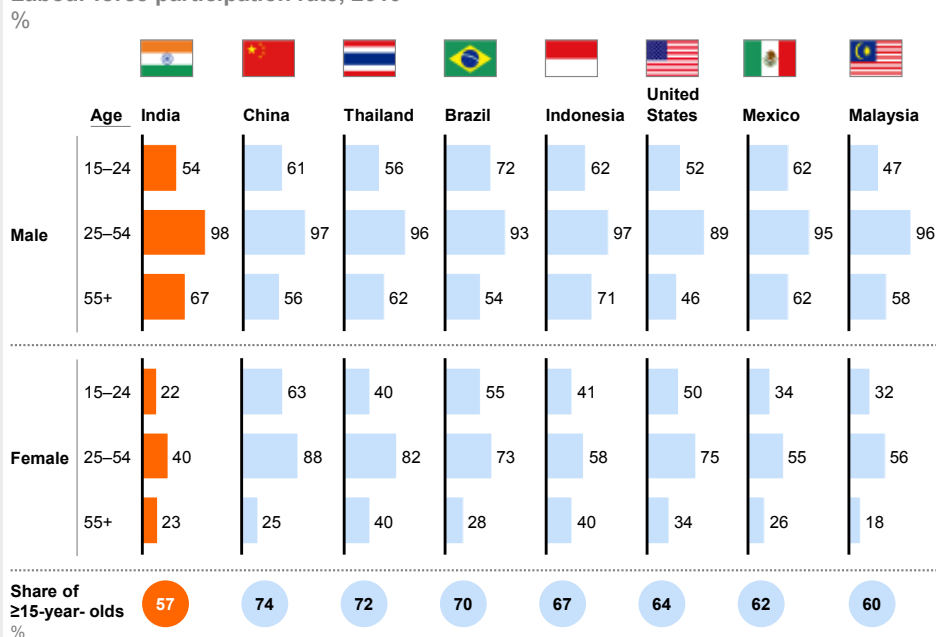
Just 57 percent of India's population participates in the labour force—well below the levels of 65 to 70 percent seen in other developing economies (Exhibit 12). A major factor behind this anomaly is the notable dearth of Indian women in the workplace. A smaller share of women works outside the home in India than in virtually any other nation in the world (only Pakistan and a few countries in the Middle East and North Africa have lower shares). Just 40 percent of India's women in their prime working years (ages 25–54) were economically active in 2010, compared with 88 percent of women in China and 73 percent in Brazil. This is not just a rural phenomenon: only 24 percent of women of prime working age in India's cities have jobs, compared with around 65 percent in urban China.

Between 2005 and 2010, women's participation in the workplace actually fell from an already low 42 percent to just 32 percent. The general trend of slow job creation, which stymied both men and women seeking better employment opportunities, is potentially one factor behind this. Women from the poorest and most unskilled segments of the population are more likely to be driven to work by necessity, and they often turn to agriculture, low-skill retail trade, and construction. At slightly higher income and education levels, such work may become unappealing, resulting in a drop in women's labour force participation in the absence of more attractive options. Other drivers could also be at work, including poor workplace security and a scarcity of opportunities involving better and safer jobs in medium-skilled services and light manufacturing.

#### Exhibit 12

#### India has a lower labour force participation rate than many other countries, due to the low participation of women

Labour force participation rate, 2010<sup>1</sup>



<sup>1</sup> Defined as ratio of number of persons in the labour force in a cohort to the total population of the cohort.

SOURCE: International Labour Organisation; National Sample Survey Office survey, 66th round; McKinsey Global Institute analysis

When workers leave the farm, it can have a direct positive impact on their incomes. At current average productivity levels, an agricultural worker could become two to three times as productive in a non-farm job, even in unorganised manufacturing or construction. He would be five times as productive if he could acquire the right training and obtain a job in the retail trade sector, in a restaurant or hotel, or in another low- to medium-skill service sector (such as security services or chauffeuring). That worker's productivity would be ten times as high with a job in formal manufacturing.

The importance of this shift is hard to overstate. If India had created 50 million more non-farm jobs from 2005 to 2012 (assuming these jobs had the same average productivity as the construction sector and that overall labour force participation remained constant), the results would have been significant. The higher earnings associated with this shift could have lifted 100 million more Indians above the Empowerment Line.

Chapter 6 contains a more in-depth discussion of the structural barriers that inhibit non-farm job creation in India. These include inadequate infrastructure, inefficient land markets, the administrative burden and excessive red tape facing businesses, tax and product-market distortions, inflexible labour laws, and a shortage of workforce skills.

### **PRODUCTIVITY IS LOW DUE TO THE PREVALENCE OF UNORGANISED AND SUB-SCALE ENTERPRISES**

Non-farm sectors in India's economy have the potential to increase wages, but they face multiple barriers to productivity growth. The potential income growth of workers on the whole is dampened by the large share of employment in unorganised enterprises.<sup>21</sup> A low-skilled worker who moves from agriculture to retail trade or light manufacturing, for example, would typically work in a small, unorganised enterprise. The average labour productivity of unorganised enterprises is estimated to be less than one-fifth that of enterprises in the organised sector due to their small scale of operation, low levels of investment in technology and capital, inefficient supply chains, and limited market access. Employees in the unorganised sector have a lesser degree of job security and less promising future prospects.

The share of employment in the organised sector varies significantly by state, with the more prosperous states having created a greater share of jobs in organised sectors. While organised sector employment was about 14 percent of total employment nationally in 2010, its share for Tamil Nadu, Maharashtra, and Kerala was close to 21 to 22 percent; for highly urbanised Goa, it was as high as 58 percent. At the other end of the spectrum, just 5 percent of Bihar's workforce was employed in the organised sector, while the share in Uttar Pradesh and Madhya Pradesh was close to 9 percent.

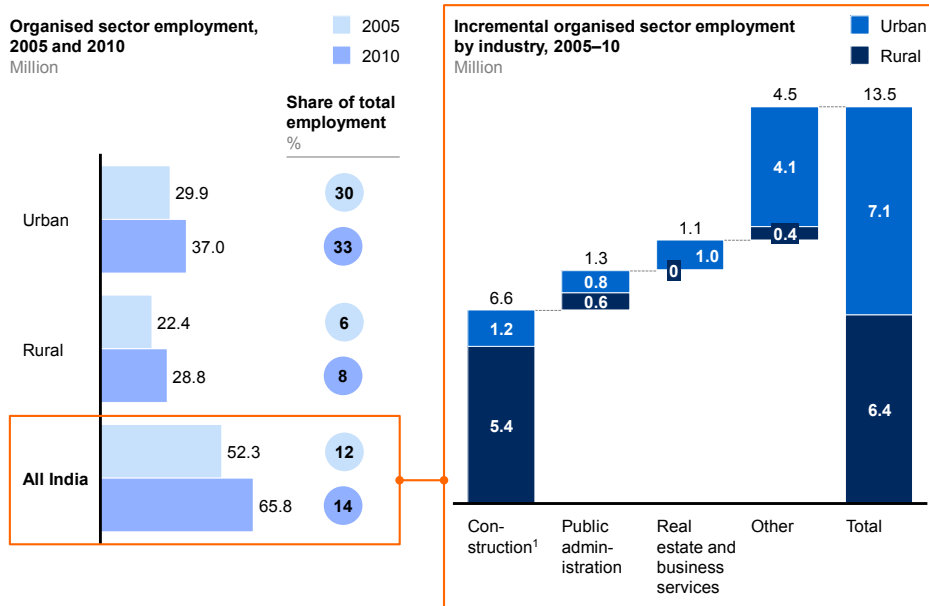
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21 Enterprises in the government, public sector, private limited or public limited companies, cooperative societies, and other enterprises employing more than ten workers are considered organised enterprises.

India's pace of job creation in organised enterprises has lagged behind what is needed to accommodate population growth and make substantial income gains. From 2005 to 2010, 65 million jobs were created, but just 20 percent (or 13.5 million) were in the organised sector—and most came from the government's rural employment guarantee programme, or MNREGA (Exhibit 13). While these jobs did raise rural incomes, they actually lowered overall productivity in the construction sector during this period.

### Exhibit 13

#### Job growth in the organised sector has been led by rural construction, which is characterised by low productivity



1 Mahatma Gandhi National Rural Employment Guarantee Act (MNREGA) contributed to about 75% of increase in construction employment between 2005 and 2010; however, construction productivity fell by 2.1% per annum.

NOTE: Numbers may not sum due to rounding.

SOURCE: National Sample Survey Office survey, 61st and 66th rounds; Central Statistical Organisation; McKinsey Global Institute analysis

The extremely small scale of enterprises lowers overall productivity in the manufacturing sector. Enterprises with fewer than 49 workers account for 84 percent of India's manufacturing employment. In sectors such as metals, machinery, and textiles, about two-thirds of the workforce is employed in unorganised enterprises that are typically small in size, but this share is as high as 85 to 95 percent for more labour-intensive sectors such as wood and wood products, apparel, and tobacco products. Extremely small units are far less productive than larger enterprises: across manufacturing and services, a worker in a unit employing more than 200 workers would produce 8 times the value and earn 4.5 times more than a worker in a unit with fewer than 49 employees (Exhibit 14).

Very small enterprises are typically the first rung up the economic ladder for low-skill workers coming out of agriculture or entering the workforce for the first time. In the absence of employment opportunities being created by larger companies, many workers tend to set up their own shops (small *kirana* stores or tea shops, for example) or tiny manufacturing units (engaging in businesses such as tailoring). Alternatively, they may find work in similar establishments set up by family members. These jobs can play a significant role in poverty reduction, but

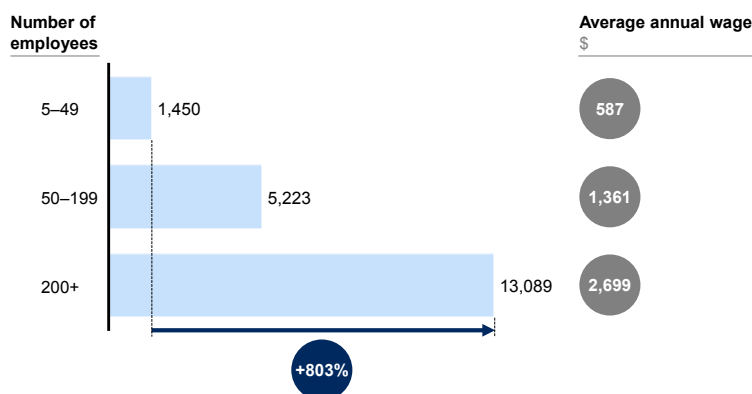
only if they provide the sustained growth in productivity and income required to raise a family's standard of living above the Empowerment Line. India seems to be doing an inadequate job of enabling these small businesses to grow in both scale and efficiency.

#### Exhibit 14

### Economies of scale are positively correlated with higher productivity and wages

#### Productivity by firm size, 2005

Value add per worker per year, 2005 \$



SOURCE: *Key indicators for Asia and the Pacific 2009*, Asian Development Bank, August 2009; McKinsey Global Institute analysis

## A LACK OF SKILLS CONTRIBUTES TO LOW WORKFORCE PRODUCTIVITY

Education and skills are critical components of productivity, and India faces enormous challenges on this front. While significant strides have been made in expanding primary education over the past decade, almost 70 percent of India's working-age population (ages 15 and above) is not educated beyond primary school. Even more startling, nearly 50 percent of the prime working-age population (ages 25 to 54)—or some 200 million people—has had no education at all. Seventy-five percent of the uneducated who are employed in rural India work on farms.

India has been expanding vocational education, but its progress pales in comparison to the sheer size of the labour force that could benefit from training. While 44 million workers have received formal or informal vocational training, this is only 9 percent of the labour force. Even in the states with the most extensive training options, no more than 20 percent of the workforce has been able to take advantage of these opportunities; the share of workers who had received vocational training was only 19 percent in Kerala and 18 percent in Goa in 2010.<sup>22</sup> In the poorer states of Bihar and Jharkhand, the corresponding numbers were 1 percent and 3 percent, respectively.

22 National Sample Survey Office (NSSO) survey, 66th round.

## Agricultural yields are only about half the levels of many peer countries

Productivity is the driving force behind economic growth, and yet nearly half of India's vast labour force is engaged in low-productivity agricultural work. Because of the sheer weight of this sector in the Indian workforce, agriculture will have to be front and centre in any broad-based poverty reduction programme. While no poor country has ever successfully reduced poverty through agricultural reforms alone, very few have achieved it without increasing agricultural productivity as part of a broader plan.<sup>23</sup>

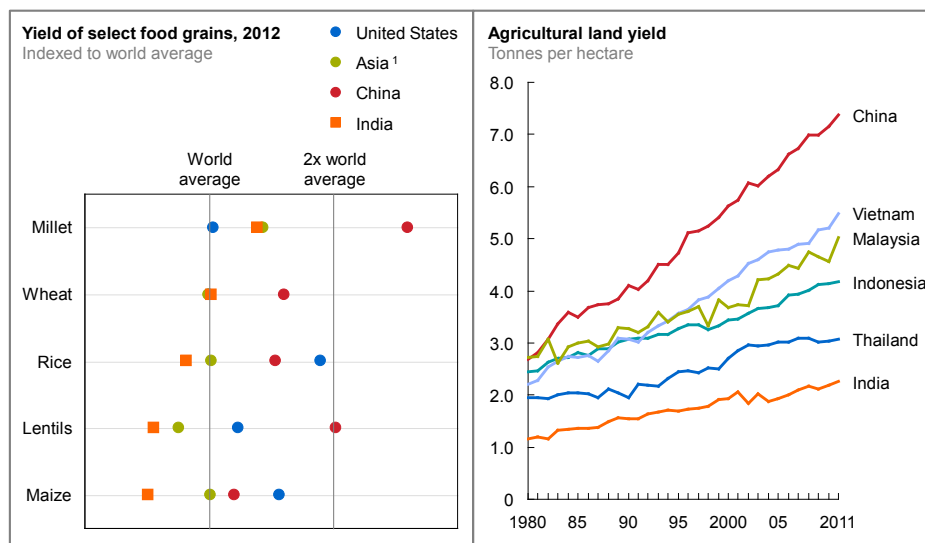
The nation's yield per hectare is half the average level for China, Vietnam, Indonesia, Malaysia, and Thailand (Exhibit 15). Consequently, farm incomes are low and climbing slowly. Farm worker productivity grew at 3.2 percent per year between 2000 and 2010, far below the rates posted by manufacturing and services, where labour productivity over this period grew by 5.6 and 5.7 percent per year, respectively. The agricultural sector also reports under-employment of about 20 percent, meaning that those employed in agriculture are not productively occupied for 20 percent of their time.<sup>24</sup>

### Exhibit 15

#### Indian crop yields are significantly lower than Asian averages

Yields in India are below Asian yields for all food grains except wheat

Indian yields started at a lower level and are not catching up with those of other countries



1 Including India.

SOURCE: Food and Agriculture Organization of the United Nations, FAOSTAT; McKinsey Global Institute analysis

23 *Growth and poverty reduction: The role of agriculture*, UK Department for International Development, December 2005.

24 NSSO Employment Survey, 66th round. This is based on the usual principal and subsidiary status (UPSS) approach and includes workers who had work in household enterprises or regular employment. It includes person days not worked for such issues as attending to domestic duties, educational institutions, or being unavailable for work due to disability or sickness (casual workers).



In Chapter 7, we discuss some of the underlying issues in India's farm sector that contribute to keeping yields low. For instance, India's farms have highly variable levels of input intensity in terms of fertiliser, manure, water, and improved seeds. Sowing and harvesting are undertaken with little knowledge of modern methods and practices. Farmers have weak market access for their produce because of issues as diverse as archaic laws, inadequate roads and storage infrastructure, and low dissemination of price-related information.

Many of the barriers to raising yields reflect a long-term pattern of investment in the agricultural sector. Over the past 20 years, government support to Indian agriculture has emphasised input and output price supports more than infrastructure, scientific research, and extension services. In 2010–11, the government spent Rs. 86,000 crore (\$18 billion) on input subsidies (primarily fertiliser and irrigation), but only Rs. 34,000 crore on building agricultural infrastructure such as storage, expanded irrigation systems, research, and extension services. Input subsidies have been consistently growing 2 to 3 percent faster than productive investment in the past decade. This has slowed the pace of yield improvement on India's farms.

## Despite rapid overall growth, public spending is insufficient in critical areas such as health care, water, and sanitation

Public spending is needed to address both lack of access to services and the inability of the poor to afford these services even where they are available. It has played a critical role in helping the poorest segments of the population survive—and yet we estimate that it drove just a quarter of the reduction in the Empowerment Gap achieved between 2005 and 2012.

India has ramped up social spending in recent years (Exhibit 16). Between 2008 and 2012, government spending on the basket of eight basic services increased at a compound annual growth rate of 20 percent in nominal terms (about 11 percent in real terms), while nominal GDP grew at 17 percent per year. By 2012, annual government spending on the eight basic services in our basket of core needs totalled Rs. 570,000 crore (\$118 billion)—or nearly one-quarter of India's annual state and central expenditure.

Spending has grown faster in some areas than in others. Between 2008 and 2012, the food subsidy programme grew by 24 percent per year in nominal terms. Spending on India's flagship social security scheme, the Mahatma Gandhi National Rural Employment Guarantee Act (MNREGA) programme, also accelerated in the past three years, posting 31 percent annual growth.<sup>25</sup> These programmes are designed to combat hunger and provide the poor with a social safety net in the absence of better employment opportunities.

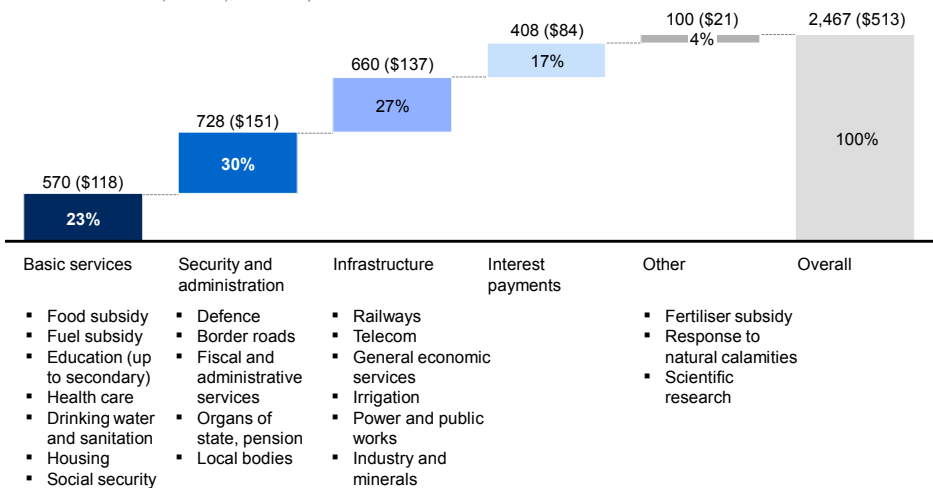
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25 MNREGA entitles one adult member of every rural household to 100 days of unskilled manual labour per year within 5 km of the household's village. The people are to be employed in the creation of durable assets and public works that would benefit the household. If the government is unable to create employment, it is obligated to pay an unemployment allowance.

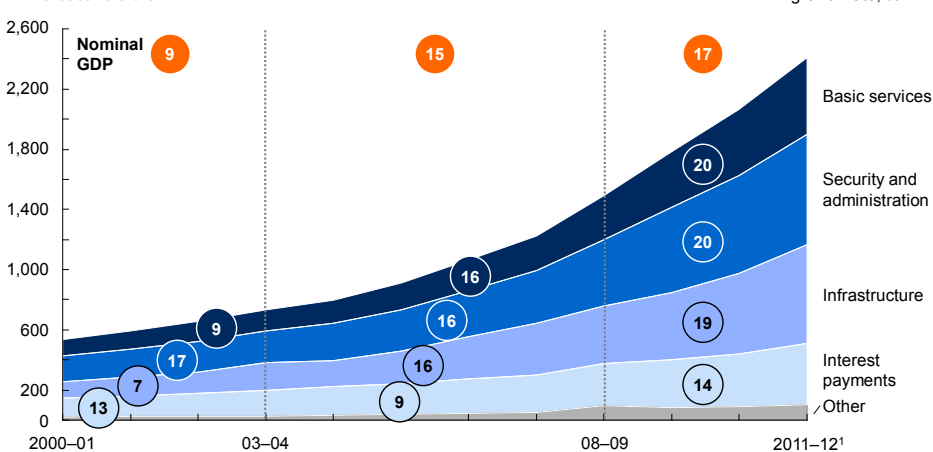
**Exhibit 16**

**Approximately 23 percent of public spending goes to basic household services; this has risen faster than GDP**

**All-India (central and state) spending, 2011–12**  
 INR thousand crore (\$ billion), 2011–12 prices



**Government (central and state) fiscal expenditure**  
 INR thousand crore



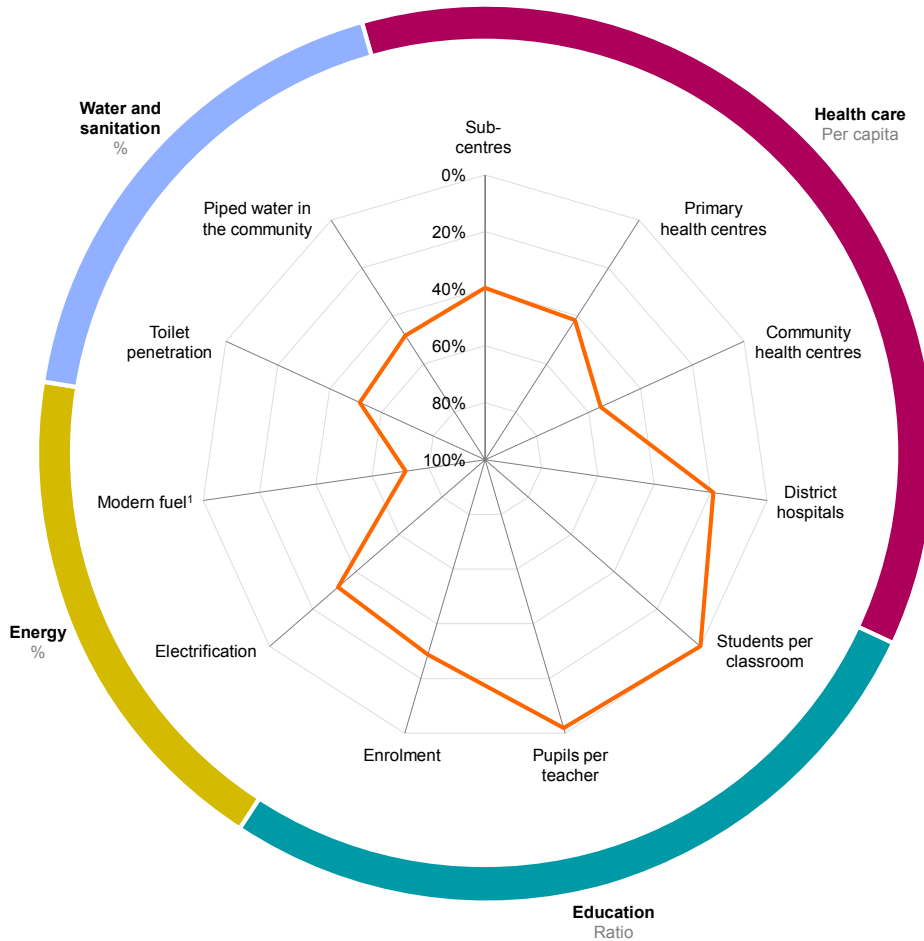
<sup>1</sup> Data for 2011–12 reflects revised estimates.  
 NOTE: Data for 2001–02 and 2002–03 were not available, so their values have been calculated by interpolating along the graph. Values differ slightly from calculations for 2009–10 shown previously, as this takes into account only fiscal expenditures; tertiary education is also included in basic services here. Numbers may not sum due to rounding.  
 SOURCE: Indian Public Finance Statistics, 2013; national and state budget documents; International Monetary Fund; McKinsey Global Institute analysis

But India also needs more water systems, affordable housing, a more extensive health-care network, and well-equipped public schools. Based on various measures of access to such infrastructure (Exhibit 17), we estimate nationwide access deprivation of 46 percent in 2011—that is, on average, people in India lack access to 46 percent of the services they need to fulfil their requirements for an acceptable standard of living. (See Chapter 4 for further detail on the Access Deprivation Score, which has been calculated at the district and state levels as well as at the national level.) The gaps are caused by inadequate public spending in some areas (notably health care, water, and sanitation) as well as ineffective spending across all areas.

**Exhibit 17**

**On average, Indians do not have access to 46 percent of basic services**

Access to basic services relative to norms



Based on these parameters and others, we calculate the Access Deprivation Score (ADS) for India as 46 percent, meaning that on average, Indians do not have access to 46 percent of basic services

<sup>1</sup> LPG penetration used as a proxy.

NOTE: For each service, the placement of the orange rule indicates relative levels of deprivation. Proximity to the centre of the circle indicates greater deprivation, while proximity to the outer circumference indicates less deprivation (that is, greater access).

SOURCE: Census 2011; District-Level Health Survey, 2007-08; District Information System for Education, 2009-10; McKinsey Global Institute analysis

The health-care gaps are significantly higher in rural areas, setting the stage for poor human development outcomes. The density of hospital beds in rural India, for example, was only 0.3 per thousand people in 2010, while the corresponding number in urban India is 3.4 (almost in line with the World Health Organization guideline of 3.5). The lack of health-care facilities creates an extreme hardship for residents of places such as Salehpur, a village in the Fatehpur district of Uttar Pradesh. Its population of almost 6,000 makes do without access to any primary health centre, registered medical practitioner, or drugstore—a situation that can turn minor ailments into misery and any medical emergency into a life-threatening event. This is only one example of a situation that affects villages across rural India.<sup>26</sup>

<sup>26</sup> Anurag Kumar et al., "Poor medical care in rural areas of Uttar Pradesh: Perceived reasons and strategies for improvement", *International Journal of Life Sciences Biotechnology and Pharma Research*, volume 1, number 3, July 2012.

Public provision of basic services is essential in remote areas where private markets cannot function economically. It can draw synergies from the existing government administrative infrastructure and also act as a check on the market power of private players. Effective public spending has a strong correlation with human development outcomes in education and health in a cross-country comparison (Exhibit 18).

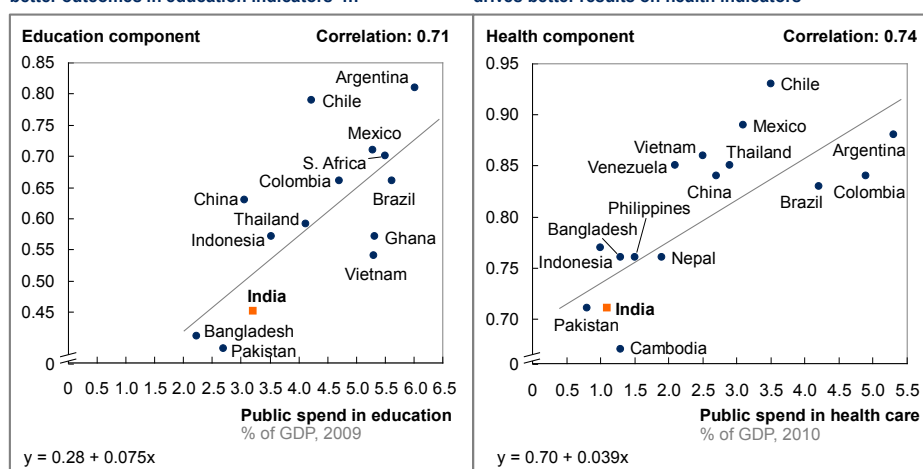
### Exhibit 18

#### Public spending on education and health shows a strong correlation with better outcomes

Human development index, 2010

Countries with higher spending on education have better outcomes in education indicators<sup>1</sup> ...

... and similarly, higher spending on health drives better results on health indicators<sup>2</sup>



1 The education component of the human development index is driven by mean years of schooling and expected years of schooling.

2 The health component of the human development index is driven by life expectancy.

SOURCE: World Bank, World Development Indicators; United Nations Development Programme, Human Development Reports; McKinsey Global Institute analysis

India's public expenditure on health care, which was equivalent to 1 percent of GDP in 2010, is extremely low by international standards. This level is far below the 3.1 percent, 4.1 percent, and 4.2 percent shares spent by Mexico, South Africa, and Brazil, respectively. A shortage of medical facilities, resources, and trained medical personnel results in poor health outcomes across the board. Some 56 percent of births in rural India and 24 percent in urban India are unassisted by any health-care personnel, and 25 percent of rural children and 16 percent of urban children are not taken to health facilities when they have acute respiratory infections or fevers.<sup>27</sup> This is a case in which lack of investment directly translates into human suffering.

Per capita public spending on basic services varies widely among states. In education, for example, Kerala spent about Rs. 6,900 per annum for each child enrolled in primary school in 2009–10, while Uttar Pradesh spent just Rs. 2,600 per child (the national average was Rs. 4,200). Per capita public health-care spending in 2004–05 was about Rs. 100 per year in Bihar, but almost Rs. 360 in Kerala and Rs. 744 in Himachal Pradesh. These variations have resulted in different levels of access to health care and education—and have produced different outcomes.

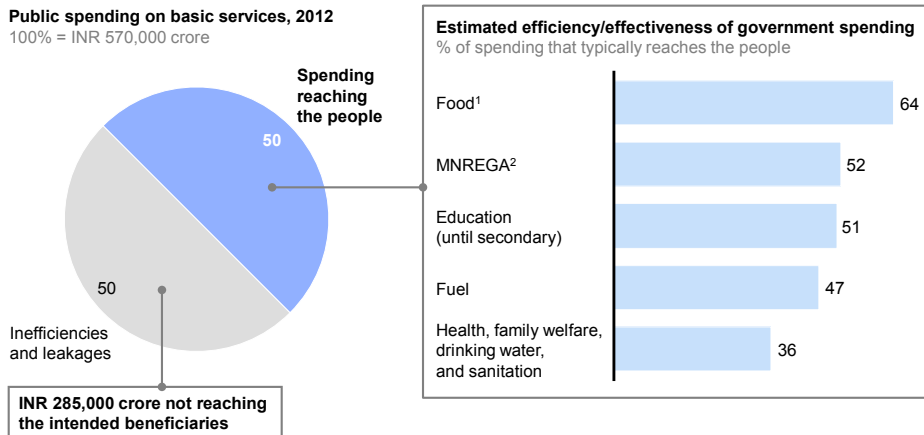
27 District Level Household and Facility Survey, DLHS-3 (2007–08), International Institute for Population Sciences.

## Half of the total public spending on basic services is not reaching the people

We estimate that almost half of India's government spending on basic services fails to translate into real benefits (Exhibit 19)—implying that nearly Rs. 285,000 crore (\$59 billion) does not reach the people (see Appendix B for details). Aspiring to full effectiveness may be unrealistic, but if even 75 percent of India's social spending reached its intended beneficiaries, it could have brought an additional 85 million people (7 percent of the population) out of official poverty and 70 million people above the Empowerment Line between 2005 and 2012. Reform is essential to eradicating extreme poverty, as the poorest segments of the population are deprived of urgently needed lifelines due to the “leaky bucket” of service delivery (see Box 4, “The leaky bucket of the PDS”).

### Exhibit 19

#### Currently, some 50 percent of public spending on basic services does not reach the people because of inefficiencies in governance and execution



1 For people below official poverty line, only 36% of food subsidy reached the intended beneficiaries in 2009–10.

2 Mahatma Gandhi National Rural Employment Guarantee Act.

SOURCE: National Sample Survey Office; government fiscal statistics; McKinsey Global Institute analysis

Consider the government's effort to combat hunger. Some Rs. 77,000 crore (\$16 billion) was spent in 2012 to deliver subsidised grains to the poor. But our analysis of data from government household consumption surveys reveals that just 55 percent of the grain distributed (by tonnage) and 65 percent of the monetary value of the subsidy benefit reaches any household at all—rich or poor. The rest leaks away: some of the grain spoils in storage or transit, while some is sold on the open market at higher prices rather than at subsidised prices.

#### Box 4. The leaky bucket of the PDS

Since independence, India's government has made food security a national priority—and that commitment eventually led to the establishment of the Public Distribution System (PDS). Under the PDS, every household is entitled to a certain amount of food grain every month through a network of nearly 500,000 fair price shops (FPS). The shops are stocked by a central agency called the Food Corporation of India. The PDS has evolved over the years, transforming from a universal to a targeted system in the late 1990s. With the passage of the National Food Security Act of 2013, it is expected to become a near-universal system.

The logistical challenges of the programme, which allocated nearly 48 million metric tonnes (MMT) of grain for distribution in 2010, combined with a weak focus on its governance, results in severe inefficiencies, such as the following:

- **Stagnant central issue price and differentiated pricing.** The central issue price (the price at which food grain is sold to beneficiaries) has not been revised since the early 2000s. In the absence of any adjustments, the value of the subsidy per family has increased over the years as economic costs of procurement and distribution have shot up—between 2005 and 2012, this increase was 57 percent for wheat and 63 percent for rice. The lower price for families below the poverty line creates a strong incentive for FPS owners to sell their subsidised grain to consumers above the poverty line at a higher margin.
- **Poor targeting.** The government machinery to identify beneficiaries is also problematic. States either run the risk of excluding the needy (more than 40 percent of households below the government poverty line in Assam were excluded, for example)<sup>1</sup>

or wind up implementing a universal system (as in Tamil Nadu).

- **Inefficient delivery.** Most FPS owners incur losses because of low margins and a lack of support services such as doorstep delivery and credit. This creates an opportunity for corruption, which becomes easier given poor performance-monitoring mechanisms.<sup>2</sup>
- **Lack of transparency.** The system is largely opaque. The movement and distribution of grain is mostly not tracked, and it is lucrative for everyone along the supply chain to divert it to the open market. In Bihar, for instance, only 55 percent of the FPS have registers that are available for inspection, and only 25 percent of targeted beneficiaries agree with the entries made in their ration cards by the shop manager.<sup>3</sup>

As a result of these issues, across the country, only 26 MMT of food grain (55 percent of the 48 MMT allocated) reached the people, while the rest either spoiled during transit or was diverted for sale to the open market. Even the share that did make it through was afflicted with targeting problems, as families below the official poverty line received only 34 percent of their entitlement by weight.

Some states, however, have shown the way by turning around the PDS. Tamil Nadu, for instance, has consistently achieved efficiency of more than 90 percent by creating a robust tracking and audit system. Chhattisgarh has also reformed the system by pursuing computerisation and community involvement. These examples show that with greater political will, the PDS can achieve its true potential (see Chapter 9 for more discussion on this topic).

1 Planning Commission of India, *Performance evaluation of Targeted Public Distribution System (TPDS)*, 2005.

2 Ibid.

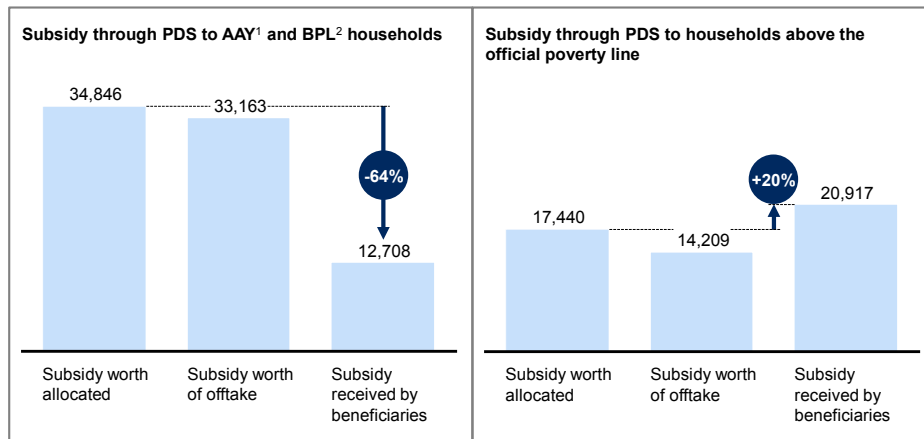
3 Reetika Khera, "Revival of the Public Distribution System: Evidence and explanations", *Economic and Political Weekly*, volume 46, number 44–45, November 2011.

The hunger gap exacts its heaviest toll on the officially poor, and from their perspective, the effectiveness of the food subsidy programme is even lower. In 2010, their subsidies accounted for less than 40 percent of the total received by all beneficiaries (and just one-fourth of the total subsidy allocated by the government), despite the fact that they account for 80 percent of the nation's nutrition gap. The officially poor received just 36 percent of the subsidy benefit intended for them in 2010 (Exhibit 20). The rest of the subsidies allotted to them were consumed by households at higher income levels (who may not have been eligible for the subsidised grain in some states) or, for the most part, leaked out of the subsidised food distribution chain altogether. This poor performance underscores the inherent inefficiencies in the current design and implementation of the food subsidy programme.

**Exhibit 20**

**Food subsidies are not efficiently targeted, as households above the poverty line receive more than their share**

Public Distribution System (PDS) subsidies, 2009–10  
INR crore



1 Population covered under the Antyodaya Anna Yojana (AAY), which included the poorest of the poor.  
2 Below India's official poverty line.

SOURCE: National Sample Survey Office survey, 66th round; Food Corporation of India; McKinsey Global Institute analysis

To create a social safety net, the government spent Rs. 38,000 crore (\$8 billion) on the MNREGA programme for the rural poor in 2012. Based on data from government consumption surveys, we estimate that just 52 percent of this money actually reached rural workers.

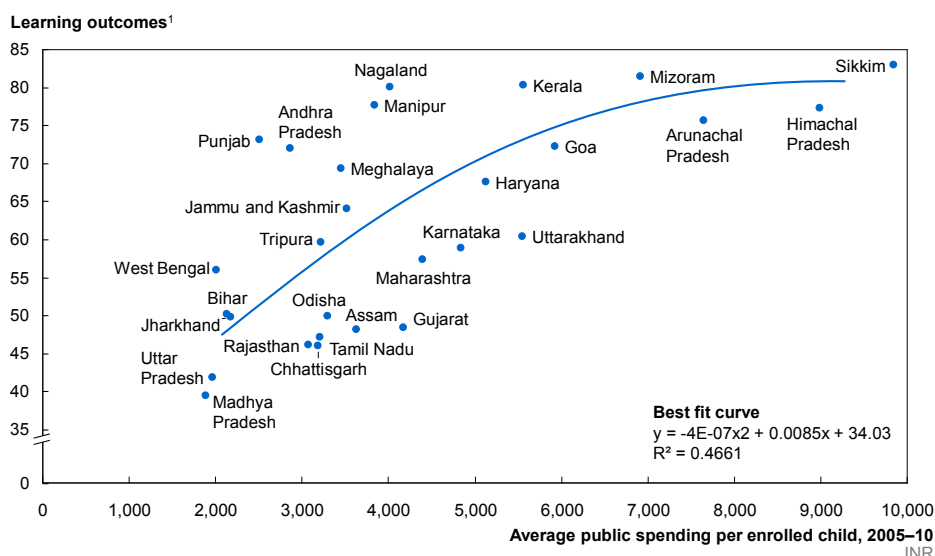
In education, the government spent an estimated Rs. 237,000 crore (\$49 billion) on primary and secondary schooling in 2012. The effectiveness of this spending is more difficult to quantify, as benefits received by households from government-run schools are not reported in household consumption surveys. Instead, we examined relative effectiveness across India's states, which vary greatly in terms of education spending per capita and educational outcomes (Exhibit 21; see also Box 5, "India's return on public education spending"). By comparing all states against the top performers (those states that delivered the highest learning outcomes per rupee of spending), we estimate that just 51 percent of India's aggregate educational spending actually translated into real learning outcomes that parents should expect. If all states were equally effective, the same outcomes could arguably be achieved with half the spending level.

The ineffectiveness of Indian schools—both public and private—is well documented.<sup>28</sup> In the context of the large commitment of public funding and the high reliance of poor families on the public education system, raising the effectiveness of government-run schools becomes all the more imperative.

### Exhibit 21

#### There is a wide variation in spending across states and in learning outcomes at a particular level of spending

PRIMARY EDUCATION  
EXAMPLE



1 Simple average of ASER 2012 scores across three groups of primary students (Std 1-2, Std 3-5, and Std 6-8).  
 SOURCE: Analysis of budgeted expenditures, 2005-08 and 2008-11, Ministry of Human Resources Development; *Annual status of education report (rural) 2012*, ASER Centre; McKinsey Global Institute analysis

Similarly, the government spent Rs. 118,000 crore (\$25 billion) on health care, water, and sanitation in 2012. To evaluate the effectiveness of this spending, we adopted a similar approach as in education—that is, comparing health outcomes across India's states relative to their level of public spending per capita on health infrastructure and services (see Appendix B for details). Based on this analysis, we estimate that just 36 percent of public spending on health services translated into real health outcomes. In other words, the same health outcomes could be achieved with a little over one-third of current spending.



### Box 5. India's return on public education spending

The best way to measure the efficiency of any spending would be to trace the flow of money across the value chain to the end consumer. However, in areas such as education and health care, this analysis can prove quite difficult without running financial audits. One approach to solving this problem is based on the concept of the efficiency frontier (or the productivity possibility frontier) and uses a technique called data envelopment analyses (see Appendix B for full details on the methodology).

Using this method, we calculate the efficiency of translating education spending into learning outcomes across various states. The best-performing states of Andhra Pradesh and Goa came in at greater than 90 percent efficiency levels. Punjab, Tripura, West Bengal, Tamil Nadu, Karnataka, and Kerala had efficiency levels of more than 60 percent. Among the worst-performing states are Bihar, Rajasthan, and Assam, whose efficiency levels were 35 percent or less. The mean efficiency level across all states was 51 percent.

The low efficiency of the Indian education system is not news to anyone who has tracked how it functions today. According to recent findings, more than half the children in class 5 are unable to read at even the class 2 level.<sup>1</sup> In the 2009 Organisation for Economic Co-operation and Development–Programme for International Student Assessment (OECD–PISA) study, India placed near the bottom of international rankings.

The three core issues contributing to poor outcomes are:

- 1. Poor teacher training, motivation, and support structures.** Classroom instruction is at the heart of the issue, and most Indian teachers are not trained to take a child-centred approach to curriculum. Teachers are not always well-qualified and do not receive high-quality training, and high rates of teacher absenteeism disrupt the learning process.<sup>2</sup> Despite high primary school enrolment, many students are not actively engaged, and attendance levels are uneven across states.
- 2. Inadequate assessment and monitoring processes.** At present, no effective mechanisms are in place to provide a realistic picture of learning outcomes. Processes for measuring teacher and school performance are similarly lacking. The ASER survey of student learning outcomes, conducted by Pratham, is today the only holistic assessment methodology available in India.
- 3. Low levels of accountability and capability in school leadership and management.** A lack of accountability for school administration and performance in both public and private schools results in substandard outcomes. There is an urgent need to develop better leadership and administrative capabilities among school management.

1 *Annual status of education report (rural) 2010*, ASER Centre, January 2011.

2 Abhijit Banerjee and Esther Duflo, *Poor economics: A radical rethinking of the way to fight global poverty*, PublicAffairs, 2011.

A number of reports and field studies have documented the weaknesses in India's public health system. For example, 26 percent of sub-centres do not have electricity, 52 percent of primary health centres do not have computers, and 32 percent do not have lab technicians; the number of surgeons at community health centres is only 28 percent of required staffing levels.<sup>29</sup> In addition, the system faces issues such as absenteeism—one study found that the absentee rate of health workers in India is 43 percent<sup>30</sup>—and poor qualifications among health-care professionals. Another impediment is breakdowns in the quality of care such as delivery of the wrong medication.<sup>31</sup>



Productivity gains and income growth have proved to be the most powerful forces to raise India's people above the Empowerment Line. But multiple symptoms of low productivity in the Indian economy—including inadequate non-farm jobs, the prevalence of small businesses outside the organised sector, and a lack of skills and education among poor workers—have held back broad-based growth in incomes. The continued weight of the agricultural sector, where crop yields remain low in comparison to those of peer countries, has been a drag on poverty reduction. The other side of the equation is public spending on basic services, which has increased in recent years but often fails to reach the poor or to fill critical gaps in infrastructure. In the chapters that follow, we take a more detailed look at how these issues manifest themselves for different segments of the population and in various regions of India.

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29 *Rural health statistics in India 2012*, Ministry of Health and Family Welfare, Government of India, April 2012.

30 Jishnu Das et al., "In urban and rural India, a standardized patient study showed low levels of provider training and huge quality gaps", *Health Affairs*, volume 31, number 12, December 2012.

31 Abhijit Banerjee and Esther Duflo, *Poor economics: A radical rethinking of the way to fight global poverty*, PublicAffairs, 2011.





## 3. Understanding the Empowerment Gap

Designing more effective and better targeted policy responses to reduce poverty requires a deeper understanding of the unmet needs of those below the Empowerment Line—and of the ramifications of those needs for hundreds of millions of households.

The Empowerment Gap comprises unmet needs for the eight basic services considered essential for a minimum acceptable standard of living. Assessing the gap through a service-by-service lens reveals that while food dominates much of the public debate on poverty, there are vast unmet needs in health care, drinking water, and sanitation. There are also gaps in areas such as decent affordable housing, particularly in urban India, that limit the options available to the poor.

The poor cannot be painted with a broad brush. The needs of those in the most abject poverty may not be the same as those of people on the verge of rising above it or to those of people who have just crossed this threshold but are still short of achieving a minimum standard of living. Two groups—which we call the “excluded” and the “impoverished”—are below the government’s official poverty line. They include the poorest of the poor and those who are just above bare minimum subsistence levels. In addition, a third segment, the “vulnerable”, comprises those who have exited extreme poverty but continue to face other types of deprivation and insecurity. And though poverty is often considered a predominantly rural phenomenon, the Empowerment Line focuses equally on urban poverty.

Understanding these different faces of deprivation can shed light on the most critical needs confronting each segment of people who struggle below India’s Empowerment Line. For the excluded and impoverished, hunger remains an overwhelming issue, but health care, drinking water, and sanitation are key gaps for all three segments. Housing and education are also pressing unmet needs for the vulnerable.

### A service-by-service view: Health and food make up 60 percent of the Empowerment Gap

To understand the unmet needs of the poor, we compare their consumption of each service with the requirements of the Empowerment Line, corroborating this with physical evidence of deprivation. In reality, the mix of consumption chosen by each household depends on individual decisions and trade-offs.<sup>32</sup> Yet such a comparison is useful to understand the broad dimensions of unmet needs.

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32 The estimation of the Empowerment Line does not weight each need based on preferences that may vary across households. The estimated Empowerment Gap by service simply illustrates the rough order of magnitude of the problem.

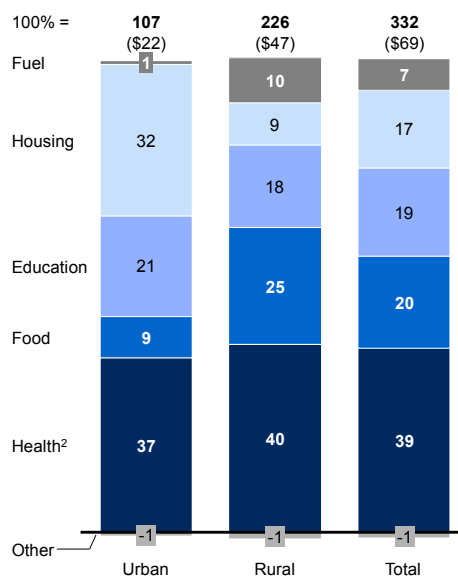
Poverty and hunger go hand in hand, but there are also critical gaps in health services (a category that encompasses health care, water, and sanitation), education, and housing. Health and food alone account for almost 60 percent of the Rs. 332,000 crore (\$69 billion) Empowerment Gap (Exhibit 22). And the gap is not simply a matter of economic value: in many cases, the *quality* of consumption is also a major issue in areas such as education, health care, drinking water, and housing.

### Exhibit 22

#### Health and food account for approximately 60 percent of the Empowerment Gap

Empowerment Gap by service and sector, 2011–12

%; INR thousand crore (\$ billion<sup>1</sup>)



1 Using average exchange rate of \$1 = INR 48.0769 for April 1, 2011 to March 31, 2012.

2 Includes health care, drinking water, and sanitation.

NOTE: Numbers may not sum due to rounding.

SOURCE: National Sample Survey Office survey, 68th round; McKinsey Global Institute

### HEALTH (INCLUDING HEALTH CARE, DRINKING WATER, AND SANITATION) IS THE LARGEST GAP ACROSS INDIA

This category accounts for the largest share (almost 40 percent) of the Empowerment Gap across the nation as a whole, an observation that holds true for both rural and urban India. Those below the Empowerment Line are able to spend less than one-fourth of what is required to obtain adequate sanitation, drinking water, and health-care services.

Government spending on these services came to about Rs. 118,000 crore (\$25 billion) in 2011–12, which is only Rs. 81 per capita per month. Most Indians must depend on their own private resources to obtain medical care—and because the poor have limited budgets, their consumption of health-care services is far lower than needed (see Box 6, “Disparities in health care: The haves and the have-nots”). Because doctors and hospitals are more scarce in rural areas than in cities, the rural poor, in particular, forgo preventive care, live with many untreated ailments, or sometimes resort to consulting untrained practitioners. Almost half of the private doctors in the Udaipur district of Rajasthan, for example, do not

### Box 6. Disparities in health care: The haves and the have-nots

India's average spending on health care was actually 21 percent higher than the normative spending level of Rs. 1,507 per year in 2009–10—and yet health care constitutes India's largest basic service gap. This may appear to be contradictory, but the gap is caused by large disparities in spending by different population segments and highly varying access to medical facilities and services across different regions (Exhibit 23). Three factors are at work:

- 1. Low share of public spending.** India's government contributed only 27 percent of the nation's total health-care expenditure, which compares poorly to peer countries such as Brazil (where public spending is 44 percent of the total), Indonesia (40 percent), and Bangladesh (37 percent).
- 2. Wide geographical disparities.** Health-care spending differs dramatically from state to state. For example, total health spending per person in Kerala was about Rs. 3,700 per year in 2005—nearly seven times as much as health spending per person in Jharkhand. While India spends more than the normative requirements on average, spending levels are below requirements in several populous states such as Uttar Pradesh, Bihar, Karnataka, Rajasthan, and Delhi.
- 3. Inequality of private spending.** Private household spending accounts for more than 70 percent of total health spending—and the richest 20 percent of households make almost half of total out-of-pocket health-care expenditures in India. Urban households on average spend 75 percent more than rural households. These gaps imply that a large part of the population remains deprived of quality health care.

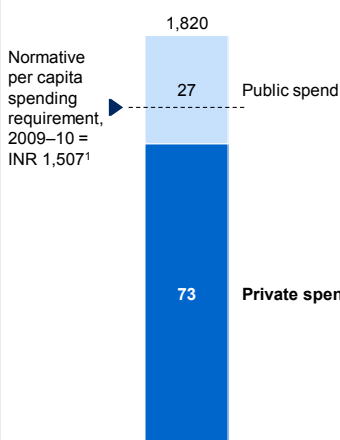
#### Exhibit 23

#### Average per capita spending on health care meets the required level but is mainly driven by private spending by the wealthiest households

##### Health spending, 2009–10

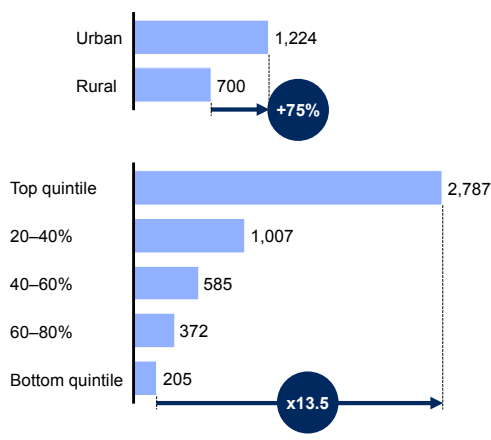
More than 70% of per capita health-care expenditure is private

Total health-care spending per capita  
%; INR per capita per year



Most private spending is by the wealthiest households

Private health-care spending by households<sup>2</sup>  
INR per capita per year



1 Based on the average across states of the minimum expenditure required for a package of basic primary, secondary, and tertiary care (High Level Expert Group) to ensure universal health coverage; health spending per capita estimated by World Bank.

2 Private spend includes spending by households, firms, employers, NGOs, and international entities. The graphs on the right show spending by households on a per capita basis; the quintiles are based on number of households.

SOURCE: World Bank; High Level Expert Group report on universal health coverage for India, 2011; National Sample Survey Office survey, 66th round; McKinsey Global Institute analysis

have medical degrees, and one-third have no college education whatsoever.<sup>33</sup> The situation is not much better for the urban poor; in the slums of Delhi, for instance, a study documented that only 34 percent of doctors had formal medical degrees.<sup>34</sup>

Limited access to clean drinking water and decent sanitation contributes to health complications and is an additional driver of deprivation, particularly in rural India. In Odisha, for example, around 39 percent of rural households send someone at least half a kilometre to fetch drinking water. One in four rural families across India sources its water from untreated taps and uncovered wells.<sup>35</sup> Even where there is access to drinking water, per capita consumption is lower than recommended levels. Poor-quality water can cause illness, and insufficient monitoring of water quality can fail to address lurking problems. Of 936,000 water delivery points in India, only 372,000 were tested for contamination in 2013. According to a report, diarrhoeal diseases account for 1 in 6 deaths annually among Indian children below age 5.<sup>36</sup>

Despite sustained efforts over the past decades, access to improved sanitation is another major issue. India's Total Sanitation Campaign has facilitated construction of more than 64 million toilets since 1999 and focused on changing behavioural patterns to adopt improved sanitation through the Nirmal Gram Puraskar (now Nirmal Bharat Abhiyan) programme. Despite these efforts, 70 percent of rural households still have poor or no access to toilets; even in areas that have wider access to constructed toilets, usage is low (just 50 percent in rural Andhra Pradesh, for example).

## **NUTRITION IS THE SECOND-LARGEST GAP**

India runs one of the largest food subsidy programmes in the world—in fact, the government directed Rs. 77,000 crore (\$16 billion) in spending to this effort in 2011–12. Despite this emphasis, hunger remains a daily fact of life for many Indians. Food constitutes roughly one-fifth of the nationwide Empowerment Gap and is the second-largest driver of the gap in rural areas (after health).

The lowest three deciles of the rural population by income and the lowest decile of the urban population consume at least 20 percent fewer calories than the minimum normative requirement.<sup>37</sup> Indeed, the poorest decile of the rural population consumes as little as two-thirds of the minimum calorie requirement (Exhibit 24). Moreover, the poor tend to rely on a cereal-dominated diet, as cereals are cheap and filling. A diversified diet including fats, milk, eggs, fruits, and vegetables is out of reach for many: only 55 percent of women consume milk

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33 Abhijit Banerjee and Esther Duflo, "Improving health care delivery in India", presented at Angus Deaton Festschrift in Princeton, NJ, in September 2009.

34 Jishnu Das and Jeffrey Hammer, "Money for nothing: The dire straits of medical practice in Delhi, India", *Journal of Developmental Economics*, volume 83, issue 1, May 2007.

35 Census of India, 2011.

36 IMIS Reports of the Ministry of Drinking Water and Sanitation, Government of India, December 2013.

37 The minimum calorie requirements were first recommended by the Alagh Committee in 1979 and have been reinforced by the activity-based calorie norms set by the Indian Council of Medical Research and the current mix of occupations in rural and urban areas. The gap in protein and fat was seen to be less than the calorie gap (in terms of the unmet need as a percent of the requirement). So any effort to bridge the calorie gap through a greater consumption of the food basket is assumed to bridge the gap in proteins and fat.

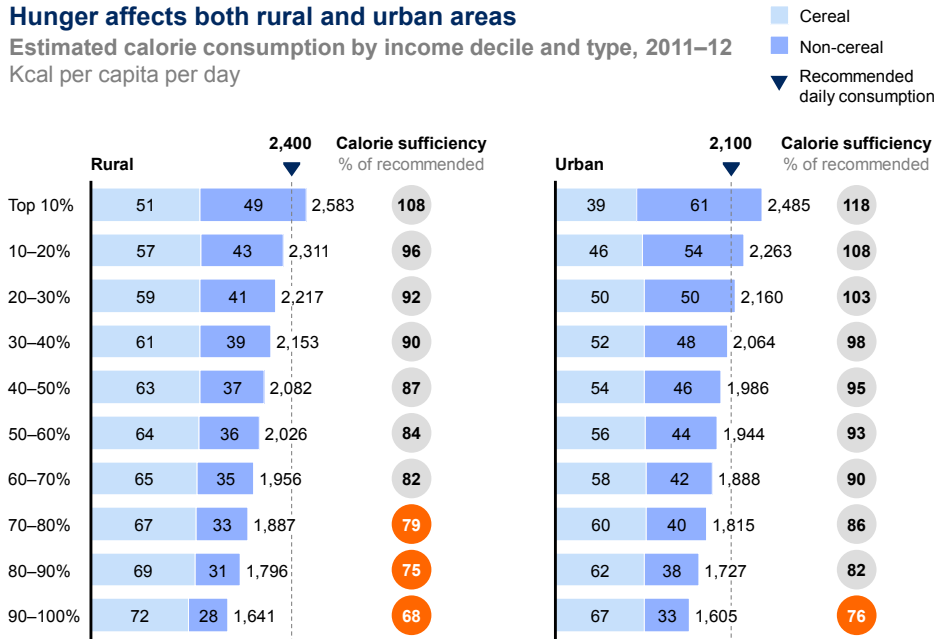


or dairy on a weekly basis, only 40 percent eat fruit at least once a week, and only 32 percent eat eggs at least once a week.<sup>38</sup> As a result, many Indians do not consume enough vital micronutrients and suffer from chronic malnourishment. With diets low in vitamin D, vitamin A, iron, and iodine, the poor have a high incidence of ailments such as anaemia, night blindness, diabetes, and stunted growth (Exhibit 25). One study found that 79 percent of children ages 6–35 months were anaemic, while 45 percent of children under 3 years were stunted.<sup>39</sup>

**Exhibit 24**

**Hunger affects both rural and urban areas**

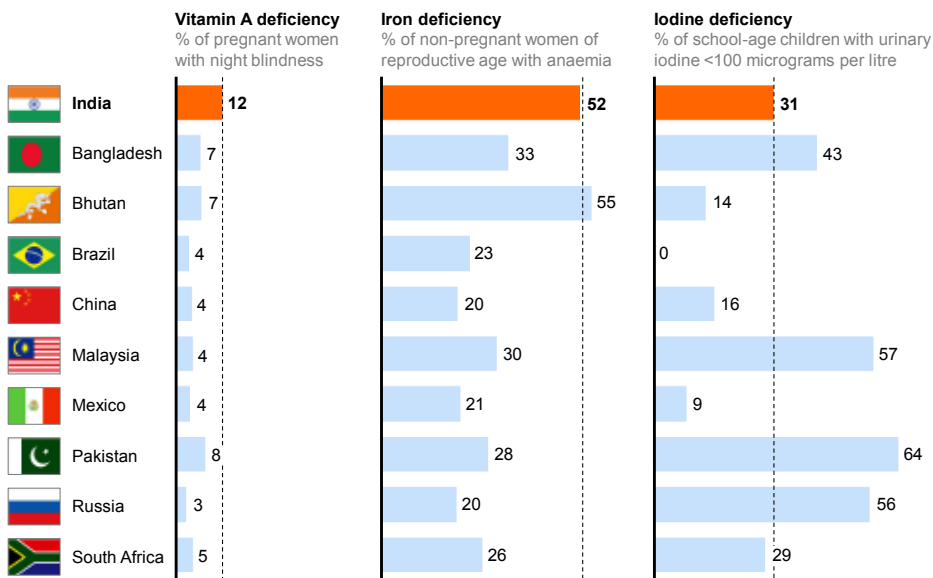
Estimated calorie consumption by income decile and type, 2011–12  
Kcal per capita per day



SOURCE: National Sample Survey Office survey, 68th round; McKinsey Global Institute analysis

**Exhibit 25**

**India has a high prevalence of micronutrient deficiencies**



SOURCE: World Health Organization; McKinsey Global Institute analysis

38 Third National Family Health Survey (NFHS-3), 2005–06.

39 Ibid.

## **THE EDUCATION GAP IS REFLECTED IN HIGH SECONDARY SCHOOL DROPOUT RATES AND POOR LEARNING OUTCOMES**

Primary and secondary education constitutes about one-fifth of the nationwide Empowerment Gap, and the issue affects rural and urban areas more or less evenly. This is despite the fact that government expenditure on education has grown rapidly to become the largest component of spending on basic services (Rs. 237,000 crore, or \$49 billion, in 2011–12). Primary schools have been built and expanded across rural and urban India, and enrolment now exceeds 90 percent. These represent tangible steps towards progress.

Yet India's households are not able to spend enough to ensure that all poor children receive a quality education. On average, people below the Empowerment Line spend less than half of the estimated level required to ensure decent schooling, after taking into account the value of education provided free to them by the government. This gap is partly explained by the fact there are still too few secondary schools to provide full access. High dropout rates at the upper primary and secondary levels imply that many children over the age of 12 don't benefit from the educational system; the net enrolment rate for upper primary school is only 64 percent.<sup>40</sup>

Furthermore, the gap is both quantitative and qualitative, as educational outcomes are extremely weak. National surveys have documented extensively that many Indian students are not acquiring basic skills in reading and math. One report found that only 12.4 percent of class 8 students in rural India were able to read class 1 text, only 25.7 percent knew basic subtraction, and only 20 percent could even recognise numbers from 10 to 99.<sup>41</sup> Without these foundational skills, children cannot cope in higher grades and tend to drop out. Girls, especially, are more likely to drop out at the secondary level because of family apprehensions regarding travelling some distance away from the home. When these factors are considered together, it is clear that India's poor do not have the resources or the access to ensure that their children receive a high-quality education.

## **HOUSING IS THE SECOND-LARGEST GAP IN URBAN AREAS, THOUGH ALSO SIGNIFICANT IN RURAL INDIA**

Housing ranks as the next significant gap—and in urban areas, it is the second-largest gap after health. India's government spending on affordable housing was Rs. 22,000 crore, or \$4.5 billion, in 2011–12. The unmet need is vast: on average, urban Indians below the Empowerment Line spend less than one-fifth of what is required for decent affordable housing. There is a sharp divide among income groups in terms of access to housing and basic services. Legal, mortgage-holding ownership of housing has become unaffordable, and rental markets are underdeveloped, a situation that has forced millions of the urban poor into untended, unsafe housing.<sup>42</sup> While the Census of India estimates that only 17 percent of urban households are in slums, the reality is that most low-income urban households face dismal housing choices.

In rural areas, too, housing is a serious problem, though the relatively higher deprivation in food, health, and education dwarfs the housing issue in contribution

40 District Information System for Education, 2012–13.

41 *Annual status of education report (rural) 2012*, ASER Centre, January 2013.

42 *Report of the working group on urban strategic planning, 12th five year plan*, Ministry of Housing and Urban Poverty Alleviation, Government of India, October 2011.

terms. While 92 percent of urban Indians lived in pucca structures during 2008–09, this was true of just 55 percent of rural households; the remaining households were in either semi-pucca structures (28 percent) or katcha structures (17 percent). Just 31 percent of rural houses were found to be in “good” condition (meaning the structure did not require any immediate repair) versus 51 percent in urban India.<sup>43</sup>

### **THE ENERGY GAP IMPERILS PERSONAL SAFETY AND ERODES THE QUALITY OF LIFE**

Energy constitutes a smaller share of the poverty gap in financial terms (just some 7 percent), but it remains a significant issue in rural India. Although rural electrification has been a major government priority, just 50 percent of rural Indians have access to connections today, and the actual supply of electricity through these connections is erratic.

As a result, the rural poor rely mainly on traditional sources (such as fuel wood, dung, and crop residue) for their cooking and lighting needs. These pose a significant health risk to households, especially to the women and children who are often responsible for gathering fuel.<sup>44</sup> Kerosene, liquefied petroleum gas (LPG), and electricity, which are considered modern sources of energy, accounted for almost 70 percent of energy use by urban households in 2005, but for less than 12 percent of energy use in rural India.<sup>45</sup> The energy gap permeates the daily life of the poorest segments: they are not able to work after dark, and women are unsafe after dusk.

The Indian government supports the energy requirements of the poor by providing subsidised kerosene (through the Public Distribution System, or PDS) and subsidised LPG (which is used for cooking, predominantly in urban areas). It also provides a subsidy for domestic consumption of electricity, which varies by state. Government spending on these three subsidies was about Rs. 79,000 crore (\$16 billion) in 2011–12, or Rs. 54 per capita per month. Despite the poor state of rural electrification, the energy gap does not add up to much in economic terms simply because the rural population depends on traditional and alternative sources of fuel.

### **SOCIAL SECURITY IS VIRTUALLY ABSENT FOR MOST WORKERS**

The poor have little sense of financial security. Unexpected events that disrupt their income sources threaten to push them deeper into poverty. Formal social security programmes are all but negligible; in a financial crisis, most poor people rely on family, caste, and community networks for help. Formal retirement

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43 A pucca structure is one with walls and roof made of materials such as cement, concrete, oven-burnt bricks, hollow cement and ash bricks, stone, stone blocks, jack boards (cement plastered reeds), iron, zinc or other metal sheets, timber, tiles, slate, corrugated iron, asbestos cement sheet, veneer, plywood, artificial wood of synthetic material and polyvinyl chloride (PVC) material. A katcha structure's walls and roof are made of non-pucca materials such as unburnt bricks, bamboo, mud, grass, leaves, reeds, or thatch. In a semi-pucca structure, either the walls or the roof but not both are made of pucca materials. *Housing condition and amenities in India, 2008–09*, National Sample Survey Office, 65th round, Ministry of Statistics and Programme Implementation, Government of India, 2010.

44 Shahidur R. Khandker, Douglas F. Barnes, and Hussain A. Samad, “Are the energy poor also income poor? Evidence from India”, *Energy Policy*, volume 47, August 2012.

45 India Human Development Survey (IHDS), 2005.

coverage through programmes such as the National Pension Scheme covers only about 12 percent of the working population. The government's rural employment guarantee programme (MNREGA) has extended a social safety net to about 50 million rural families by providing the guarantee of 100 days of employment per year to one working member of each rural household. Government spending on this programme in 2011–12 was about Rs. 38,000 crore (\$8 billion).

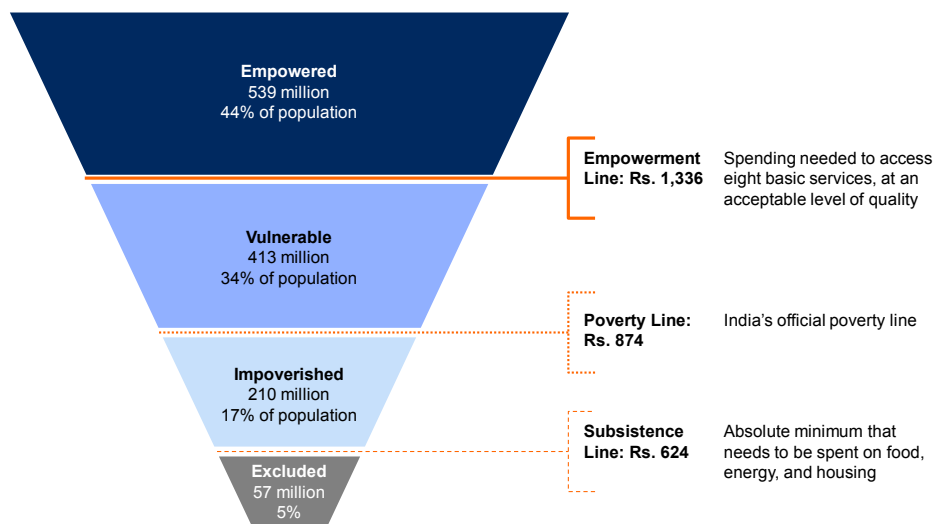
## A segment-based view: Three distinct groups live below the Empowerment Line

We define segments of the population based on their relative levels of poverty and the size of the gap they would have to bridge in order to cross the Empowerment Line (Exhibit 26).

### Exhibit 26

#### India's population can be segmented into four groups on the basis of different consumption thresholds

Poverty segments and thresholds of consumption, per capita per month<sup>1</sup>



<sup>1</sup> Adjusted for public spending reaching the people

SOURCE: National Sample Survey Office survey, 68th round; McKinsey Global Institute analysis

- 57 million Indians are “excluded”.** The poorest of the poor make up approximately 5 percent of India's population. This segment lacks even the barest minimum subsistence levels of the three most basic needs (food, energy, and housing). Although nearly 60 percent of their total spending goes towards purchasing food, they are able to consume only around 1,600 calories per day, lower than even the bare minimum requirement to support a sedentary lifestyle.<sup>46</sup> The average excluded household would need to raise its consumption almost 2.6 times to reach the minimum standards of the Empowerment Line.

<sup>46</sup> Madhura Swaminathan, “The new poverty line: A methodology deeply flawed”, *Indian Journal of Human Development*, volume 4, number 1, January–June 2010.

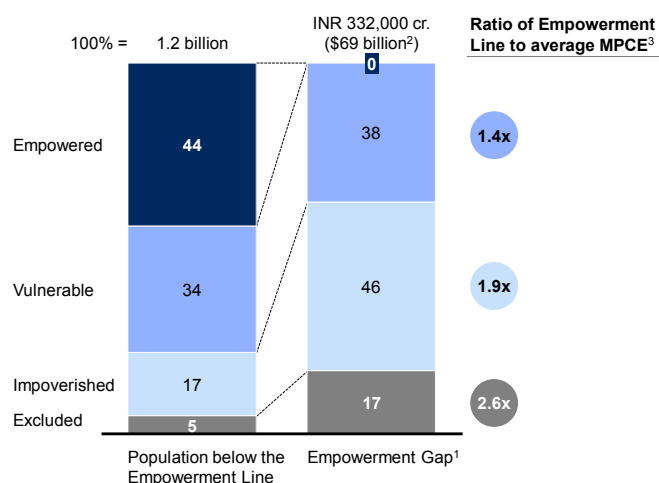
- **210 million are “impoverished”.** The impoverished constitute approximately 17 percent of India’s population. They are below the official poverty line, but above the barest levels of subsistence that define the excluded. Their consumption would need to rise more than 1.9 times, on average, to get them to minimum standards of the Empowerment Line. Substandard housing options and limited access to health care are issues that dominate the daily lives of the impoverished.
- **413 million are “vulnerable”.** Some 34 percent of India’s population falls into the vulnerable category (Exhibit 27). Vulnerable households need a smaller push to achieve minimum living standards: on average, if they were able to raise their incomes to 1.4 times current levels, they would move over the Empowerment Line. But this gap makes all the difference in families being forced to do without even basic health, sanitation, education, and social security. The vulnerable have only a tenuous grip on a better standard of living. Small shocks to their livelihoods (a lost job or one bout of ill health or injury, for example) can push their families back into the ranks of the officially poor.

**Exhibit 27**

**The vulnerable segment is the largest population below the Empowerment Line and accounts for some 40 percent of the total Empowerment Gap**

India’s population and Empowerment Gap by segment, 2011–12<sup>1</sup>

%



<sup>1</sup> The Empowerment Gap is defined as the aggregate differential between actual private consumption expenditure and the Empowerment Line.

<sup>2</sup> Using average exchange rate of \$1 = INR 48.0769 for April 2011–March 2012.

<sup>3</sup> Monthly per capita expenditure.

NOTE: Numbers may not sum due to rounding.

SOURCE: National Sample Survey Office survey, 68th round; Oanda; McKinsey Global Institute analysis

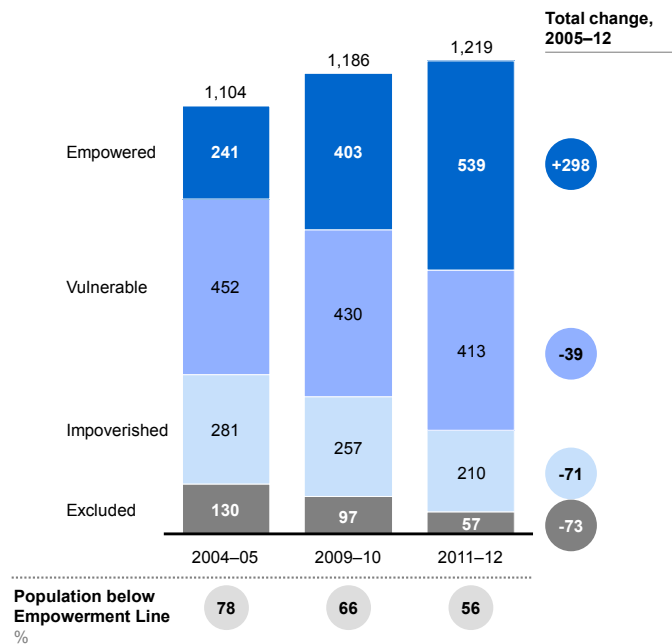
The needs of all three segments are critical to address. The fact that millions are still excluded and face such desperate circumstances is unconscionable; they must be helped in the immediate term. The impoverished represent almost half of India’s Empowerment Gap and would benefit from the better management of existing programmes that are targeted at the population below the official poverty line. Finally, designing policies to address the needs of the vulnerable segment will become increasingly important over time. While economic empowerment is within reach for many of the vulnerable, an almost equally large impoverished population is poised to move into the ranks of the vulnerable. As a result, the vulnerable segment shrinks more slowly than the other segments. From 2005 to 2012, the head count in the vulnerable category fell by only 39 million, even as

the impoverished segment fell by 71 million and the excluded fell by 73 million (Exhibit 28). In the future, the nature of poverty can be expected to shift towards vulnerability as incomes continue to rise.

### Exhibit 28

#### Significant progress has been made in shrinking the share of the population below the Empowerment Line

Population profile by poverty segment  
Million



NOTE: Numbers may not sum due to rounding.

SOURCE: National Sample Survey Office survey, 61st, 66th, and 68th rounds; McKinsey Global Institute analysis

## Urban Indians are almost as likely as rural Indians to be vulnerable

India's official poverty line indicates that the urban population is only half as poor as the rural population. By contrast, the Empowerment Line highlights the rising issue of urban poverty.

We observe that one-fifth of those below the official poverty line (53 million people) live in urban areas, while four-fifths (214 million) live in rural areas. India's villages not only house more of the officially poor, but their residents are also poorer in relative terms: 26 percent of India's rural population is below the official poverty line vs. 14 percent of India's urban population.

However, urban Indians are almost as prone as their rural counterparts to falling into the vulnerable category (Exhibit 29). The national Empowerment Line of Rs. 1,336 per capita per month is a weighted average of a rural line of Rs. 1,228 and an urban line of Rs. 1,692. This difference is primarily driven by the higher cost of living in India's cities. When applying these differentiated benchmarks, 30 percent of India's urban population is considered vulnerable, approaching the 35 percent of the rural population in similar straits—revealing that city dwellers, like rural residents, face ongoing struggles to achieve minimum standards of living once they have exited official poverty.

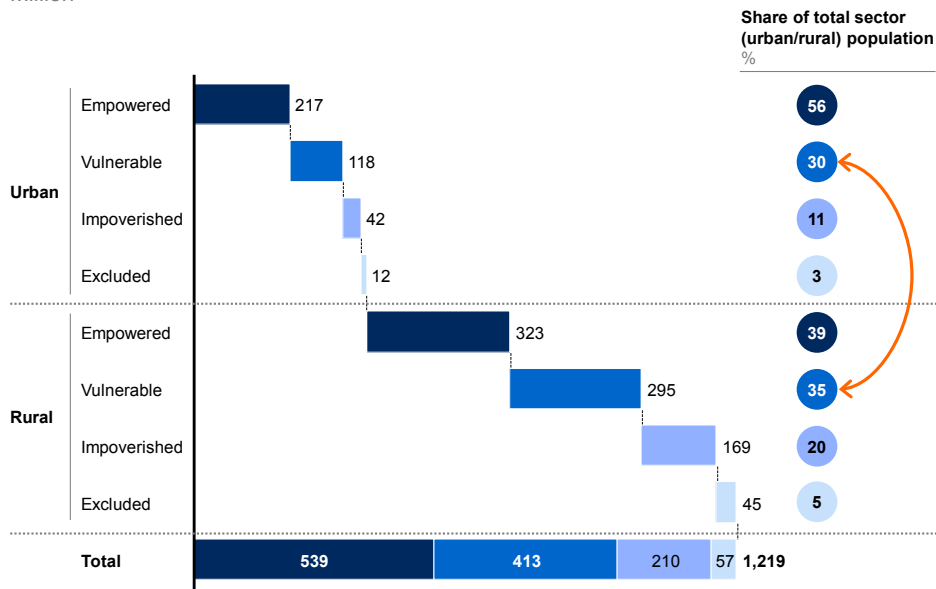
As Indians continue to migrate from the countryside to the city, the urban population is likely to grow from 31 percent of all Indians to 40 percent or more by 2030.<sup>47</sup> Policy interventions will need to focus on a growing pool of the urban poor.

**Exhibit 29**

**The prevalence of vulnerability is about the same in urban and rural areas**

Population by sector and segment, 2011–12

Million



NOTE: Numbers may not sum due to rounding.

SOURCE: National Sample Survey Office survey, 68th round, McKinsey Global Institute analysis

**Each segment has distinct unmet needs**

The most urgent unmet needs of the excluded and impoverished are hunger and health—but health, education, and housing are major issues for the vulnerable (Exhibit 30).

Extreme malnourishment prevails among the poorest of the poor. In fact, food accounts for almost half of the value of unmet needs of the rural excluded, and one-third of the unmet needs of their urban counterparts. Compounding the effects of chronic malnourishment, this segment has a shockingly high health gap; the excluded can spend only about 10 percent of what is needed for basic health care, clean drinking water, and sanitation, in both urban and rural areas.

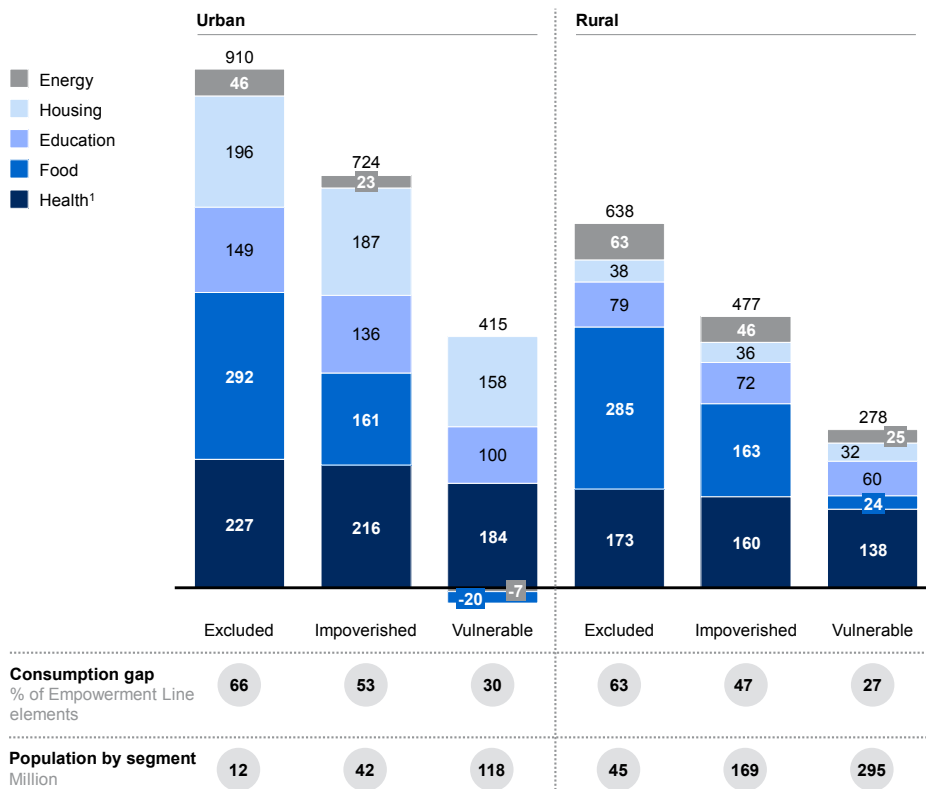
For the impoverished, the nutrition gap is not as overwhelming as for the excluded, but hunger is still a stark reality. Households in this segment survive on just 70–80 percent of the minimum calorie requirements. The health gap for the impoverished is almost as glaring as that of the excluded segment; the impoverished are able to consume just 15 percent of the minimum level of health care. For the urban impoverished, affordable housing is in short supply, and many live in slums.

<sup>47</sup> *India's urban awakening: Building inclusive cities, sustaining economic growth*, McKinsey Global Institute, April 2010.

Nutrition is not a major issue for the vulnerable segment; instead, health, housing, and education represent the major gaps. In urban India, health and housing account for more than two-thirds of the deprivation facing the vulnerable, while health accounts for half of the unmet needs of the rural citizens in this segment. Their spending on health services is less than a third of the normative level, and their housing expenditures are one-fourth of the normative level.

**Exhibit 30**  
**Health is a significant gap across all segments; food is an urgent issue for the impoverished and excluded**

Consumption gap by segment and service, 2011–12  
 INR per capita per month



1 Includes health care, drinking water, and sanitation.  
 NOTE: Numbers may not sum due to rounding.  
 SOURCE: National Sample Survey Office survey, 68th round; McKinsey Global Institute analysis



Since 56 percent of India's population is below the Empowerment Line, it is critical to take a more granular view of how poverty is experienced by those at different income levels. When the gaps are examined in greater detail, it becomes clear that while nutrition remains one of India's large unmet needs, especially for the excluded and the impoverished, it is only part of the story. There are critical gaps across the board in health care, drinking water, and sanitation, as well as distinct issues facing the rural poor and the urban poor. These deprivations shape every aspect of daily life for the poor. Hundreds of millions of households face hard choices and limited prospects—and India cannot realise its full economic potential until it maximises this human potential. That also requires providing the entire population with schools, hospitals, toilets, energy, and other basic services. However, as discussed in the next chapter, India's poor face a severe lack of access to these services in their daily lives.





## Examining the faces of poverty: Sketches of six lives

While poverty has to be addressed at the policy level, it also has to be understood at the individual level. To underscore the human toll of poverty, we have created a series of composite sketches to illustrate how the issues facing the poor play out in the lives of millions of families across rural and urban India.

### **The rural excluded: Fending off hunger and living without health care**

For the poorest residents of rural India, hunger is a matter of daily survival. Consider the story of Gurang, who lives in Odisha's Koraput district. In addition to growing a meagre crop of rice on the acre of land he owns, he collects seasonal fruits such as jamun, amla, and mango; he also gathers bamboo and sal leaves to sell to basket makers in the local market to supplement his income. The PDS shop gives him less than half his entitlement of grains.

Through the summer months, the produce dries up, and he incurs debts from the local moneylender to keep his family fed. They survive on wild tubers, leaves, and seeds from the forest, and finally just by cutting down consumption to the bare minimum (rice, salt, and black tea twice a day). During a recent drought, Gurang had to sell off his goats to maintain even this level of subsistence.



One son helps Gurang in farm and forest work; the other two work with their wives at brick kilns in neighbouring Andhra Pradesh for six months a year. A ray of hope came to Gurang in the form of the MNREGA employment scheme, which gives him 30 days of work a year, but payments were delayed and wound up amounting to less than what he thought he was owed.

The villagers consult the local medicine man when minor ailments strike. But last year, Gurang's grandson fell desperately ill with malaria; Gurang put him on his back and walked 30 kilometres to the nearest district hospital. Luckily, the child survived, but two others in his village succumbed. Despite these hardships, Gurang thinks he is better off than his father's generation, which lacked even a district hospital.

### **The urban excluded: Life at the margins of india's cities**

For rural subsistence farmers, India's cities hold the promise of economic opportunity—but many urban migrants find that they have simply traded one life of poverty for another. Shakeel, for example, came to Kanpur from his village in eastern Uttar Pradesh ten years ago. His family worked as sharecroppers, but a prolonged drought decimated their harvests. With no help forthcoming from their landlord, they moved to the city in search of work. Shakeel's cousin worked as a waste-picker there and introduced him to the trade.

Today Shakeel and his family of five live with his parents in a shanty made of plastic and tarpaulin sheets. Behind his house runs a *nallah*, or drain, which doubles as a sewer and toilet. Lighting comes from a wire pulled from the local electricity distribution box. For these privileges, Shakeel must pay Rs. 500 a month to the local *dada*, or don.



Shakeel spends nine hours a day at the landfill picking through rags, plastic waste, bottles, and paper; he carries each day's finds on his back to sell to the waste collector. Negotiations with the waste collector leave him feeling cheated sometimes, but since he owes the man money, he has no choice but to accept the price being offered. Shakeel earns about Rs. 100 per day, barely enough to feed and clothe his family. Waste-picking is harsh and dirty work, and Shakeel often contends with dog bites and cuts from broken glass. But treating these wounds at the government hospital, even if they become infected, is out of the question. Although he would be entitled to free treatment, Shakeel hasn't the time

and worries that missing even half a day of work will leave his family with nothing to eat. He longs for a permanent job that could provide them with more security.

### **The rural impoverished: The worsening plight of farming families**

Drought, soil depletion, and a lack of rural infrastructure are exacerbating the hardships facing India's farming families. Consider Mathurabai and her husband, Bablu, who live with their five children on one acre of rocky land in the drought-prone tract of Dewas district in Madhya Pradesh. Bablu works the land as best he can, though rainfall is scarce and groundwater has been drying up. Mathurabai looks after the family's livestock: three cows and eight goats that give them milk to drink and sell, as well as dung for fuel. Veterinary services are not easy to come by; three years ago they lost half their livestock to disease. Watering the animals, taking them out to graze, and milking them is hard work, and Mathurabai walks at least two hours a day in search of fodder. With the soil and vegetation eroding on the local common lands, she is forced to range farther each year.

When rainwater is available, Bablu grows chillies, cabbages, and onions. The village is connected to the nearest large town by only a *kutch* road; to sell milk and vegetables at the district headquarters, he must carry them 12 kilometres. The village was connected to the electricity grid in 2009, but supply is erratic, and villagers use kerosene to light their houses.



To compound matters, the village hand-pump is defunct, so the family now collects water from a polluted river a few kilometres away. Diarrhoea and cholera are rampant in the village, and took the life of one of Mathurabai's children last year. The secondary school is too far away, so her eldest two children have dropped out, but the younger two attend the village primary school. Mathurabai and her husband never went to school at all, so she takes pride that her children are learning to read and write and hopes that this will provide them with the tools for a better life.

### **The urban impoverished: A lack of options for those with little education**

A lack of skills training limits the employment options available to the poor—and even the meagre earnings they manage to cobble together are often eroded by corruption. Nilmani, a vegetable vendor in Imphal, Manipur, is a case in point. After her husband died of tuberculosis a few years ago, she was left with no income to feed her family and pay off the debts she incurred for his final medical treatment.

Vegetable vending was the only occupation open to her, as it requires virtually no skills and very little capital. Nilmani leaves for work from her one-room shanty at 4:30 a.m., while her three children are asleep. She buys vegetables from the wholesale market, investing Rs. 2,000 of working capital per



day, which she finances through a moneylender. She brings the vegetables back home and cleans and sorts them by 6 a.m. Then Nilmani goes to the market, where she occupies a slot between a fruit seller and a tea stall to sell her vegetables. Vending earns her a profit of about Rs. 150 per day, but she is harassed by police and municipal authorities, who threaten to make her move out of her pavement slot. To stave them off, she pays an average of Rs. 30 each day in bribes.

Nilmani is not back home until 8 p.m., after the evening shoppers disperse. Her older daughter has studied up to class 10 in the government school and has learned how to sew; she earns a little by sewing clothes for local women and manages the home for the younger two children while her mother is away all day. Nilmani's son dropped out of school, as he couldn't pass the exams and she had no money for extra tuition. She sent him off to work with her sister's husband, a signpost painter, to learn a trade. She is hopeful he will one day set up his own business or perhaps join her selling vegetables, a business she could expand if she borrows more money to buy a pushcart.

### **The rural vulnerable: Hoping that luck holds out**

Those who have risen just above the official poverty line have a tenuous hold on a better life. That is the case for Ramanna, who runs a small business manufacturing cycle seat covers in the Srikakulam district of Andhra Pradesh. While most people in his village cultivate paddy and peanuts to make a living, Ramanna has been luckier: he landed work as a tailor's assistant for a few years and learned a skill. Then he managed to get a loan for Rs. 20,000 from a cooperative society. With this, he bought an industrial stitching machine and a few hand tools and set up his business. His workshop occupies 300 square feet of his home; Ramanna and his family live in the remaining 300 square feet. He even employs an assistant, a 19-year-old village youth who is keen to work and learn a trade, just as Ramanna did some years ago.

But Ramanna's stitching machine needs power. Although his village has access to electricity, it typically works for only four to five hours a day. Ramanna makes a profit of some Rs. 5,000 each month—enough to keep his family fed and his three children in school—but the erratic power supply limits his ability to earn more.



Life could have been much harder for Ramanna, though. A few years ago, a fire broke out in his workshop and destroyed his machines and supplies. Having no insurance, he now had no income, and debts to repay. For six months, the family survived on rice and thin daal while Ramanna did odd jobs to make ends meet. Finally, his wife sold her only assets—two gold bangles her parents had given her when she got married—to repay their debts and rebuild the business. Today Ramanna is relieved that tough times are behind him and hopes to install a generator for a more reliable source of power that will allow him to take more orders and grow his business.

### **The urban vulnerable: Depending on the kindness of employers**

Lata is a domestic worker in Mumbai's prosperous Worli area. Her husband lost his job as a mill worker 15 years ago and never found another steady occupation. His odd jobs don't pay the bills, so Lata became the breadwinner, along with her daughter, who dropped out of school to join her. They perform domestic chores for four households—cleaning homes, washing clothes, and doing basic cooking. Wages are high in that part of the city, so Lata and her daughter earn Rs. 8,000 per month, just enough for the basics

for their family and her husband's parents back in the village.

She lives in a one-room semi-permanent structure with brick walls and a corrugated iron roof in a slum bordering the sea. The inside has some of the hallmarks of middle-class success: a television, an LPG stove, and a wall of shining steel pots and pans. But the toilet is shared, and Lata must stand in line for 45 minutes a day and pay the local *dada* for water from a municipal tap. Preparing her house cost her Rs. 30,000 a few years ago, and Lata repays Rs. 1,000 per month to a moneylender.

Despite the hardships, Lata is lucky that her work brings her into contact with well-off, modern India. She and her daughter get two decent meals a day at their employers' homes, and when she needed an emergency operation last year, one of her employers paid to have it done at a well-regarded hospital. She borrowed from another to get her son admitted into a private college in the town close to their village. She hopes he will one day land an office job, but she worries about her daughter's prospects, as she is unable to afford a course that would allow her to fulfil her dream of becoming a beautician. She also worries that the support she has enjoyed from her employers will end one day, leaving her with few options as she ages.



## 4. Access to basic services: The patterns of deprivation

When it comes to the availability of basic services, geography is destiny for India's poor. Even for households of similar income levels, the actual experience of poverty varies dramatically based on where they live.

The eight basic needs addressed by India's Empowerment Line can be satisfied in different ways. Nutrition, water, and energy needs, for instance, can be met if households gain more purchasing power. But others—particularly education and health—require better shared infrastructure (such as schools and hospitals) and more effective delivery of public services. It is therefore vital to take a realistic look at how India's geographies are equipped to provide the basics for their populations.

We have created the Access Deprivation Score to quantify the availability of services in each region. Using this tool, India's 640 districts can be mapped into five distinct categories. This approach allows us to make comparisons at both the district and state levels. Combining insights about the intersection of income-based poverty with gaps in social infrastructure can enable policy makers to tailor their responses and allocate resources more effectively.

### Access-based measures are needed to complement the Empowerment Line

While the Empowerment Line measures households' ability to afford a set of basic services, we also need metrics that capture the ease or difficulty of actually obtaining those services. For example, consider a family of four in rural India with a household income of Rs. 5,000 per month. This family is above the Empowerment Line, which implies that they can afford a minimum acceptable standard of living—but they still face deprivation. The nearest primary health centre is probably more than five kilometres away, and when they travel there for medical care, there is no certainty that a doctor will be available. Their daughter is not continuing her education, as she would have to travel more than ten kilometres to the nearest secondary school. And despite their willingness to spend money on electricity, their power supply doesn't work for more than three hours a day.

This example illustrates how the willingness or ability to spend money is not, in itself, sufficient to guarantee a household's quality of life. Incomes need to be complemented by physical access to affordable basic services of an acceptable quality. Assessing and widening access across India is crucial in any effort at poverty alleviation.

## The Access Deprivation Score (ADS) measures access to the basic services required for an empowered life

The Empowerment Line indicates that 56 percent of the population is not able to afford a minimum acceptable standard of living. To complement this understanding with an assessment of the current availability of basic services, we have constructed the Access Deprivation Score (ADS).

The ADS is based on access to six basic services (health care, education, drinking water, sanitation, housing, and energy) that are part of the consumption bundle that makes up the Empowerment Line. To arrive at the ADS, access is measured using nine variables such as school enrolment, immunisation rates, the use of oral rehydration solution (ORS) as a proxy for basic medical care, electrification, and access to LPG for cooking (Exhibit 31; also see Appendix C for a detailed description of the individual indicators and how they are measured).

The nine variables are combined to reach the overall ADS for a particular district. Zero ADS represents the point of “no deprivation”, or universal access to services. On the other end of the spectrum, an ADS score of 100 percent represents the point of complete deprivation, or the complete absence of any of these basic services.

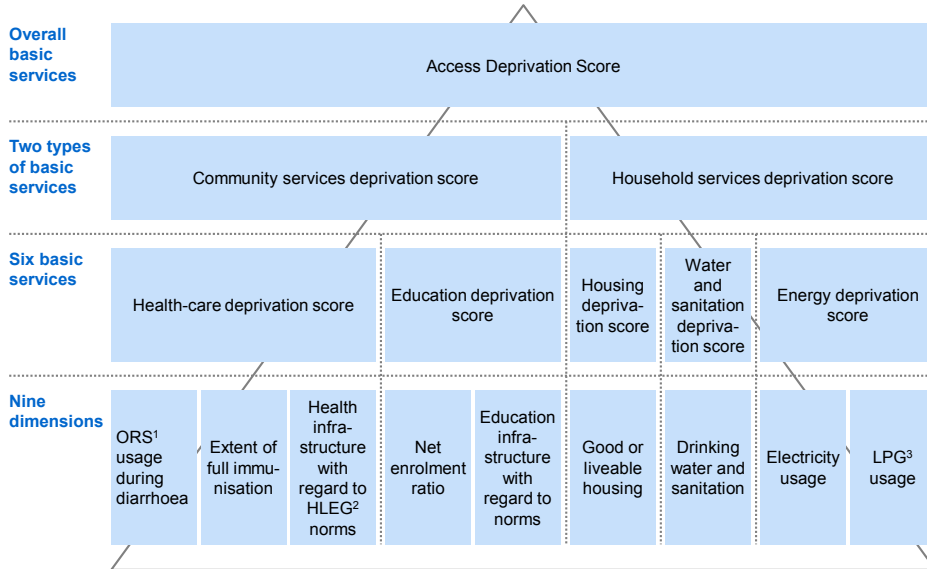
What would an ADS of zero, or universal access, look like? For a district with a population of one million, this would translate into 200 sub-centres, 33 primary health-care centres, and eight community health centres (as per government health-care norms). This would allow all families in the district to utilise basic health-care services such as immunisation and oral rehydration solution as treatment for diarrhoea. Every child between the ages of 6 and 16 would be enrolled in a primary or secondary school. Each and every household would occupy housing of good or adequate quality (as defined by the Census of India), and every household would have access to electricity, modern cooking fuels such as LPG or smokeless *choolahs* (cooking stoves), improved sanitation, and drinking water within the home. These goals are aspirational, but they set benchmarks against which India can monitor progress.

The ADS has been calculated at a district level to provide a more granular understanding of access deprivation, as state and national averages tend to mask sharp variability across regions. By calculating the ADS for each of India's 640 districts, we can pinpoint areas of extreme need, compare districts, and aggregate results at the state and national levels.



**Exhibit 31**

**The Access Deprivation Score (ADS) helps to evaluate access to various basic services at several levels of aggregation**



1 Oral rehydration solution.  
 2 High Level Expert Group.  
 3 Liquefied petroleum gas (used as cooking fuel).  
 SOURCE: McKinsey Global Institute analysis

The average Indian household lacks access to 46 percent of basic services, but this varies widely even within each state

The nationwide ADS is 46 percent—that is, on average, Indians do not have access to 46 percent of the basic services they need. Bihar has the highest level of deprivation with an ADS of 62 percent, while at the other extreme, Himachal Pradesh has the lowest level of access deprivation (among states with at least ten districts) with an ADS of 28 percent.

Even within states, individual districts exhibit wide variations (Exhibit 32). In Madhya Pradesh, for example, Singrauli district has an ADS of 65 percent (implying that it is more deprived than the average district of Bihar), while Bhopal district has a dramatically lower score of 34 percent. Examining deprivation at the district level allows us to better pinpoint critical gaps in social infrastructure.

**Exhibit 32**

**India has wide disparities in access to basic services, and variations within states are as high as variations between states**



1 Standard deviation calculated only for states with at least ten districts.

2 Arunachal Pradesh and Nagaland have data limitations and hence are not part of the state list.

SOURCE: Census 2011; District-Level Health Survey, 2007–08; District Information System for Education, 2009–10; McKinsey Global Institute analysis

## Basic services are grouped into two types to help understand the patterns of access deprivation

To better understand the patterns of deprivation at the district level, we segment the basic services into two types.

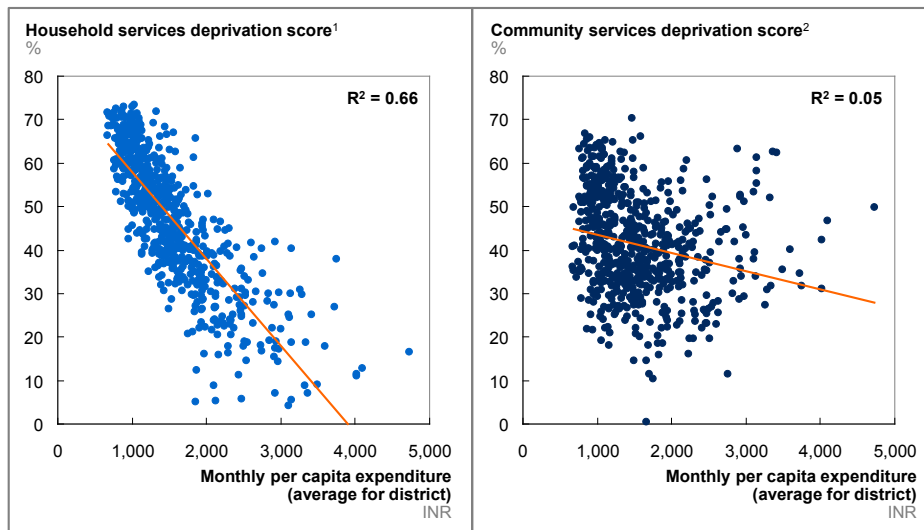
### HOUSEHOLD-LEVEL BASIC SERVICES

Of the six basic services used to construct the ADS, we classify drinking water, sanitation, energy, and housing as household-level services (that is, the final point of service delivery is ideally within the premises of the home). Based on cross-sectional data for the 640 Indian districts in 2011, we find that districts with higher average monthly per capita expenditures have lower levels of deprivation in household services (Exhibit 33).

#### Exhibit 33

#### Access to household-level services improves with higher incomes; no such effect is seen for community-level services

District-level data, 2011



1 Household services deprivation score = distance of each district from the point of no deprivation in household services.  
 2 Community services deprivation score = distance of each district from the point of no deprivation in community services.  
 SOURCE: National Sample Survey Office survey, 2011–12; McKinsey Global Institute analysis

As their incomes (and hence their consumption expenditures) increase, people are in a better position to meet their own needs for household-level services. A slum dweller who lives in an informal shanty may have to make do with a shared water tap and a community toilet, but if she could afford it, she could move into a pucca building with water supply and toilet in her own home. Similarly, a rural farmer could improve the quality of his home, upgrading from mud and thatch to cement and bricks; he could also install a personal tube well for water supply and a personal pit-based toilet if he could afford them.

It is important to note that while the point of service delivery might be at the household level, the government nevertheless has a substantial role in providing the supporting infrastructure by, for example, laying sewerage networks for sanitation, building pipe and purification systems for drinking water, and enabling the infrastructure for electricity generation and transmission.

## COMMUNITY-LEVEL BASIC SERVICES

We classify health-care services and education as community-level services. In these cases, the point of service delivery is usually shared by a group of households or the community at large. Families need well-run schools and health centres within a reasonable radius of their homes to access these services. Based on cross-sectional data for all 640 districts in 2011, we find that there is no correlation between average monthly per capita expenditures and deprivation in community-level services (see Exhibit 33 on the previous page).

The benefits of education and health care for an individual are felt by the entire community, but market mechanisms for supplying these services often fail to work effectively, even in communities with higher incomes. This underscores the fact that investment in this type of infrastructure is a public good, and the government usually has a strong role in either providing these services or enabling a functional market for them.

## India's 640 districts can be grouped into five categories

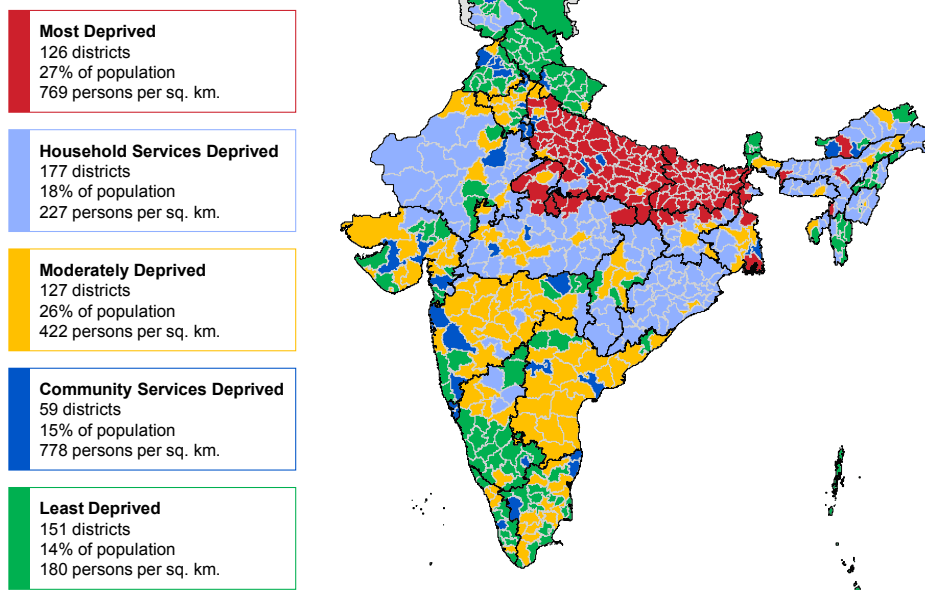
India is a country of great size and diversity, and some of its states are as populous as entire countries (Uttar Pradesh is comparable to Brazil, Maharashtra to Mexico, and West Bengal to Vietnam, for instance). Even individual districts are fairly large administrative units; Thane district, for example, is more populous than Greece. This underscores the need for a more detailed view of deprivation across these districts.

Examining the access to household and community services that prevails in each district yields five broad categories (Exhibits 34 and 35).

### Exhibit 34

#### Each of India's districts falls into one of five categories

2011

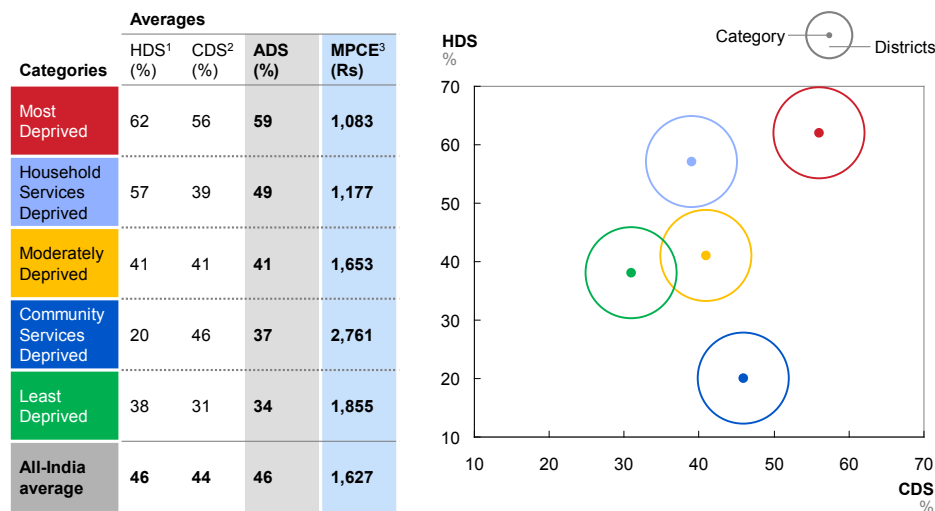


SOURCE: Census 2011; District-Level Health Survey, 2007–08; District Information System for Education, 2009–10; National Sample Survey Office survey, 2011–12; *India state of forest report 2011*, Ministry of Environment and Forests; McKinsey Global Institute analysis

**Exhibit 35**

**Access deprivation varies greatly across district categories**

2011



	Average deprivation scores by basic service						Other indicators		
	Household services				Community services		Overall ADS <sup>5</sup>	Urbanisation %	BEL head-count ratio <sup>6</sup>
	Energy	Sanitation	Drinking water	Housing <sup>4</sup>	Health care	Education			
Most Deprived	82	76	15	8	67	32	59	14%	72%
Household Services Deprived	71	74	32	6	48	15	49	16%	68%
Moderately Deprived	52	52	18	5	50	18	41	34%	53%
Community Services Deprived	25	21	8	3	54	25	37	75%	32%
Least Deprived	48	45	14	4	35	20	34	29%	47%
All India	59	57	18	5	53	23	46	31%	56%

1 Household services deprivation score = distance of each district from the point of no deprivation in household services.  
 2 Community services deprivation score = distance of each district from the point of no deprivation in community services.  
 3 Monthly per capita expenditure.  
 4 Based on Census 2011 data for "dilapidated houses". Other categories are "good" and "liveable" houses, which may include slums.  
 5 ADS is a weighted sum of squares of service-level deprivations, not the simple average.  
 6 Proportion of total population below the Empowerment Line (BEL), 2011–12.  
 SOURCE: Census 2011; District-Level Health Survey, 2007–08; District Information System for Education, 2009–10; National Sample Survey Office survey, 2011–12; India state of forest report 2011, Ministry of Environment and Forests; McKinsey Global Institute analysis

**MOST DEPRIVED DISTRICTS: HIGH DEFICITS IN ALL SERVICES**

India's 126 Most Deprived Districts, which are heavily concentrated in Uttar Pradesh and Bihar, have extremely weak access to all types of services and are home to about 230 million of the 680 million Indians who are below the Empowerment Line. Their deprivation scores for energy (82 percent) and sanitation (76 percent) are considerably higher than the national averages of 59 and 57 percent, respectively. Similarly, their average health-care deprivation score is 67 percent, well above the national average of 53 percent.

The pervasive and deep nature of deprivation in these districts is indicative of their extreme income-based poverty. Their average monthly per capita expenditure, Rs. 1,083, is the lowest among the five categories of districts. Just 14 percent of the population of these districts lives in urban settlements that might offer greater job opportunities; 60 percent rely for their livelihood on agriculture, which has only moderate productivity despite high input intensity.

### **HOUSEHOLD SERVICES–DEPRIVED DISTRICTS: MODERATE DEFICITS IN HEALTH AND EDUCATION, HIGH DEFICITS IN OTHER AREAS**

Around this belt of extreme deprivation lies an equally poor region that seems to have partially overcome the challenges of poverty. These 177 districts—largely concentrated in Odisha, Madhya Pradesh, Rajasthan, Chhattisgarh, and the Northeast—have better access to community services than the Most Deprived Districts. They are home to about 140 million of the 680 million Indians below the Empowerment Line.

These districts have an average monthly per capita expenditure of just Rs. 1,177, so their household-level consumption of basic services is almost as low as that of the Most Deprived Districts. Yet this category performs significantly better in terms of access to community-level services. Health-care deprivation is 48 percent, lower than the national average of 53 percent, and considerably lower than the average of 67 percent for the Most Deprived Districts. At 15 percent, the education deprivation is the lowest among the five district archetypes.

### **MODERATELY DEPRIVED DISTRICTS: MODERATE DEFICITS IN ALL SERVICES**

The 127 Moderately Deprived Districts tend to match the national average for both incomes and access to basic services. They are home to 25 percent of India's population below the Empowerment Line—in line with their share of the overall population.

Substantial parts of India's most prosperous and urbanised states (Haryana, Maharashtra, Gujarat, Karnataka, Tamil Nadu, and Andhra Pradesh) fall into this category. Eighty-four of India's 200 largest cities (including Meerut, Bhubaneswar, Madurai, Patiala, and Vadodara) are in these districts. Many are in the nation's interior, and without coastlines, they lack opportunities for port-based trade and related development.

With an average monthly per capita expenditure of Rs.1,653, their private consumption is 40 to 53 percent higher than that of the Household Services–Deprived and Most Deprived Districts, respectively. Though they are 34 percent urban, twice the urbanisation rate of the Most Deprived and Household Services–Deprived Districts, their share of non-farm jobs and the level of workforce skills are only somewhat better. Their share of jobs in the organised sector, at 13 percent, is roughly equal to the national average. Many of these districts could drive the future growth of the Indian economy, but they seem to be struggling to build momentum for job creation.

### **COMMUNITY SERVICES–DEPRIVED DISTRICTS: MODERATE DEFICITS IN HEALTH AND EDUCATION, LOW DEFICITS IN OTHER AREAS**

India's largest cities are included among these 59 districts. The juxtaposition of high-rises and slums is symptomatic of their unique challenges. Mumbai, for example, is a major business centre—where 42 percent of the population resides in slums. Incomes are not the issue: while one-third of the population in these 59 districts is below the Empowerment Line, this is much lower than the national average of 56 percent. Four-fifths of the labour force in these districts has already transitioned out of agriculture, and income levels are high enough for people to afford many basic services on their own. Deprivation scores on services bought directly by households, such as drinking water, sanitation, electricity, and cooking fuel, are less than half the national average.

But access to community services for these 59 districts is only at the national average level—a level of deprivation far higher than is warranted by the relative prosperity and superior access to household-level services that these citizens enjoy. This could reflect the impact of very high population density (more than twice the national average) and also the necessity for greater citizen awareness and engagement. India's megacities urgently need to address shortcomings in spending, infrastructure, and local governance in order to fulfil their citizens' aspirations.

### **LEAST DEPRIVED DISTRICTS: LOW DEFICITS IN HEALTH AND EDUCATION, MODERATE DEFICITS IN OTHER AREAS**

People living in the 151 Least Deprived Districts have relatively good access to both types of services. These districts are concentrated in the prosperous and better developed northern and southern parts of the country (Kerala, Tamil Nadu, coastal Maharashtra, southern Karnataka, Himachal Pradesh, Punjab, and Uttarakhand). They are 29 percent urban, with an average monthly per capita expenditure of Rs. 1,855—both significantly lower than these indicators in the Community Services–Deprived Districts. Yet these areas enjoy better access to health care and education than the more urbanised Community Services–Deprived Districts. Population growth and access to health care and education infrastructure have moved broadly in line with each other.

Thirty-three of India's largest 200 cities are in these districts, but 25 (including Bathinda, Salem, Rohtak, and Palakkad) have populations below 500,000, allowing them to achieve economies of scale without the infrastructure strains and overcrowding that plague India's megacities. This raises the question of whether a more diffused and distributed form of urbanisation, with greater numbers of smaller urban centres, could work in favour of households.

## **Five insights from these patterns of deprivation point to potential solutions**

The categories described above lead to five key insights and implications for policy makers about how to address gaps in access to the fundamental services that are part of a minimum acceptable standard of living. Because an individual state may have districts with widely varying levels of social infrastructure, policy

makers will have to take these starting points into consideration (see Box 7, “Developing archetype-specific strategies”, near the end of this chapter).

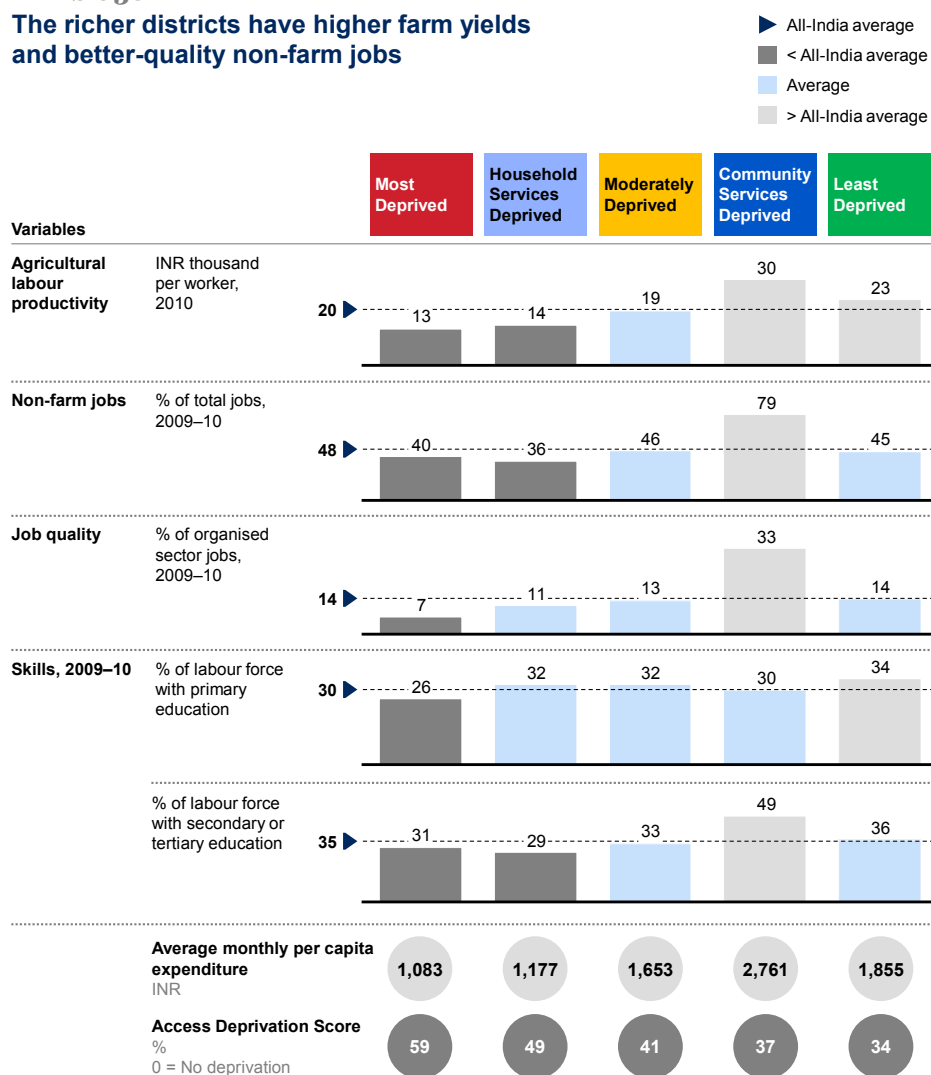
## 1. HIGHER INCOMES, BOTH FARM AND NON-FARM, LEAD TO LOWER LEVELS OF OVERALL DEPRIVATION

The Most Deprived and Household Services–Deprived Districts are the nation’s poorest. By contrast, the Community Services–Deprived and Least Deprived Districts have significantly higher agricultural yields and shares of non-farms jobs, which correlate strongly with citizens’ ability to secure basic services at the household level (Exhibit 36). They, along with the Moderately Deprived Districts, have higher-quality jobs than poorer districts, and a greater share of those jobs are in organised sectors.

Productivity growth (both within the agricultural sector and in other sectors) can raise incomes and expand access to basic services at the household level in the poorest districts. Achieving this will involve focusing on structural issues that can boost farm productivity and enable the smooth transition of labour from farms to non-farm sectors with higher wages.

### Exhibit 36

#### The richer districts have higher farm yields and better-quality non-farm jobs



NOTE: Not to scale.

SOURCE: National Sample Survey Office survey, 2009–10, 2011–12; Bhalla and Singh, *Growth of Indian agriculture: A district-level study*, 2010; McKinsey Global Institute analysis



## 2. INCREASED INCOMES DO NOT GUARANTEE THE AVAILABILITY OF COMMUNITY-LEVEL SERVICES

With increasing incomes and purchasing power, people are able to afford better housing, sanitation, drinking water, and fuel for cooking and lighting, reducing deprivation scores for household services. But higher income levels do not automatically imply improved community-level services and infrastructure (see Exhibit 33, earlier in this chapter).

Improving access to quality education and health care will require increased and more effective public spending, along with active community participation. Productivity and wage improvements do, however, have an indirect impact on community-level basic services by broadening the government's revenue base to fund such programmes.

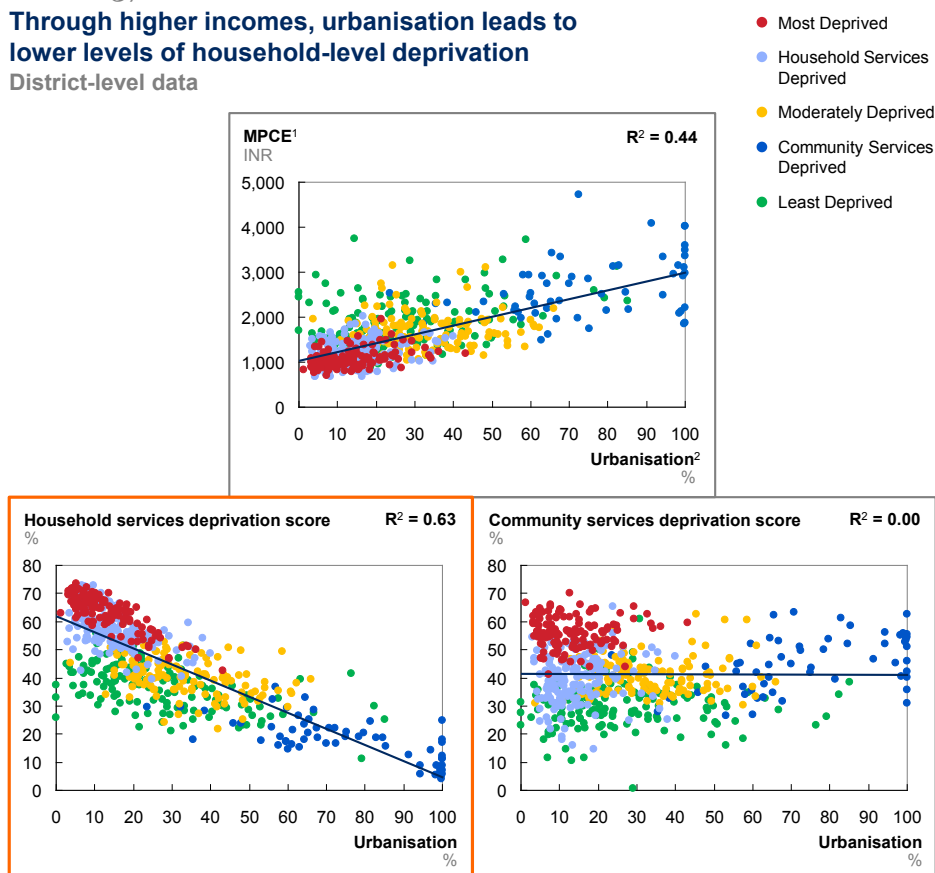
## 3. URBANISATION, THROUGH ITS INCOME EFFECT, RESULTS IN LOWER HOUSEHOLD DEPRIVATION

The more economically prosperous categories of districts are also the most urban, as cities afford better access to jobs with higher wages. In fact, India's cities have been its engines of non-farm job creation, and millions of migrants have flocked to urban areas from the countryside in search of better opportunities. The attendant higher incomes reduce household-level deprivation, but urbanisation does not seem to have any correlation with improved access to community-level services (Exhibit 37).

**Exhibit 37**

**Through higher incomes, urbanisation leads to lower levels of household-level deprivation**

District-level data



1 Monthly per capita expenditure, average for district, 2011–12.

2 Based on Census 2011.

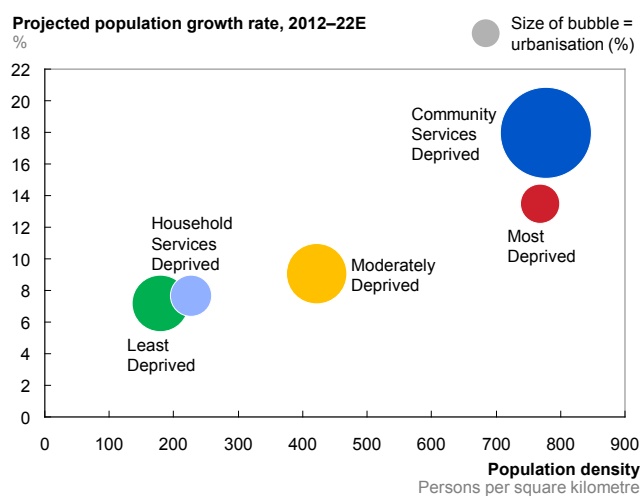
SOURCE: Census 2011; District-Level Health Survey, 2007–08; District Information System for Education, 2009–10; National Sample Survey Office survey, 2011–12; McKinsey Global Institute analysis

#### 4. RAPID URBANISATION WITHOUT COMMENSURATE INVESTMENT DEPRIVES PEOPLE OF ACCESS TO HEALTH CARE AND EDUCATION

India's nine megacities (Mumbai, Delhi, Chennai, Bengaluru, and five others with populations of more than four million) are among the Community Services–Deprived Districts. They have the nation's highest number of schools per square kilometre, but due to extremely high population density, their per capita penetration is the lowest (Exhibit 38). This may be why Community Services–Deprived Districts have lower average net enrolment rates than the Least Deprived Districts. Even the prevalence of basic health-care practices is lower than in the Least Deprived Districts, despite the physical concentration of services created by urbanisation. In Mumbai district, for example, only 54 percent of children with diarrhoea were treated with oral rehydration solution, significantly less than the average of 61 percent in Himachal Pradesh—a state where all districts fall into the Least Deprived category. Based on current trends, it is also expected that the Community Services–Deprived Districts will continue to experience high population growth in the next ten years, underscoring the urgency of addressing social infrastructure issues in India's megacities.

##### Exhibit 38

#### High population density in Community Services Deprived and Most Deprived Districts strains health and education infrastructure



	Government health-care centres and hospitals		Schools	
	Per thousand square kilometres	Per million population	Per thousand square kilometres	Per million population
Most Deprived	98	124	3,063	3,981
Household Services Deprived	47	200	1,543	6,786
Moderately Deprived	63	148	2,174	5,153
Community Services Deprived	59	71	3,395	4,364
Least Deprived	40	214	1,123	6,224

SOURCE: Census 2011; District-Level Health Survey, 2007–08; District Information System for Education, 2009–10; National Sample Survey Office survey, 2011–12; *India state of forest report 2011*, Ministry of Environment and Forests, Government of India, February 2012; McKinsey Global Institute analysis

Urbanisation levels in Moderately Deprived Districts are similar to those in the Least Deprived Districts, but they are concentrated in a few larger cities. This seems to adversely affect per capita access to health care and education in Moderately Deprived Districts. These services need to be scaled up rapidly, with increased public investment directed to health care in particular.

More broadly, job creation policies can be recalibrated to promote growth across a greater number of urban centres to help facilitate the transition from farm to non-farm jobs. This will alleviate the growing pressure on all types of infrastructure in India's megacities.

## **5. SOCIAL EMPOWERMENT AND IMPROVED GOVERNANCE GO HAND IN HAND WITH BETTER ACCESS TO BASIC SERVICES**

The Household Services–Deprived Districts have significantly lower gaps in community-level infrastructure for health and education than their counterparts at similar income levels, the Most Deprived Districts. Similarly, the Least Deprived Districts and the Moderately Deprived Districts have comparable income levels, but the Least Deprived have better access to community services. Interestingly, the two groups of districts with greater access also have better sex ratios; women are more educated and aware; and child marriage is less prevalent. The government apparatus also works much better in such districts, as shown in the better performance of the MNREGA and PDS programmes. For example, in 2011–12, families below the official poverty line in Household Services–Deprived Districts purchased 18 kilograms (kg) of food grain on average, compared with only 14 kg in the Most Deprived Districts (Exhibit 39). While the cause-and-effect relationship is unclear, the correlation of women's empowerment with improved local governance and access to basic services is evident.

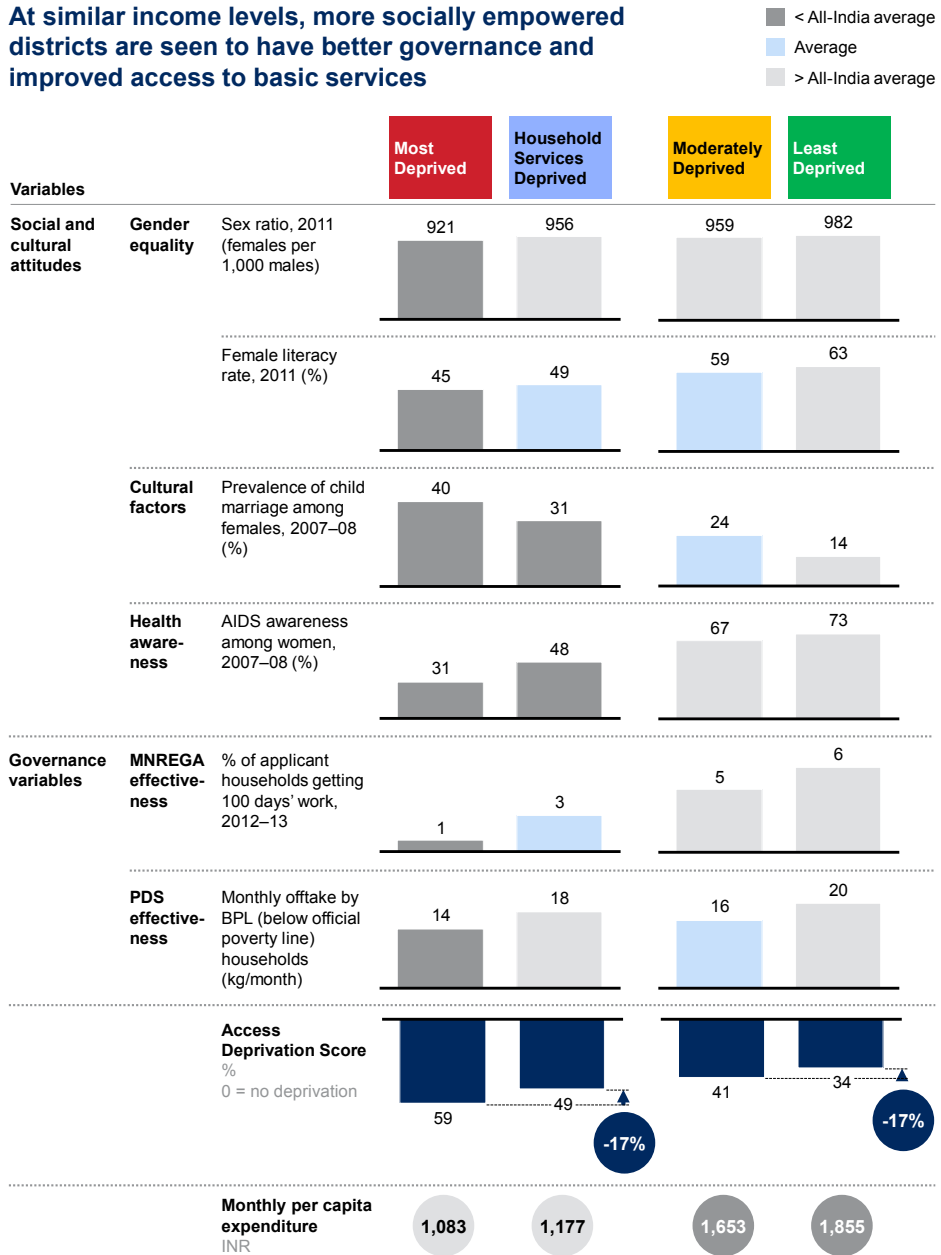
When they become *panchayat* members, women have been seen to take the lead in organising immunisation drives and health camps in their villages.<sup>48</sup> In places with more progressive attitudes towards gender, women have taken a more visible role in the non-farm sectors of the economy and have better utilised public welfare measures. Women can be effective advocates for their own families' welfare, and when they have greater levels of education and autonomy, they are powerful drivers of improved health and education outcomes for their children—and for the wider community. To achieve substantial improvements in the delivery of public services, citizens will have to claim their basic rights and insist on accountability and good governance.

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48 Leela Visaria and Meera Bhat, "Public provisioning of health and decentralisation in Gujarat", *Economic and Political Weekly*, volume 46, number 49, December 2011.

**Exhibit 39**

**At similar income levels, more socially empowered districts are seen to have better governance and improved access to basic services**



NOTE: Not to scale.

SOURCE: Census 2011; District-Level Health Survey, 2007-08; National Sample Survey Office 2011-12; MNREGA website; McKinsey Global Institute analysis

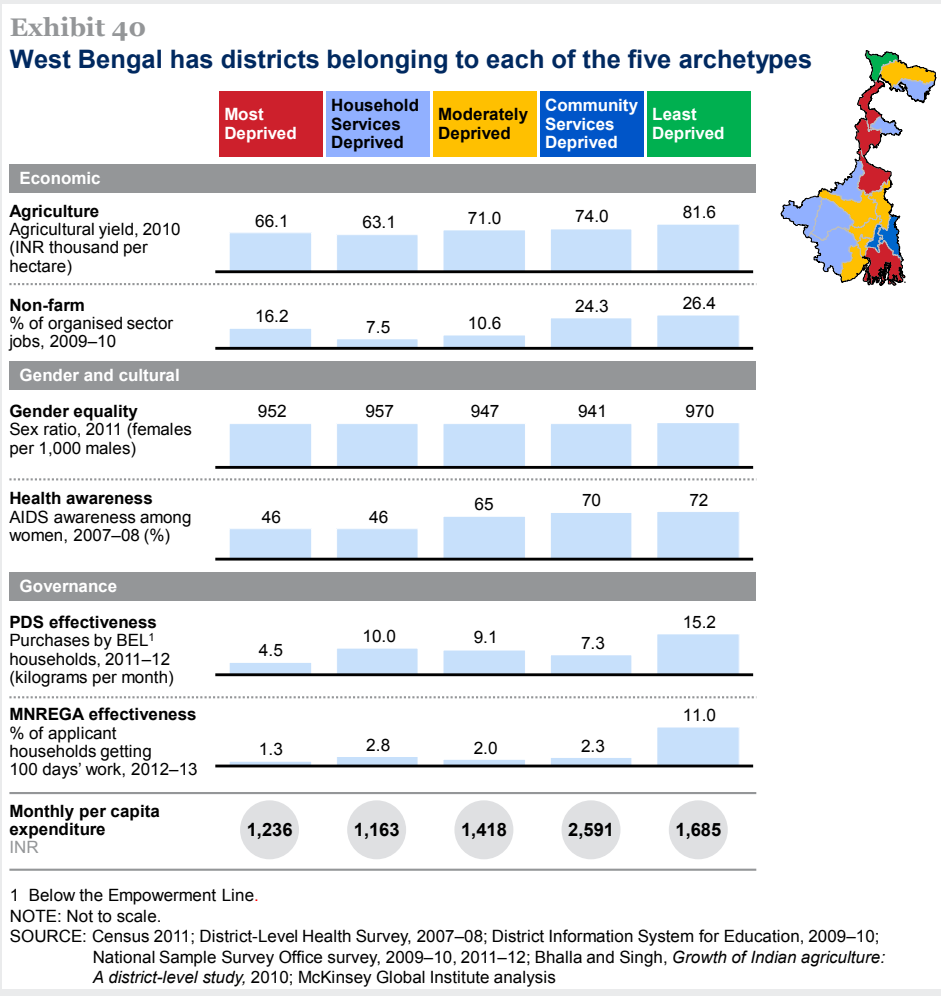
### Box 7. Developing archetype-specific strategies

Districts within states such as Uttar Pradesh, Bihar, Himachal Pradesh, and Odisha tend to fit one main archetype. In most states, however, districts fall into multiple categories, reflecting their different levels of access, incomes, community participation, and governance—and this diversity of starting points calls for a variety of interventions tailored to these realities. West Bengal, for instance, has districts that match each archetype (Exhibit 40).

Its Most Deprived Districts (such as Maldah, Uttar Dinajpur, and Murshidabad), which are concentrated in North Bengal, include some of the poorest in the entire country and have the highest Access Deprivation Scores. They also rate poorly for gender equality and the effectiveness of government systems. The state's Household Services–Deprived Districts have the lowest monthly per capita expenditures, resulting in household deprivation of 61 percent—but greater gender equality and more effective government services in these highly tribal districts have contributed

to better access to community-level services. The two Community Services–Deprived Districts (Kolkata and its neighbouring district of North 24 Parganas) have the lowest household deprivation scores, driven by higher incomes, but population density is straining community-level infrastructure. The only Least Deprived District in West Bengal, Darjeeling, is a tourist hub with the best social and governance indicators, along with strong agricultural yields and a high share of jobs in organised sectors.

Taking a one-size-fits-all approach to the design of economic development policies and social programmes is unlikely to yield the most effective results given these widely varying conditions. Each district archetype presents its own set of challenges. Some desperately need job creation and productivity improvements, while others require a strengthening of governance and expanded social infrastructure. These disparate needs call for a more nuanced approach from state and central governments.





Within India, and even within its constituent states, are significant disparities in access to basic services. Parts of India have surged ahead of others, thanks to economic growth, new attitudes towards gender equality and community engagement, and the strength of local governance. All of these factors are critical to achieving the objective of bringing millions up to acceptable living standards. To raise incomes, India needs a surge of non-farm job creation, especially in the organised sector, along with higher agricultural productivity. This has to be accompanied by a push to fill in the existing gaps in education and health infrastructure and by a concerted effort to improve the efficiency and effectiveness of basic services. The Empowerment Line and the Access Deprivation Score are tools that provide a comprehensive and nuanced view of how poverty is experienced across India to assist policy makers as they allocate resources and design appropriate responses. Building on those insights, the chapters that follow will outline a series of potential reforms that could form the basis of a new approach to delivering higher living standards—one that addresses both the income and infrastructure sides of the equation.







## 5. Reforms and governance to move India from poverty to empowerment

Poverty reduction was recognised as the main goal of an independent India even before independence. The National Planning Committee formed by the Indian National Congress in 1936 declared that the objective of policy should be “to get rid of the appalling poverty of the people”—and the process of fulfilling that goal is now gaining momentum.

From 1994 to 2005, the share of the population below the official poverty line declined from 45 percent to 37 percent. Between 2005 and 2012, robust annual GDP growth of 8.5 percent coincided with an almost 11 percent real increase in spending for basic services—and as a result, the official poverty rate fell further, to 22 percent. During this period, India successfully reduced the number of people below the Empowerment Line by 183 million.

This research considers what it would take to achieve an even more ambitious goal in the decade ahead. The “inclusive reforms” scenario explored here is predicated on India’s adoption of a bold reform agenda that supports higher and more broad-based growth targets. We project that this path could leave just 100 million Indians, or 7 percent of the population, below the Empowerment Line by 2022. In addition, the reforms proposed here would have benefits that extend beyond those below the Empowerment Line. India’s entire population would benefit from higher economic growth, a better business climate, more extensive social infrastructure, and more responsive governance.

This scenario focuses on the potential for bringing at least an additional 580 million people above the Empowerment Line. But in aiming for the higher minimum standard of living inherent in the Empowerment Line, we do not lose focus on ending extreme poverty. If India can accelerate its annual rate of extreme poverty reduction by 20 percent, only about 1 percent of its population would be left below the official poverty line by 2022.

Achieving that goal is not a foregone conclusion, however. If current economic growth rates hold and no major reforms are undertaken, India will fall well short of these aspirations. Some 470 million Indians, or 36 percent of the population, would likely remain below the Empowerment Line in 2022. This would include about 165 million Indians, or 12 percent of the population, remaining below the official poverty line. This chapter compares the two potential paths and identifies the policy issues that must be tackled to truly empower the majority of Indians.

## Without wide-ranging reforms, 470 million Indians might remain below the Empowerment Line in 2022

After a period of robust growth, India's economic engine has been sputtering. GDP growth dropped from 9.3 percent in 2010–11 to 5 percent in 2012–13.<sup>49</sup> At the same time, a rising fiscal deficit and the persistence of government inefficiency have called into question whether a rapid expansion in public spending on basic services is actually sustainable.

India's 12th Five Year Plan (2012–17) noted that the nation ran the risk of being mired in a “policy logjam”—one in which growth is hampered by the absence of decisive reforms that could boost investment and productivity across sectors, improve legislative and administrative functioning, and more effectively execute government programmes. In response to the economy's recent sluggishness and the negative outlook for job creation and public finances, the government has been adopting a set of near-term and relatively easily implemented measures to encourage investment, curb the current account deficit, and improve investor confidence. But restoring higher long-term growth will require India to make a serious commitment to deeper reforms—a challenging prospect in the current environment. In this context, it is important to envision the outcomes that would result over the next decade if long-standing structural barriers in the Indian economy go unaddressed.

In this “stalled reforms” scenario, slow job creation and sluggish productivity growth in both farm and non-farm sectors would persist. A lower tax revenue base would constrain the government's ability to spend on basic services, and service delivery would remain inefficient. In this hypothetical scenario, India would average just 5.5 percent annual GDP growth from 2012 to 2022, based on a continuing poor investment climate, the absence of a strong industrial revival, limited uptick in services or agricultural sector productivity, and no decisive moves to improve government functioning.

The consequences of slower growth are dismaying: about 36 percent of India's population could remain below the Empowerment Line in 2022, with 12 percent of the population still trapped below the official poverty line. At this rate, the goal of removing extreme poverty would not be reached until the mid-2030s. Access deprivation would remain at 26 percent in 2022, as fiscal resources would be inadequate to build all the basic services people need.

The stalled reforms scenario presents sobering implications for India's future. First and foremost, it would be a humanitarian failure for so many to lack the basics in a nation that will likely be the third-largest economy in the world in terms of incremental GDP between 2012 and 2022.<sup>50</sup> At another level, persistently high deprivation amid rising inequality could be a recipe for social, political, and financial instability. Fortunately, India does have the option to choose a better path.

49 GDP growth rates at factor cost in constant 2004–05 prices; provisional estimates of GDP used for 2012–13 (GDP growth was revised to 4.5 percent in estimates released on 31 January 2014). Data from Ministry of Statistics and Programme Implementation.

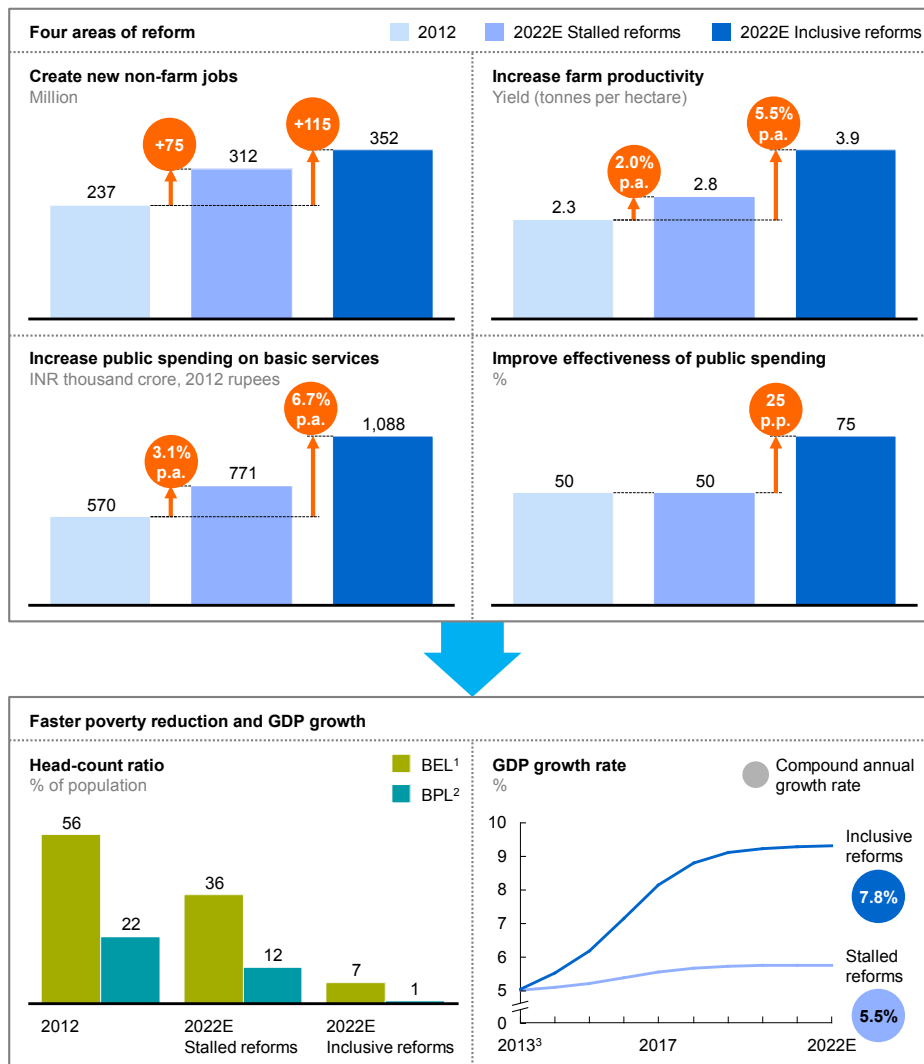
50 According to forecasts from IHS Global Insight, the countries with highest incremental GDP between 2012 and 2022 will be China, the United States, and India.

## Reforms in four key areas can bring 580 million people above the Empowerment Line and virtually eliminate extreme poverty by 2022

India can and must do better. This report considers an alternative scenario in which India adopts crucial reforms that can enable faster growth, rising incomes, and more effective public services (Exhibit 41). The inclusive reforms path focuses on stimulating job creation and productivity growth across the economy (with particular emphasis on the most labour-intensive sectors). Rising incomes would support higher tax revenue that enables increased social spending, and a concerted push for more efficient delivery by the government machinery would make such spending yield greater results.

### Exhibit 41

#### Pursuing inclusive reforms in four key areas can achieve faster GDP growth and unprecedented poverty reduction



1 Below Empowerment Line.

2 Below official poverty line.

3 GDP growth of 5% in 2012–13 based on provisional estimates.

SOURCE: McKinsey Global Institute analysis

With an emphasis on investment that boosts human capital and engages more workers in more productive jobs, India's GDP has the potential to grow at an average of 7.8 percent per year through 2022, significantly higher than the average 5.5 percent growth in the stalled reforms scenario. (See Box 8, "Investment to sustain job and productivity growth," for more on India's investment needs.) By pursuing the path of inclusive reforms, India could have just 100 million, or 7 percent of the population, below the Empowerment Line by 2022. In addition, the goal of eliminating extreme poverty could be nearly fulfilled, with just 17 million people (about 1 percent of the population) remaining below the official poverty line. As poverty recedes, some 580 million Indians could enjoy better living standards and wider economic opportunities.

### **Box 8. Investment to sustain job and productivity growth**

To fuel the growth in jobs and productivity that we have envisaged, India would need to increase the level of investment in the economy—and deploy that investment judiciously among sectors.

India's growth acceleration in the last decade was accompanied by a steep increase in the investment rate.<sup>1</sup> From a starting point of 24 percent of GDP in 2000–01, the investment rate climbed steadily before peaking at 38 percent in 2007–08. With the onset of the global economic crisis, it dropped slightly, before recovering to reach 36 percent in 2012–13.

This broad trend, however, masks variation across sectors. The decline during the global economic crisis was caused solely by a slowdown in India's industrial investment (which dropped from 67 percent of industrial GDP in 2007–08 to 52 percent in 2008–09). Agriculture and services, by contrast, each saw a 2–3 percent uptick in investment rates. To re-ignite growth, India would need to broaden investments in sectors across the economy.

We estimate that India would need to increase its level of investment from 36 percent of GDP in 2011–12 to an average of 38 percent of GDP over the next decade. The public sector can provide the initial impetus, gradually drawing in private capital. Public investment would need to increase from 8 percent of GDP in 2011–12 to nearly 9 percent over the next ten years. This, along with an improving economic climate, would lead to an increase in private corporate investment from nearly 11 percent of GDP in 2011–12 to an average of 13.5 percent over the next ten years. Investment levels would need to increase for all sectors, but in particular, both industrial and services investment will need to rise by 1–2 percent of sectoral GDP.

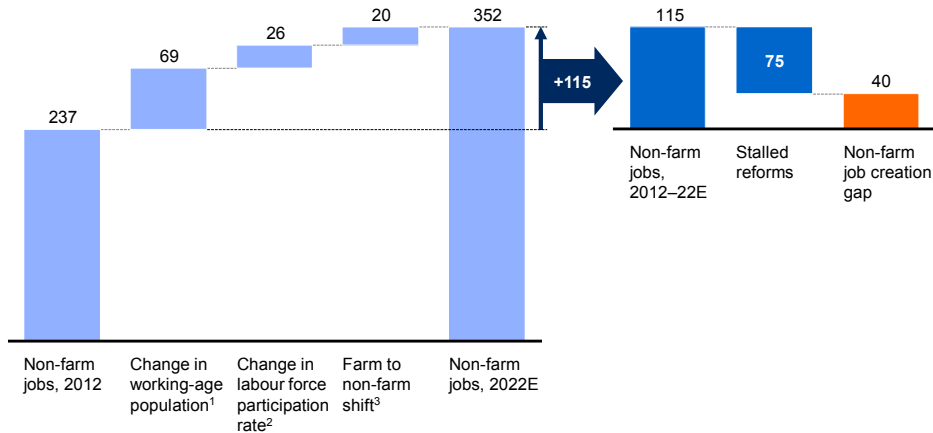
<sup>1</sup> The investment rate is defined as gross capital formation (GCF) divided by gross domestic product at market prices (GDPmp)

The inclusive growth scenario hinges on four key elements:

**1. Creating 115 million new non-farm jobs.** To realise the productive potential of its large and relatively young population, India needs a surge of non-farm job creation. India's working-age population is projected to grow by 131 million between 2012 and 2022—and at the current labour force participation rate, the nation will need 69 million new jobs just to accommodate population growth (assuming all new entrants will be employed in the non-farm sector, as the agricultural sector is already characterised by underemployment and low productivity). In addition, the labour force participation rate can improve by 2 to 3 percentage points, necessitating an additional 26 million jobs. Moreover, India needs to continue shifting workers from agriculture to other sectors. To overcome the current 20 percent underemployment rate in agriculture and to bring India closer to China's proportion of farm employment in 2010, India would need to reduce agriculture's share of the workforce from 49 percent in 2012 to 37 percent by 2022—a shift that will require 20 million additional non-farm jobs. All told, India will need to add 115 million non-farm jobs over the decade (Exhibit 42). However, in the stalled reforms scenario, India is likely to generate just 75 million new non-farm jobs, falling short of this goal by about 40 million. This would be only marginally higher than the 65 million jobs that India created from 2000 to 2010—too few to keep pace with rising labour force growth and the goal of lowering reliance on agriculture. The inclusive reforms scenario focuses on filling this gap by unleashing growth and job creation in labour-intensive sectors, not just the knowledge- and capital-intensive sectors that have been India's traditional strengths. Construction and manufacturing (as well as retail trade, transportation, and tourism) will be central to this effort. (See Chapter 6 for a detailed discussion of what it will take to create these non-farm jobs.)

**Exhibit 42**  
**India can create 115 million additional non-farm jobs by 2022, but the stalled reforms scenario will fall 40 million short**

Non-farm job potential (inclusive reforms)  
 Million



1 Working-age population, defined as 15 years and above, assumed to grow at 1.4% per annum based on demographic profile.

2 Labour force participation rate assumed to rise by 2.6 percentage points.

3 Share of farm sector in total employment assumed to fall from 49% to 37%.

SOURCE: National Sample Survey Office survey, 68th round; United Nations Population Division; McKinsey Global Institute analysis

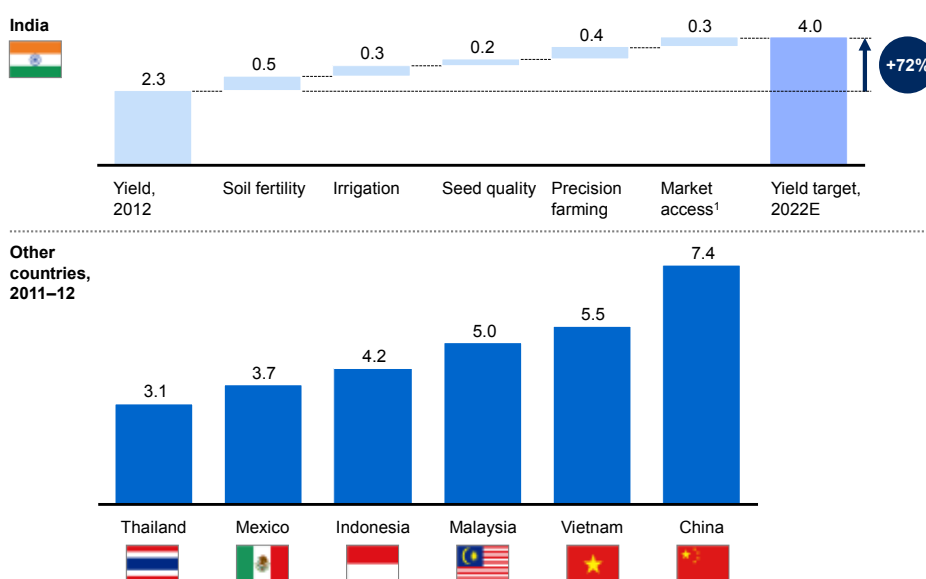
**2. Raising agricultural yield by 5.5 percent per year.** India's agricultural yield stood at 2.3 tonnes per hectare in 2012—about half the average yield produced by other developing countries in Asia. In the past decade, agricultural yields have increased by about 2 percent annually, but the inclusive reforms scenario projects productivity growth of 5.5 percent per year. That would bring India's output to almost 4 tonnes per hectare by 2022, much closer to the Asian average (Exhibit 43).<sup>51</sup> Improvement of this magnitude is possible if India's farms boost their yields by increasing the intensity and quality of inputs such as water, seeds, and fertiliser. Farming practices can be improved through better know-how and training. In addition, India can revamp post-harvest infrastructure and market access by establishing cold storage, improving rural roads, and undertaking regulatory reforms to liberalise the procurement and marketing of agricultural produce. (See Chapter 7 for a detailed discussion of ideas to improve agricultural yield and productivity.)

### Exhibit 43

#### By 2022, India can increase farm yields to 4 tonnes per hectare, which would be comparable to current yields in other emerging economies

Yield

Tonnes per hectare



<sup>1</sup> Includes post-harvest infrastructure and rural roads.

NOTE: Numbers may not sum due to rounding.

SOURCE: Food and Agriculture Organization of the United Nations; McKinsey Global Institute analysis

**3. Expanding access to affordable basic services through concerted public spending.** India's population needs many more points of access to affordable health care, drinking water, sanitation, education, and energy—and this is particularly important for those below the Empowerment Line, who are currently deprived on too many of these fronts. The poor will also need financial support to improve their ability to afford a more balanced and nutritious diet, to obtain better housing, and to provide a safety net against loss of income. As a result, public spending on these services would need to almost double in real terms (or a growth rate of 6.7 percent per annum compared with 11 percent per annum between 2005 and 2012), rising from

<sup>51</sup> This is close to the target production growth of 5.4 percent identified by the Planning Commission working committee on agriculture for the 12th Five Year Plan (2012–17).

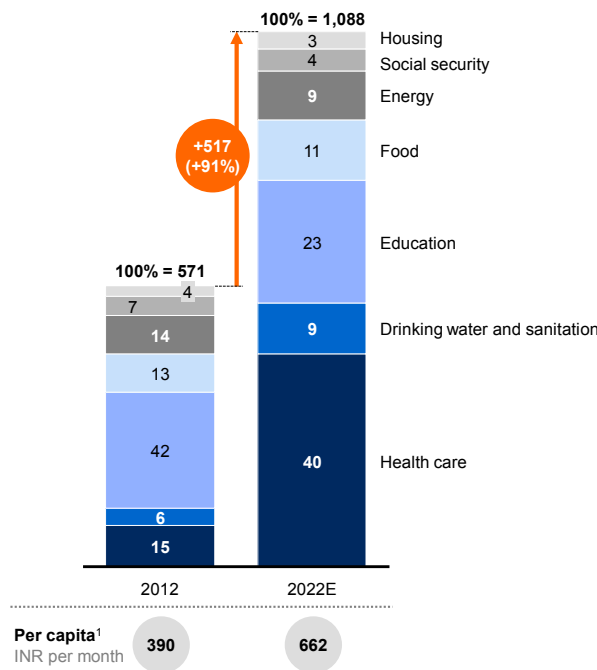
Rs. 570,000 crore (\$118 billion) in 2012 to Rs. 1,088,000 crore (\$226 billion) in 2022 (Exhibit 44). The composition of this spending also needs to shift, with the share directed to health care, drinking water, and sanitation rising from 21 percent to nearly 50 percent. The pace of economic growth will determine whether government revenue will be sufficient to support this increased social spending.

**Exhibit 44**

**Public spending on basic services needs to almost double, with more resources allocated to health care, drinking water, and sanitation**

**Public spend on basic services**

%; INR thousand crore, 2011–12 rupees



<sup>1</sup> Not accounting for inefficiencies and leakages.

NOTE: Numbers may not sum due to rounding.

SOURCE: Indian Public Finance Statistics; McKinsey Global Institute analysis

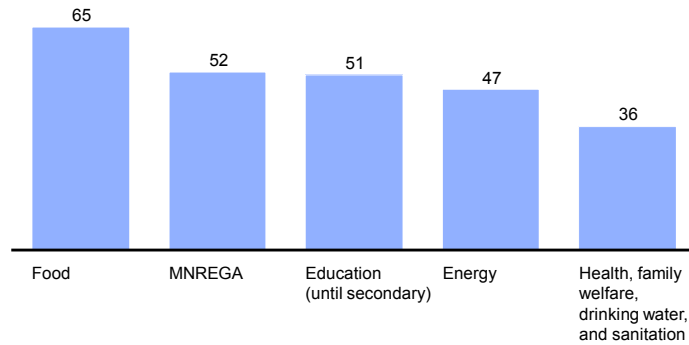
**4. Improving the effectiveness of basic service delivery.** India's delivery of basic services is hampered by governance issues and corruption. As discussed in Chapter 2, we find that on average, no more than 50 percent of public expenditure actually delivers better living standards for Indian citizens (see Appendix B for the methodology used to arrive at this estimate). To realise the true potential of India's social programmes, a greater share of every rupee spent by the government needs to reach the people it is intended to benefit. The inclusive reforms scenario sets a higher bar, adopting as national benchmarks the levels of effectiveness already achieved by India's better-performing states. By this standard, we estimate that India can raise the average effectiveness of services across all major areas of spending to about 75 percent (Exhibit 45). The inclusive reforms scenario assumes that the right combination of strong political will, government reforms, and innovation in service delivery can achieve improvements of this magnitude across India. The stalled reforms scenario, by contrast, maintains a status quo in which the quality and efficiency of public services remains poor. It assumes no change in the effectiveness of spending—which means that an estimated \$113 billion of social service spending in 2022 would fail to reach its intended beneficiaries.

(See Chapter 9 for an in-depth discussion of improving the effectiveness of basic service delivery.)

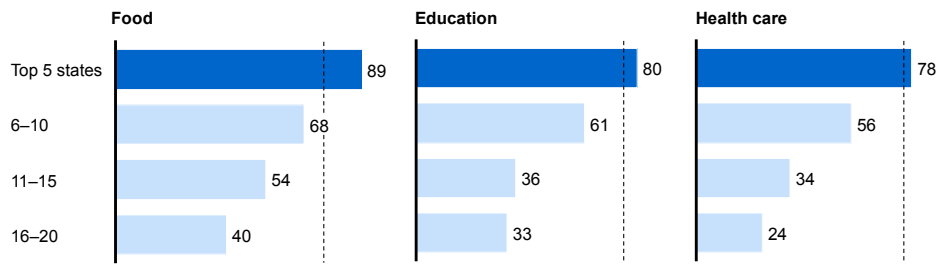
#### Exhibit 45

### At a national level, India can match the effectiveness of spending on basic services currently achieved by its best-performing states

Current estimated efficiency/effectiveness of government spending, 2012  
% of spend reaching people



We set a modest target of 75% efficiency in 2022, based on best-performing states



SOURCE: McKinsey Global Institute analysis

## Job creation and productivity growth drive most of the potential poverty reduction impact

By pursuing the four strategies outlined above, India could achieve unprecedented progress against poverty. The number of people below the Empowerment Line could decline twice as fast on an annual basis as it did from 2005 to 2012, and the number below the official poverty line could fall 20 percent faster.

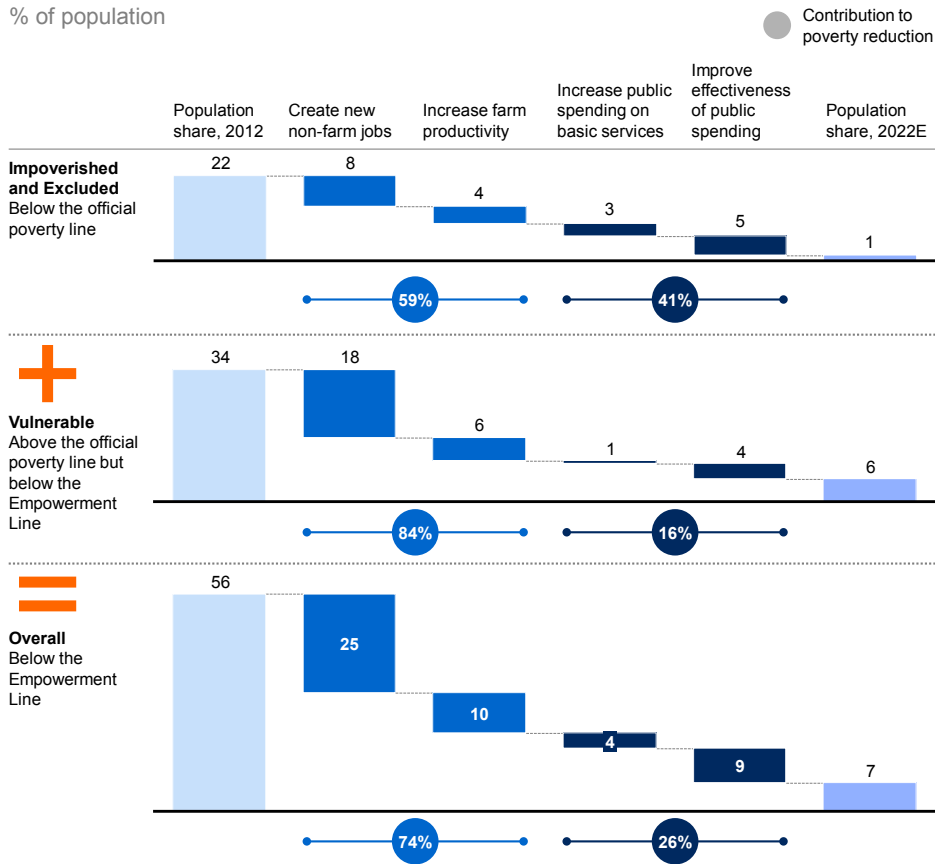
The majority of this impact stems from broad-based job creation in labour-intensive manufacturing, construction, and services as well as productivity-led growth in agriculture. This would directly contribute to lifting more than 400 million people above the Empowerment Line, generating some three-quarters of the total impact in this scenario (Exhibit 46).

Within this jobs and productivity engine, the creation of 115 million non-farm jobs drives the largest share of poverty reduction. This element has the ability to bring the proportion of people under the Empowerment Line down by 25 percentage points, which is the equivalent of raising more than 300 million people above it. The construction sector could be the single largest contributor to this effect, if we make the assumption that construction productivity will improve but only marginally at 0.8 percent per annum until 2022 (given the likely influx of low-skill labour from agriculture).



**Exhibit 46**

**Productivity improvements and public provision of basic services contribute in different proportions based on the poverty segment**



NOTE: Numbers may not sum due to rounding.  
 SOURCE: National Sample Survey Office, 68th round; McKinsey Global Institute analysis

Even with robust non-farm job creation, an estimated 37 percent of India's workforce will still be employed in the agriculture sector in 2022. Those workers will be the least productive in the economy, and hence additional focus is needed on households that are dependent on agriculture. Bringing India's per-hectare yields in line with those of other Asian countries could reduce poverty by 10 percentage points, raising nearly 125 million people above the Empowerment Line. Raising agricultural productivity will also contribute to non-farm job creation in areas such as infrastructure and logistics, food processing, and related services, which will enable farmers to transition to other sectors of the economy and create a more vibrant rural non-farm sector.<sup>52</sup>

Raising public spending on social infrastructure to fill in gaps in access, as well as providing subsidy support to aid consumption, is the next lever we consider. The doubling of public spending on basic services, along with initiatives to make that spending more effective, has the potential to contribute 26 percent of the total poverty reduction impact described in the inclusive reforms scenario, raising some 150 million people above the Empowerment Line. However, more government spending alone, without these accompanying improvements in

52 Manoj Jatav and Sucharita Sen, "Drivers of non-farm employment in rural India: Evidence from the 2009–10 NSSO Round", *Economic and Political Weekly supplement*, volume 48, numbers 26–27, June 2013.

delivery and the prevention of leakage, would generate only about 8 percent of total impact.

Delineating the relative contribution of each of these levers to the poverty reduction targets is a broad exercise, of course, and expressing this impact in terms of the number of people affected is somewhat artificial. In reality, many rural families derive income from both farm and non-farm occupations, as well as through remittances from urban family members who are mostly employed in non-farm sectors. Similarly, incomes of urban workers may well increase as a result of farm growth, due to the multiplier effects of the agricultural sector on demand for farm inputs and consumption. But these rough estimates do serve a purpose in illustrating the central role of economic reforms and job creation in any poverty reduction effort.

Similarly, while the relative contribution of public spending on social services to poverty reduction is valid in consumption terms, it does not fully capture the importance of government provision of social services. Virtually everyone raised above the Empowerment Line in the inclusive reforms scenario would benefit from better access to affordable health care, clean drinking water, sanitation, and quality education; almost half would benefit from food, energy, and housing subsidies. The wider provision of these services would build better human capital in the long run and make economic growth itself more sustainable.

## The poorer the household, the greater the need for more effective public spending

For the entire population below the Empowerment Line, almost half the impact achieved in the inclusive reforms scenario stems from the creation of non-farm jobs, and an additional 21 percent is derived from growth in farm yields. Within this population, however, the vulnerable are more likely to have slightly better education than India's impoverished or excluded segments, making them better positioned to benefit from employment opportunities in manufacturing and services. As a result, nearly two-thirds of the potential economic empowerment of this segment comes from non-farm employment and productivity growth.

For the impoverished and excluded segments of the population, however, the picture is different. Jobs and agricultural growth are still critical levers, delivering nearly 60 percent of the total impact of poverty reduction. However, increased and more effective public provision of social services has the potential to deliver a substantial 40 percent of total poverty reduction impact among these groups. Their ability to raise their own incomes to pay for higher consumption is weaker. For these segments, the government plays a critical role in delivering the basics of health, education, water and sanitation, food, housing, and energy. Reforms to make social spending more effective are a matter of urgency to improve the lives of the impoverished and excluded segments of the population.

## Inclusive reforms generate adequate resources to spend on basic services while also reducing the fiscal deficit

We estimate that the Indian government will need to increase public spending on basic services by 6.7 percent per annum, reaching Rs. 1,088,000 crore (in 2012 real rupees) by 2022. For this growth in spending to be achievable and sustainable without compromising on fiscal stability, the government will need adequate revenue. We have assumed a combined (state and central) fiscal deficit target of 6 percent to be reached by 2016–17. In this context, it is important to note that India had a high fiscal deficit of nearly 9 percent in the early 2000s that was reduced to about 4 percent in 2007–08. However, it shot back up to 9 percent in 2009–10 in the wake of the global financial crisis and was at 7 percent in 2012–13, bringing back the imperative to rein it in.

In the stalled reforms scenario, lower improvements in productivity across the board lead to lower tax buoyancy and constraints on government resources. As a result, public spending on basic services can grow at just 3 percent per annum until 2022, reaching Rs. 771,000 crore by 2022 (or 30 percent lower than the target we assume for expanded access).

The higher GDP growth inherent in the inclusive reforms scenario generates more tax revenue, enhancing the ability of the government to undertake greater spending on basic services—even as India meets its fiscal objectives more quickly. This scenario allows India to adhere to its fiscal consolidation road map from 2017 onward, with steady increases in basic service spending to reach the target levels.

The inclusive reforms scenario has the additional benefit of reducing the need for public spending on basic services. The benefits of higher GDP growth in the inclusive reforms scenario reach a larger number of workers, leading to faster growth in income for the majority of households. This enables many more to afford the essentials out of their own pockets rather than relying on subsidies. We estimate that public expenditure on services such as food, fuel, housing, and social security can be reduced by 55 percent, thus freeing government resources that could be redirected to building health-care networks and schools or to productivity-enhancing infrastructure development.

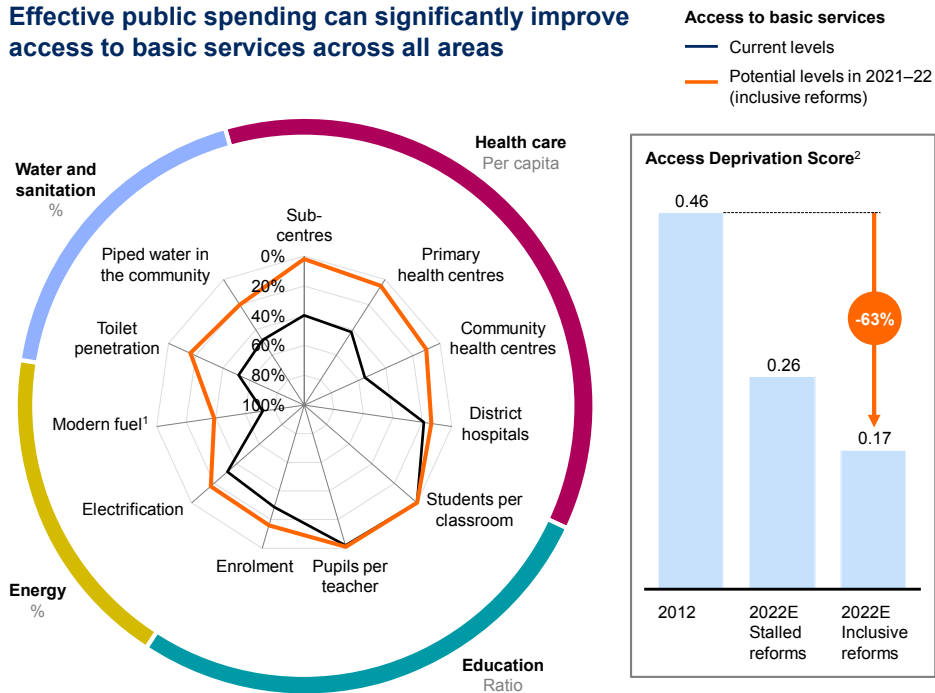
### **INDIA'S NATIONWIDE ACCESS DEPRIVATION SCORE CAN BE REDUCED FROM 46 PERCENT TODAY TO 17 PERCENT IN 2022**

Currently, the average Indian is deprived of access to 46 percent of basic services—and that number soars up to 59 percent for the Most Deprived Districts, which are concentrated in Uttar Pradesh and Bihar (see Chapter 4). But by committing to a steady increase in public social spending—and ensuring that resources are not wasted or diverted—the government can dramatically expand access to the basics (Exhibit 47).

In the stalled reforms scenario, India is able to fund only 70 percent of the required public spending on basic services. In the absence of reforms, the effectiveness of public spending remains at 50 percent. As a result, India's nationwide Access Deprivation Score (ADS) drops to 26 percent by 2022—a clear improvement over the current level of 46 percent, but well below India's potential.

The inclusive reforms scenario expands access by providing greater financial resources and improving the efficiency of service delivery. By 2022, public spending of Rs. 1,088,000 crore (\$226 billion) at 75 percent efficiency can bring India’s ADS down from 46 percent in 2012 to 17 percent.

**Exhibit 47**  
**Effective public spending can significantly improve access to basic services across all areas**



1 LPG penetration is taken as a proxy.  
 2 ADS is a population-weighted average of district-level access deprivation score.  
 NOTE: For each service, the placement of the orange rule indicates relative levels of deprivation. Proximity to the centre of the circle indicates greater deprivation, while proximity to the outer circumference indicates less deprivation (that is, greater access).  
 SOURCE: McKinsey Global Institute analysis

## Improved governance is crucial to reshaping India’s future

India’s track record of poor governance has been well documented and widely discussed, and it is a major factor that has prevented the nation from achieving its full economic potential. Large companies and small businesses alike generally view government bureaucracy as an impediment to their expansion. Despite an overhaul of the “licence raj” system of the 1970s, procedural formalities and a lack of transparency continue to constrain growth.

The poor, who rely on the government as a lifeline for basic services, feel the failures of governance most acutely. If the teacher at the only government-run school in a remote village leaves his classroom unattended, the students have no other means to obtain an education. A whopping 91 percent of government health centres in Assam do not have electricity, for example, while 75 percent in Jharkhand do not have a regular water supply.<sup>53</sup>

53 *Rural health statistics in India 2012*, Ministry of Health and Family Welfare, Government of India, April 2012.

But encouraging signs are emerging. The public is beginning to demand better performance: grassroots movements are agitating for new laws or improved government functioning, and citizens are turning out to vote in larger numbers.

This is an opportune time for India's leadership to address the governance issue head-on by taking a twin-track approach—one that strengthens government accountability while simultaneously building institutional capabilities. Doing so will give those in public service the ability, tools, and incentives to execute on their mandates.

### **STRENGTHEN ACCOUNTABILITY MECHANISMS ACROSS ALL GOVERNMENT ROLES**

A breakdown in performance can often be tied to lack of accountability. Many government officials in service delivery roles do not feel the need to increase efficiency because there is rarely a consequence for not doing so. Similarly, politicians who engage in corrupt practices would be less likely to do so if they were certain of legal or electoral punishment for such behaviour. Therefore, any approach to strengthening accountability needs to be focused on creating a system of checks and balances that can drive performance and impose consequences for failures. A framework for approaching this issue (detailed in Appendix E) can apply different types of accountability to various government roles. Exhibit 48 illustrates a few ideas that are relevant in the Indian context. They may apply to both government divisions and private players involved in public service delivery.

Strengthening accountability is only one part of the equation, however. It is equally important to ensure that the public sector develops adequate capabilities for the most optimal outcome.

### **ENHANCE INSTITUTIONAL CAPABILITIES AND CAPACITY**

Government organisations are complex entities, and bringing about change is usually a challenging and slow process. But it is possible to make internal improvements by reconsidering current configurations through three lenses: structure (the very design of the government unit and its role within the broader context of government), people (the application of the right talent to the right task as well as systems to manage that talent effectively), and processes (the day-to-day functioning of the organisation).

Structural weaknesses in India's public administration have been well documented.<sup>54</sup> These include, for example, the proliferation of ministries and departments (partly the outcome of coalition politics) with illogical divisions of work, weak coordination, and no integrated approach even on closely related subjects.

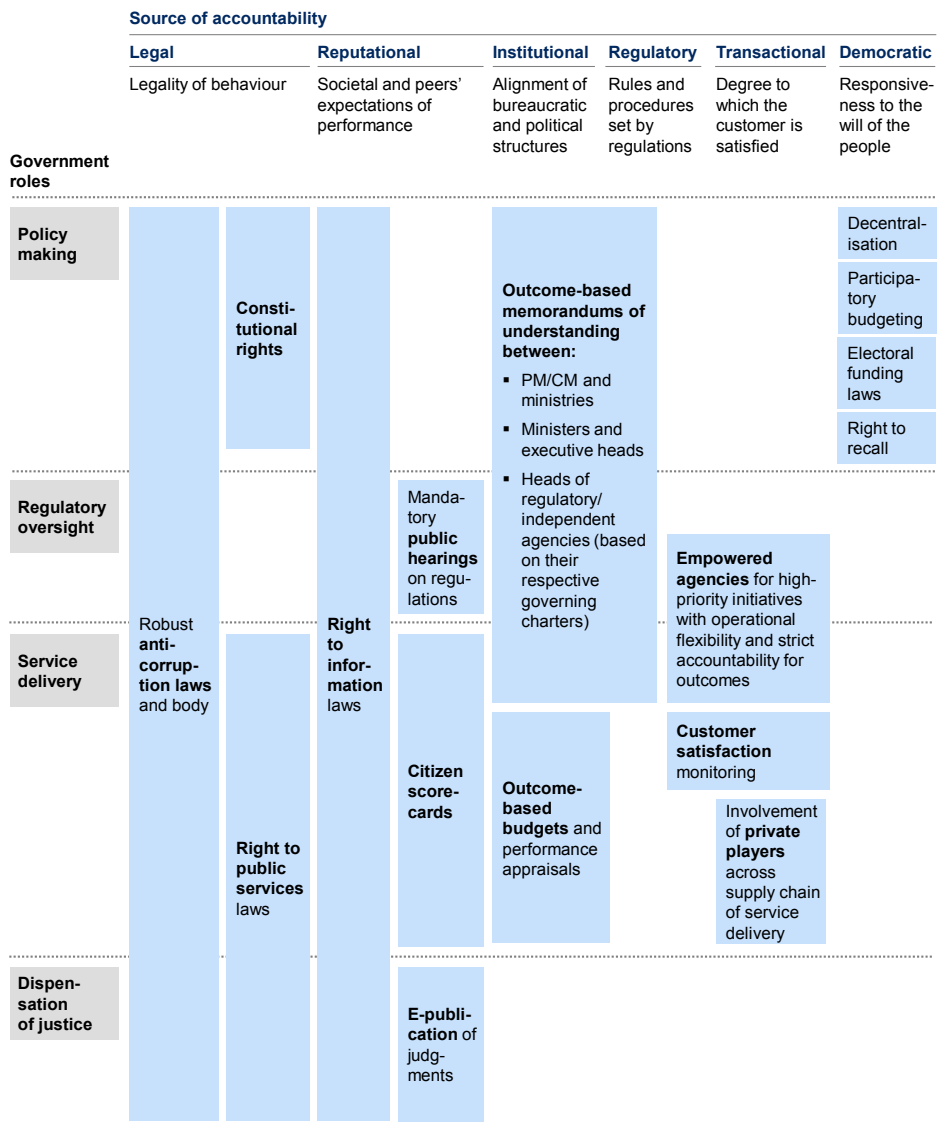
India's government recruits talented individuals, but there is scope to strengthen the talent pool and to better manage it. Often, expert skills are not available for initiatives such as developing public-private partnerships; implementing technology-related transformations; or drafting laws, rules, and regulations unambiguously. These needs can be filled by hiring "change agents"—midcareer professionals who may work in government for a short period of time, as opposed

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<sup>54</sup> *Organisational structure of government of India*, Second Administrative Reforms Commission, Thirteenth report, April 2009.

**Exhibit 48**  
**A range of interventions can strengthen accountability**

NOT EXHAUSTIVE



SOURCE: McKinsey Global Institute analysis

to an entire career, and can bring deep expertise and a different working style to a particular government function. Beyond broadening the talent pool, there is a pressing need to institutionalise comprehensive, relevant, and ongoing training programmes.

Another critical requirement is to implement more robust performance management systems at all levels. Government commissions on administrative reform have pointed out that India's bureaucracy tends to be focused more on internal processes than on results.<sup>55</sup> This is natural in an environment where government functionaries are judged on their adherence to procedures as opposed to their effectiveness. Outcomes are not well monitored, and few, if any, positive or negative consequences are attached to them. The Sixth Central Pay Commission (2006-08), however, made recommendations to introduce

<sup>55</sup> *Refurbishing of personnel administration: Scaling new heights*, Second Administrative Reforms Commission, Tenth report, Government of India, 2008.

performance-related salary incentives in government departments. This type of approach, combined with recent measures to implement a results-based framework of performance management, could be an important early step in this journey.

Even with the right structure and people in place, a government ministry's ability to get things done boils down to its day-to-day functioning and processes. Many government arms do not use technology to streamline processes, but those that do have demonstrated impressive results (see Box 9, "Process redesign through technology"). For instance, Tamil Nadu has re-engineered its entire public distribution system value chain by using technology to monitor the movement of food grain and creating an effective system of surprise checks. These interventions are not foolproof, but they do represent steps forward in the drive for more efficiency in government processes.

### **Box 9. Process redesign through technology**

Like most other states, Karnataka had a cumbersome and often inaccurate approach to managing land records. The manual and decentralised system could be easily manipulated by village accountants. Farmers were often subject to harassment and even extortion while changing ownership of land or obtaining certification for crop loans. Errors that crept into the system led to problems in managing land taxes and revenue, legal disputes, and inaccurate crop and insurance data collection.

In response, the government decided to digitise all land records in the state. The magnitude of the task was enormous, involving more than 20 million manually managed land records on nearly 6.7 million farmers with an average land holding of 0.6 hectares. But the government poured resources into the task; it ultimately took 20,000 person-months to collate and verify the data and then upload it onto a digital platform. After the process was completed, the manually maintained system was invalidated and more than six million farmers were given copies of digital land records. A network of supporting infrastructure was created in more than 30,000 villages across the state, managed through biometric identification and passwords.

The transition has greatly benefitted both farmers and the administration. Farmers can now obtain land records at the click of a button or through a touchscreen for a minimal fee of Rs. 15, which is sufficient to make the system sustainable. Digitisation has also allowed banking systems and the judiciary to access updated and reliable land records as needed. Through judicious use of information and communications technology, the process of land ownership management has been significantly improved for the benefit of all stakeholders.

At all levels and across its many institutional arms, India's government can execute its mandates more effectively by looking for ways to enhance institutional capabilities. Exhibit 49 offers an illustrative list of ideas.

**Exhibit 49**  
**Multiple interventions can strengthen institutional capacity** NOT EXHAUSTIVE

	Source of institutional capacity		
	Structure	People	Process
<b>Government roles</b>	Redesign organisation and role to enhance performance	Change mix of capabilities and better manage talent	Streamline processes to deliver more efficiently
<b>Policy making</b>	Delegation of policy making to expert sub-groups		More focus on expertise at various levels (e.g., drafting rules, framing legislation, case judgment writing)
<b>Regulatory oversight</b>	Cells that remove bottlenecks and coordinate execution (e.g., delivery units, using National Development Council to engage states)	Performance incentives for bureaucrats along with performance management framework	
<b>Service delivery</b>	Empowered agencies with operational flexibility but accountability for outcomes (e.g., state-level economic agencies for tourism, health-care missions)	Lateral entry for civil servants to diversify experience base and bring in experts	
		Greater investment in training for civil servants at all levels	
	Leverage private-sector capabilities		
<b>Dispensation of justice</b>	Specialised courts with specialised talent to expedite proceedings (e.g., commercial courts)		Greater use of technology in government, in conjunction with process streamlining

SOURCE: McKinsey Global Institute analysis

**SIX STARTING POINTS FOR A NEW APPROACH TO GOVERNANCE**

To put the principles of enhancing institutional capabilities and strengthening external accountability into practice, we have identified the following six key elements that could form the basis of a reform agenda for governance in India:

- **Empowered agencies for high-priority initiatives, given operational flexibility but held strictly accountable for outcomes.** Empowered agencies, led by externally recruited “change agents” or high-performing civil servants, can be set up with the specific mandate of building a particular service infrastructure (such as health care or drinking water) or delivering a certain job creation target (such as creating tourism circuits). These agencies can also be cross-functional Delivery Units (see Box 10, “Delivery Unites for better implementation and outcomes”) that drive coordination and implementation of critical government missions across multiple government departments. They would be backed by and accountable to statutory boards headed by the highest authority (for example, the prime minister at the central level or the chief minister at the state level). These agencies would be governed by the “tight-loose” principle—that is, they should be held strictly accountable for outcomes but should have flexibility in methods, operating models, and partnerships with external agents (as opposed to the



“loose-tight” approach predominant today). They would be given adequate funding, and their progress on utilisation of funds and outcomes would be subject to the highest standards of transparency and public scrutiny, including by independent regulatory bodies and civil society. (The Unique Identification Authority of India, for example, is a quasi-independent agency that is mandated to issue personal identification numbers to citizens, and it has significant flexibility in running its operations while reporting to the Planning Commission.)

### Box 10. Delivery Units for better implementation and outcomes

Delivery Units are widely used in countries around the world to ensure that the targets set by the government are met. These quasi-independent bodies focus on a limited number of priority areas, set targets, and offer support to public and private players, all while adopting a results-oriented approach. For instance, the Prime Minister's Delivery Unit (PMDU) was established by the United Kingdom in 2001 to focus on strategic goals spanning health care, education and skills, home office, and transportation, among others.<sup>1</sup>

Chile has used the Delivery Unit model effectively to focus on such objectives as attracting investment and creating jobs. It has set hard targets for measuring success (such as increasing investment to 28 percent of GDP by a given year). This target is then translated into key activities (for instance, streamlining the process to open a business, simplifying building codes, developing a database of registrars and notaries) that require support and coordination among various government bodies. The Delivery Unit then acts as a facilitator for the relevant government departments and monitors their progress against the action plan.

In India, other structural solutions have been attempted with varying degrees of success. The Delhi-Mumbai Industrial Corridor Development Corporation (DMICDC) is a state-controlled special-purpose vehicle that convenes various central and state-level government agencies (such as the Gujarat Infrastructure Development Board) along with private investors and companies to marshal and coordinate infrastructure investment. The DMICDC reports to a steering committee headed by the finance minister but retains significant control over its day-to-day operations.

<sup>1</sup> The unit was discontinued in 2010. The UK government subsequently created the Efficiency and Reform Group within the Cabinet Office, headed by a “chief operating officer” who is focused on improving the way government operates and eliminating waste.

- Transparency in public information and service effectiveness.** Raising public consciousness through transparency is critical to strengthening accountability. The Right to Information Act (2005) was an important step forward for India—and the next stage could be a massive digitisation effort to get government data into shareable form that is much more accessible to a broad base of users. India has already made progress on this front: the government's Public Information Infrastructure project, for instance, seeks to create open public data by improving connectivity and providing a single

platform for applications. Voluntary government disclosure (for example, putting draft legislation and cabinet notes online for public debate) could also usher in greater transparency. Digital infrastructure initiatives are gathering momentum and need to be extended deep into the semi-urban and rural parts of the country by accelerating government initiatives such as the National Optical Fibre Network, which plans to connect all settlements with populations exceeding 500. Greater government disclosure and more open data could enhance accountability through moves such as creating public scorecards at the state, local authority, and specific desk/office levels. In addition, a rights-based approach to service delivery can be institutionalised and streamlined to reduce administrative burden. The Right to Public Services, now enacted in 17 states, could be strengthened and adopted at the central level.

- **Decentralisation of funds, functions, and functionaries.** India's sheer size and diversity heighten the challenge of governance. National policies have to be designed to work as well in the disadvantaged areas of Bihar as they do in more prosperous Kerala, despite huge gaps in factors such as literacy. As discussed in Chapter 4, community participation (especially by women) goes hand in hand with better access to basic services—and to enable this in such a diverse country, programmes need to be more decentralised. Through the 73rd and 74th Constitutional Amendments in 1992, India sought to devolve powers to *gram panchayats*. But a serious effort needs to be made to strengthen the financial autonomy of local governments as well as to clearly demarcate their functions and train local staff resources.<sup>56</sup>
- **Talent and performance management for government employees.** Robust performance management systems are needed to ensure that public officials fulfil their duties. The aims of the institution should be clear, accountabilities should be fixed, plans should be created and tracked, and regular performance reviews should be instituted. Senior bureaucratic positions can be filled through a comprehensive application-based process, even from within the civil services. Most important, bureaucrats and government employees should have incentives for good performance and penalties for consistently poor performance. Teacher absenteeism in public schools, for instance, can be reduced if the consequence is strict disciplinary action.<sup>57</sup> Officials would need periodic training to enable them to function in the new environment, and technology can provide the tools for both training and performance tracking.
- **A robust anti-corruption framework.** Corruption has been a persistent problem in India, which ranked 94th among 174 countries in Transparency International's 2012 Corruption Perceptions Index. Mass protests against corruption culminated in the Lokpal and Lokayuktas Act of 2013. While the impact of the law remains to be seen, more can be done and needs to be done in areas such as whistle-blower protection. International best practices can be used as a template in India (see Box 11, "Hong Kong's anti-corruption framework," for one such example).

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56 India's Thirteenth Finance Commission report noted, "The transfer of funds, functions and functionaries to local bodies consistent with the XI and XII Schedules of the Constitution has met with limited success so far. The traditional theology that funds and functionaries will follow functions does not appear to have worked".

57 Karthik Muralidharan and Michael Kremer, "Public and private schools in rural India", in *School choice international: Exploring public-private partnerships*, Rajashri Chakrabarti and Paul Peterson, eds., MIT Press, 2009.

**Box 11. Hong Kong's anti-corruption framework**

Because corruption touches on every aspect of government, there are many strategies for removing opportunities for it to occur and putting penalties in place as deterrents. Hong Kong, which overcame a long history of intractable graft to achieve a ranking of 14th in the Transparency International index, is a useful example to consider as India looks for ways to minimise corruption.

First, Hong Kong gave teeth to legal accountability. In 1974, the government established a strong anti-corruption body, the Independent Commission Against Corruption (ICAC), which reported to the city's chief executive. The ICAC retained full operational control of its mandate to investigate corruption and make arrests, although the power to prosecute remains with the Department of Justice. In 2012, 245 individuals were prosecuted for corruption and 221 were convicted. Moreover, whistle-blowers are given significant protection: in especially sensitive cases, the ICAC facilitates changing the identities of witnesses and relocating them during investigations and judicial proceedings.

Second, the ICAC has attempted to end a culture of complacency towards corruption by reinforcing reputational accountability. It has a proactive community outreach strategy to promote the principle of government integrity, including mobile vans for anti-corruption exhibitions and e-learning resources. The ICAC has also developed model codes of conduct for businesses to adopt to foster an anti-corruption mindset in the private sector.

- **Simplification of laws and expansion of judicial capacity.** Access to speedy justice at a reasonable cost needs to be ensured. Complex laws, some of which are relics from the colonial past, need to be reviewed and greatly simplified. There is also potential to reform current procedural laws to expedite the judicial process, and hence reduce the burden on the court system. Simultaneously, India needs more courts, staffed with an adequate number of judges. Capacity building is needed in India's legal and regulatory arms to enable these institutions to react to changes in society.

This is by no means a complete discussion of governance challenges and solutions for India. However, it highlights some of the key guiding principles and most promising themes to explore as the nation seeks to improve the efficiency and effectiveness of the public sector.

□ □ □

India's recent pace of economic growth is not generating enough jobs to make rapid gains against poverty, while poor governance has eroded the nation's potential. By choosing the path of reform, however, India has the opportunity to set off a virtuous cycle of economic growth and increased public spending on basic services that will deliver higher living standards even as it achieves the country's fiscal targets. Taking a fresh approach to regulation and accountability can push this effort forward. The chapters that follow will outline more specific proposals for reform in each of these areas, including ideas that strengthen the capacity and incentives for government to deliver the kind of sweeping change that India requires.





## 6. Revitalising India's job creation engine

Non-farm job creation and productivity growth are fundamental to India's effort to raise living standards. But India's current pace of job creation is not sufficient to make rapid progress. Maintaining the status quo would create at best 75 million jobs—far short of the 115 million needed to absorb population growth, boost the labour force participation rate, accelerate the shifting of labour out of agriculture, and lift a large population above the Empowerment Line.

To jumpstart job creation, India will need to improve its business and investment climate, especially for labour-intensive manufacturing, construction, and services. This needs to be addressed from multiple angles, but the most critical reforms relate to speeding the delivery of infrastructure, cutting much of the red tape that constrains businesses, removing tax and product-market distortions, making land markets more functional, making labour laws more flexible, and expanding vocational training to millions of unskilled workers. India's state and central governments can implement these ideas in stages, starting with procedural and administrative changes that do not require new legislation.

Along with these cross-cutting reforms, India can deploy public investment to create specific “job creation engines”, such as industrial clusters, tourism circuits, and food-processing parks. These initiatives can expand the options available to India's poorest citizens—and because they catalyse economic growth and increase public revenue, these projects can be fiscally self-sustaining. By developing some 70 to 100 job creation engines, India can generate an estimated 11 million jobs for medium- and low-skilled workers within a decade. The government can also realise returns of more than 20 percent per year through tax revenue and land monetisation, providing funding for additional job creation and social spending in the future. Creating job centres across the country could bring new opportunities to rural districts that have yet to fully share in the benefits of India's recent economic growth. India's megacities are straining to absorb an unprecedented wave of migration from the countryside, and encouraging more geographically balanced development could alleviate some of these growing pressures.

### India needs to add 115 million new non-farm jobs by 2022

India cannot meet its aspirations for poverty reduction without a surge of job creation in higher-productivity sectors to reduce the overall share of agriculture in employment. In the inclusive reforms scenario outlined in Chapter 5, the share of those below the Empowerment Line falls from 56 percent in 2012 to just 7 percent in 2022—and just over half of that impact comes from creating more non-farm jobs.

Four priorities can set the stage for such large-scale impact:

- **Accelerating the farm to non-farm shift.** The shift of labour out of farmwork has immense potential to improve incomes. In 2010, for example, a worker in registered manufacturing was approximately 14 times as productive as a farmworker. Workers in the trade and hospitality sector were five times as productive as those in agriculture, and those in construction were three times as productive. However, approximately half of India's labour force is employed in agriculture.
- **Raising the share of organised enterprises.** In 2010, registered manufacturing firms exhibited five times the productivity of unregistered manufacturing enterprises.<sup>58</sup> Yet unorganised enterprises engage approximately 70 percent of India's non-farm workforce.
- **Achieving greater economies of scale for tiny and small enterprises.** In 2005, companies with more than 200 employees were approximately eight times as productive as companies with 5 to 49 employees. But 84 percent of India's manufacturing enterprises employ fewer than 50 workers, compared with just 25 percent in China.<sup>59</sup>
- **Building a more skilled and trained workforce.** In the most labour-intensive sectors (such as trade, light manufacturing, and construction), a worker can reap a 35 to 55 percent increase in daily wages by attaining secondary and higher education. Yet 70 percent of India's working-age population has only primary education—or no schooling at all.

### THE INVESTMENT RATE NEEDS TO RISE IN ORDER TO SUPPORT A HIGHER JOB CREATION TARGET

From a starting point of 237 million non-farm jobs in 2012, India's goal in the inclusive reforms scenario would be to add 115 million non-farm jobs over the next decade. This level of job creation will absorb a working-age population that is forecast to expand by 15 percent by 2022. It would also allow the labour force participation rate to rise by 2.6 percent while reducing the share of farm jobs by 12 percentage points, from 49 percent to 37 percent of total employment (bringing India closer to China's share of non-farm jobs in 2010). But meeting this target requires improving on past performance: only 65 million new non-farm jobs were created in the decade between 2000 and 2010.

India will not be in a position to deliver on this potential without concerted efforts to encourage investment. We estimate that the economy's investment rate will need to rise to an average of 38 percent over the coming decade.<sup>60</sup> After averaging 35.9 percent from 2005 to 2010, the investment rate briefly touched 38 percent in 2007–08 before falling in the wake of the global economic slowdown. This dip needs to be reversed, particularly in the industrial sector. In the inclusive reforms scenario, the capital formation rate in both the industrial sector and in services will need to rise by 1 to 2 percent of sectoral GDP over

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58 We have used registered manufacturing as a proxy for organised manufacturing, as productivity information is available for registered manufacturing and not for organised manufacturing.

59 Asian Development Bank, "Enterprises in Asia: Fostering dynamism in SMEs", in *Key indicators for Asia and the Pacific 2009*, August 2009.

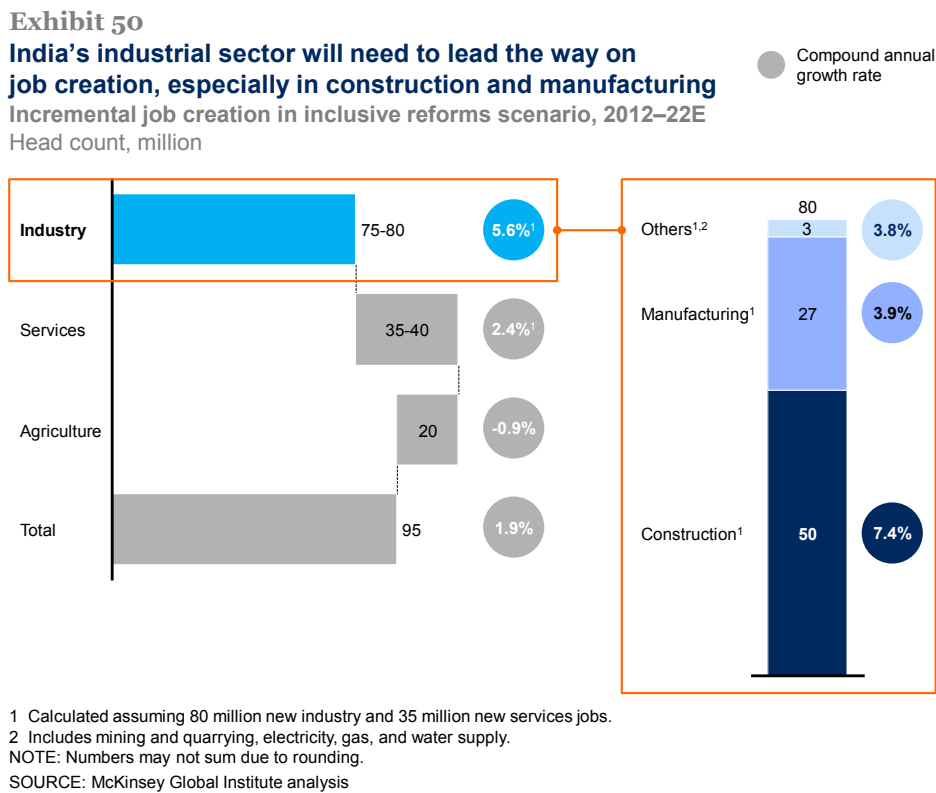
60 Defined as the ratio of gross capital formation to GDP at market prices.



the 2005–10 average. Improving the business and investment climate as well as committing public funding to seed job engines around the country will be critical to moving private capital off the sidelines.

### MANUFACTURING AND CONSTRUCTION ARE PIVOTAL SECTORS FOR JOB CREATION

We estimate that some three-quarters of the incremental non-farm job creation will need to come from the industrial sector (Exhibit 50), which must create jobs at a brisk annual clip of about 5.6 percent. Construction and manufacturing will be crucial sources of employment in this scenario.



The construction sector has the potential to create about 50 million of the 115 million non-farm jobs India requires. While it needs to generate the most jobs in absolute terms, this represents a moderation in the recent rate of employment growth in construction. After averaging 9.2 percent growth from 2000 to 2012, the sector needs to sustain job growth of 7.4 percent from 2012 to 2022. The surge in construction jobs during the past decade was largely driven by the MNREGA programme. We assume this trend will stabilise in the future, with greater growth in construction jobs outside MNREGA, in response to higher investment in infrastructure, residential housing, and commercial construction.

The manufacturing sector has the potential to create some 21 million to 27 million jobs in the inclusive reforms scenario. This represents a doubling in the rate of growth of manufacturing jobs (from 2 percent annual growth in the past to about 4 percent from 2012 to 2022). An expanding manufacturing sector has long been recognised as an engine of development that can raise incomes, living standards, and productivity.<sup>61</sup> Food processing, textiles and garments, leather, wood, and furniture making are the most labour-intensive types of manufacturing. Their employment declined from 42.6 million in 2005 to 39.7 million in 2010, as they were hit harder by the global economic slowdown than knowledge- and capital-intensive industries. But global trends may set the stage for reversing this trend. China's aging population and movement of labour up the value chain to more knowledge-intensive work is opening opportunities for other countries to capture larger shares of the global economy's labour-intensive jobs. Already, Vietnam, Indonesia, Bangladesh, and Cambodia are experiencing growth in labour-intensive industries, because of the cost advantages these nations now offer.<sup>62</sup> In this context, India can respond by creating the investment and business climate necessary to boost its own share of global manufacturing jobs by becoming a larger player in global supply chains.

The inclusive reforms scenario envisions some 35 million to 40 million new jobs being created in the services sector by 2022 (up from 28 million from 2000 to 2010). Industries such as retail and wholesale trade, hospitality, and transportation have been the mainstays of India's employment growth in the past, and that role will continue. But their potential for job creation can be even greater. Services can benefit from rising household incomes and increased economic activity in the industrial and agricultural sectors as well as growing export demand.

### **JOB CREATION NEEDS TO BE MORE GEOGRAPHICALLY BALANCED**

Almost half of the required jobs are needed for the labour force in states facing particularly difficult hurdles (Exhibit 51). For example, despite outward migration, Uttar Pradesh will need to absorb 23 million new workers into non-farm jobs by 2022 (approximately one-fifth of the national target). Yet the state is more rural than others and has a lower share of jobs in organised enterprises (only 9 percent vs. the 14 percent national average). Bihar will need to provide 11 million new workers with non-farm jobs but must do so with even less advantageous starting conditions.

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61 *Manufacturing the future: The next era of global growth and innovation*, McKinsey Global Institute, November 2012.

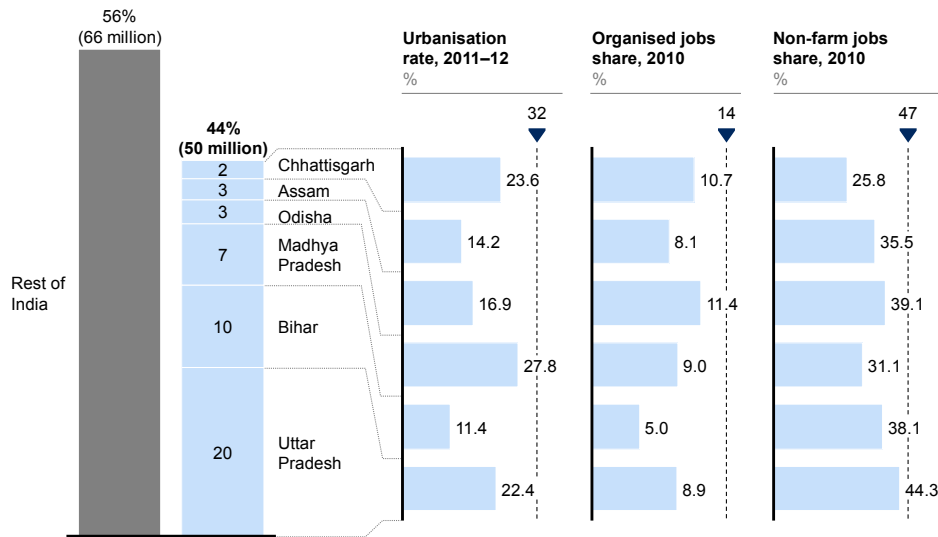
62 *The world at work: Jobs, pay and skills for 3.5 billion people*, McKinsey Global Institute, June 2012.

**Exhibit 51**

**Approximately 45 percent of the need for non-farm jobs will be in states with particularly poor starting conditions**

▼ All-India average

State-level non-farm job creation requirement in inclusive reforms scenario<sup>1</sup>  
 %; million jobs, 2012–22E



<sup>1</sup> Based on demographic changes and forecasts of net migration.  
 NOTE: Numbers may not sum due to rounding.

SOURCE: Census of India; National Sample Survey Office, 66th and 68th rounds; McKinsey Global Institute analysis

A more balanced and diffused pattern of urbanisation can help India create jobs in the regions where they are needed. Beyond its megacities, India needs to cultivate a vibrant set of small, emerging cities with thriving local economies that are well connected with other parts of the country (see Box 12, “India’s urban ‘missing middle’”). Many more of India’s small towns (those with populations just above or below half a million, for example) can be developed into job creation centres through focused programmes to build infrastructure and link their economic activities to wider markets. One idea, explored later in this chapter, involves building industrial clusters, on a brownfield or greenfield basis, to capture agglomeration effects. This could create 1.5 million to 2 million additional jobs by 2022, and a total of 4 million to 4.5 million jobs by 2030.

### Box 12. India's urban "missing middle"

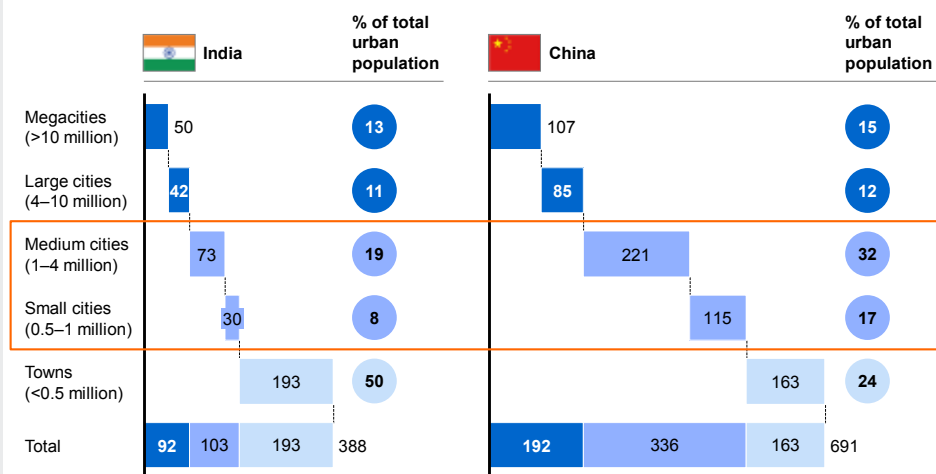
The task of generating and sustaining 115 million additional non-farm jobs by 2022 cannot fall exclusively to India's megacities or its villages. It is a nationwide challenge—and also a nationwide opportunity to focus on developing an expanding tier of mid-sized cities. Today India's urban population is concentrated in its largest cities or in those with fewer than half a million residents. Only 27 percent of the urban population lives in middle-tier cities (those with populations between 0.5 million and 4 million). By contrast, nearly 50 percent of urban residents in China live in middle-tier cities (Exhibit 52). A large share of India's 115 million new non-farm jobs will be created in urban areas, but accommodating these new urban workers in India's existing megacities will prove exceptionally challenging and expensive, pointing to the need for a broader approach to urbanisation over the coming decades.

#### Exhibit 52

#### Less than a third of India's urban population is found in the middle tier of cities vs. nearly 50 percent in China

Urban population distribution by size of city

Head count, million



NOTE: Numbers may not sum due to rounding.

SOURCE: Census of India; Insights India; Insights China; McKinsey Global Institute analysis

Indian policy makers can hasten the development of this urban "missing middle" by encouraging the development of industry clusters (or "agglomeration economies"), which allow companies to reduce their cost base by co-locating with suppliers, competitors, and customers.<sup>1</sup>

1 Michael Porter, "Location, competition, and economic development: Local clusters in a global economy", *Economic Development Quarterly*, volume 14, number 1, February 2000; Joseph Cortright, *Making sense of clusters: Regional competitiveness and economic development*, Brookings Institution Metropolitan Policy Program, March 2006.

## Six cross-cutting reforms are critical to broad-based job creation and can be implemented relatively quickly

Both job creation and labour productivity growth follow investment, so the process of identifying and removing barriers to investment is critical to meeting India's growth challenge. Discussions with policy makers and business leaders inside and outside India point to a number of key impediments: infrastructure bottlenecks, administrative red tape, tax distortions, dysfunctional land markets, overbearing labour regulations, and a shortage of skills in the workforce.

We focus on a set of six reforms to address these concerns. These can improve the country's attractiveness to investors, and also improve the returns to labour (without deterring investment). These six priorities address the most cross-cutting barriers to job creation across a wide range of sectors and geographies. Beyond this list, a host of policy reforms are required at the individual sector level, and although they are not the focus of our current research, this is not meant to minimise their importance in ensuring that India's economy is vibrant and growing.

### 1. IMPROVE THE EXECUTION AND PRODUCTIVITY OF INFRASTRUCTURE INVESTMENT

Infrastructure bottlenecks, especially in power and transportation, hinder economic growth, particularly in manufacturing. States such as Delhi, Tamil Nadu, and Kerala, which have more extensive infrastructure in terms of roads, power, and household amenities such as modern fuel, drinking water, and sanitation, also tend to create more organised sector jobs with higher wages. This is a virtuous cycle: better infrastructure enables job creation, which in turn provides governments with the resources to invest in additional infrastructure.

India has a widely acknowledged infrastructure deficit that the government has sought to correct through substantial increases in planned investment. The infrastructure investment target quadrupled in real terms from the 10th Five Year Plan to the 12th Plan to address historic shortfalls. However, outlays often fail to translate into the expected outcomes (Exhibit 53). The 11th Plan, for example, called for capacity additions at major ports—but the actual expansions were 63 percent below the original target and 35 percent less than the revised target. In the power sector, the government initially aimed to add 79 gigawatts (GW) of capacity, but only 55 GW were realised. Most other infrastructure sectors, with the exception of railway lines and rail electrification, fell short of delivering on their investment.

There are many reasons behind this kind of disappointing performance. Foremost is poor coordination between various ministries and departments, which has frequently led to delays in project implementation due to land acquisition difficulties, slow environmental clearances, inadequate fuel supply linkages for approved power plants, and lack of an integrated approach to planning. In sectors where private investment is encouraged, such as power, the rates of return on major projects are sometimes unattractive.<sup>63</sup> And both public and private infrastructure providers are not often held accountable for project management.

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63 Sun-Joo Ahn and Dagmar Graczyk, *Understanding energy challenges in India: Policies, players, and issues*, International Energy Agency, 2012.

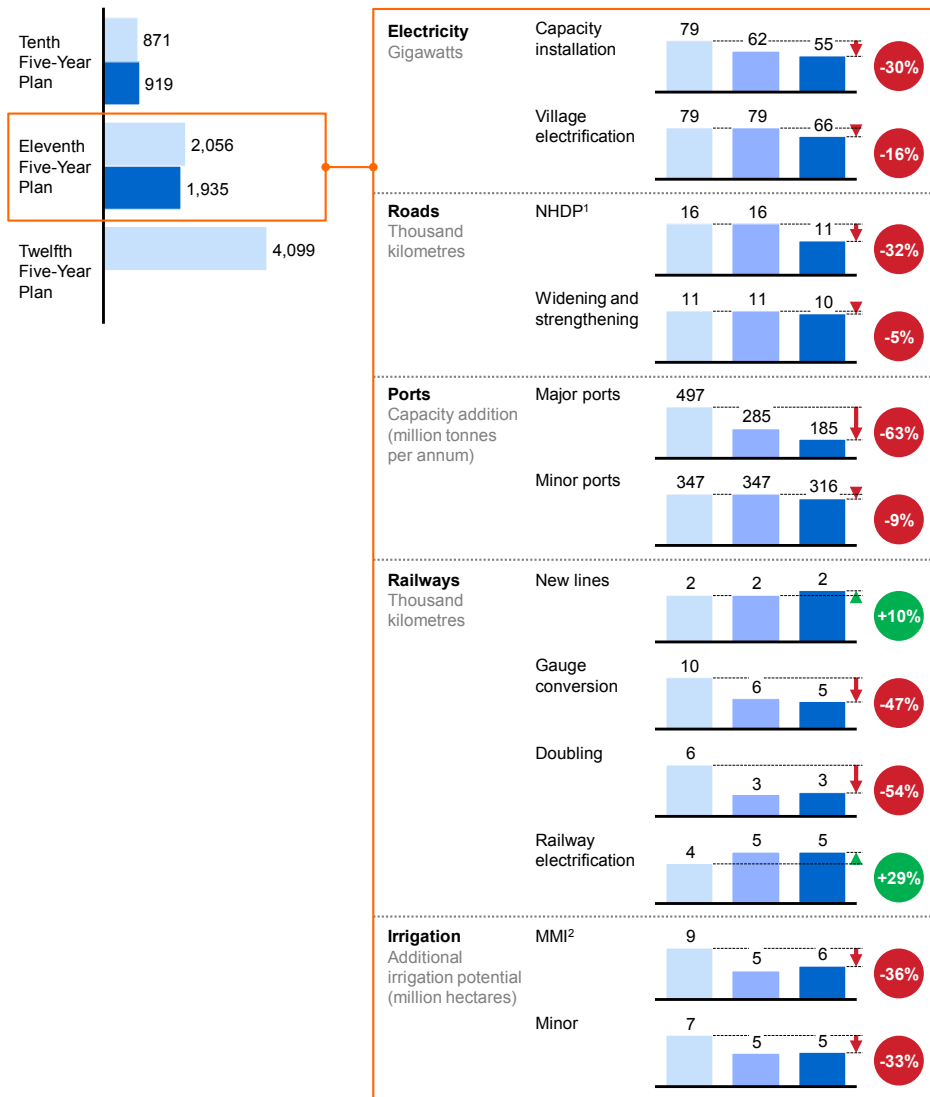
India needs to accelerate the delivery of infrastructure and maximise the capital productivity of each project.<sup>64</sup> Two main strategies can be employed: more rigorous oversight of projects through a Delivery Unit approach, and greater focus on capital efficiency through use of non-traditional sources of financing and optimisation of existing assets.

**Exhibit 53**

**Infrastructure spending has been growing, but build-out targets are almost consistently missed**

Infrastructure investment, 2006–07 prices  
INR thousand crore

Original target  
Revised target  
Actual



1 National Highways Development Project.

2 Major and Medium Irrigation.

NOTE: Not to scale. Numbers may not sum due to rounding.

SOURCE: Planning Commission of India; McKinsey Global Institute analysis

64 For a discussion of this issue in a global context, see *Infrastructure productivity: How to save \$1 trillion a year*, McKinsey Global Institute, January 2013.

### **Establish a National Infrastructure Delivery Unit to ensure the right mix of projects and accelerate project execution**

To maintain an integrated view of the country's infrastructure needs and ensure that large projects are efficiently conceived and speedily executed, the Indian government could establish a high-level National Infrastructure Delivery Unit, or NIDU. This office would serve as a permanent institutionalised form of support to the existing Cabinet Committee on Investment, which aims to fast-track critical investment projects.

The NIDU would take primary responsibility for coordinating the various arms of government and entities involved in project implementation. In this role, the NIDU would plan for critical linkages across ministries and functions, set and monitor schedules, and facilitate implementation. The appointed head of the NIDU, reporting to the prime minister, would be specifically accountable for infrastructure outcomes and empowered to resolve bottlenecks. The NIDU's performance targets would be framed in an outcomes-based memorandum of understanding with the prime minister that holds the organisation accountable for the overall performance of the project portfolio against timelines and budgets.

For projects above a certain size, the NIDU would also have the mandate to evaluate feasibility and contain costs. This approach has proven successful in South Korea, where the Public and Private Infrastructure Investment Management Centre (PIMAC) is responsible for selecting which infrastructure projects are to go forward on the basis of reasonable technical and economic risks. PIMAC develops a detailed methodology and procedures for the pre-feasibility studies that inform its project reviews. Before 1999, when the first predecessor to PIMAC was established, 97 percent of proposed infrastructure projects were approved by the government, and the average cost overrun was 122 percent. Since then, only slightly more than half of proposed projects have been approved, and cost overruns have dropped 81 percentage points.

### **Pursue multiple avenues for greater capital efficiency of infrastructure**

India can explore greater use of non-traditional sources of infrastructure financing. One such approach is using land and development rights as a currency. For example, the Mumbai Metropolitan Regional Development Authority (MMRDA) is developing a 553-acre site at Bandra-Kurla as a secondary commercial centre. Instead of taking the traditional approach, in which the government provides infrastructure, the MMRDA sells land to private developers, who are then responsible for building infrastructure on it. The incremental land value appreciation from the presence of infrastructure is expected to compensate for the cost. In a similar vein, the Faria Lima Urban Operation in São Paulo, Brazil, has focused on selling development rights above specific density thresholds to finance public infrastructure in the area.

India can also explore strategies to extract greater value and maximise the capacity of its existing infrastructure assets. One way of doing this is through privatisation with appropriate monitoring of outcomes. In Jamshedpur, water distribution is managed by a private company, which has resulted in better performance across the board. In 2007, the Jamshedpur water distribution company employed 5.6 staff per 1,000 connections vs. the national average of 7.4. Water supply duration was 12 hours a day, 2.8 times the national average of 4.3 hours. The company has been able to reduce non-revenue water to

13 percent (as opposed to 32 percent in India as a whole) by investing in plastic pipes for last-mile distribution, installing meters at regular intervals to detect leaks, and incentivising employees to improve overall collections.

## **2. REDUCE ADMINISTRATIVE BURDEN, ESPECIALLY FOR MSMES, THROUGH GOVERNMENT PROCESS IMPROVEMENTS**

India imposes a heavy administrative burden on businesses. This represents a significant cost, especially for micro, small, and medium enterprises (MSMEs), and it discourages many from entering the formal economy. According to the World Bank's 2014 Ease of Doing Business indicators, India ranks 134th out of 189 countries, while the average ranking for emerging Asia is 101 and the overall average ranking for a cross-section of emerging markets is 73.

Many elements contribute to India's poor showing. For example, it takes some 1,400 days to enforce a contract in India, as opposed to 500 days in the average Organisation for Economic Co-ordination and Development (OECD) country. Getting a construction permit requires 35 procedures in India (vs. 16 in South Asia on average). To start a business in India, the minimum capital required is approximately 125 percent of GDP per capita, compared with the 15 percent average in South Asia and the 10 percent average for OECD countries. Resolving insolvency in India typically takes 4.3 years, and the recovery rate is 26 cents on the dollar; the averages in OECD countries are 1.7 years and 71 cents on the dollar.

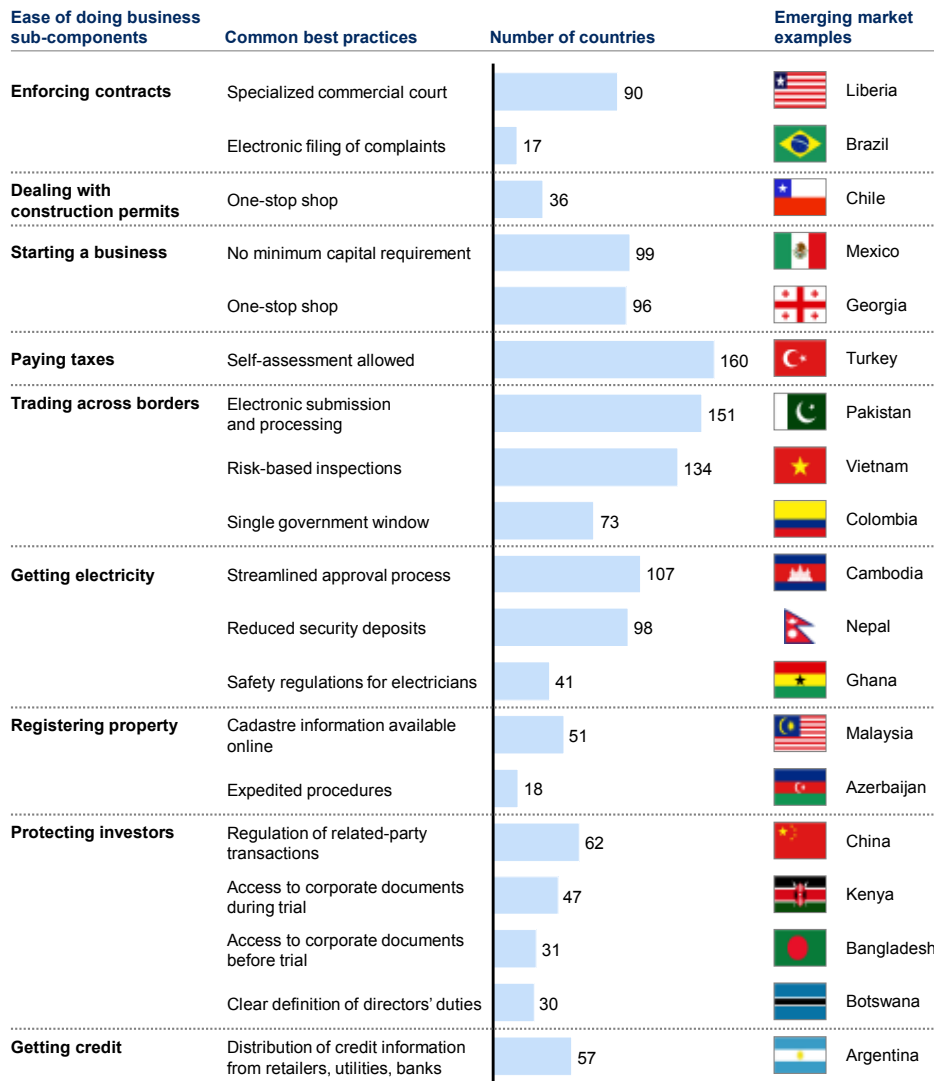
India has many opportunities to reduce the administrative burden on businesses by adopting international best practices (Exhibit 54). To improve the process of enforcing contracts, for instance, a specialised commercial court could be set up to expedite proceedings, a reform that 90 countries have put into practice. To facilitate cross-border trade, 134 countries have instituted risk-based inspections that call for customs officials to inspect only the most suspicious cargo. In 160 countries, the government allows companies to self-assess their tax burden and relies on targeted audits to deter tax avoidance and fraud. These process improvements, among others, are not in place in India.

A road map for administrative reform could be implemented relatively easily by India's state and central governments, starting with quick wins to improve business sentiment in the near term and building support for more robust reforms in the medium to long term. Because of the complexity of India's regulatory environment, the near-term priority should be to add transparency to regulations and inspections—specifically, the inspectorates responsible for various regulations, penalties, and the rights of businesses during an inspection. The Philippines has created transparency by requiring its government offices to post an informational billboard that lays out which services are offered, the documents and fees required, a step-by-step explanation of the process, the time required to render the service, and the name of the official in charge. A number of government interactions can also be easily streamlined by, for example, allowing self-assessment for corporate taxes (with an appropriate level of auditing to ensure compliance) and instituting risk-based customs inspections for trade cargo. Many of these changes can be accomplished through changes in administrative rules and procedures rather than legislation.



**Exhibit 54**

**Many countries have implemented various best practices to reduce the administrative burden on businesses**



SOURCE: World Bank, *Doing business 2014*; McKinsey Global Institute analysis

In the medium term, India could move towards electronic platforms for most business-related interactions with government—including paying taxes, submitting documentation, and registering a company. At the back end, this implies the need to streamline overlapping or cumbersome government processes. Transparency and simple work-flow improvements can go hand in hand; a digitised file tracking system that allows business owners to know exactly which desk is holding up their case also allows each ministry and department to monitor its pace of decision making.

The government's national vision for e-governance, launched in 2006, has 31 Mission Mode Projects across a wide range of public services such as passport services, e-procurement, digitisation of land records, and a national citizen database. It also has eight technology support components to help set up the required infrastructure. Now the focus needs to shift to accelerating implementation. These programmes can be effective if they clearly identify their execution activities and milestones and if they are led by empowered, focused

leaders and teams held accountable for delivery. Other countries have adopted a similar approach: Germany's Federal Employment Agency appointed an IT executive with more than 30 years of experience as chief information officer; he created a centralised IT project management function that provided training and execution guidelines for critical projects. Every project had a manager who was held accountable for meeting project milestones and budgets and was also empowered to make the necessary decisions to achieve outcomes within boundaries set by the steering committee.<sup>65</sup>

Moreover, the cost of doing business could be decreased by eliminating the requirement for paid-in minimum capital when starting a company, reducing the security deposit to get an electricity connection, and establishing a specialised commercial court to expedite proceedings (see Box 13, "Cutting red tape: Lessons from Colombia and Latvia", for details on Colombia's reforms in the early 2000s).

Government departments will also improve performance if they are subject to greater external accountability. The extension of India's Right to Public Services laws to business-related services nationwide would make government officials liable for the time it takes to render a service to an enterprise. Customer

### Box 13. Cutting red tape: Lessons from Colombia and Latvia

Easing the path for startups and reducing the burden of inspections are two particularly crucial areas for administrative reform. Colombia and Latvia have undertaken these steps, and their results illustrate the potential benefits for the overall economy.

In Colombia, setting up a business used to be a byzantine task. In 1999, registering a business required 45 forms and 17 procedures at ten different locations, resulting in a setup time of 57 days at a cost of some \$500. To eliminate the hassle, the Colombian government created a "one-stop shop" to consolidate virtually all of these procedures. The relevant government agencies were housed in a single office, replicated across many locations. A digital central business registration database was established to issue a single tax identification number on the spot to a new business. The time required to register a new business fell by 95 percent; it now takes just three days, requiring two procedures in two locations. As a result, Colombia has seen a surge in start-up activity. Annual new business registrations climbed from 34,000 in 2006 to 58,000 in 2011—a 70 percent increase in five years.<sup>1</sup>

In Latvia, the heavy burden of inspections on businesses was a legacy of the country's Soviet past. In the late 1990s, many businesses complained that overbearing inspections—often accompanied by the expectation of bribes—were their top concern about the country's business environment. As part of a broad reform programme, the Business Environment Improvement Effort, the Latvian government decided to standardise its inspection reports and procedures in all locations to create greater transparency. Most importantly, a central website was created to publicise the new procedures and aggregate other information, such as a company's rights during an inspection and the appeals process. According to one study, the probability of a small firm undergoing an inspection fell by some 20 percent in just two years, while the probability of a fine being imposed fell by some 80 percent.<sup>2</sup>

1 *How many stops in a one-stop shop? A review of recent developments in business registration*, World Bank, December 2009; "Colombia: Sustaining reforms over time", World Bank, *Doing business 2013*, October 2012.

2 Jacqueline Coolidge, Lars Grava, and Sanda Putnina, "Case study: Inspectorate reform in Latvia 1999–2003", World Bank background paper prepared for *World development report 2005*, 2004.

satisfaction could be monitored through, for example, real-time SMS feedback after an interaction; all government offices could be required to publicly display their customer satisfaction score for the previous week or month. India could introduce a rigorous, independent scoring process to measure the business environment across states, with full disclosure to the public.

### **3. REMOVE TAX AND PRODUCT-MARKET DISTORTIONS**

India's tax system is a messy tangle of central and state levies that serve to undermine competitiveness. The sheer variety of taxes—and their considerable differences across states and sectors—results in high compliance costs. It also balkanises the national market into smaller state markets, harming the ability of businesses to achieve economies of scale.

The proposed goods and services tax (GST), a harmonised consumption tax across nearly all goods and services, represents an important step towards reducing complexity and lowering the tax burden. A study commissioned by the 13th Finance Commission suggests that by broadening the tax base, a GST of 12 percent would generate as much revenue as today's value-added taxes of 20.5 percent.<sup>66</sup> The tax could have other positive effects, such as reducing the differential in taxation across states and sectors, leading to a more efficient allocation of investment, and lowering the barriers to trade between states within India. Concerns from states about revenue loss can be mitigated by guaranteeing protection of revenue and creating a ring-fenced fund to support this.

In addition to cross-cutting tax reform, India can improve industry competitiveness and encourage enterprises to scale up and enter the formal economy by removing distortions in individual sectors—especially those that will be the most significant sources of non-farm job creation. By way of illustration, the textiles subsector is relatively low-skill and labour-intensive, which makes it well suited to absorbing many former agricultural workers and raising their incomes. But the textile market is distorted by excise duties on man-made fibers (which do not apply to cotton textiles); import duties on raw wool, wool top, nylon staple fiber, and polypropylene staple fiber; and duties exceeding 25 percent on textile machinery, including excise, octroi, and sales tax.

The construction sector, too, is beset by a plethora of duties that undermines project economics. The Planning Commission estimates that 20 to 30 percent of the cost of an infrastructure project is composed of direct taxes on material and equipment, with an additional 15 to 20 percent of the project cost going to indirect taxes. The excise tax on cement, for example, ranges from 46 percent to 61 percent; construction equipment incurs import duties as well as excise duties; and moving material and equipment across state lines typically also incurs taxes.

### **4. RATIONALISE LAND MARKETS BY REFORMING LAND RECORDS AND ENCOURAGING NEW MODELS OF ACQUISITION**

Land markets are a barrier to growth in India for three primary reasons. First, inaccurate and outdated records mean titles are not clearly held, private transactions are hampered, and dispute resolution in the judicial system is extremely slow. Second, laws impose restrictions on the sale, lease, and

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<sup>66</sup> Rajesh Chadha, *Moving to goods and services tax in India: Impact on India's growth and international trade*, National Council of Applied Economic Research working paper number 103, 2009.

conversion of agricultural land. Third, land transaction prices are often under-reported to avoid stamp duty, which creates uncertainty around the true market price for land.

In the absence of an efficient private market for land, the backers of major infrastructure and industrial projects have pursued the government-driven land acquisition process, which historically has been viewed as unjust to the displaced. The recently passed Land Acquisition, Rehabilitation and Resettlement Bill of 2013 intends to make the process fairer and more remunerative for landowners. The consent of 70 to 80 percent of landowners is now required before the government may step in to acquire a tract of land. The process must now compensate both landowners and other affected families, such as those who have earned a living from the land, and both groups are entitled to a rehabilitation and resettlement award. To correct for uncertainty around land prices, which are artificially depressed, compensation is based on the recorded market value but with an effective multiplier of two in urban areas and four in rural areas.

The new framework could make the process of land acquisition more difficult and time-consuming. However, it remains an open question whether it will actually undermine major investment and therefore the country's economic growth. For one, more generous compensation as well as rehabilitation and resettlement stipulations may diminish the frequency and intensity of protests over land acquisition. Second, a one-person authority is being set up to adjudicate disputes, which holds the promise of expediting proceedings. The need for such a mechanism is undeniable, though its effectiveness remains to be seen.

At the same time, the private land acquisition process must be facilitated. For this, India needs more robust, transparent, and efficient land markets, and three key reforms would help address their structural challenges.

First, India needs to reinforce property rights, primarily by demarcating land holdings through geospatial surveys and providing standardised title to landowners. Technology has been leveraged, for example in Karnataka, to digitise paper land records and create a software mechanism to control changes to the land registry. Second, many restrictions on monetising land (especially agricultural land) can be loosened or eliminated, as they prevent private transactions for major projects and undermine the farm to non-farm shift.

Third, alternative models for land acquisition that create less disruption to existing landowners can be explored. For example, Gujarat uses a land pooling and readjustment scheme for planning infrastructure in peri-urban areas. Under this framework, all holdings of land in a large area are proactively pooled and their borders readjusted to make way for public infrastructure such as roads. All of the landowners in the pooled area lose a proportionate amount of land, but they also all benefit from the appreciation in value that results from infrastructure provision and they are not displaced in the process. This kind of scheme requires strong urban planning capabilities, including the foresight to plan infrastructure well ahead of demand, but it also avoids the time-consuming nature of land acquisition.

The Maharashtra Industrial Development Corporation has adopted an intermediate model. When the company acquires land, it returns 15 percent of the land to the displaced original owners after the land is developed so they can share in the financial upside. However, the returned landholdings tend to be different from the landowners' original holdings, and thus resistance to land acquisition remains an issue.

## 5. MAKE THE LABOUR MARKET MORE FLEXIBLE THROUGH INCREMENTAL REFORMS

India's constitution stipulates that the government should "endeavour to secure ... to all workers ... work, a living wage, [and] conditions of work ensuring a decent standard of life". At least 43 national laws—and many more state laws—touch on the labour market, regulating the terms of work, hiring and dismissal practices, and the working environment. Ironically, this web of legal restrictions has managed to secure rights for only a tiny minority of workers who are employed in the organised sector. More than 85 percent (including agricultural workers) still lack any form of job security or protection from income loss.

Despite effectively protecting so few, India's labour laws are onerous by international standards. The OECD assessed 43 countries (including nine non-OECD nations) and found that India had the second-strictest set of laws regarding protection of permanent workers from individual dismissal.<sup>67</sup> The procedural inconvenience and difficulty of dismissing a worker is considered especially burdensome in India. The Industrial Disputes Act of 1947, for example, stipulates that in industrial establishments with 100 or more employees, businesses must obtain government permission for retrenchments, layoffs, and closures. In the event of dismissal, a worker has up to three years to file an unfair dismissal claim, and court proceedings usually take three to four years on top of that.

As a firm expands its staff, various labour laws phase in and the average cost per worker increases with each additional regulation that comes into force. The Factories Act of 1948 phases in when a manufacturing enterprise employs its tenth worker (if it uses electricity) or its 20th worker (if it does not). Businesses are subject to the Contract Labour (Regulation and Abolition) Act of 1970 once they employ 20 or more contract labourers. Both the Industrial Disputes Act of 1947 and the Industrial Employment (Standing Orders) Act of 1946 apply to industrial businesses with 100 or more employees.

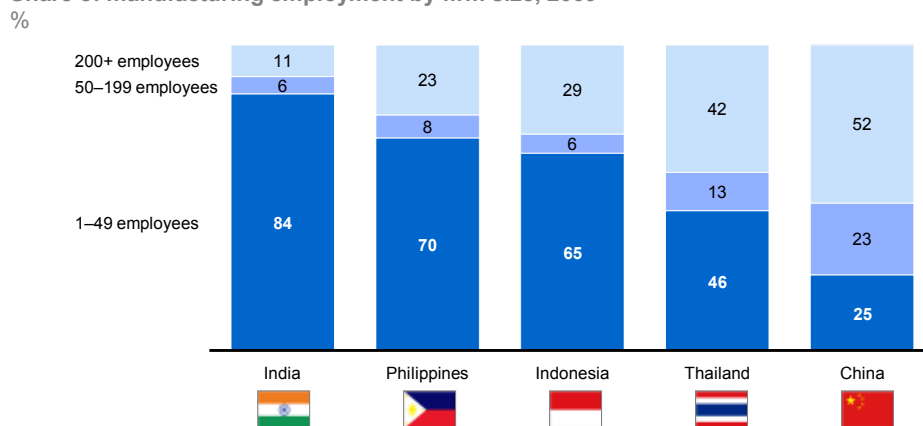
The size profile of the country's manufacturing enterprises reflects the economic cost of labour laws that give firms incentives to stay small. In 2009, 84 percent of India's manufacturers employed fewer than 50 workers, as opposed to 70 percent in the Philippines, 65 percent in Indonesia, and 25 percent in China. Across all sectors, India's largest companies (those with more than 200 employees) exhibit approximately the same level of labour productivity as large enterprises elsewhere in Asia, but its smallest enterprises are only 25 to 65 percent as productive as their small-scale peers in nearby countries. This points to an artificial glut of small-scale, less productive enterprises in India, likely caused by structural barriers to enterprise growth, such as labour laws (Exhibit 55).

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67 OECD, "Protecting jobs, enhancing flexibility: A new look at employment protection legislation", *OECD Employment Outlook 2013*, 2013.

**Exhibit 55****India's manufacturing sector is characterised by a glut of sub-scale, low-productivity enterprises**

Share of manufacturing employment by firm size, 2009



**Value add per worker, 2005<sup>1</sup>**  
\$ thousand per year



<sup>1</sup> Both manufacturing and services businesses.

<sup>2</sup> Productivity data is only for small enterprises (i.e., 5-49 employees) and does not include micro enterprises (i.e., 1-4 employees).

NOTE: Numbers may not sum due to rounding.

SOURCE: Asian Development Bank, *Key indicators for Asia and the Pacific*, 2009; McKinsey Global Institute analysis

India is not alone in facing a labour market with excessive regulations. In 2012, both Spain and Mexico passed labour reforms aimed at reducing the regulatory compliance costs facing businesses and spurring them to increase hiring. Spain made it easier and less costly to fire workers by more precisely defining what constitutes fair dismissal and capping severance payments. At the same time, hiring was encouraged by introducing one-year probationary periods for new hires (with no right to severance during that time) and subsidies for hiring the long-term unemployed and young people.<sup>68</sup> In Mexico, similar thinking led to a set of reforms that included probationary periods for new hires and caps on the accumulation of back wages in unfair dismissal proceedings.

Though labour reform is widely perceived to be difficult to implement, some of India's states have started down this road—and those states where labour laws are more flexible for employers have a greater prevalence of organised sector non-farm jobs (Exhibit 56).<sup>69</sup> These states also experienced greater organised sector non-farm job creation from 2005 to 2010, resulting in a higher-productivity mix of jobs.

India can substantially improve labour flexibility by phasing in a reform agenda that builds on early successes before addressing the more ambitious and politically controversial issues (Exhibit 57).

<sup>68</sup> *The 2012 labour market reform in Spain: A preliminary assessment*, OECD, December 2013.

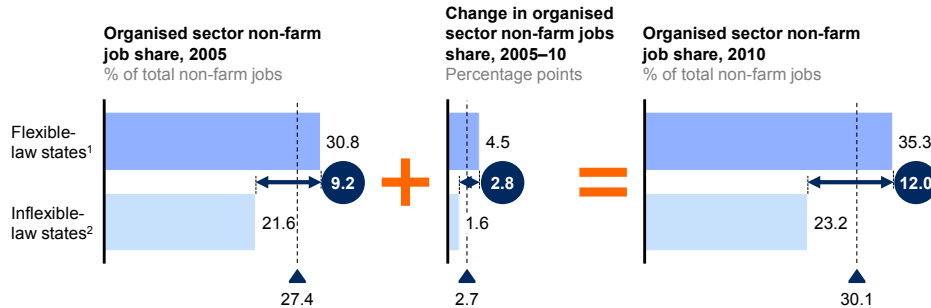
<sup>69</sup> See, for example, OECD Economic Surveys, India, 2007; Gupta et al., "Big reforms but small payoffs: Explaining the weak economic growth in Indian manufacturing", Indian Policy Forum, 2009; and Cain et al., *Trade liberalization and poverty reduction: Evidence from Indian states*, Columbia Program on Indian Economic Policies, working paper 2010-3, 2010.

**Exhibit 56**

**States with relatively pro-employer labour laws have a greater share of organized sector non-farm jobs than other states**

▲ All-India average

**Organised sector non-farm jobs in states with flexible vs. inflexible labour laws**



1 Andhra Pradesh, Gujarat, Karnataka, Maharashtra, Rajasthan, Tamil Nadu.

2 Assam, Bihar, Kerala, Odisha, Punjab, West Bengal.

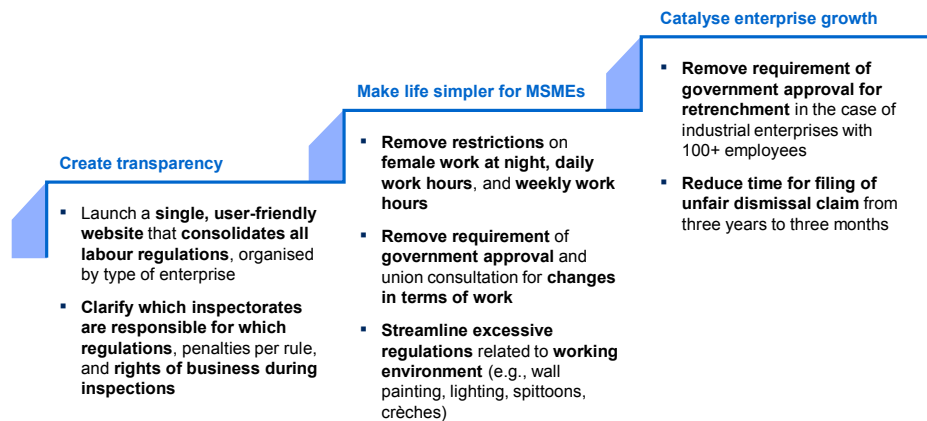
NOTE: Numbers may not sum due to rounding.

SOURCE: National Sample Survey Office, 61st and 66th rounds; McKinsey Global Institute analysis

**Exhibit 57**

**A stepwise reform agenda for the labour market can attract investment and improve the returns to labour**

ILLUSTRATIVE



SOURCE: Expert interviews; McKinsey Global Institute analysis

First, the government can create greater transparency about the scope and enforcement of labour laws. A single website that consolidates all labour regulations at both the national and state levels, organised by enterprise size and sector, could quickly lower the cost of ensuring compliance—especially for less sophisticated MSMEs that are unsure which labour laws apply to them. Similarly, greater transparency about enforcement (spelling out, for example, which inspection units are responsible, penalties per regulation, and the rights of a business during an inspection) would reduce opportunities for corruption.

Second, a series of legislative reforms could make life simpler for MSMEs, where the vast majority of Indians work. Regulations that restrict the terms of work—including, for example, limits on women working at night, daily work hours, and weekly work hours, as well as the requirement to obtain government approval before changing an employee's standing orders—hinder the flexibility that small businesses need to survive. Furthermore, excessive regulations related to the working environment can be streamlined. Rules related to the provision of spittoons, the type of lighting, and the quality of wall painting,

among many others, can be simplified or entirely eliminated. Doing away with arcane regulations can reduce the scope for bribe taking during inspections and may remove disincentives for many unorganised businesses to enter the formal economy.

The third set of reforms should focus on catalysing formal employment. The major impediment in this regard is the high cost of firing, which likely deters hiring in the first place. Industrial establishments with 100 or more workers must seek government permission to dismiss workers. This hinders the expansion of India's manufacturing sector and undermines competitiveness, as enterprises choose to stay small and forgo economies of scale. India could eliminate the government's role in firing decisions entirely and instead set out rules defining what constitutes "fair" retrenchment, as Spain has recently done. Moreover, India allows three years to file an unfair dismissal claim, in contrast to, say, Turkey, which allows up to one month for a worker to file a grievance after notification of dismissal; Austria allows only two weeks. Bringing this time period in line with international norms would lessen the risk a business takes on by hiring a worker.

Any increase in the flexibility to fire should be paired with measures to reinforce income security in case of unemployment. India's current policies are poorly suited to the task. Severance is 15 days' pay for each year of service, while the unemployment insurance scheme pays out 50 percent of an employee's previous wage for six months. However, both are available only to workers who were employed in formal enterprises, who make up only some 15 percent of the workforce.

One approach to addressing this gap in the informal economy could be direct unemployment assistance, in which the government provides a fixed stipend to the unemployed. In Argentina, for example, the government provides a stipend of 150 pesos per month, which is less than the minimum wage, for one unemployed head of a household with children. In Germany, unemployment assistance is conditional, requiring the unemployed person to register with the government-run job placement agency and actively seek work.

This model could be adopted in India, but only after the country's system for employment matching and placement improves. Today most low- and medium-skilled job seekers in India find employment through networks of labour contractors and through family, caste, and community connections.<sup>70</sup> These networks are a natural response to the high degree of informality in the job market. But as the job market formalises, the capabilities of employment exchanges will have to be beefed up. Today India has some 1,200 employment exchanges, but their placement rate is around 1 percent annually.<sup>71</sup> By contrast, Egypt's Ministry of Manpower and Immigration has one employment office for approximately every 180,000 people in the working-age population and manages to make some 40,000 job placements per month. Approximately half of Egypt's job seekers claim to have found employment through the agency.<sup>72</sup>

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70 Arvinder Singh, "Labour mobility in China and India: The role of Hukou, caste and community", in *China and India: Learning from each other—Reforms and policies for sustained growth*, Jahangir Aziz, Steven Dunaway, and Eswar Prasad, eds., International Monetary Fund, September 2006.

71 Employment exchange statistics 2012, Ministry of Labour and Employment, Government of India.

72 Amina Semlali and Diego Angel-Urdinola, *Public employment services and publicly provided ALMPs in Egypt*, World Bank, 2012.



## 6. BUILD SKILLS FOR POOR WORKERS THROUGH A GOVERNMENT-SUPPORTED SYSTEM

Many of the poor do not benefit from economic growth because they lack the skills required to obtain a job—but if they do manage to acquire skills, the impact on their personal incomes can be dramatic. An illiterate worker who moves from agriculture into light manufacturing can, with appropriate training, realise a 40 percent increase in wages. Similarly, a literate worker who has completed only primary education can expect 70 percent higher wages by moving from the farm into heavy manufacturing after having acquired the relevant skill set.

Ensuring a well-trained workforce is a particularly acute challenge in India because most businesses are small and operate outside the formal economy; they are therefore unlikely to provide the same training opportunities as larger, better-established firms. The government's efforts to address this issue have included initiatives such as the National Skill Development Corporation. Most of the progress to date has been around developing models for workers in urban areas and those with a minimum education level (typically class 12 or graduates). To make economic growth more inclusive, however, vocational education providers need to engage the poorest workers, those with lower levels of education (perhaps no schooling at all or only primary education), and those who live in rural areas (Exhibit 58). Some 278 million Indians of working age are in these segments, but they are under-served. While some organisations, such as Odisha's Gram Tarang, are beginning to cater to these segments, India could more actively pursue and scale up promising models that address the widespread need for training and skill development.

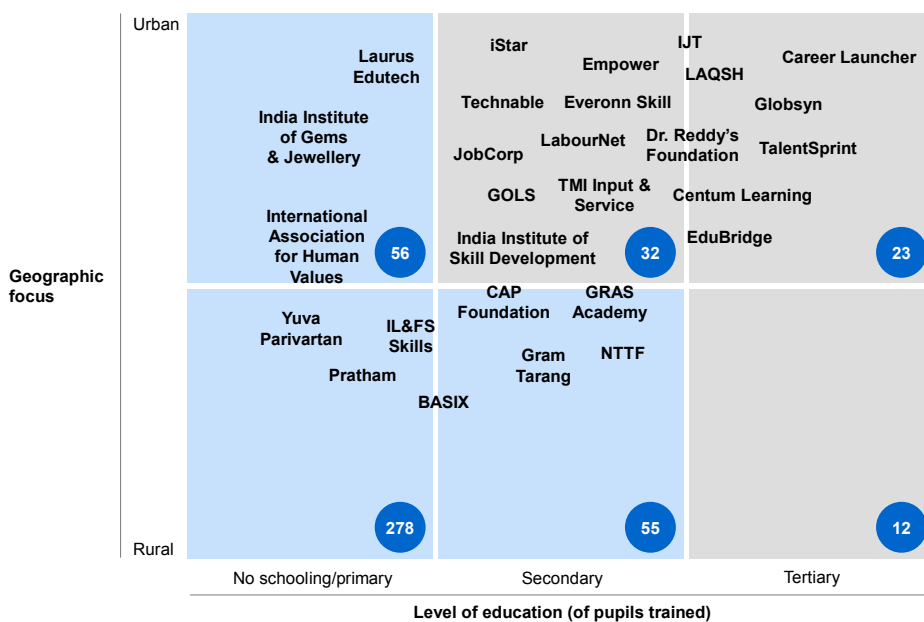
### Exhibit 58

#### There is a major gap in vocational training offerings in rural areas for those with little education

Focus of various vocational education providers in India

NOT EXHAUSTIVE

- Labour force size, 2010 (million)
- Segments with largest supply-demand mismatch



SOURCE: National Sample Survey Office, 66th round; expert interviews; McKinsey Global Institute analysis

Short training courses and certification systems could help workers improve their skills (and thus their incomes). There are proven ways to do this, and these can be identified and scaled up. An Andhra Pradesh-based NGO has trained more than 50,000 young people for the retail and hospitality industries in three-month programmes, for example, while an NGO in western India uses mobile vans to offer 15-day programmes in skilled trades like plumbing to some 100,000 rural students.

IL&FS Skills, a public-private partnership, trained some 9,000 aspiring workers and achieved an 85 percent placement rate in 2012, and its model has many of the elements required for success. IL&FS Skills directly targets poor, less educated rural youth, training dropouts for jobs in textiles, leather, welding, fitting, and construction; it teaches high school graduates the skills for retail, hospitality, electrical and appliance repairing, and machine tooling. Its delivery model emphasises low cost of operation, interactive learning, and teaching skills that are in demand. The company uses a standardised curriculum that is delivered through a portable multimedia platform called the K-Yan. Classroom instruction on the K-Yan is paired with hands-on experience in simulated work environments. Industry partnerships with some 1,000 employers ensure the relevance of the curriculum and secure placements for enrollees. The Ministry of Rural Development pays the tuition of participants, but there is no stipend to participants to defray the opportunity cost of their time spent in training. For a poor individual supporting a family, this might be a major barrier; the government can play an important role in filling this type of gap and creating incentives for skills development.

Many such social sector and private enterprises could provide “earn-as-you-learn” skill-building programmes to poor workers, training millions of people over a decade. The money for such courses could be given as government grants to trainers once workers are certified, or workers could get vouchers that allow them to choose among providers. Some programmes could evolve into marketplaces that link certified trainees with employers willing to pay for quality. Training programmes also need an increased focus on entrepreneurial skills to enable trainees to start their own enterprises. This could catalyse the growth of hundreds of vocational training organisations, subject to quality monitoring and certification by government-approved agencies. Existing programmes can be repurposed for this effort. For example, the funds used by the MNREGA scheme to provide unskilled manual work for at least 100 days a year to rural workers can be channeled into skills development. Such an initiative could leave poor rural workers with durable and long-lasting means to improve their own standards of living.

## Building focused “job creation engines” can create 11 million jobs and generate revenue to plough back into infrastructure and social services

In addition to critical reforms that improve the business and investment climate in a broad-based way, India can seed new “job creation engines” across the country. Mumbai, New Delhi, Bengaluru, and other major urban centres have a significant role to play in generating additional non-farm jobs, but they will not be able to meet the challenge alone. Even after accounting for net migration,

more than 50 million non-farm jobs (out of a total requirement of 115 million ) will need to be created for the labour force in six large, mainly rural states, including 23 million for Uttar Pradesh alone.

Three targeted government interventions to build job creation engines—industrial townships, tourism circuits, and food-processing parks—could make a notable contribution towards more geographically balanced growth.

Industrial townships provide tailor-made infrastructure that supports a cluster of companies in similar industries (in this case, manufacturing, though they can also be developed around financial services, education, medical services, technology, or other types of innovation). Their proximity creates efficiencies, knowledge transfer, and higher labour productivity, attracting investment and creating jobs.

Tourism circuits are clusters of tourist attractions, supplemented by hotels, restaurants, and recreational activities and connected by road, rail, and air links. They need to have reliable power supplies, clean drinking water and sanitation, and local populations skilled at meeting tourists' demand for goods and services. The tourism sector is labour-intensive, creating jobs that are well suited to those moving up from the lower rungs of society and causing positive spillover effects in the informal economy.

Finally, agro-based industries, such as food-processing parks, not only bring industry to rural areas, but also improve farmers' access to the broader market, increasing their incomes.

If these three interventions are approached correctly, we estimate that they could create some 11 million non-farm jobs by 2022, bridging approximately 25 to 30 percent of the job creation gap between our inclusive reforms and stalled reforms scenarios.

To bring these to fruition, India's government would need to make concurrent investments in infrastructure (power, roads, water, and sanitation), basic services (schools, hospitals, and affordable housing), and sector-specific needs (for example, beach development and tourist attractions to support tourist circuits). These investments can be self-sustaining for the government, as returns (in the form of tax receipts and land monetisation) can be re-invested in additional job creation. However, each of these initiatives will require a well-considered approach to ensure that resources are not squandered.

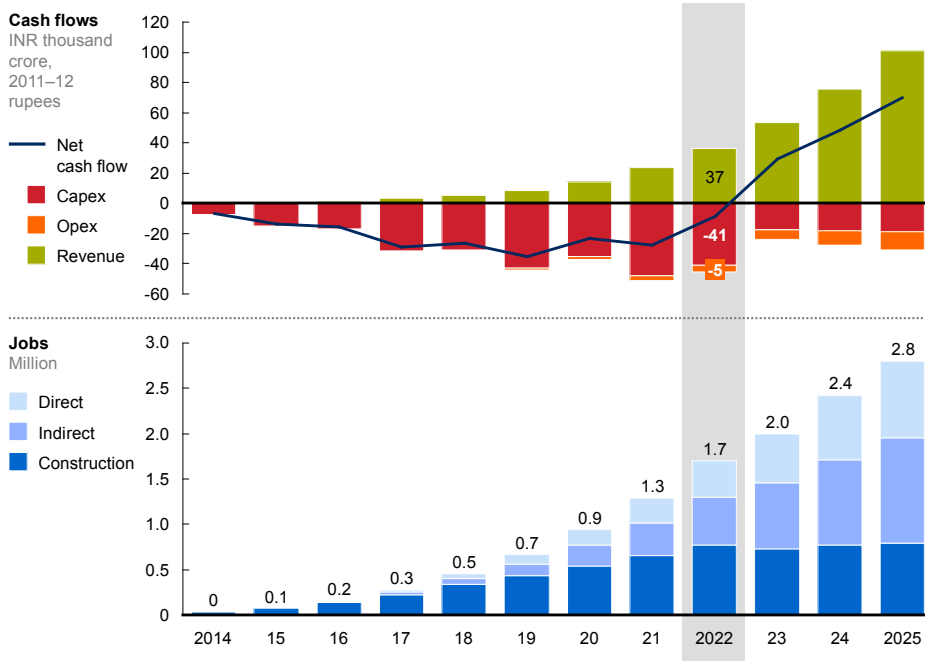
## **INDUSTRIAL TOWNSHIPS**

India cannot meet the non-farm job creation challenge without a significant ramp-up in manufacturing employment. A series of geographically dispersed industrial townships, both greenfield and brownfield, can enhance the reach of this sector and broaden job opportunities. If programmes to create or strengthen 35 industrial townships could be launched over the next eight years, some 1.7 million jobs could be created by 2022, including 400,000 manufacturing jobs and 800,000 construction jobs (Exhibit 59). In steady state, reached around 2030, the townships could support approximately 4.2 million jobs with an average salary of Rs. 450,000 per annum (2011–12 rupees).

**Exhibit 59**

**A portfolio of industrial townships can create approximately 1.7 million non-farm jobs by 2022**

Economic profile of 35 industrial townships<sup>1</sup>



<sup>1</sup> One launched in 2014, two in 2015, three in 2016, four in 2017, and five every year thereafter to 2022; 17 brownfield and 18 greenfield.

SOURCE: McKinsey Global Institute analysis

Creating a large number of industrial townships will require significant investment in infrastructure. A single greenfield industrial township of 55 square kilometers might require Rs. 14,000 crore (2011–12 rupees) of capital expenditure over 18 years, with approximately half in the first five years of development. This would go into building hard assets such as power, sewage, water, and roads as well as social infrastructure such as schools and hospitals. Despite this large capital outlay (plus rising operating costs as the city grows), the township can achieve returns of about 25 percent to the government, largely from tax revenue. Cash flow becomes positive in the sixth year of the project, and nominal payback to the government happens in the ninth year. These assumptions are similar in the case of brownfield townships.

If these assumptions hold across 35 industrial townships launching between now and 2022, capital expenditure for infrastructure would average about Rs. 30,000 crore annually for the first eight years, and the internal rate of return of the portfolio of industrial townships would be about 25 percent. Aggregate cash flow would turn positive in 2023, and nominal payback would occur in 2026.

Building 35 industrial townships by 2022 is an ambitious aspiration. Some of these would likely fall under India’s new National Investment and Manufacturing Zone (NIMZ) framework, which requires a minimum of 50 square kilometers of contiguous land. By way of comparison, under the government’s Special Economic Zone policy, multi-product zones were required to use at least 10 square kilometers of contiguous land, and only 15 such zones have been initiated

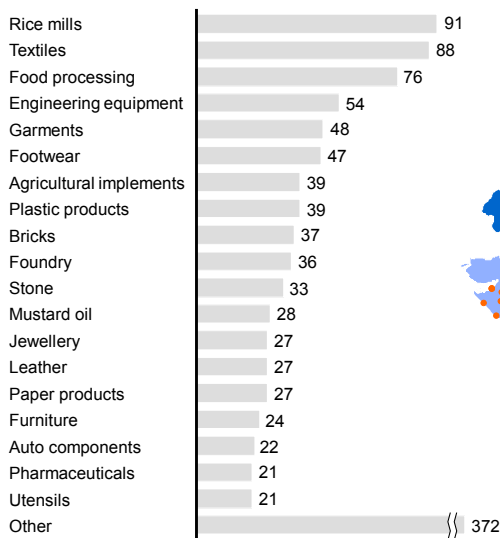
since the policy took effect in 2005, a rate of approximately two each year.<sup>73</sup> Our scenario, by contrast, calls for launching one industrial township in 2014, two in 2015, and then ramping up to five per year by 2018 and every year thereafter to 2022.

For the scheme to work, the right enablers must be in place. First and foremost, the locations that are chosen must have inherent attractiveness to manufacturing firms. Site selection should be driven by basic competitiveness and the likelihood of achieving critical mass. Focusing on brownfield industrial clusters (that is, strengthening infrastructure in existing clusters of industrial activity) is a good strategy to capitalise on current hubs of skills and entrepreneurship. The Foundation for MSME Clusters has already identified more than 1,000 such clusters in India, some of which are located in states with large non-farm job creation needs (Exhibit 60). Targeted government investment in high-quality transportation and power infrastructure, as well as social infrastructure, could accelerate their development.

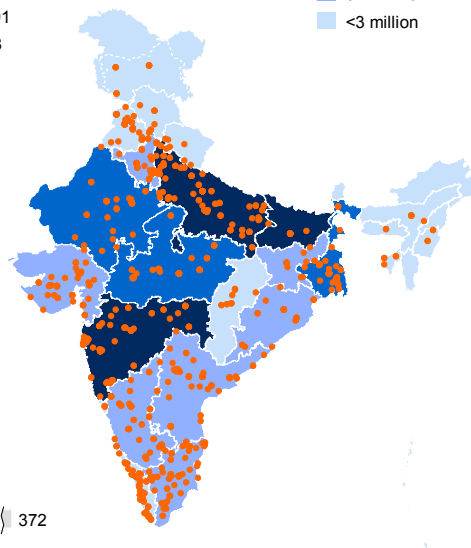
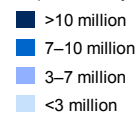
**Exhibit 60**

**More than 1,000 existing industrial clusters could be ramped up with targeted government investment**

Distribution of industrial clusters  
Number



Non-farm job creation requirement by 2022



SOURCE: Foundation for MSME Clusters; McKinsey Global Institute analysis

Second, beyond infrastructure investment, a policy framework must be in place to guarantee that the sectors in question become more competitive; it will need to include more flexible administrative rules and the removal of product-market distortions, as discussed earlier in this chapter. Without inherent competitiveness in place, government investment in infrastructure alone will not yield a thriving manufacturing sector.

Third, these government investments should be executed through formally constituted, highly empowered and accountable special purpose vehicles

73 The new manufacturing policy in 2011 established a framework for National Investment and Manufacturing Zones. These are state government-led initiatives in which the government is responsible for land acquisition. They do not offer the financial incentives of earlier Special Economic Zones, but they do have the scope to streamline such tasks as environmental clearances and master planning.

(SPVs), with adequate funding, headed by extremely competent private- or public-sector leaders, and backed by the chief minister (or in the case of multi-state programmes, the prime minister). As in the NIMZ framework, the state government should take the lead in identifying and acquiring land and constituting an SPV to spearhead the zone. The SPV would be responsible for developing a master plan for the zone, engaging a developer, obtaining environmental clearances, promoting investment, and acting as the agent of the central government in monitoring and enforcing national labour laws within the zone. The central government's key responsibilities would include providing clearances, ensuring major connecting infrastructure to the zone, offering financial support to private-sector developers of internal infrastructure, and auditing the SPV's regulatory oversight mechanisms from time to time.

Because SPVs for industrial townships would be proposed and driven by state governments, it will be important to share best practices across states and zones. The Department of Industrial Policy and Promotion currently has a "mentor group" of government and manufacturing industry representatives to monitor and support individual NIMZs. This concept could be expanded to entail a best-practices council across all industrial township SPVs. The Delhi-Mumbai Industrial Corridor Development Corporation is expected to play a similar role for the NIMZs within its purview.

In addition, the SPVs in control of these projects will have a significant concentration of power—and that underscores the importance of building in transparency and accountability. State governments can apply the "tight-loose" principle to monitoring the SPV (that is, setting "tight" performance targets for key metrics, along with consequences for missing them, while giving only "loose" operational guidance that allows the SPV considerable operational autonomy). This would allow SPVs to experiment with the best approaches to delivering a world-class industrial township while still being held accountable for overall delivery.

## **TOURISM CIRCUITS**

Tourism can play a significant role in "pro-poor" economic development in that it employs a large number of people and requires skills that are relatively easily acquired. To date, however, India has been unable to harness the job creation potential of tourism. China, for instance, has nearly 40 percent more tourism jobs per capita than India, while Thailand has nearly 110 percent more. We estimate that creating five well-defined tourism circuits in India would require a government outlay of about Rs. 2,000 crore (2011–12 rupees) over five years, which would yield returns of some 28 percent to the government and generate some 7.7 million jobs by 2022. This investment would focus on developing tourist attractions such as museums, convention centres, theme parks, and beach facilities, as well as hard infrastructure such as parking and roads. While tourism can generate a considerable number of jobs, they tend to be relatively low paying, with an average salary of about Rs. 80,000 per annum (2011–12 rupees). This is significantly lower than in manufacturing, but still more remunerative than farmwork.

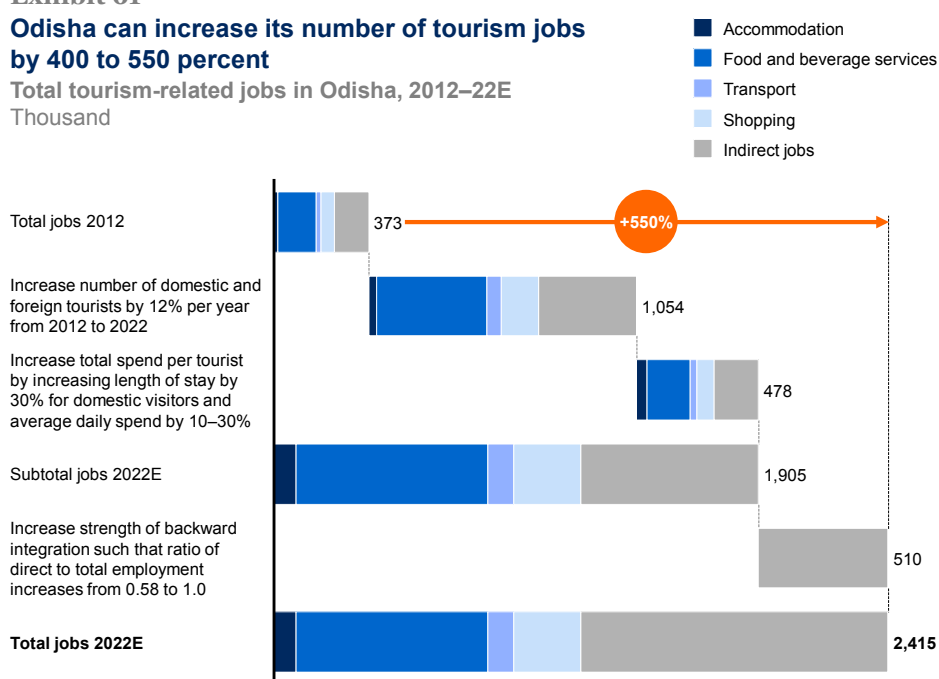
The key to unlocking this job and value creation is ensuring that government investment attracts a significant number of additional tourists, entices them to stay longer and spend more money, and strengthens the links between tourism and other sectors. To accomplish this, the investment must be focused on areas

with unique natural and cultural endowments. Take Odisha as an example: despite unique offerings such as the Konark Sun Temple (a UNESCO World Heritage site) and Bhitarkanika National Park, the state still has plenty of scope to expand its tourism sector, as it currently draws less than 1 percent of foreign visitors to India (vs. 25 percent who visit Maharashtra and 17 percent who visit Tamil Nadu). We estimate that the number of tourism jobs in the region could grow from 0.4 million in 2012 to 1.9 million to 2.4 million by 2022, representing a 400 to 550 percent increase (Exhibit 61). Approximately half of the job growth comes from increasing the number of visitors by 12 percent annually, in line with the targets set in the 12th Five Year Plan. The other half comes from increasing total spending per tourist (by increasing both the length of stay and average spending per day) and creating indirect jobs.

**Exhibit 61**

**Odisha can increase its number of tourism jobs by 400 to 550 percent**

**Total tourism-related jobs in Odisha, 2012–22E**  
Thousand



SOURCE: Statistics of Government of India; Odisha Department of Tourism; McKinsey Global Institute analysis

Creating a tourism circuit would entail increasing the intrinsic attractiveness for tourists, ensuring readiness for tourist inflow, and developing a distinctive value proposition. A priority circuit with a high density of historical, cultural, or natural landmarks needs to be branded. Investment in infrastructure such as roads, hotels, and other tourist facilities is needed, and social awareness campaigns, especially for hygiene, sanitation, and public safety should also be undertaken. The tourism sector will require liberalisation in procedures such as taxation structure and visa application for tourists. Finally, following up on the initial investment with a well-crafted international marketing plan will be critical.

India can also do more to ensure that tourism supports other sectors. According to the World Travel and Tourism Council, India creates 0.58 indirect jobs per 1 direct tourism job. By comparison, Thailand creates 1.12 indirect jobs for each tourism job; in China, that number is 1.80, and in Indonesia it is 2.04. Enhancing the links between tourism and other sectors is an important priority for policy makers. One approach to this is to promote local sourcing as an opportunity for distinctiveness. The government of Jamaica, for example, organises meetings

of hoteliers (who mostly represent large international chains) and local business people such as farmers and craftsmen to encourage procurement from domestic suppliers. Strategies like local sourcing mandates could be considered but may not be wholly effective; in the multi-brand retail sector, many international retailers have avoided the Indian market because of a perception that meeting the country's local sourcing regulations may be challenging. Instead, the government and businesses, through their corporate social responsibility efforts, can collaborate to improve capabilities and competencies on the supply side, for example, by training local producers and vendors to form more organised and reliable supply chains.

### **FOOD-PROCESSING PARKS**

If executed well, food-processing parks can have a sizeable impact on job creation and agricultural productivity. We estimate that 30 food parks could create one million jobs by 2022 at an average salary of some Rs. 300,000 per annum (2011–12 rupees). Moreover, the annual incomes of 1.5 million farming households would grow by 20 to 80 percent. The government's investment requirement, mainly in rural infrastructure such as roads that improve market access, would be approximately Rs. 3,400 crore (2011–12 rupees) over five years, yielding a return of more than 30 percent.

While the 12th Five Year Plan calls for the creation of 30 mega-food-processing parks, only two are currently operating. Eleven others have been granted approval and are in the process of acquiring land or being constructed.

A number of issues have hindered progress. First, since there is limited land aggregation in India's agricultural sector, food processors incur high transaction costs in interacting with many small farmers. A lack of rural infrastructure makes the "catchment area" of a food-processing park relatively small and limits the availability of supply. In addition, because the legal system moves slowly, binding contracts cannot be enforced, eroding trust between small-scale farmers and industry, two groups that have often been at cross-purposes.

For government investment in food-processing parks to succeed, a number of enablers will need to be in place, including the land market reforms discussed earlier in this chapter. A major push to develop rural infrastructure, especially roads, could help to expand the catchment areas, making project economics more attractive.





Relations between industry and government have long had an adversarial edge in India, with many business feeling stifled by regulation and red tape. But India's leadership can hit the reset button and redefine this relationship for a new era. Rather than taking a prescriptive approach that tightly manages industry, policy makers can adopt a new mindset—one focused on facilitating a competitive market environment that allows businesses to thrive. By sweeping away arcane regulation and antiquated procedures, India can build a more efficient engine of job creation. Combining a bold reform agenda with forward-thinking investments in job creation engines of the future could generate opportunities for millions of Indians to obtain better jobs, attain a better livelihood, and reach the next rung on the economic ladder.



## 7. Raising productivity on India's farms

Agriculture has a central role to play in poverty reduction. Despite a recent wave of urban migration, some 68 percent of India's population is still rural. Even our inclusive reforms scenario, which includes faster non-farm job creation, envisions that at least 37 percent of India's entire workforce will still be engaged in agriculture by 2022. Focusing on the productivity and performance of the agricultural sector to lift the incomes of smallholder farmers, wage-earning labourers, and small agro-based enterprises is the most direct route to addressing rural poverty.

There is great scope for improvement, as agriculture has not kept pace with recent growth in India's broader economy. The sector made profound strides starting immediately after independence and sustained a wave of momentum in the wake of the Green Revolution. Since then, however, its productivity growth has stagnated—and there is growing concern that current practices and policies are depleting the soil and the water supply. Today the nation's crop yields remain well below potential due to a number of structural factors: low investment in agricultural infrastructure, research, and extension services; an inefficient land ownership model; and market distortions that discourage productivity-enhancing investment.

Bringing India's yields in line with those of other emerging Asian countries could reduce the population below the Empowerment Line by 10 percentage points, raising over 125 million above the line. In addition, the ripple effects of agricultural growth are felt beyond the farm sector. As farmers obtain higher incomes, their demand for consumer and durable goods increases, which bolsters India's expanding manufacturing and service sectors.

India has the capacity to achieve 5.5 percent annual yield growth over the next ten years, but significant structural reforms are needed to realise this potential. The keys will be focusing on inputs such as seeds, fertilisers, and water; working with farmers to implement more efficient practices; expanding rural access to credit; reforming land markets; and improving agricultural logistics and infrastructure. Underpinning the entire process will be a unified method of governing India's agricultural bureaucracy and making it support farmers in a more coordinated way.

### Raising agricultural productivity is essential for reducing rural poverty

Although agriculture accounts for a diminishing share of India's GDP, it remains the backbone of the rural economy, providing almost three-quarters of rural employment and generating more than half of rural household income in 2004–05 (Exhibit 62). However, the sector's productivity per worker is 60 percent lower than that of construction and 75 percent lower than that of manufacturing. As a

result, the contribution of agriculture to rural net domestic product (NDP) was only 39 percent in 2005, despite the heavy concentration of labour and land in the sector.<sup>74</sup>

### Exhibit 62

#### Agriculture is a critical element of the rural economy

Rural areas, 2004–05

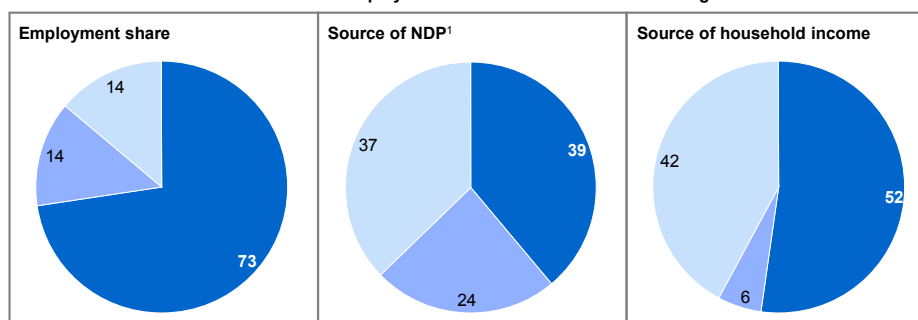
%



Most of the rural workforce is employed in agriculture

Agriculture's contribution to value added is much lower than its employment share

However, a large share of household income in rural areas is from agriculture



1 Net domestic product = GDP – depreciation.

NOTE: Numbers may not sum due to rounding.

SOURCE: Ministry of Statistics and Programme Implementation; NSS Employment and Unemployment Survey, 2004–05; National Council of Applied Economic Research, 2004–05; McKinsey Global Institute analysis

A large body of academic research has highlighted the vital role of agricultural productivity in reducing poverty in developing countries. China's experience, for example, shows that a growth spurt in agriculture can drive a steep reduction in poverty—and in China's case, it also generated demand and capital to drive a boom in town and village enterprises (see Box 14, "Reducing poverty through agricultural reforms: The Chinese example"). The levers used by China at that time are not entirely relevant to India today (for instance, India does not have the collectivised and planned model of farming prevalent in China in the 1970s, and it was the unshackling of this model that drove much of China's agricultural progress). However, with nearly 70 percent of active workers in the excluded and impoverished segments and more than 60 percent in the vulnerable segment engaged in farmwork, India needs its own set of reforms to improve farmers' incomes and generate demand and employment in the rural non-farm economy.

Raising productivity benefits the entire rural ecosystem associated with agriculture, including smallholders, wage-earning labourers, and related businesses. In addition, the ripple effects of agricultural growth are felt beyond the farm sector.<sup>75</sup> For instance, as farmers obtain higher incomes, their demand for all types of consumer goods (such as toiletries and packaged foods) and durable goods increases—and growth can be swift because of low initial penetration. Demand for farm inputs such as fertilisers, pesticides, and tractors also stimulates the manufacturing sector; revenue for agricultural equipment grew by 16 percent annually between 2008 and 2012.

74 Similar estimates of NDP or GDP breakdown in rural India are not available for later years.

75 Kate Schneider and Mary Kay Gugerty, "Agricultural productivity and poverty reduction: Linkages and pathways", *The Evans School Review*, volume 1, number 1, Spring 2011.

### Box 14. Reducing poverty through agricultural reforms: The Chinese example

China and India were at a similar stage of development in 1977, with per capita incomes around \$190 per year. Agriculture dominated both economies. But their paths diverged in 1978, as China began to implement a series of economic reforms that unleashed high growth and rapid poverty reduction. Given the large size of the agricultural labour force, this sector was a central focus.

China discarded collective ownership and management of farms in favour of the household responsibility system to improve incentives for individual households to boost yields. Centrally mandated targets for yield, output, and sown area that existed prior to the reforms were eliminated. Procurement prices were enhanced through an 18 to 22 percent increase in quota prices, though the government also scaled back its role in procurement and promoted free trade in agricultural markets. These reforms were further strengthened after 1984, when the fertiliser market was liberalised, a direct income transfer to farmers was started, and a new agricultural lease law provided greater tenancy security.<sup>1</sup>

As a result of these reforms, annual agricultural growth between 1978 and 1984 was 7.1 percent, compared with an average of 2.5 percent during the previous decade. Despite a mild deceleration in industrial growth from 10.3 percent to 8.2 percent in this period, China's official poverty rate declined sharply, from 33 percent in 1978 to 15 percent in 1984.

Agricultural growth had ripple effects in other parts of the economy. Increased agricultural incomes boosted consumption demand (which grew 2 to 3 percent more than investment demand in this period). The household savings rate also increased, from 2.5 percent to 14.3 percent, thus creating a pool of productive capital that could be used to fund new businesses. Together, this enabled the proliferation of town and village enterprises, which created 67 million non-farm jobs in this period. In 2009, of 99 million people employed in the manufacturing sector, 65 million were employed in rural town and village enterprises.

<sup>1</sup> Ashok Gulati and Shenggen Fan, eds., *The dragon and the elephant: Learning from agricultural and rural reforms in China and India*, Johns Hopkins University Press, 2008.

## India's crop yields are well below Asian averages

India is an agricultural powerhouse, producing more than 405 million tonnes of land-based produce every year—up sharply from 1980, when production stood at 192 million tonnes. The total land under cultivation has not increased significantly over that period, so the increase is driven almost exclusively by a 2.1 percent compound annual growth in yield. This phenomenon occurred across crop categories, including coarse cereals and rice (for which the area under cultivation actually declined between 1998 and 2009). But land is growing increasingly scarce as industry, infrastructure, and urban areas expand, and without the ability to increase the area under cultivation, India will have to focus on productivity to ensure food security and increase farming incomes.

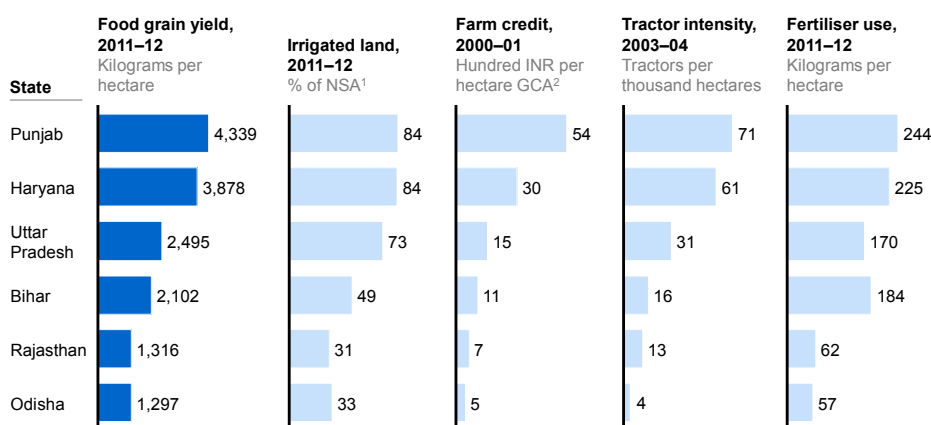
Despite the substantial improvements achieved in recent decades, Indian yields (with the exception of wheat) are 10 to 50 percent lower than Asian averages. The difference between peer country yields and the Indian yield across all crops has widened over the past three decades (1980–2011). This “yield gap” has grown from 1.5 to 5.1 tonnes per hectare (t/ha) with China, from 1 to 3.2 t/ha with Vietnam, and from 1.6 to 2.8 t/ha with Malaysia.

After registering robust growth from the 1950s to the 1980s, yield improvements began to stagnate in the 1990s. Yields actually fell for some product categories, such as pulses and cotton during the Ninth Five Year Plan (1998–2002) and wheat during the Tenth Five Year Plan (2002–07). Growth in agricultural yields revived during the 11th Five Year Plan (2007–12) due to an uptick in private-sector investment (which rose from 11 percent of agricultural GDP in 2007 to 17 percent in 2011). These results are also due to an increase in public investment that began in 2003, with higher expenditure on research and extension (educating farmers on best practices). India does have some positive current momentum, but a more concerted push will be required to sharply accelerate growth in yields.

Beneath the national trends lie significant interstate differences. Punjab and Haryana, the proverbial wheat bowls of India, have food grain yields of 4.3 t/ha and 3.9 t/ha, respectively—but the third-ranked state, Tamil Nadu, comes in 44 percent lower. These differences can be explained to a large extent by the intensity of inputs such as irrigation, tractors, and fertilisers as well as the availability of credit, all of which are much higher in Punjab and Haryana (Exhibit 63). Yields have stagnated in these two agricultural powerhouses, however, and new areas of growth are emerging. In the last decade (2000–10), annual yield growth was highest in Chhattisgarh (9.0 percent), Odisha (6.8 percent), Gujarat (6.5 percent), Karnataka (6.2 percent), and Tamil Nadu (5.8 percent).

### Exhibit 63

#### Interstate variations in yield point to the intensity of inputs as a key factor



1 Net Sown Area.

2 Gross Cropped Area.

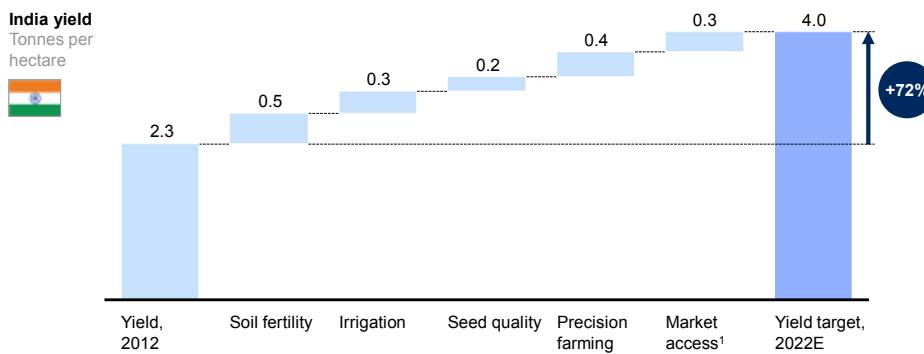
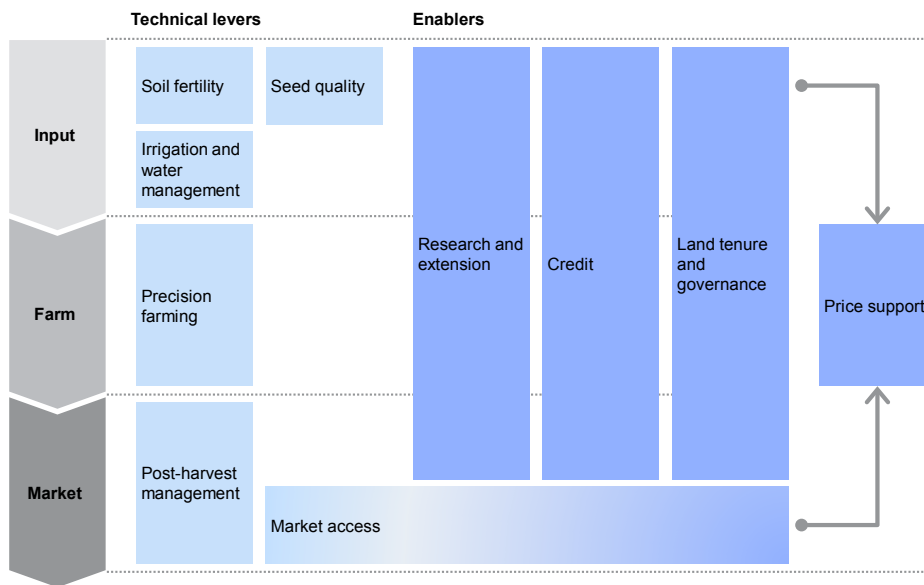
SOURCE: Department of Agriculture and Cooperation; IndiaStat.com; Sharma, *India's agricultural development under the new economic regime*, 2011; Golait, *Current issues in agriculture credit in India*, 2007; Singh, "Estimation of a mechanisation index", 2005; McKinsey Global Institute analysis

India has the potential to increase yields by about 70 percent over the next ten years by focusing on technical levers

India's current average crop yield of 2.3 t/ha will have to rise to 4 t/ha to match the yields achieved elsewhere in Asia. This represents a sharp increase of 72 percent, but it appears to be a reasonable target, as it involves raising lower-performing states to the yield levels already achieved in the best-performing

Indian states today. Bridging this gap will require interventions at each stage of the agriculture value chain (Exhibit 64). Input intensity will have to rise, while sowing and harvesting need to be better timed and more efficient. Finally, markets need to be made more competitive, and farmers need to be equipped to respond to market signals. This transformation will have to be backed by an expansion of credit, stepped-up research and extension services, land tenure reforms, and price support.

**Exhibit 64**  
**Boosting growth in rural areas requires a focus on all aspects of the agriculture value chain**



<sup>1</sup> Includes post-harvest infrastructure and rural roads.  
 NOTE: Numbers may not sum due to rounding.  
 SOURCE: McKinsey Global Institute analysis

Some 60 percent (or 1 tonne per hectare) of the improvement can be driven by input-related factors: fertiliser and manure use to improve the quality of the soil; better water management through decentralised water harvesting and efficient use of existing irrigation channels; and research-driven improvements in seed quality. So-called precision farming, which involves tailoring the use of seeds, fertiliser, equipment, and practices based on highly site-specific conditions and applying inputs to the soil at the correct time, can be expanded through improved extension services, resulting in 22 percent of the yield improvement. Finally, post-harvest logistics and better market access can be improved by expanding cold storage capacity and building a more extensive network of rural roads. This could reduce crop waste by 50 percent, improving yields by about 18 percent. Three of

these factors—soil fertility, water management, and post-harvest management—are discussed in greater detail below.

Some Indian states are already moving ahead with interventions in multiple areas. Gujarat, for example, clocked 8.2 percent annual growth in agricultural GDP over the last decade, largely driven by investment and reforms along with better governance of public functions in the agricultural sector (see Box 15, “Gujarat’s agricultural turnaround”).

### Box 15. Gujarat’s agricultural turnaround

Semi-arid lands kissing the Thar Desert do not have the look of an agricultural powerhouse. But this is precisely what Gujarat has become since the early 2000s. The drought of 1999–2000 was felt severely in the state. However, the recovery from that setback has been striking, as agriculture and allied sectors have grown by an unprecedented 8.2 percent annually.

The hallmark of the Gujarat agriculture miracle has been prioritisation at the top echelons of the government and a high degree of coordination of government interventions at the state and grassroots levels. Since 2005, the state government has brought together farmers, scientists, officials, and ministers at the annual *krishi mahotsav* (agricultural conclave). This is followed by a month-long mass contact programme, in which *krishi raths* (agricultural department vehicles touring the state) visit every village to share knowledge and distribute kits to select farmers to promote new technology adoption through demonstration. Since functionaries from different departments visit the village at the same time, farmers receive holistic extension services.

Water management is at the centre of agricultural policy in Gujarat, including creation of canal irrigation potential through the Sardar Sarovar Project as well as a focus on community-based decentralised sources. Micro-irrigation has been promoted through subsidies, and as a result, the area under micro-irrigation increased from nearly 20,000 hectares in 2003–04 to 140,000 hectares in 2009–10. The government also ensured availability of improved cottonseeds to farmers by imposing a price ceiling and created incentives for the use of phosphorus- and potassium-based fertilisers.

Gujarat has also made a strong push to create the necessary agricultural infrastructure, including feeder lines to deliver electricity to farms and roads to connect almost all villages. The research and extension network was overhauled by splitting the monolithic Gujarat Agricultural University into four smaller institutions, with a renewed focus on sharing knowledge with farmers. Gujarat was also one of the first states to enact agricultural produce market committee reforms that promote freer trade. By leveraging the strengths of privatisation while providing adequate financial support to farmers, Gujarat has been able to script a major turnaround in its agricultural sector.

### SOIL FERTILITY: PROMOTE INCREASED USE OF THE RIGHT FERTILISERS

Soil is the very basis of farming, delivering both nutrients and water to crops. India’s soil, however, has low levels of nitrogen and phosphorus, two important macronutrients, as well as rapidly declining levels of potassium. Increased use of fertiliser—and use of the right fertilisers—is vital to prevent further soil degradation and ensure that crops can thrive.

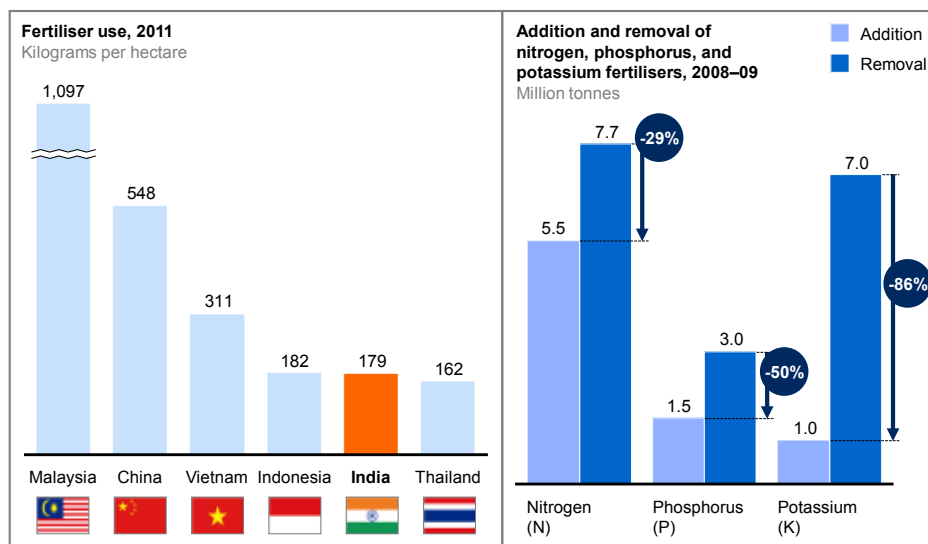
Despite 4.2 percent compound annual growth in fertiliser use per hectare of cultivated land, Indian farmers use only about one-third the amount of fertiliser per hectare as Chinese farmers. Each year’s crop cycle further depletes the soil, drawing out more nutrients that need to be restored through the use of fertiliser and manure. In 2008–09, for example, 8.0 million tonnes of nitrogen,



phosphorous, and potassium were added to India's soil—but 17.7 million tonnes were removed (Exhibit 65).

### Exhibit 65

#### Fertiliser use in India is below recommended levels and below that of other Asian countries



SOURCE: *State of Indian agriculture 2012-13*, Ministry of Agriculture; Food and Agriculture Organization of the United Nations, FAOSTAT; World Bank; Fertiliser Association of India; Prasad, "Fertilisers and manures", 2012; McKinsey Global Institute analysis

Along with increasing overall use of fertilisers, there is a need to rebalance the mix of fertilisers applied to Indian soils. Due to extensive government price controls in favour of urea/nitrogen-based fertilisers, Indian farmers used less phosphorus and potassium fertilisers in 2011-12 than the levels recommended to achieve the correct proportions.

Over-reliance on chemical fertilisers alone has proved to be both insufficient and unsustainable, so fertilisers should be supplemented with organic manure to preserve micronutrient balance in the soil. India has an annual unused manure potential of 9.1 million tonnes, drawn primarily from crop residue, animal dung, and rural compost.<sup>76</sup> Putting this material to use can significantly address the nutrient imbalance in Indian soils while also contributing to the long-term sustainability of agriculture.

## WATER MANAGEMENT: INCREASE EFFECTIVENESS OF EXISTING INFRASTRUCTURE AND IMPROVE RAINFALL MANAGEMENT

Water is the lifeblood of agriculture—so it is no surprise that the immediate focus of policy makers after independence was to create access to irrigation for Indian farmers. (The Bhakra Dam was described as the "new temple of resurgent India" by Jawaharlal Nehru.) Coverage of irrigation networks has increased from 20 million hectares (M Ha) in 1950 to 63 M Ha in 2010—but according to the Planning Commission, India has nearly exhausted its long-term canal irrigation potential of some 70 M Ha. Today the focus of water management policy has to

<sup>76</sup> *State of Indian agriculture 2012-13*, Ministry of Agriculture, Government of India, 2013.

shift to increasing the effectiveness of existing canals and creating decentralised rain-based irrigation channels.

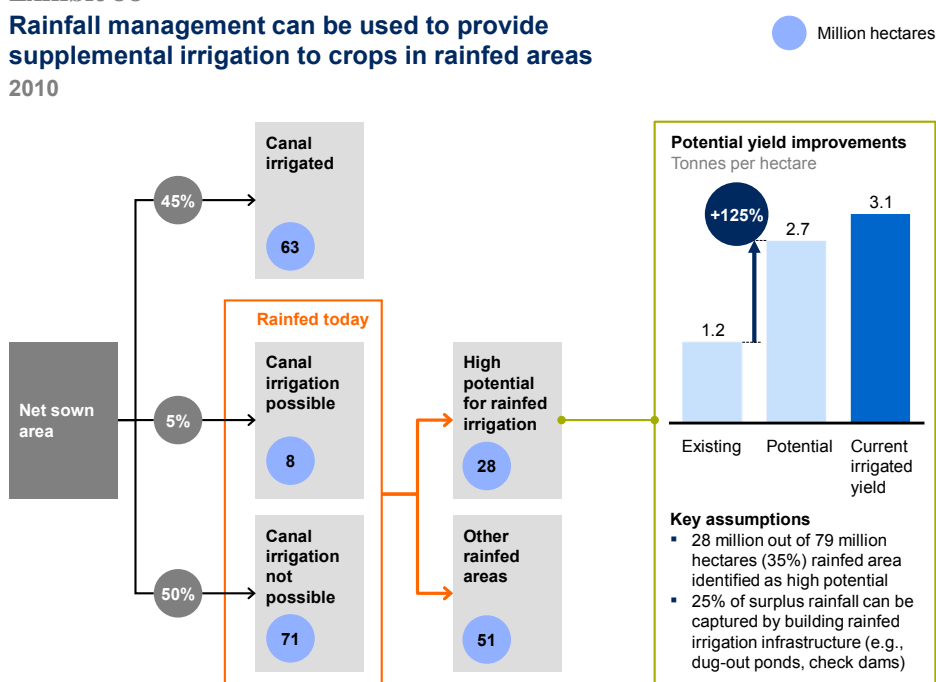
The current efficiency of surface water irrigation in India is estimated at only 35 to 40 percent.<sup>77</sup> These systems can be more fully maximised by involving farmers to a greater degree in the operation and management of irrigation services to ensure better timing and higher effectiveness. Studies have noted that farmers who own or manage irrigation services engage in more multi-cropping, sow more high-yield variety seeds, use more fertiliser per hectare, and ultimately produce higher output per hectare.<sup>78</sup> Also, micro-irrigation methods such as drip irrigation and sprinkler irrigation have resulted in much higher water-use efficiencies of 70 to 80 percent.

Even if India can realise its full canal irrigation potential, approximately half of its farmland will be dependent on rainfall. Rainfed areas were identified as a focus area in the 12th Five Year Plan (2012–17). They are the prime growing areas for coarse cereals, pulses, cotton, and oilseeds, among other crops. In several of these regions, rainfall is sufficient for supplemental irrigation, but it is concentrated in a few months of monsoon downpours. Installing simple rainwater harvesting infrastructure (in the form of check dams and dug-out pits) in 28 M Ha of high-rainfall areas can improve yields by 125 percent to 2.7 t/ha, almost matching the irrigated land yield of 3.1 t/ha (Exhibit 66).

### Exhibit 66

#### Rainfall management can be used to provide supplemental irrigation to crops in rainfed areas

2010



SOURCE: Sharma et al., "Converting rain into grain: Realising the potential of rainfed agriculture in India," 2010; Planning Commission 12th Five Year Plan Working Group on Rainfed Agriculture; McKinsey Global Institute analysis

77 A. Narayanamoorthy, *The potential for drip and sprinkler irrigation in India*, International Water Management Institute, 2006.

78 M. Dutta and M. Bezbaruah, "Institutional factors behind effectiveness of Irrigation: A study in the Brahmaputra Valley in Eastern India", presented at International Association of Agricultural Economists annual meeting in Queensland, Australia, August 12–18, 2006.

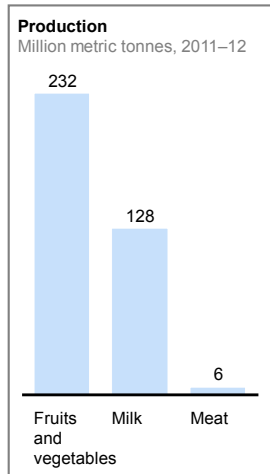
## POST-HARVEST MANAGEMENT: IMPROVE STORAGE AND BUILD ACCESS TO MARKETS

A large part of India's farm output is perishable, and as fruits and vegetables assume a greater role in the crop mix, this share will only increase. Today, India produces more than 350 million tonnes of perishables every year, including fruit, vegetables, milk, and meat. Yet 10 to 20 percent of the nation's agricultural output goes to waste every year because of insufficient storage capacity and difficult access to markets. India's cold chain storage infrastructure lags behind world standards: its cold storage capacity is only 0.09 cubic metres per person, compared with 0.30 in Brazil and 0.27 in Japan (Exhibit 67). There is a pressing need to expand this capacity by adding facilities such as refrigerated warehouses.<sup>79</sup>

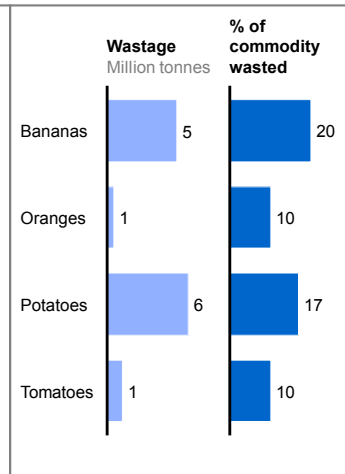
### Exhibit 67

#### India's cold storage infrastructure is inadequate

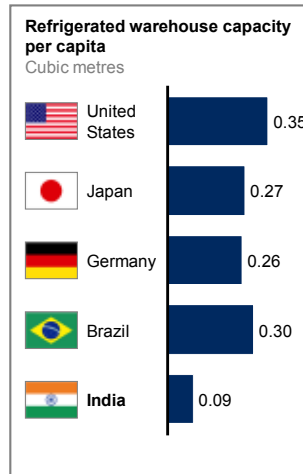
India produces over 350 million tonnes of perishables every year



Wastage (by weight) is as high as 10 percent for all fruits and vegetables combined



India's cold chain infrastructure capacity lags behind world standards



SOURCE: *India as an agriculture and high value food powerhouse: A new vision for 2030*, McKinsey & Company and Confederation of Indian Industry, April 2013

Rural roads have a strong effect on agricultural output and incomes, as they determine farmers' ease of access to markets. They streamline the time required to deliver produce and perishables, and they increase the ability of rural farmers to travel to towns where customers and suppliers are located, credit is available, and pricing and market information can be obtained. The government's Pradhan Mantri Gram Sadak Yojana initiative aims to eventually provide all-weather roads that connect all rural villages with more than 500 residents. But to bring all states up to the road density of the five most agriculturally productive states, India would have to construct 50 percent more rural roads than the initiative's targets.

<sup>79</sup> See *India as an agriculture and high value food powerhouse: A new vision for 2030*, McKinsey & Company and Confederation of Indian Industry, April 2013.

## The technical levers will need to be supported by nine “enabler” ideas to achieve agriculture’s full potential

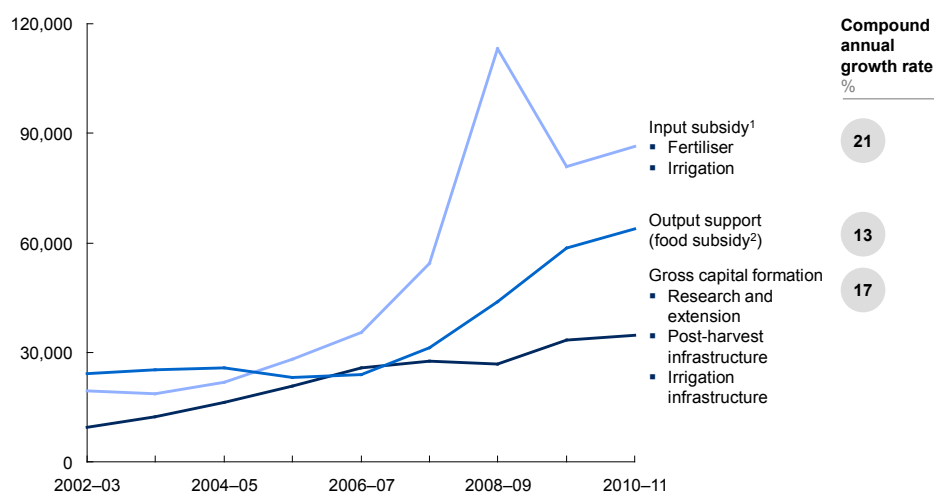
Especially in the past 20 years, government support to Indian agriculture has emphasised input and output price support rather than investment in scientific research and extension services that can put the latest knowledge and techniques into the hands of farmers. In 2010–11, central and state governments spent Rs. 86,000 crore (\$18 billion) on input subsidies (primarily fertiliser and irrigation), but only Rs. 34,000 crore on building agricultural infrastructure such as storage, expanded irrigation systems, research and extension. There is no trend towards rebalancing this divergence, with input subsidies consistently growing 2 to 3 percent faster than productive investment in the last decade (Exhibit 68). While price supports are important bulwark against hunger and poverty, there is also a pressing need to build the long-term capacity and productivity of India’s farmers.

### Exhibit 68

#### Government support to agriculture has emphasised input subsidies over investment in productive assets

Public expenditure on subsidies and investments in agriculture

INR thousand crore



1 Does not include electricity subsidy accruing to agriculture and subsidy to indigenous urea production.

2 A part of the food subsidy is actually a consumer subsidy rather than a producer subsidy, but a breakdown is unavailable.

SOURCE: Planning Commission, 2012; McKinsey Global Institute analysis

Apart from rebalancing government expenditures on agriculture, the sector needs structural and administrative changes to create an environment of real competition and enable farmers to operate effectively within a new framework. The nine-point agenda below can help to set these changes in motion.

### 1. ENABLE PRIVATE TRADE BY REFORMING APMC ACTS

One of the biggest constraints to a flourishing agricultural market in India is the distortionary role played by the government, and the most visible symptoms of the problem are the agricultural produce market committees (APMC), markets set up by state governments in which traders are licensed to buy farm produce from farmers. The APMC system, which was established to protect farmers from the market power of local landlords and merchants, has itself become a market distortion. The role of middlemen is strengthened by APMC acts that place severe

restrictions on private trade, while providing middlemen with significant political clout to engage in collusive behaviour and thwart modern capital from entering agricultural marketing (see Box 16, “APMC and the government's changing role in agricultural markets”).<sup>80</sup>

### Box 16. APMC and the government's changing role in agricultural markets

To protect farmers from powerful moneylenders and traders, various state governments introduced agricultural produce market committee (APMC) acts that created a government-supported network of *mandis* (markets) where prices would be determined through auctions. Traders in these *mandis* needed a government licence to operate and generated revenue through commissions paid by farmers and retailers. All sales and purchase could occur only at these *mandis*.

However, the APMC system has become a breeding ground for abuse. The market power exerted by the middlemen or *arhatiyas* often results in collusive and exploitative behaviour. Auctions are frequently not held, and the tax on transactions that is supposed to be used for developing the *mandi* infrastructure is diverted elsewhere. The limited supply of licences opens up scope for corrupt practices in obtaining them. Hence,

the system promotes rent-seeking behaviour that leads to farmer exploitation.<sup>1</sup>

This led to calls for reevaluation of the government's role in the agricultural market, culminating in the Model APMC Act in 2003. It has several provisions to increase private trade, but the government will still have a large role to play in facilitating this, as shown in state-level innovations. In Punjab's Apni Mandis, for instance, farmers sell directly to buyers or consumers, with the APMC of the area providing all necessary facilities including space, water, shade, counters, and balances. In Karnataka's Raitha Santhe, farmers sell directly to consumers under the management of *gram panchayats* or local authorities.

1 Ramesh Chand, “Development policies and agricultural markets”, *Economic and Political Weekly*, volume 47, number 52, December 2012.

Margins have been increasing for middlemen, which squeezes both farmers and retailers—in fact, one report found that farmers receive 15 to 40 percent higher prices when middlemen are not present.<sup>81</sup> Despite a substantial increase in the government's minimum support prices, the prices actually received by farmers have not kept pace, especially in Bihar, West Bengal, and other states where the central government does not directly procure much of the food grain it needs for the public distribution system and to maintain buffer stocks.

APMC reform could introduce a greater degree of competition and enable farmers to obtain sufficient value for their produce. While the Model APMC Act issued by the central government in 2003 addresses these concerns by enabling private trade, fostering quality control, and enhancing transparency, much of the actual implementation of agricultural policy falls to the states—and their embrace of reform has been slow and incomplete, leading to wide regulatory disparities. Haryana, for example, has implemented only provisions pertaining to contract farming, while Andhra Pradesh has set the licensing fee for private players so high that it discourages small farmers and traders. Some states, such as West Bengal, have made no move towards APMC reforms, while others such as Bihar have no APMC Act at all. But it is clear that better-performing states such as Punjab also have more efficient APMC markets.

80 Ramesh Chand, “Development policies and agricultural markets”, *Economic and Political Weekly*, volume 47, number 52, December 2012.

81 *Final report of committee of state ministers in charge of agriculture marketing to promote reforms*, Ministry of Agriculture, Government of India, January 2013.

To expedite state-level reforms, farmers will need greater accountability from state governments. Information transparency can help: conducting computerised recording of prices and quantities of APMC auctions can add the kind of transparency that reduces corruption. Similarly, farmer producer organisations can be strengthened by annual *krishi mahotsav* gatherings. Greater direct interaction among farmers, traders, corporations, bureaucrats, and the agriculture minister can strengthen democratic accountability and give farmers a greater voice in pushing for APMC and other reforms in their respective states. In addition, private players can enable better price discovery through an expansion of modern retail.

## 2. LEVERAGE TECHNOLOGY TO ENSURE BETTER PRICE DISCOVERY

When a farmer brings his produce to the APMC market, he is often forced to sell it at whatever price is offered; taking the produce back to his village is too expensive. In addition, farmers are often simply unaware of the price at which their produce is sold to consumers, which increases their willingness to accept low offers by middlemen and traders. Better price information thus benefits farmers in two ways: it increases their bargaining power with the trader, and it allows the farmer to sell his product in the most lucrative market if multiple options are available in the vicinity.

Technology can bridge this information asymmetry in a cost-effective manner. Almost 70 percent of Indian villages are connected with mobile phone service, which enables real-time price discovery. Fee-based price dissemination services, such as Africa's Esoko (see Box 17, "Technology for price dissemination"), give farmers new bargaining power that can substantially improve their incomes. These services are becoming available in India but have achieved only limited scale to date due to lack of awareness among farmers. Pricing information could be an important component in the government's extension services and form the cornerstone of farmer-industry interactions.

### Box 17. Technology for price dissemination

Esoko is a fee-based data dissemination service operating in more than 16 African countries. Farmers enrolled with Esoko receive automatic and personalised price alerts, buy and sell offers, and bulk SMS. To enable farmers to use new technology, they are trained on how to interpret the alerts and operate a mobile messaging platform. Armed with more information, farmers demand, and receive, higher prices. More than 60 percent of farmers using Esoko leverage this information to negotiate prices, and they typically command prices that are 7 to 11 percent higher than those paid to farmers who do not use Esoko.<sup>1</sup> Farmers

can also decide to sell their produce in a market that offers a higher price.

Similar technology-based services have been launched elsewhere. Drumnet in Kenya has established rural information kiosks to provide free information to local farmers about prices of commodities. In India, IFFCO Kisan Sanchar Ltd. provides information on market prices via voice messages in local languages. The private sector is also entering this area in a significant way. ITC Limited runs a network of e-Choupal computer stations in rural areas of India; trained farmers run these Internet-enabled kiosks where other farmers can obtain price information, get tips on farming practices, and place orders for agricultural inputs.

<sup>1</sup> *Market information systems for rural farmers: Evaluation of Esoko MIS—Year 1 Results*, New York University Abu Dhabi Center for Technology and Economic Development, March 2013.

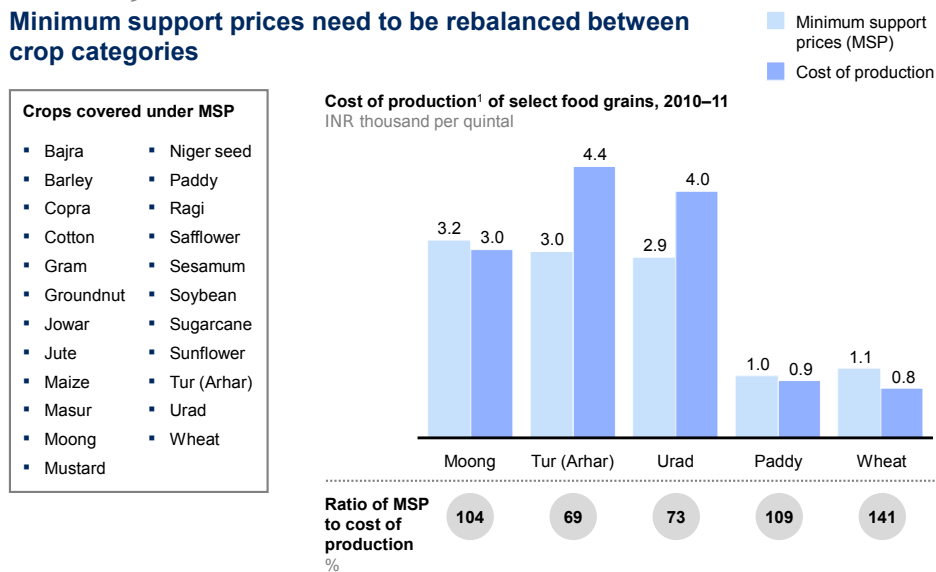
### 3. REBALANCE PRICE SUPPORTS TO REMOVE MARKET DISTORTIONS

To protect farmers from fluctuations in the prices of agricultural produce, the government provides a minimum support price (MSP) for a wide range of grains and other cash crops. However, the existing system distorts the market in two ways. First, it does not cover all types of crops, notably fruits and vegetables. Second, the ratio of price support to the actual cost of production differs by crop type (it is as high as 140 percent for wheat and as low as 70 percent for certain types of pulses; Exhibit 69). This deters farmers from diversifying to higher-value crops such as fruits and vegetables, which are six times more productive per hectare than cereals or pulses, leaving an overwhelming focus on rice and wheat. As a result, pulses saw a price increase of 16–18 percent per annum between 2005 and 2012, compared with a 9–10 percent increase in the prices of non-PDS wheat and rice (based on NSSO consumption surveys).

Rationalising MSPs, especially in food grains, would remove these distorting effects. But price support today is often a political decision; MSPs have even become campaign issues. India can move to a more objective system, governed by strong accountability, by creating an independent regulator or agency to set appropriate support levels within a fixed fiscal framework. This agency would also have an explicit mandate to ensure an optimal balance between different types of agricultural output based on consumer preferences and costs of production.

Exhibit 69

#### Minimum support prices need to be rebalanced between crop categories



- Crops covered under MSP**
- Bajra
  - Barley
  - Copra
  - Cotton
  - Gram
  - Groundnut
  - Jowar
  - Jute
  - Maize
  - Masur
  - Moong
  - Mustard
  - Niger seed
  - Paddy
  - Ragi
  - Safflower
  - Sesamum
  - Soybean
  - Sugarcane
  - Sunflower
  - Tur (Arhar)
  - Urad
  - Wheat

1 Includes explicit costs (e.g., labour, seeds, irrigation, fertilisers, manure), imputed rent, imputed wages, and opportunity cost of labour; all cost of production is for Andhra Pradesh, except wheat (which is for Haryana).  
 SOURCE: Commission for Agricultural Costs and Prices; Ministry of Agriculture; McKinsey Global Institute analysis

### 4. REFORM THE CROP INSURANCE PROGRAMME

Farmers face several types of risks, such as drought and pests, that can easily sap their incomes and force them into poverty. To provide safeguards against these risks, the government has instituted crop insurance programmes—but only 17 percent of farmers participate (and most of that participation involves compulsory insurance). The existing National Agriculture Insurance Scheme, the government's flagship crop insurance programme, suffers from issues

such as delayed payments and a mismatch of premiums and risk levels across geographies. Additionally, it has crowded private insurers out of the market.

It is worth considering a hybrid model such as the one that prevails in France. There, private-sector companies offer crop insurance with government-subsidised premiums. Because the private companies receive the full amount, they compete for customers and usher in market forces and better administration. In this model, public insurance can continue but public providers would be forced to respond to the new and more competitive environment. That could lead to improvements such as greater introduction of technology, a new methodology for “threshold yield” calculation, and packaging various types of crop insurance.

## **5. PROVIDE INCENTIVES FOR NEW TECHNOLOGY ADOPTION**

It often takes new technology to promote efficient use of scarce resources such as water, but the high initial cost prevents adoption by small and marginal farmers unless the government provides economic incentives. Under the National Mission on Micro Irrigation, for example, the central government funds 40 percent of the cost of a micro-irrigation system, while the state government contributes 10 percent.

But more can be done in this regard, especially by state governments, to encourage farmers to adopt the latest innovations. Some states—notably Gujarat and Andhra Pradesh—have set up special purpose vehicles to promote micro-irrigation by setting and directing the flow of subsidies. This could be replicated by other states, even in areas beyond irrigation such as sowing, harvesting, and fertiliser application. New technology adoption should be on the agenda for every state’s department of agriculture, with committees of officials and experts set up to identify high-potential ideas and set economic incentives accordingly.

## **6. OVERHAUL THE PUBLIC RESEARCH AND EXTENSION NETWORK AND ENHANCE PRIVATE-SECTOR PARTICIPATION**

India’s spending on agricultural research was equivalent to 0.4 percent of agricultural GDP in 2009, coming in below the levels in Brazil (1.8 percent) and sub-Saharan Africa (0.6 percent). This translates into relatively little knowledge being created for a country of India’s size—and in addition, the repository of existing knowledge is not being effectively disseminated to farmers (Exhibit 70). The public extension network, due to its large size, is considered less efficient than the private extension network. The Department of Agriculture has 751 extension workers per million farmers, fewer than the 926 available from private farmer associations and the 1,078 employed by producer cooperatives.

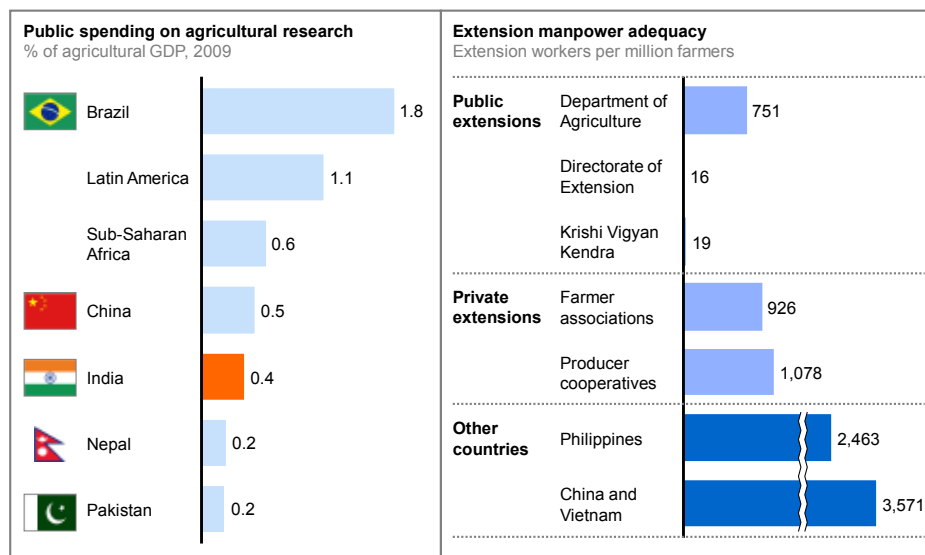
Among the steps that could achieve greater effectiveness are improving coordination among individual research institutions, increasing the engagement of farmers in extension services, and enhancing private-sector participation. A holistic, unified approach to extension has been extremely successful in Gujarat, where *krishi raths* (vehicles touring the state) visit village after village to share information on agricultural best practices and provide a host of other services. Fee-based private extension services (such as those offered by Mahindra Subhlabh Services Ltd.) are an effective alternative to public extension for medium-sized and large farms with capability to pay. However, public extension will need to play an important role for poor farmers and those in remote geographies. The government has historically used television and radio (such as the *Krishi Darshan* TV show) to get information to farmers, but the focus now



needs to shift to mobile innovations. Weather forecasts, new seed information, and tips on improved farming practices can be disseminated to farmers through phones.

**Exhibit 70**

**Public investment in agricultural research and extension is both inadequate and ineffective**



SOURCE: *India as an agriculture and high value food powerhouse*, McKinsey & Company and Confederation of Indian Industry, 2013; Francisco and Bordey, *Productivity growth in Philippine agriculture*, 2000; *Fact sheet on extension services*, Global Forum for Rural Advisory Services, 2012; McKinsey Global Institute analysis

**7. IMPROVE FARMERS' ACCESS TO CREDIT AND ELIMINATE REGIONAL DISPARITIES**

Though agricultural credit has met overall targets in the past decade, it is inefficiently and unevenly allocated. The north and south receive some two-thirds of agricultural credit, although these regions are home to only 39 percent of gross cropped area and 43 percent of gross irrigated area. The central and east regions, by comparison, are starved of access to capital. While this might be driven by differences in the capacity to absorb borrowing, the role played by better financial infrastructure in the north and south cannot be overlooked. (Branch penetration in the east is 30 percent of per capita norms set by CRISIL, the credit rating agency, while it is 55 and 41 percent in the south and north, respectively.<sup>82</sup>) Moreover, most agricultural credit is released in March, a non-critical month for agriculture, in order to meet annual targets, and even this credit is directed to large farmers, especially in western, northern, and eastern India (Exhibit 71).

These disparities can be addressed by complementing commercial bank lending with a greater role for institutions (such as cooperative banks) or individuals with better local knowledge. Currently, almost three-quarters of agricultural credit is provided by commercial banks, so there is a case for strengthening cooperative banks through recapitalisation, changes in the governance structure, and targeted training programmes. Also, technology and delivery innovations such as business correspondents (third-party, non-bank agents who extend banking services right to people's doorsteps) will have to be deployed to provide credit to areas with low

82 CRISIL *inclusix: An index to measure India's progress on financial inclusion*, CRISIL, June 2013.

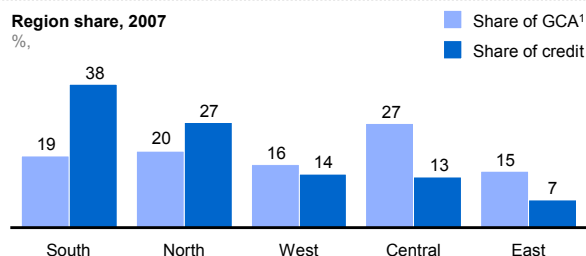
levels of conventional banking penetration. Targets could be set on the basis of cropped area and level of technology to ensure more equitable access to credit.

### Exhibit 71

## India needs to remove inefficiencies in the distribution of agricultural credit

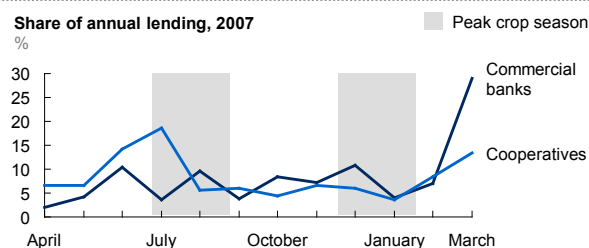
#### Remove inter-regional disparity

- East and Central receive less credit than their shares of cropped area



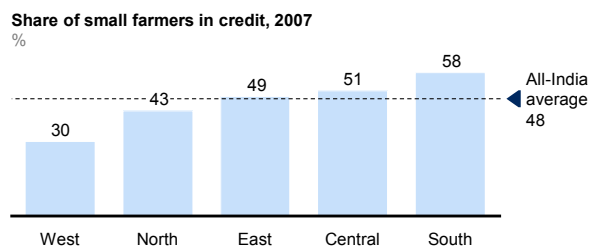
#### Set monthly targets

- Maximum credit flows to agriculture in March—a lean period for agriculture
- Cooperative bank lending more attuned to crop cycles



#### Focus on small and marginal farmers

- Share of small and marginal farmers in operational land holdings increased from 81% in 1991 to 86% in 2007
- Their share of credit in the same period decreased from 54% to 48%



1 Gross Cropped Area.

SOURCE: Nirupam Mehrotra, "Agriculture credit: The truth behind the aggregate numbers", *Economic and Political Weekly*, 2011; McKinsey Global Institute analysis

## 8. REFORM LAND MARKETS TO PROMOTE LEASING

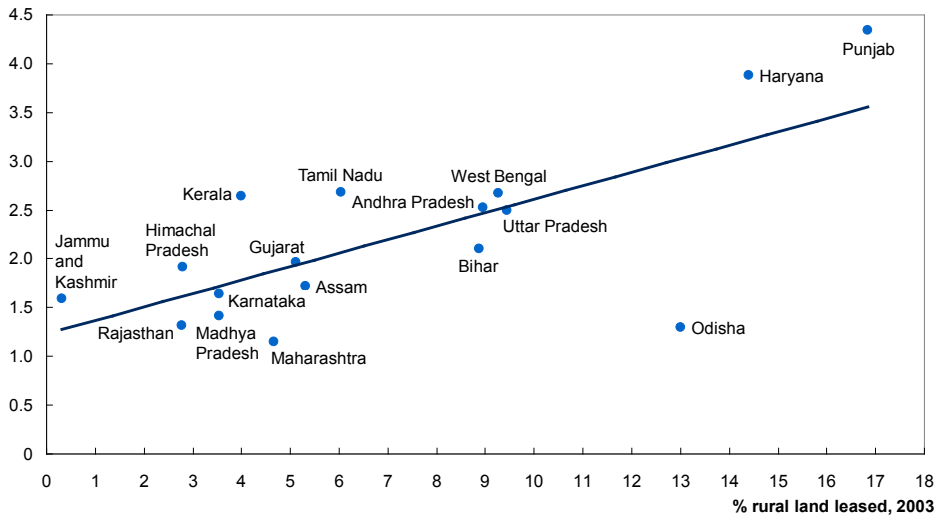
Given India's high population density, land is a precious resource. But its ownership is often murky and contentious (see Chapter 6 for a discussion of this issue). Due to inadequate records of land ownership and complicated tenant-owner relationships, markets in parts of rural India are dysfunctional. There are significant interstate differences in policies related to the leasing of agricultural land—and states that have more rural land under lease also have higher agricultural productivity (Exhibit 72).

Creating more modern and comprehensive land ownership records is a crucial first step. The leasing market could also be strengthened by the introduction of public land banks. Under such a scheme, absentee landowners could "deposit" their land at a land bank operated by a credible financial institution or the local *panchayat*, for instance, and receive rent for its use. Small and marginal farmers could be encouraged to borrow and cultivate the land, knowing that they have secure tenancy for a fixed period. This will utilise more arable land and allow farmers to increase their output.<sup>83</sup>

83 12th five year plan, Planning Commission, Government of India.

**Exhibit 72****A more active rural land market is associated with higher agricultural productivity****Food grain yield, 2011**

Thousand kilograms per hectare



SOURCE: Tajamul Haque, *Impact of land leasing restrictions on agricultural efficiency and equity in India*, 2011; Ministry of Statistics and Programme Implementation; Planning Commission; McKinsey Global Institute analysis

## 9. INTEGRATE GOVERNANCE OF THE AGRICULTURAL SECTOR AT A GRASSROOTS LEVEL

At the core of the Gujarat turnaround described earlier in this chapter was good inter-ministerial coordination—but for the most part, the organisational bureaucracy overseeing India's farm sector is overwhelming. India currently has several ministries that set policies for agriculture and related sectors. At the centre, there are separate ministries for agriculture, chemicals and fertilisers, food processing, water resources, and rural development. This multiplicity of authorities is even more acute at the state level: Bihar, for instance, has separate ministries for agriculture, water resources, rural development, revenue and land reforms, minor irrigation, rural development, animal husbandry and fisheries, sugarcane, and rural works.

To bring these departments together, a formal structure such as a secretariat or a delivery unit at both the central and state levels could be considered. This secretariat would organise monthly meetings on issues that require clearances or action from multiple departments. Coordination can also take the form of agricultural missions. These missions can empower a team of bureaucrats and domain experts to make decisions and allocate financial support. They can be closely monitored based on key performance indicators such as the number of farmers reached and productivity improvements achieved.

## Strengthening the rural non-farm sector will need to go hand in hand with agricultural productivity improvements

Rising agricultural incomes create new demand for non-farm goods, leading to positive ripple effects throughout the rural economy. The rural non-farm sector can be an engine of growth, offering wider employment opportunities to farmworkers and playing a role in alleviating poverty.

This has been one of the fastest-growing areas of the Indian economy since the 1980s. From 1993 to 2004, value added in the rural non-farm sector grew at 7.2 percent annually, while the overall non-farm sector grew at 6 percent and the farm economy grew at only 1.8 percent. To build on this momentum, India will have to focus on rural infrastructure in the form of reliable and cheap electricity, roads, and schools that can deliver better education and skills.

Building a more dynamic rural non-farm sector will involve creating jobs both at later stages of the agriculture value chain and in non-agricultural sectors that can provide these regions with greater diversification. Adding value to agricultural output could be as simple as enabling milling enterprises to flourish; farmers can find employment in non-peak seasons by grinding wheat into flour after harvesting. Nearly 10 percent of manufacturing sector value added occurs in food-related industries, and this activity can be scaled up in rural areas. Building food-related logistics and supporting services (such as decentralised storage infrastructure, quality and grading operations, and disaggregated markets) will generate wage-paying jobs in India's villages.

For a highly agricultural country such as India, food exports can be a source of foreign exchange and also an opportunity for farmers to extract better prices for their produce. Exports also hedge against the risk that increasing yields might bump up against the limits of domestic demand, resulting in falling prices. However, agriculture's share of India's total exports has fallen from 15 to 8 percent over the past decade. Creating a geographically dispersed network of labour-intensive food-processing parks can support the goal of increasing agricultural exports while simultaneously adding more non-farm jobs to the rural economy (see Chapter 6).

Of all the interventions needed to create non-farm employment, the development of workforce skills is particularly important for the rural non-farm sector. Currently, only 37 percent of the agricultural labour force is educated (and only 8 percent has attained secondary education or higher). The ability of the non-farm sector to absorb unskilled labour is limited, so it will be vital to improve rural access to secondary and vocational education. Both the non-farm and farm sectors require adequate access to capital (see Box 18, "Financial inclusion and poverty reduction").

### Box 18. Financial inclusion and poverty reduction

Financial inclusion can open new opportunities for the poor by providing capital for farm investment, small businesses, and needs such as education and health care. But more than 40 percent of India's households do not have access to banking services—and that share is as high as 55 percent in the case of Assam and Bihar. The poor suffer a “double economic disadvantage”: only 34 percent in the lowest quartile have cash savings, and even among those, only about half have access to banks.<sup>1</sup> Access to more sophisticated financial products such as life insurance is of course even lower for this group.

Several government committees have proposed reforms to increase financial inclusion. In 2009, the Raghuram Rajan Committee recommended allowing the entry of private, well-governed, deposit-taking small finance banks; liberalising regulation so that a wide range of banking correspondents (local agents) can extend financial services; allowing banks that undershoot their priority sector obligations to buy priority sector loan certificates issued by other banks in lieu of direct credits; and freeing lending rates. In 2013, the Committee on Comprehensive Financial Services for Small Businesses and Low Income Households outlined a road map for creating a universal electronic bank account for every Indian by 2016; access within a 15-minute walking distance to cash deposit and withdrawal services; a credit-to-GDP ratio of at least 10 percent in each district; and universal access to products that manage risks related to commodity prices, longevity, disability, or death of livestock.

Technology is expected to play a significant role in financial inclusion, especially in the Least Deprived and Community Services–Deprived Districts that have mobile penetration exceeding 70 percent. Even for districts with low mobile penetration, a kiosk banking model using an online system can be effective. Policies that reduce the cost of Internet access will be essential. For example, it has been suggested that for broadband to achieve widespread adoption, the cost of access should go as low as Rs. 200 (\$3.50) per month.<sup>2</sup>

Beyond the need to develop low-cost channels, banks need to mitigate risks in lending to the poor; the agricultural non-performing assets of the State Bank of India, were as high as 9 percent of agricultural assets, for instance. The ability of the poor to take and repay loans is limited by low agricultural productivity, lack of local value addition, inadequate market linkages, high risk, the unorganised nature of non-farm employment, and their lack of health care and education, among other factors.<sup>3</sup> Microfinance, provided by private companies, has had only a limited impact; more than 80 percent of poor borrowers use the money for consumption, including nearly 12 percent who use it merely to repay loans. To improve access to credit on a more sustainable basis, broader reforms are necessary, such as in human development, electricity, rural roads, land reforms, irrigation, and post-harvest infrastructure. These reforms, along with access to finance, will create a long-term trend of poverty reduction.

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1 *A hundred small steps: Report of the Committee on Financial Sector Reforms*, Planning Commission, Government of India, 2009.

2 Rajat Kathuria and Mansi Kedia, *India: The impact of Internet*, ICRIER, 2012.

3 Recommendations of the Committee on Financial Inclusion, Government of India, 2008.



At the time of independence, the goal of making India self-sufficient in terms of food production seemed insurmountable. Yet focused efforts, eventually culminating in the Green Revolution, met that goal. Today India needs a comparable jolt of reforms and better governance in its agriculture sector to achieve real economic empowerment. By rationalising markets and ensuring that poor farmers have better access to markets, pricing information, and inputs, India can boost its yields to match the levels achieved by other Asian economies. Growth in agricultural productivity is a uniquely powerful tool for fighting poverty—one capable of generating wider ripple effects, as it stimulates job growth in manufacturing and service sectors and keeps food costs low to the benefit of the poor throughout India.







## 8. Increasing public spending on basic services

Despite the economic strides of the past decade, the majority of India's citizens continue to live with some form of deprivation. Medical care is not available in many of the poorest villages. Millions live in dangerously substandard housing without a reliable supply of clean drinking water, light, or basic sanitation. Children leave primary school without acquiring basic skills and may not have the opportunity to continue with secondary education. And hunger continues to be a daily reality for the poorest segments of Indian society.

Access to basic services remains extremely weak and fragmented across India, as noted in Chapter 4. At an aggregate level, India's citizens lack access to about 46 percent of the basic services they need. But India has the opportunity to greatly expand social infrastructure and meet more than 80 percent of the population's needs. The path to achieving this depends on steadily increasing public spending on basic services at 6.7 percent per year in real terms so that current spending levels are doubled by 2022. The inclusive reforms scenario, which is predicated on more robust economic growth, provides the nation with the fiscal resources to support an increase of this magnitude. The stalled reforms scenario, by contrast, allows India to achieve only some 70 percent of this spending target.

As the government devotes more resources to basic services, committing to the right mix of spending will be critical. Our assessment suggests that India will need to direct substantially more funding towards health care, drinking water, and sanitation, doubling their share of total public expenditures on basic services. By contrast, the share of public spending allocated for education, food, energy, and the MNREGA programme could be reduced over time, even though spending on these priorities would grow in absolute terms.

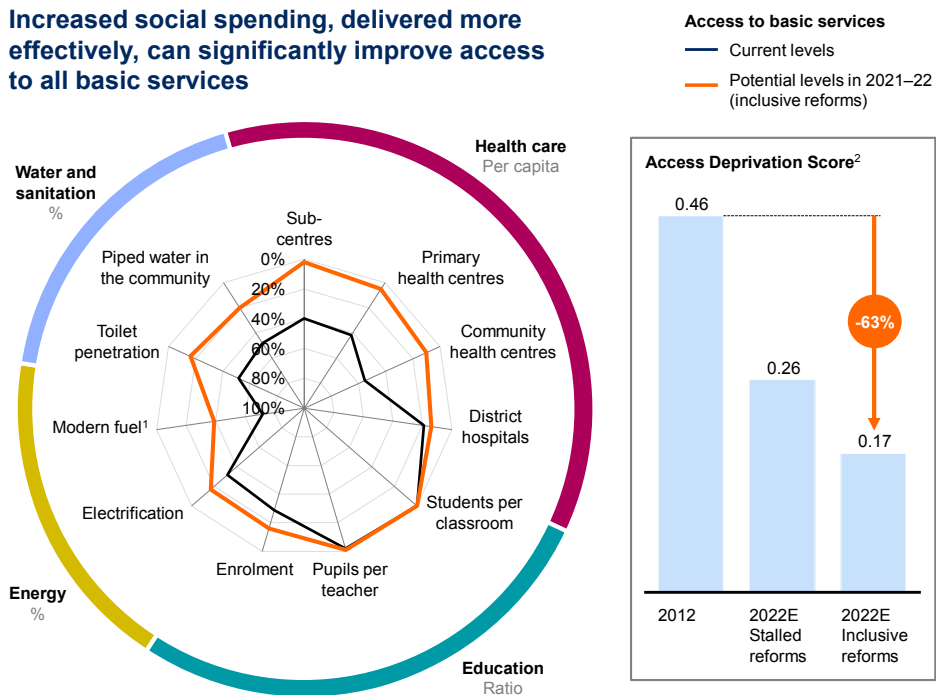
Boosting public funding for basic services can deliver about 10 percent of the total impact of bringing people above the Empowerment Line in the inclusive reforms scenario. But increased spending is only part of the solution. It is also critical to make that spending more effective and ensure that a greater share of it produces real outcomes for its intended beneficiaries, a point we explore more fully in Chapter 9.

## Public spending on basic services needs to grow by about 7 percent per year in real terms

India’s public spending on all basic services grew at about 11 per annum in real terms (nearly 20 percent in nominal terms) from 2005 to 2012, rising from about 5 to 6.4 percent of GDP. But this increase followed many years of underinvestment. As a result, many regions still have significant gaps in social infrastructure. An inadequate health-care system—with too few hospitals, health centres, and well-trained medical professionals—is one of India’s most acute challenges.

At an aggregate level, India’s people lack access to about 46 percent of the basic services they need. But India can substantially fill many of those gaps in the span of just a decade. The higher growth inherent in the inclusive reforms scenario will generate the fiscal resources to reduce access deprivation to 17 percent by 2022. This can be accomplished through a combination of greater spending on building access plus measures to improve the effectiveness of service delivery (Exhibit 73).

**Exhibit 73**  
**Increased social spending, delivered more effectively, can significantly improve access to all basic services**



On the spending side of the equation, we estimate that government funding for basic services will need to grow by about 6.7 percent per year in real terms from 2012 to 2022. This implies a near-doubling of public spending on basic services, from Rs. 570,000 crore in 2012 (\$118 billion) to Rs. 1,088,000 crore (\$226 billion) in 2022.<sup>84</sup> Per capita spending would rise from Rs. 390 in 2012 to Rs. 662 in 2022.

84 These figures are in 2012 rupees.

In the inclusive reforms scenario, this level of government spending on basic services would equate to about 6 percent of GDP in 2022—about the same as its share in 2012. This path would allow India to contain its combined (centre and state) fiscal deficit and converge to the recommended 6 percent fiscal deficit target by 2017, even as it ramps up social spending. The stalled reforms scenario, by contrast, would fall short. Because the government would receive less tax revenue in a lower-growth scenario, it would be able to commit only about 70 percent of this level of spending—and as a result, access deprivation would remain at 26 percent by 2022.

In a perfect world, India would meet 100 percent of the population's needs. But it is important to set clear-eyed aspirations: India is constrained not only by availability of fiscal resources but also by its capacity to execute rapidly, train the requisite manpower, and introduce systemic changes to make every rupee of spending count. The first step to maximise the social impact of increased spending is to direct funding to the services and geographies that require it the most.

## The share of public spending allocated to health care, drinking water, and sanitation needs to double

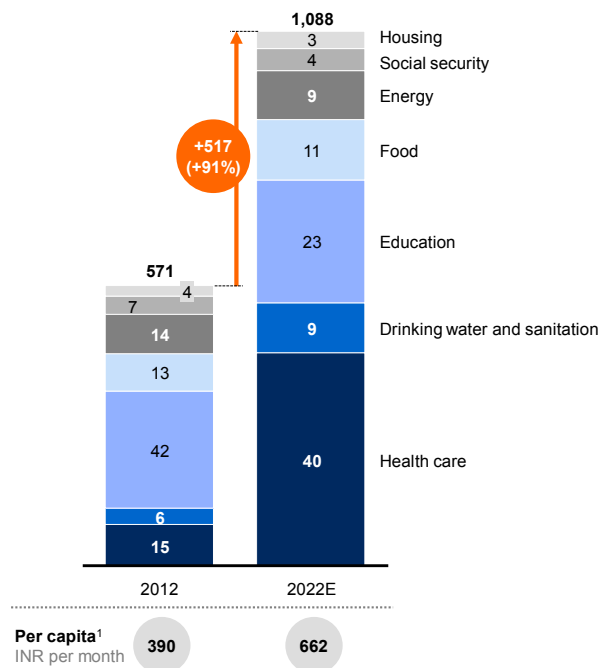
Two guiding principles drive the allocation of public spending between basic services. First, government spending needs to be directed to services in which the existing level of deprivation is high. Second, public funding is urgently needed in areas that require the government to build out social infrastructure on an equitable basis—specifically, the community-level services of education and health.

For other types of basic services, private markets can function effectively, and public spending is needed only to cover a part of the affordability gap. For instance, we estimate that energy subsidies would need to rise by only some 2.2 percent per year, from Rs. 79,000 crore (\$16 billion) in 2012 to Rs. 99,000 crore (\$21 billion) by 2022 (in 2011–12 prices). They would eventually account for 9 percent of total public spending on basic services in 2022. Food subsidies would need to rise by just 5 percent per year, from Rs. 77,000 crore (\$16 billion) in 2012 to Rs. 124,000 crore (\$26 billion) by 2022 (in 2011–12 prices). They would reach 11 percent of total public spending in 2022 (based on spending estimated under the National Food Security Act of 2013). However, the timing of this spending might vary by service; public spending on food, for instance, will need to be increased rapidly to nearly Rs. 120,000 crore by 2017 to meet the food security act's provisions, while electricity will need a more gradual increase.

Spending on health care, drinking water, and sanitation, by contrast, would need to double in terms of their share of total spending (Exhibit 74). These are areas in which the country faces severe deprivation: nearly 60 percent of households do not have toilets, and nearly 55 percent do not have drinking water inside their homes. The existing public health-care infrastructure is inadequate, leaving millions unable to obtain medical treatment when they need it. India's share of public spending in health care is extremely low compared with that of other countries, and the wealthiest population segments account for most private health-care expenditure. These factors add up to poor health outcomes at a national level—and untold human suffering.

**Exhibit 74****Public spending on basic services needs to almost double, with more resources allocated to health care, drinking water, and sanitation****Public spend on basic services**

%; INR thousand crore, 2011–12 rupees



1 Not accounting for inefficiencies and leakages.

NOTE: Numbers may not sum due to rounding.

SOURCE: Indian Public Finance Statistics; McKinsey Global Institute analysis

The district-level assessment of access to services in Chapter 4 revealed that health care does not seem to be as responsive to rising incomes as access to food, energy, or housing. Instead, it will take a step change in public spending to bridge the gaps. We estimate that health-care spending would need to grow by about 18 percent per year, from Rs. 84,000 crore (\$18 billion) in 2012 to Rs. 434,000 crore (\$90 billion) in 2022 (in 2011–12 prices). This would allow India to build out the primary health-care network and to train and hire the requisite number of doctors and other medical professionals to fulfil the recommended targets for density of hospital beds and health-care workers.

Spending on drinking water and sanitation would need to grow by some 12 percent per year to ensure that these services are accessible to more than 90 percent of the population. This implies raising annual spending on these services from Rs. 34,000 crore (\$7 billion) in 2012 to Rs. 103,000 crore (\$21 billion) by 2022 (in 2011–12 prices).

By contrast, education spending would need to grow only marginally—by 0.5 percent per year in real terms, from Rs. 237,000 crore (\$49 billion) in 2012 to Rs. 249,000 crore (\$52 billion) in 2022. Access deprivation in education is much lower, at about 25 percent, reflecting the fact that the government has already made education a high priority. The Sarva Shiksha Abhiyan (SSA), a centrally funded scheme to build primary schools, was launched in 2000 in a bid to ensure universal access to primary education. Central government budgets allocated approximately Rs. 126,000 crore in nominal terms to SSA from 2005 to 2012 cumulatively. As a result of this push, the number of primary school-age

children who are not in school dropped from 16.9 million in 2001 to 1.4 million in 2012.<sup>85</sup> Future capital outlays for education will be focused on maintaining primary schools and building more secondary schools to absorb an influx of students as the dropout rate falls. The quality of education is still a major problem, as we note in Chapter 3, but based on the experience of education experts, our estimated operating cost per student would be broadly sufficient to improve learning outcomes.

See Appendix D for more detail on the methodology used to estimate the future public spending needed to bridge the gaps in each of these services.

## Incremental government spending should be concentrated in regions with higher levels of deprivation

Families living in one of India's Most Deprived Districts on average lack access to 59 percent of basic services, while in the Least Deprived Districts, only 34 percent of basic needs go unmet. Addressing these sharp geographical inequalities will require a fundamental rebalancing of government funding and resources—one that takes into account current levels of deprivation in basic services at the district level.

If funds were allocated strictly on the basis of current gaps in access to basic services and population density, states such as Uttar Pradesh, Bihar, and Jharkhand, which receive about 20 percent of central government funding, would collectively need almost 40 percent of future funding. At the same time, states with the best levels of current access (Jammu and Kashmir, Himachal Pradesh, Punjab, Uttarakhand, Goa, Kerala, and Tamil Nadu) would require smaller amounts to ensure full access. Of course, each state's share of central government spending should be informed by other factors, such as the state's capacity to utilise funding effectively to achieve better outcomes for its citizens and its own revenue from state-level taxes. The present structure of central transfers reflects these two concerns, thus ensuring that states have an incentive to improve their performance, while also protecting economically weaker states.<sup>86</sup>

If India hopes to eventually provide full access to all basic services, public funding cannot simply be allocated equally to all districts. As discussed in Chapter 4, even within states, there are wide variations in both income-based poverty and the adequacy of social infrastructure. Districts within the same state may vary sharply in terms of overall access to basic services, and the size of the gaps may differ by service. Careful consideration of specific needs at the district level will have to be central to any successful allocation formula. Using a formula based on Access Deprivation Scores alone, for instance, the eight Most Deprived Districts of Jharkhand should receive 39 percent of the state's funds, while the 11 Household Services–Deprived Districts should receive only 32 percent. Using the same lens on a national level, the 126 Most Deprived and 177 Household Services–Deprived Districts would require nearly 55 percent of funding support.

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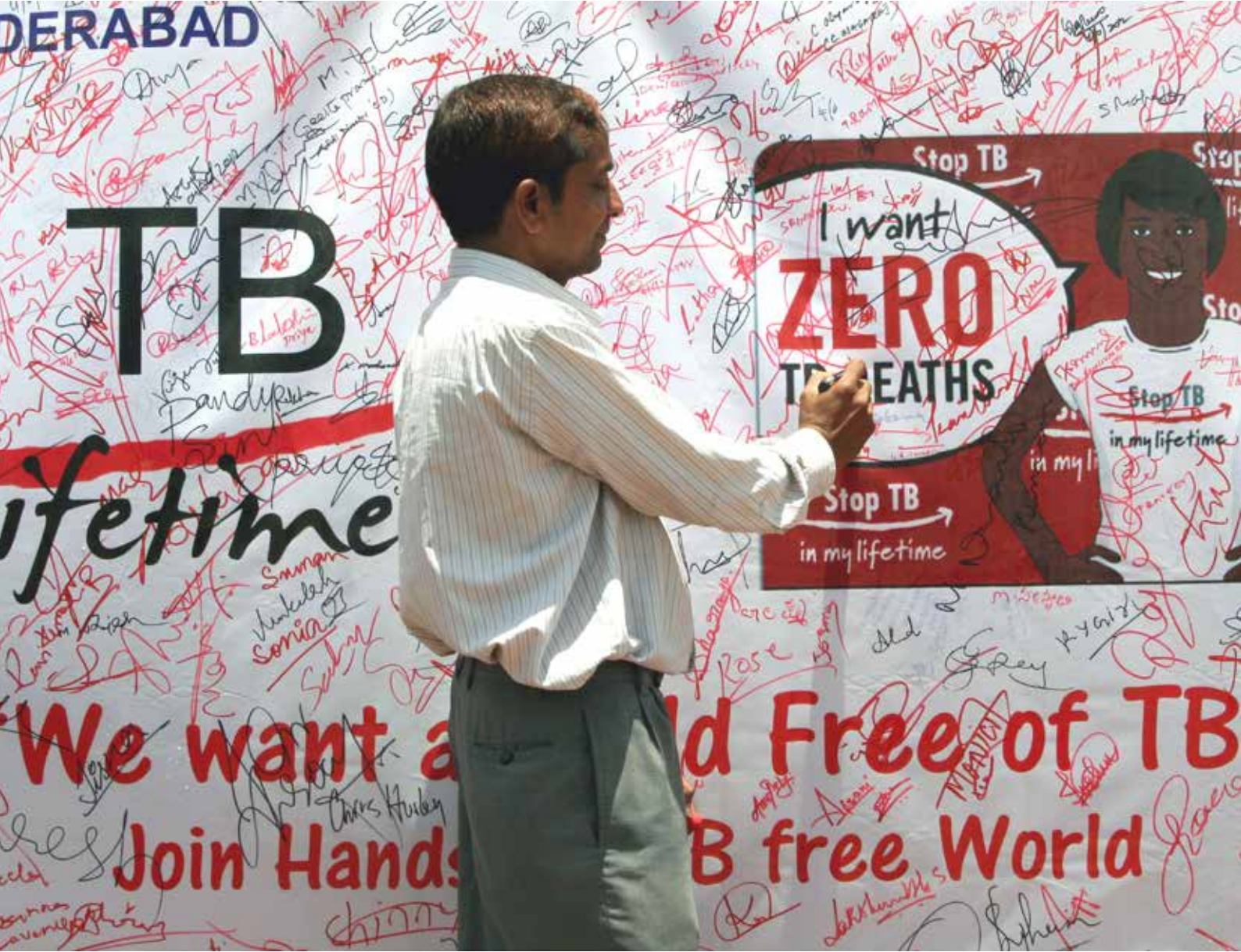
85 World Bank estimates.

86 For a richer discussion, refer to *Report of the committee for evolving a composite development index of states*, Ministry of Finance, Government of India, September 2013.

This is a simplified illustration that would need to be supplemented with other considerations. The cost of building social infrastructure would vary by service (building a health-care network will probably be more expensive than building schools) and by geography (installing a sanitation system in an urban area will probably be more expensive than building one in a rural village). That being said, our simulation of allocations based purely on access deprivation underscores the fact that spending patterns need to be revisited.

□ □ □

Building a system that delivers higher-quality basic services to the entire population is a critical foundation for more equitable growth. To widen access to vital services, public spending on basic services would need to double by 2022—and the pace of economic growth will determine whether government revenue will be sufficient to support this increase. India will also need to reconsider its funding formula with an eye towards directing more resources to meet urgent needs for health care, drinking water, and sanitation and giving greater allocations to the districts with the most critical gaps. Building out this type of social infrastructure would benefit the entire population, not just those below the Empowerment Line. But the solution is not just to spend more; India also needs to spend more effectively. Chapter 9 discusses strategies for ensuring that these services are efficiently delivered to the intended beneficiaries rather than being wasted or diverted, and it highlights new and innovative models that could serve as templates.



DERABAD


TB

lifetime

Stop TB

I want  
**ZERO**  
TB DEATHS

Stop TB  
in my lifetime



We want a World Free of TB

Join Hands TB free World





## 9. Improving the effectiveness of basic service delivery

Providing all Indian citizens with health care, education, and basic dignity will require not only an increase in public spending but also fresh thinking about the best ways to deploy resources to achieve maximum results.

One key initial step in making basic services more effective is selecting the right delivery model—whether in-kind services by the government, public-private partnerships (PPPs), or cash transfers. The second step is to make service delivery more effective through a greater openness to innovation and better operating practices. These transformations may involve bringing private- and social-sector players into the delivery process or engaging communities (especially women) as active participants. Above all, India needs a relentless focus on performance measurement and monitoring, which is now easier to achieve through the power of technology.

This chapter discusses cross-cutting ideas that have the potential to transform India's model of basic service delivery, with special focus on new approaches in food, education, and health care. These collectively account for 70 percent of current public spending on basic services and about 74 percent of the future spending we estimate by 2022. They also account for 78 percent of the Empowerment Gap and hence represent critical opportunities for improving the lives of millions of households.

Based on our analysis of more than 350 case studies from around the world, we have identified a range of promising interventions and potential solutions. These ideas are relevant not just for India's government, but also for the social entrepreneurs, funding agencies, philanthropists, and companies that could bring a greater degree of innovation and investment to bear in the effort to build better basic services for the poor.

### India should become at least 50 percent more efficient in the delivery of basic services

India's government spent Rs. 570,000 crore (\$118 billion) on basic services in 2012, but we estimate that, on average, half of this money did not translate into real benefits for the intended recipients. The inclusive reforms scenario (described in Chapter 5) involves all Indian states matching today's best-performing states in their ability to translate public funding into effective basic services for the poor. If they can achieve this, the average nationwide efficiency of public spending would improve from 50 percent in 2012 to about 75 percent in 2022.

As detailed in Chapter 8, India needs to increase public spending in order to widen access to critical basic services, most notably in health care, drinking water, and sanitation—and, given this imperative, it is all the more critical that this additional funding produce maximum results. The current efficiency rate of 50 percent translates into about Rs. 285,000 crore (\$59 billion) of annual spending (2011–12) on basic services that leaks away—but if India increases spending without substantially improving this performance over the next decade, it could find itself wasting about Rs. 545,000 crore (\$113 billion) of annual social spending by 2022.<sup>87</sup>

India's food subsidy programme achieved average nationwide efficiency of 65 percent in 2012. In other words, more than one-third of the value of the subsidy allocated by the government did not reach the intended beneficiaries; food grain was either wasted or sold in the open market. The three poorest deciles of the population received just 36 percent of the subsidy allocated to them in 2012, despite accounting for 80 percent of the hunger gap. Several large Indian states were less than 30 percent efficient, with Bihar at only 19 percent. If India's entire food subsidy delivery system could match the results achieved in the five best-performing states, the national efficiency level would rise to about 90 percent. However, we make a more modest assumption of improving national efficiency to about 75 percent. Achieving this would translate directly into better nutrition: the poorest people in Bihar, for example, would receive an average of 12–14 kgs of food grain per month, two and a half times the amount they received in 2012.

In education, the issue is a lack of effectiveness—that is, government spending yields far weaker learning outcomes than it could. Compared with the results achieved by the best-performing states (as measured by the Annual Status of Education Report, or ASER assessments), the average Indian state achieved just 51 percent of the learning outcomes warranted by its level of spending on primary and secondary education in 2012. In the inclusive reforms scenario, we assume that all states can match the effectiveness of the current best performers in education (with allowances made for their different starting points). Currently, 40 to 50 percent of primary school students in the weakest-performing states pass the ASER evaluation, but it is feasible to set a goal of improving their pass rate to 70 to 80 percent by 2022, as well as improving their net enrolment ratios by 5 to 10 percentage points. Similarly, the low effectiveness of health-care spending needs to be addressed across states.

## Two broad channels are important in delivering public spending

Making social services effective starts with choosing the most appropriate delivery model, whether the government acts as the service provider or whether the state facilitates the creation of a private market (Exhibit 75). Around the world, a variety of approaches have been adopted, and there is evidence that each can work if the right preconditions or enablers are in place. There is no one-size-fits-all prescription for success, but there is a need to think through the options systematically and choose the right delivery model for different basic services in

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87 In 2011–12 rupees and U.S. dollars.

different parts of India. A programme that works for rural Uttar Pradesh may not work for urbanised Karnataka.

### Exhibit 75

#### Several modes of delivery are available for all basic services

Basic service	Mode of benefit distribution				
	Benefits through producers	Benefits to consumers			
		In-kind transfer	Cash transfer	Voucher	Insurance
<b>Food</b>	Fortified food production	Midday meals in schools; Public Distribution System (PDS)	Conditional cash transfer instead of PDS in urban areas	Food vouchers	
<b>Education</b>	Subsidised low-cost private/PPP <sup>1</sup> schools in urban/rural areas	Government-owned schools with private/social management	Conditional scholarships for girls and women	Skills vouchers system with accredited providers	Add-on benefits with life insurance covers, e.g., Shiksha Sahyog Yojana
<b>Health</b>	Subsidised low-cost NGO-run secondary and tertiary care centres	Government-run health-care institutions. Network of <i>anganwadi</i> workers and nurses		Health vouchers for BPL <sup>2</sup> families through Sambhav, a scheme for reproductive health services	Micro-insurance for hospitalisation, e.g., Rashtriya Swasthya Bima Yojana
<b>Fuel</b>	Viability gap funding for rural power and solar devices	Kerosene subsidy under the PDS	LPG subsidy		
<b>Drinking water and sanitation</b>	Low-cost models in partnership with private sector/NGOs	Infrastructure development through schemes such as Total Sanitation Campaign	Community grants through Nirmal Gram Puraskar		
<b>Housing</b>	Viability gap funding/incentives for affordable housing	Construction of low-cost houses under Jawaharlal Nehru National Urban Renewal Mission	Financial assistance for BPL <sup>2</sup> households under Indira Awaas Yojana		
<b>Social security</b>			MNREGA for rural workers. Old age/disability pension, family benefit scheme		Micro-pension with self-contribution

1 Public-private partnership.

2 Below the official poverty line.

SOURCE: McKinsey Global Institute analysis

Among the range of delivery models available, two deserve particular attention:

- In-kind transfers.** The government can run shops for food distribution, operate schools and health facilities, and deliver water and sanitation through state-run programmes. Despite challenges of making the public sector efficient, some government-run systems around the world have been very successful. South Korea's state-run school system, for instance, built facilities and raised enrolment and graduation rates, then shifted its focus to improving the quality of education; more recently, it has increased investment in technology and allowed schools greater operating autonomy. As a result, South Korea now ranks among the top five countries globally on various parameters of educational outcomes.<sup>88</sup> A well-run in-kind transfer needs the public sector to have strong execution capabilities and a commitment to quality, accompanied by a clear focus on measuring outcomes and tracking progress. Governments also need to be supportive of reforms that attract the right talent and institute the best operating practices within government-run basic service systems.

<sup>88</sup> *Beyond Korean style: Shaping a new growth formula*, McKinsey Global Institute, April 2013.

- Cash transfers.** Governments can transfer benefits in multiple forms, including cash, bank account transfers, or mobile money. Many governments around the world have implemented conditional cash payments—that is, families enrolled in these programmes receive monetary benefits in exchange for complying with conditions such as preventive health checkups, supplemental nutrition, or school attendance. Bolsa Familia of Brazil and Oportunidades of Mexico are two examples of well-run conditional cash transfer programmes (see Box 19, “Poverty reduction through direct cash transfer: Brazil’s Bolsa Familia”). Such programmes can be successful in conjunction with widespread digital and banking penetration, the ability to convert financial benefits into real benefits painlessly (for example, to withdraw cash easily or pay for goods through electronic means), and few supply-side barriers. Cash transfers also need a clear and convincing methodology for enrolling beneficiaries; the metrics for determining eligibility need to be transparent, easily verifiable, and simple to implement.

### Box 19. Poverty reduction through direct cash transfer: Brazil’s Bolsa Familia

Though its per capita income is nearly eight times that of India, Brazil is characterised by widespread economic inequality and significant poverty. In 2003, the Brazilian government launched Bolsa Familia as a flagship programme to assist poor families.

Today, the programme covers all families below the national poverty line of \$57 per capita per month (50 million people, or more than a quarter of the population). Families receive an average of \$36 a month (the amount varies by number and age of children). In return, families must ensure that their children are immunised and go to school; those under age 6 and

pregnant women get periodic medical checkups. If beneficiaries do not comply with these conditions, the cash transfers are either suspended or terminated.

The programme requires close coordination among government departments. The state-owned bank, Caixa Econômica Federal, issues an electronic card to each family. Every month, an amount is credited against the card by the treasury after the Ministry of Social Development verifies the beneficiary list. Beneficiaries can use the card to withdraw cash within 90 days from any of 32,000 points across the country—and typically, the money goes to ensure that food is on the table.

## Three broad strategies can transform service delivery

From an analysis of more than 350 case studies, three broad strategies emerge as effective approaches to achieving better outcomes.

### 1. MOBILISE EXPERTISE FROM THE PRIVATE AND SOCIAL SECTORS

Most of India’s current social welfare programmes follow the government-as-service-provider model, which can limit their capacity and incentives for innovation and experimentation. But the government can transform its performance by injecting new thinking and new operational approaches from the private and social sectors. Outright privatisation of services is not required; external agents can be deployed in a variety of ways, whether by having an outside entity run an entire system funded by the government or by contracting out specific parts of the process. For-profit organisations, NGOs, aid agencies, philanthropic organisations, and corporate social responsibility initiatives from private-sector companies can all play an active role in providing funding, shaping goals, delivering services, and monitoring outcomes.

Successful examples that already exist across India could serve as a template for other regions. In nine of India's states, for example, the NGO Akshaya Patra provides midday meals in public schools, covering 1.3 million children. A PPP focused on skills training for the rural poor involves the state government compensating the IL&FS training organisation on a per-pupil basis for every person to whom it provides vocational training.

Addressing India's serious gaps in education and health care will require engagement from the private and social sectors. The Municipal Corporation of Greater Mumbai, for instance, runs the Mumbai Schools Excellence programme with UNICEF and partners such as Akanksha, Muktangan, and Naandi. Its mission is to improve school management, teacher training, and learning outcomes in 148 municipal schools with 45,000 students. Student learning outcomes in the Mumbai Schools Excellence programme have improved from a baseline average of "52 out of 100 on a simple test" to "80+ out of 100 on a similar test" as measured by both schools and external third-party assessments.<sup>89</sup>

To institutionalise such initiatives, the government can develop a PPP policy to allow collaborations among local governments, private schools, and education-management organisations. PPP schools can be granted sufficient autonomy and exemptions from rigid regulatory or legal requirements if they are held accountable for specified learning outcomes.

A similar approach would be beneficial in health care, where there is a great need for innovative models to proliferate. The importance of forging effective PPPs is even more acute given the magnitude of the problems with access, quality, and affordability.

## **2. INVOLVE COMMUNITIES, ESPECIALLY WOMEN**

It is no accident that those communities where citizens (especially women) feel empowered to express their needs and shape solutions have better access to social services and enjoy development outcomes (see Box 20, "Involving NGOs and empowering women to advance human development: The Bangladesh example"). Local knowledge can improve policy making and design, and the cost of delivering services can be reduced if communities contribute (for example, by providing the land and labour to build a sanitation system). Because they are closest to the problems, local communities are also best positioned to track progress and effectiveness. They can apply democratic pressure to policy makers and service providers to deliver on their promises, and local vigilance can reduce opportunities for corruption.

India is starting to see encouraging developments on this front. In Chhattisgarh, *gram panchayats* (village governing bodies) monitor food subsidy recipients. In health projects around the country, local women are being trained as accredited social health activists. Cooperatives and women's self-help groups in Tamil Nadu are running fair price shops, which are the point of contact for subsidised food distribution. Local community members meet with officials in Balangir, Odisha, to discuss the effectiveness of government programmes. This kind of involvement transforms the role of the poor from beneficiaries to active participants in the system.

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<sup>89</sup> Prachi Windlass, "Education in India: Mumbai's School Excellence Program tackles school turnaround at a massive scale", Michael & Susan Dell Foundation blog, June 6, 2013.

## Box 20. Involving NGOs and empowering women to advance human development: The Bangladesh example

Bangladesh and India share a common history and a common burden of widespread poverty. Bangladesh faces enormous hurdles: it has three times the population density and half the per capita income of India. Its combined spending for education and health care were equivalent to 3.6 percent of GDP in 2010, well below India's at 4.3 percent. Yet the country has overtaken India in several human development indicators on the back of a nationwide effort to empower women (Exhibit 76).

Both the government and NGOs have contributed to this transformation. In the past few decades, the Bangladesh government has emphasised women's empowerment through education and has launched several programmes in association with international agencies. One example, funded by the International Development Association, raises girls' enrolment by providing a tuition stipend to female students in senior secondary schools; it also delivers higher-quality education by focusing on teacher training, performance incentives, and school infrastructure. To benefit from this scheme, female students must remain unmarried, maintain 75 percent attendance, and perform well at

school. As a result of this initiative, girls' enrolment rose from 1.1 million in 1991 to 3.9 million in 2005, and girls' completion rates in senior secondary schools increased from 39 percent in 2001 to 63 percent in 2008. The government also ran a successful population control programme in the 1980s that has reduced the fertility rate through education and advice on contraceptive use.

NGOs are also playing an important role in women's empowerment. For instance, BRAC (formerly the Bangladesh Rural Advancement Committee) runs its own primary schools in remote locations and also educates women in basic health-care practices. Microfinance institutions such as Grameen Bank have increased the economic role of women within the household and have provided microloans to aspiring female entrepreneurs.

Bangladesh's example shows that if the entire nation comes together for a cause such as women's empowerment, it is achievable. Today entire communities in Bangladesh are beginning to realise dividends in the form of improved health and education outcomes.

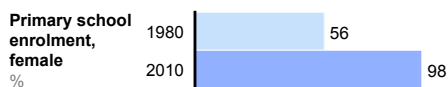
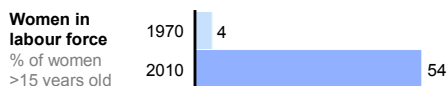
### Exhibit 76

#### Bangladesh has improved health outcomes through social transformation

**Bangladesh has seen significant social transformation in recent years**

##### Women's empowerment

NGOs promote women's inclusion through programmes aimed at increasing school enrolment and vocational skills

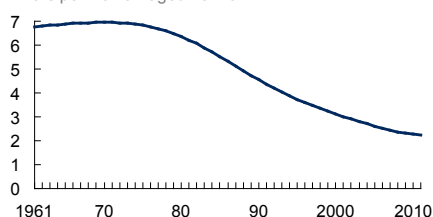


##### Fertility decline

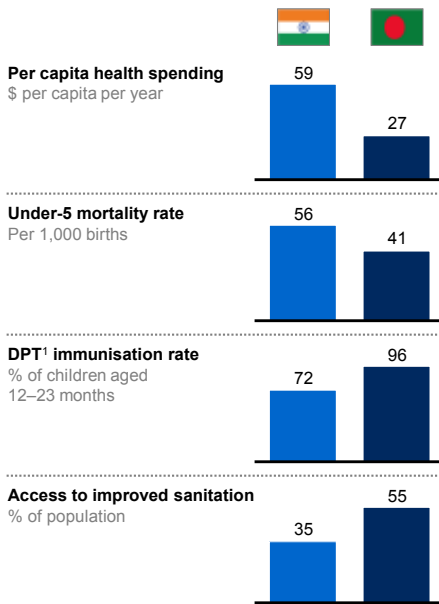
Since 1980, the government has led population policy interventions through education and awareness building

##### Fertility rate

Births per woman aged 15–49



**Despite lower health spending, Bangladesh performs better than India on a number of metrics**



<sup>1</sup> Diphtheria, pertussis (whooping cough), and tetanus.

SOURCE: World Bank; International Development Association; *Asian Scientist*; McKinsey Global Institute analysis

### 3. ACTIVELY MONITOR PERFORMANCE

Continuous measurement and tracking of key metrics can make a big difference to the effectiveness of any service provider. An objective measurement of learning outcomes, for example, can raise pressure on schools to improve teaching standards. Pratham, the largest educational NGO in India, has implemented a systematic and deep national measurement process to evaluate children's learning outcomes.

Technology is arguably one of the biggest levers for improving performance. India is likely to become the world's second-largest base of Internet users by 2015, and about three-fourths of new users will be mobile-only.<sup>90</sup> As penetration grows, India will be able to use this platform to create information transparency and monitor services in new ways. Already, SMS-enabled systems are building stronger communication with beneficiaries and real-time feedback loops. Digital checks and balances using simple computerisation, electronic transfers of funds, and more sophisticated devices such as RFID tracking tags and smart cards are powerful means of preventing graft, corruption, and diversion in the distribution of benefits.

## Food and nutrition: Simple interventions can significantly reduce hunger and malnutrition

Hunger is widespread among India's impoverished and excluded segments. The bottom three deciles of the rural population and bottom-most decile of the urban population by income consume less than 80 percent of the recommended calorie intake. Beyond overall consumption levels, it is crucial to diversify the diet of the poor, who tend to rely on a cheap and filling cereal-rich diet lacking in fruit, vegetables, milk, eggs, and meat. High levels of micronutrient deficiencies have led to widespread prevalence of anaemia, goiter, and osteoporosis.

For the poor, cereals account for about 20 percent of private expenditure on food and provide 60 percent of calorie and protein intake. India has achieved sufficient production of cereals to feed its population; production has kept pace with demand and is expected to do so in the future. But now substantial structural reforms are required to raise supply, reduce costs, and stabilise the prices of vegetables, fruit, and other forms of diversified nutrition. Implementing reforms to bring a more affordable and varied diet to the poor is critical, but these are likely to be longer-term solutions.

In the immediate time frame, the poor continue to rely on subsidised cereals for food security. India's National Food Security Act, enacted in 2013, guarantees subsidised food grains to 75 percent of the rural population and 50 percent of the urban population; the "poorest of the poor" households (previously identified under the Antyodaya Anna Yojana scheme) are eligible for greater entitlements. Eligible beneficiaries are to be identified by individual states based on a socioeconomic caste census methodology that assesses deprivation across multiple indicators, or methodologies chosen by the states themselves.

The estimated cost of food subsidies was approximately Rs. 77,000 crore (\$16 billion) for the year 2011–12, based on government estimates. But the current

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<sup>90</sup> *Online and upcoming: The Internet's impact on India*, McKinsey & Company, December 2012.

share of subsidy reaching the poorest is approximately 36 percent. Innovating to create efficient channels of food and nutrition distribution is certainly an immediate and high-priority issue for India.

### **BOTH PHYSICAL FOOD TRANSFERS AND CASH TRANSFERS CAN WORK, DEPENDING ON STARTING CONDITIONS AND CONSUMER PREFERENCES**

Countries around the world have experimented with different models of food subsidy distribution—through physical transfers, food vouchers, and conditional cash transfers. At present, in-kind transfers through the PDS are the dominant model in India, though there are other forms of nutritional support, such as school midday meals and feeding programmes in the government-sponsored Integrated Child Development Services.

Where private food distribution and banking infrastructure are well developed (in cities, for example), India could consider selectively moving from its physical food transfer model to one involving cash transfers to provide consumers with greater choice and also potentially reduce waste and leakage in the supply chain. A randomised intervention in Delhi that provided unconditional cash transfers for food assistance found that food security did not decline with the use of this model; in fact, households had better opportunities to incorporate other nutritious options into their diets beyond cereals.<sup>91</sup> It should be noted, however, that the excluded segment (the poorest 5 percent of the urban population), who are the only urban residents with a significant calorie gap, typically lack access to any financial services. For an urban cash transfer model to work, the poorest of the poor need access to bank accounts or other money solutions.

In rural areas, there are significant challenges to rolling out cash transfers at present. These regions typically have low penetration of both banking services and of private food shops that stock cereals in bulk quantities. If the poor received a fixed sum in lieu of physical food transfers, their food security could be at risk if the price of food grains spiked in certain seasons. A survey of consumers in rural areas of nine states indicated a strong preference for government-run ration shops to provide actual food grain.<sup>92</sup> The physical transfer of subsidised grain through government channels is likely to continue to be important in such parts of the country.

Based on various studies and discussions with experts, we find that the optimal mode of benefit transfer depends on the starting situation of a particular region (Exhibit 77).

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91 Shubhashis Gangopadhyay, Robert Lensink, and Bhupesh Yadav, *Cash or food security through the Public Distribution System? Evidence from a randomized controlled trial in Delhi, India*, October 2012.

92 Reetika Khera, "Revival of the Public Distribution System: Evidence and explanations", *Economic and Political Weekly*, volume 66, numbers 44–45, 2011.



**Exhibit 77**

**The optimal mode of benefit transfer depends on market conditions and realities on the ground**

Key factors dictating the choice		Physical/in-kind food transfer	Cash transfer
<b>Food markets</b>	Efficient private markets, providing regular and easy access to food		●
	Stable and predictable food prices		●
	Seasonal variation in food availability	●	
	Geographical variations in food availability	●	
<b>Infrastructure</b>	Well-functioning government food transfer system (infrastructure and administration)	●	
	Availability of basic financial infrastructure (banks, post offices, correspondents)		●
	Mechanisms for fraud prevention and resolving grievances	●	●
<b>Social factors</b>	A population with the awareness and education to make sound nutritional choices		●
	Low likelihood of emergencies causing food shortages		●

SOURCE: McKinsey Global Institute analysis

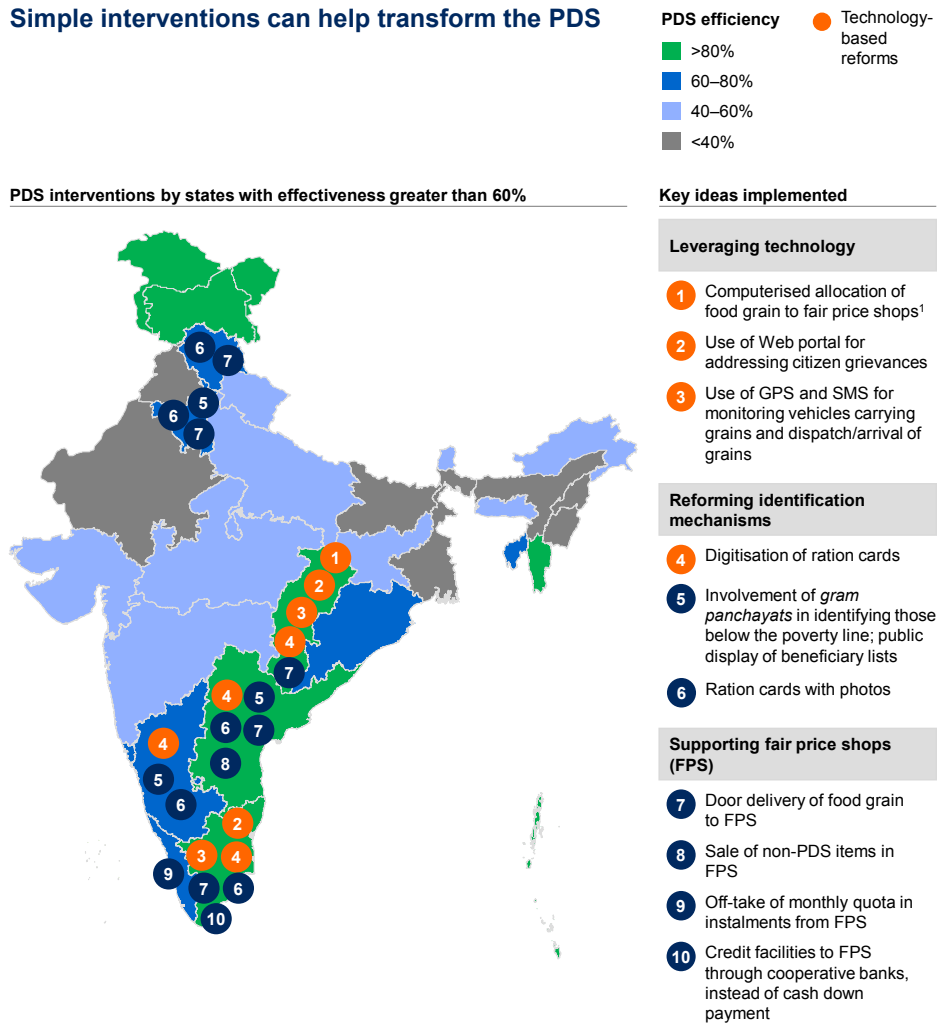
**THE PUBLIC DISTRIBUTION SYSTEM (PDS) CAN BE MADE MUCH MORE EFFICIENT**

If the PDS remains the dominant model of food subsidy support in India in the medium term, its reform is a top priority. Nearly one-third of India's production of rice and wheat is procured by the government at minimum support prices, and most of this finds its way into the PDS. Grain is transported and stored by the Food Corporation of India and then distributed by the states through a network of more than 400,000 fair price shops (FPS). Food grain from the PDS accounted for nearly 20 percent of calorie intake for the poorest decile of Indians nationwide in 2012. Unfortunately, leakage and waste in the system in 2009–10 amounted to as much as 60 to 80 percent in Uttar Pradesh and Bihar, and about 65 percent for the poorer segments (people below the official poverty line) of the population nationwide.

The potential for PDS reform has been studied in great depth. Exhibit 78 synthesises ten key ideas that could address the current problems. These fall into three categories: integrating technology into the supply chain, reforming mechanisms for identifying those who are below the official poverty line (since they are the key beneficiaries under the current system of food transfer), and supporting FPS.

## Exhibit 78

### Simple interventions can help transform the PDS



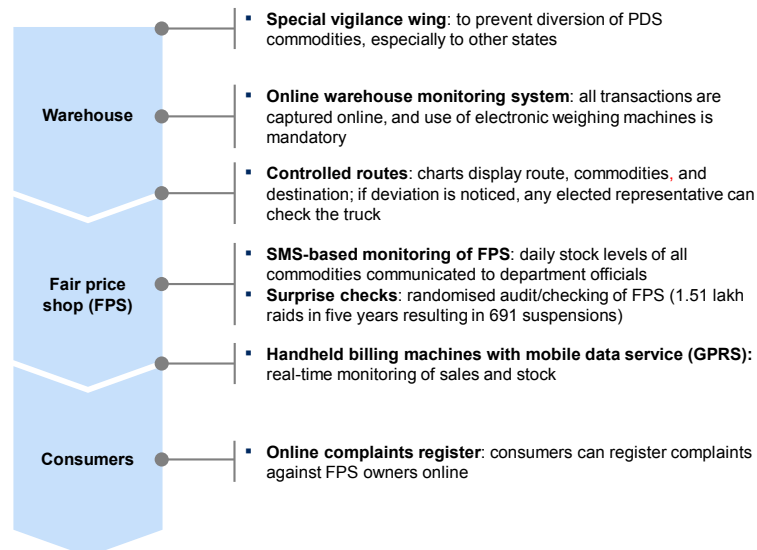
<sup>1</sup> Government- or privately run shops that are entrusted with distributing food grain to consumers.

SOURCE: Puri, "Reforming the Public Distribution System: Lessons from Chhattisgarh", 2012; Deb, "Public distribution of rice in Andhra Pradesh: Efficiency and reform options", 2009; McKinsey Global Institute analysis

Even simple interventions can yield significant benefits, as the state of Chhattisgarh has shown. To improve transparency about who is eligible for subsidised food, the name of the head of household, the type of card that person holds, and the purchase price of rice to which the household is entitled is painted outside each house in the village. In some villages, a list of all ration cardholders (beneficiaries) is painted outside the ration shop. Beneficiary lists are computerised and regularly updated. The movement of food grain is tracked and stored in a computerised database for accounting and monitoring purposes. Communities are actively involved: FPS management has been shifted from private dealers to community-based organisations such as *gram pachayats*, women's self-help groups, and cooperatives. The government sends SMS alerts to villagers to inform them when shipments of grain are on the way, converting entire communities into watchdogs who help prevent misuse. Similarly, surprise checks and audits by the Tamil Nadu government help monitor irregularities across the supply chain (Exhibit 79).

## Exhibit 79

## Tamil Nadu has established a robust auditing system for the PDS by combining simple technology with surprise audits



SOURCE: Media reports; Mahendran, *A study on customer satisfaction on food delivery mechanism of universal PDS in Tamil Nadu (India)*, 2013; McKinsey Global Institute analysis

These innovations can be used almost anywhere, by anyone. They need only very simple technology (mobile phones and basic computerisation) and the will to engage citizens. They are equally relevant to food distribution systems run by aid workers in Africa and those managed by government agencies in rural Jharkhand, next door to Chhattisgarh.

### FIVE BEST PRACTICES CAN SIGNIFICANTLY COMBAT MICRONUTRIENT-LINKED DEFICIENCIES

Apart from providing macronutrients, India's government has focused on programmes to increase consumption of six essential micronutrients (iron, folic acid, vitamin A, iodine, vitamin D, and zinc). There are two broad approaches for delivering micronutrients: fortifying food items and providing supplemental packets. Innovative implementation can save considerable resources; it has been estimated that these interventions could work for only \$600 million per year (less than 4 percent of food subsidy spending in 2010).<sup>93</sup>

We examined more than 60 innovative models (20 Indian and 40 international) in food and nutrition. From the 32 most promising models, we found a set of best practices for micronutrient delivery, based on their applicability and potential to be scaled up across India (Exhibit 80).<sup>94</sup>

93 Susan Horton et al., *Scaling up nutrition: What will it cost?* World Bank, 2010.

94 Models with the same features but implemented in different geographies were not considered.

### Exhibit 8o

#### We examined 32 nutritional programmes employing innovations in technology, awareness building, and delivery

Country	Model	Sources of Innovation		
		Technological	Awareness	Delivery
 India	Bhavishya Alliance			
	Britannia (Naandi)			
	Doodh Sanjivani, Gujarat			
	Double fortified salt (MI <sup>1</sup> )			
	Mumbai Maternal Nutrition Project			
	Municipal Corporation of Delhi			
	Oil (Cargill)			
	Rice (Abbott)			
	Rice, school (Naandi)			
	Solid Bano			
	Sprinkles			
	Tamil Nadu community program (MI <sup>1</sup> )			
	Zinc (MI <sup>1</sup> )			
 Bangladesh	Golden rice			
	Grameen Danone			
	Sprinkles			
 Bolivia	GAIN <sup>2</sup>			
 China	UNICEF			
 Colombia	School programme			
 Ecuador	GAIN <sup>2</sup>			
 Germany	Germany community programme			
 Haiti	Medika Mamba			
 Kenya	Insta porridge			
 Mexico	Liconsa			
 Nigeria	MI <sup>1</sup>			
Pacific Region <sup>3</sup>	Pacific community programme			
 Philippines	Golden rice			
 Poland	Food labels			
 South Africa	UNICEF			
 Uganda	HarvestPlus			
 United States	Hawaii school programme			
Global	Micronutrients (Heinz)			

1 Micronutrient Initiative, an organization working in food fortification across the world.

2 Global Association for Improved Nutrition, an organization working in nutrition across the world.

3 Includes the Micronesian, Melanesian, and Polynesian island groups.

SOURCE: Literature review; McKinsey Global Institute analysis

A study of these 32 models yields the following five best practices:

- **Use technology to add micronutrients to locally produced foods.** Widely consumed local staples such as rice, oil, and salt are potent vehicles for micronutrients. The Philippines and Bangladesh have launched large-scale production of golden rice, which adds beta carotene (which the body converts to vitamin A), while Uganda and Mozambique have begun to grow orange-fleshed sweet potatoes with added vitamin A. Mexico's Liconsa project provides children from low-income families with low-cost milk fortified with vitamins A, C, B12, and D, iron, zinc, and folic acid.
- **Ensure that fortified foods meet local cultural norms and appeal to local tastes.** The item must be a tasty staple of the local community, leading to easy adoption. For example, green leafy vegetables, fruit, and milk are combined into savoury snacks like samosas that are cooked fresh each day and distributed to maternal centres in Mumbai as part of the Mumbai Maternal Nutrition Project.
- **Integrate micronutrients with government food transfers such as PDS and school meals.** Micronutrient-enriched foods can be featured in child nutrition and midday meal programmes. For example, in Hawaii, distribution is carried out as part of the National School Lunch Program, the Summer Food Service Program, the Afterschool Snack Program, the School Breakfast Program, and the Special Milk Program.
- **Involve the private sector and local communities.** The production and distribution channels of for-profit companies and NGOs can be used to increase the delivery of nutrition. For example, Britannia has developed special 5-mg iron-fortified Tiger biscuits being distributed by the Naandi Foundation to supplement school feeding programmes in Hyderabad for close to 150,000 children. "Shakti Doi", or fortified yogurt, is distributed house to house by local "Grameen ladies" in the Grameen Danone Bangladesh project.
- **Educate and build awareness through multiple channels.** Schools, hospitals, nutritional delivery services, local community organisations, mass media, and social media can help raise awareness about nutritional needs and cultivate better habits. In Tamil Nadu, for example, there has been a holistic use of government nutrition delivery programmes (the Integrated Child Development Services), health delivery services (primary health centres), and "women's working groups", which mentor families from a nutritional perspective. A variety of communications strategies, such as flash cards for the primary target group of mothers, mothers-in-law, and fathers, and popular films, pamphlets, and street plays deliver messages more broadly.

## Education: Innovative approaches can improve learning outcomes

A basic assessment of India's education system shows that the quality of instruction is the biggest issue, followed by access. The net enrolment ratio is 91 percent for primary schools, but lack of effective engagement in classrooms contributes to a high dropout rate at the upper primary level, where the net enrolment ratio drops to 64 percent. By the upper secondary level, the ratio is just 36 percent.<sup>95</sup> Assessment scores reinforce these concerns about quality. Students from the perceived best-performing states of Tamil Nadu and Himachal Pradesh had lower scores in math, science, and reading in the Programme for International Student Assessment 2009 than China, the United States, Malaysia, Brazil, Indonesia, and virtually all other countries that participated in the OECD testing programme.

Improving quality and access will require extensive focus on three key performance areas: teaching, performance assessment, and school leadership. Teachers are vital to the success of any education intervention—but in India, they often lack training and incentives. Providing them with better motivation, tools, and support is paramount. Basic standardised assessment procedures are completely missing at the elementary school level, especially in government schools; implementing systems to measure current performance and areas for improvement is critical. Finally, strengthening school leadership is vital to make sure that each unit in the huge education superstructure can be more effective.

We examined 100 interventions in education (30 Indian and 70 international), shortlisting 22 models that are particularly relevant to India (Exhibit 81).<sup>96</sup> Examining these models yields six promising ideas and practices for improving primary and secondary schools in India. Operators of low-cost private schools have the flexibility to implement some of these ideas. The government can do its part by removing regulatory barriers that may prevent widespread adoption of all best practices and by embracing these ideas in its own government-run or PPP schools.

- **Create incentives that reward schools and teachers for outcomes.** While the success of the charter school movement is still uneven in the United States, it is a model with interesting potential applications in India. Charter schools have to fulfil pre-determined goals and learning outcomes in order to be re-authorised; this leads to greater accountability for performance—and the best charter schools may outperform standard public schools by 25 to 30 percent. One method that is increasingly being adopted around the world to boost learning outcomes is performance pay for teachers. One study of incentive programmes adopted in the Indian state of Andhra Pradesh found that bonuses had a large and significant impact on learning outcomes.<sup>97</sup> Another approach being piloted by the Centre for Civil Society in Delhi, Uttarakhand, Rajasthan, and Uttar Pradesh is the use of vouchers; this introduces competitive pressure on participating schools to improve performance in order to gain enrolment share.






















95 District Information System for Education 2012–13.

96 Models with the same features but implemented in different geographies were not considered.

97 Karthik Muralidharan, *Long-term effects of teacher performance pay: Experimental evidence from India*, September 2011.

**Exhibit 81**

**Innovative educational models can effectively reach low-income children**

		Spectrum of service delivery			
		Holistic delivery		Supplementary models	
Primary location	Developing countries	 BRAC schools <i>Bangladesh</i>	 Bridge International Academies <i>Kenya</i>	 Pratham <i>India</i>	 Educational Initiatives <i>India</i>
		 Escuela Nueva Project <i>Vietnam</i>	 Azim Premji Foundation <i>India</i>	 AID India <i>India</i>	 Kaivalya Education Foundation <i>India</i>
		 Satya Bharti schools <i>India</i>	 Gyanshala <i>India</i>	 Eklavya <i>India</i>	 Centre for Civil Society <i>India</i>
		 Naandi NEST Centres <i>India</i>	 Central Square Foundation <i>India</i>		
	Developed countries, but expanding in developing countries	Charter schools Global   Kunskapsskolan School System <i>Sweden</i>	 Jordan Education Initiative <i>Jordan</i>   ARK <i>United Kingdom</i>	 Khan Academy <i>United States</i>   Minas Gerais Assessment System <i>Brazil</i>	 School voucher system <i>Sweden</i>   STIR Education <i>United Kingdom</i>

SOURCE: Expert interviews; McKinsey Global Institute analysis

- **Recruit local teachers and administrators to increase accountability to the community and lower costs.** Hiring from the local community enables teachers to better connect with students; it also puts reputational pressure on the teacher to deliver. Some communities may not have a sufficient pool of potential teachers with the right capabilities, but this can be overcome by organising focused training “boot camps” and providing extensive support. Gyanshala in India and BRAC in Bangladesh have both tapped local community members to provide high-quality education at a low cost. A typical BRAC teacher would be a female community member with ten years of schooling who is provided with an initial 12-day training course to reinforce the basics of teaching and subsequently participates in monthly subject-based refresher courses.
- **“Flip” the classroom through blended learning.** Traditionally teachers are forced to spend too much time delivering lectures and are able to spend too little time in one-on-one interactions with students, helping them practice problem solving. Today, standardised high-quality content is available that enables students to listen to content lectures on their own time, at their own level, and at their own pace. Once the students have done this new form of “homework”, they can solve traditional homework problems in class, giving teachers leeway to spend individual time and help each student with their own questions. Technology can be a breakthrough tool in this regard, with video tutorials developed for both teachers and students. Khan Academy, for example, has developed more than 4,000 videos across a wide variety of K–12 subjects. Its videos and personalised assessment systems can support

classroom instruction and allow students to absorb material at their own pace. The Azim Premji Foundation has already dubbed 38 Khan Academy videos in Hindi, Tamil, and Kannada, with plans to complete more in the coming years.

- **Frequently assess and share results.** With standardised assessments in place at various levels, data analytics can track progress and weaknesses at the district, school, teacher, and student levels. Currently, Indian teachers are supposed to develop their own assessments, mark them, and communicate to students. As a result, assessments have functioned only as an end-of-year stage gate. In Brazil, Minas Gerais has pioneered the use of technology to generate assessments regularly, monitor performance, and chart each student's trajectory, weak points, and areas for focus. Khan Academy takes this to another level: it has introduced modular assessments with a "100 percent right" philosophy. A student will take an exam after every module and will have to demonstrate 100 percent proficiency (while being allowed to take computer-generated exams as many times as desired) to ensure that the concept is truly understood before the student moves on. A comprehensive assessment system also helps to involve parents and families. In India, Pratham's ASER is a powerful survey initiative that has brought national attention to the need for assessments. Government investment in technology could enable regular and easy-to-manage assessments as a public good.
- **Empower and support school leadership.** School principals can be thought of as CEOs (with commensurate capability, training, and incentives) running the school, rather than as senior teachers promoted to carry out administrative duties. Under Bridge International Academies' franchise model, school managers are responsible for school performance; their salaries and bonuses are linked to this performance (see Box 21, "Low-cost quality education through innovation: Bridge International Academies"). Bridge also extensively trains and supports school management with detailed procedures for financial and operational management, dashboards, and tracking of performance metrics. This enables principals to devote more time to overseeing teachers and engaging with parents. In India, the Azim Premji Foundation and the India School Leadership Institute are investing in taking school leaders to the next level through high-level training and development.
- **Focus on cost-effective expansion using technology and existing resources.** Building widespread access while containing costs is the need of the hour. Any rupee saved is a rupee spent on educating a child. A heightened focus on cost saving can reduce capital and operating expenses. One successful approach is to maximise existing resources: Pratham in India and BRAC in Bangladesh, for instance, have partnered with governments to use public infrastructure for their teaching programmes. This has removed the need for heavy investment to reach scale while ensuring that the most underprivileged children are given easy access.



### Box 21. Low-cost quality education through innovation: Bridge International Academies

Kenya's per capita income is nearly half of India's, and its human development indicators are comparable or lower. But Kenya is making remarkable strides in education, thanks to the efforts of several development organisations and innovative private-sector initiatives such as Bridge International Academies.

A for-profit chain of primary schools, Bridge International Academies operates 134 schools in Kenya and has educated more than 50,000 students from disadvantaged backgrounds. To keep schooling affordable but maintain high quality, Bridge has lowered costs by 80 percent through its "academy in a box" approach. This model incorporates the use of mobile phones, tablets, and customised text messages to reduce the costs of teaching, training, assessments, outreach, and school management. Technology also creates highly standardised operating procedures across schools. To address a shortage of qualified

teachers, the company hires and intensively trains secondary school graduates instead of government-certified teachers, with no compromise on quality. It also greatly reduces the capital expenditures involved in building new schools by using simple methods and affordable materials such as iron sheeting and wooden frames. As a result, spending per student by Bridge is estimated to be much lower than at most other schools.

The learning outcomes achieved by Bridge Academies have been consistently higher than those achieved by Kenya's government-run schools. For instance, reading fluency is 120 percent higher than at government schools, and math abilities are higher by nearly 30 percent. This model could be particularly relevant to India, where quality teachers are in short supply, administrative costs are high, and the community is not engaged in the education process.

## Health care: New models for expanding effective, affordable care

The Indian health-care system faces multiple problems. Chief among them is poor access to primary and preventive health care, accompanied by the growing incidence but poor detection and treatment of chronic ailments.

India's 12th Five Year Plan acknowledged these limitations and set out the objective of universal health coverage, under which "each individual would have assured access to a defined essential range of medicines and treatment at an affordable price, which should be entirely free for a large percentage of population". The basic care package it outlines includes primary and preventive care delivered through primary health centres and sub-centres as well as basic secondary health care delivered through secondary centres and district hospitals. This goal needs to be viewed in the context of the starting point: extremely inadequate health infrastructure and human resources.





















Unlike food and education (particularly primary schooling), where a minimum level of access is already present, India is at an early stage of its journey in health care. The goal should be to build adequate physical infrastructure and human resource capacity, as was done for primary schools over the past decade.

Market-driven solutions of adequate quality are not likely to proliferate in underserved rural areas without substantial help and involvement from the government. At the same time, government-only systems are often inefficient and face major challenges in developing trained health-care workers without substantial support and involvement from the private and social sectors and local communities.

A government-financed effort to build the health-care network using a PPP or contracting model that actively engages external agents and communities in different elements of health-care delivery, with widespread use of technology, could produce better outcomes. This is an opportunity for India to make bold choices in designing a health-care system that works.

We examined more than 200 models (18 Indian and 188 international) to look for insights and inspiration to address these issues, shortlisting 20 models with particular relevance to India.<sup>98</sup> Scalability is a big issue in health care, and it is difficult to ascertain if these models will succeed in the future, but each of them shows promise (Exhibit 82).

**Exhibit 82**  
**Approaches from innovative health-care programmes around the world can be scaled up across India**

		Health services			
		Preventive cure and primary care <sup>1</sup> (not including emergency services)			Chronic disease <sup>2</sup> focus
Primary location	Rural areas	 Living Goods <i>Uganda</i>	 Arogya Ghar <i>India</i>	 First Care Rural Health Project <i>India</i>	 HIV/AIDS home-based care <i>Zambia</i>
		 HealthKeepers Network <i>Ghana</i>	 Healthpoint Services India <i>India</i>	 SughaVazhvu HealthCare <i>India</i>	 Chunampet Rural Diabetes Prevention Project <i>India</i>
		 Behvarz Village Workers <i>Iran</i>	 Mobile Medics Healthcare <i>India</i>	 CARE Rural Health Mission <i>India</i>	
		 Lady Health Workers <i>Pakistan</i>	 Smile on Wheels <i>India</i>		
	Urban poor areas	 Saúde da Família <i>Brazil</i>	 Medical Home <i>Mexico</i>	 Greenstar Social Marketing <i>Pakistan</i>	 DiabetIMMS <i>Mexico</i>
			 Health Management and Research Institute <i>India</i>		 Presbyterian Healthcare Services <i>United States</i>
					 YMCA Diabetes Prevention Program <i>United States</i>

1 Refers to services that are the first point of consultation for patients within the health-care system (does not include ancillary models).

2 Refers to conditions or diseases that are persistent or have long-lasting effects. Common chronic diseases include diabetes, cancer, cardiovascular diseases, and HIV/AIDS.

SOURCE: Expert interviews; McKinsey Global Institute analysis

98 Models with the same features but implemented in different geographies were not considered.

Given the magnitude of India's current health-care gaps, there is ample room—and a strong need—for multiple models to proliferate, and many of them can complement the existing government system. As we looked at these models, the following insights emerge:

- **Build human resource capacity through focused training.** There is a strong need to focus on developing more skilled health-care professionals at all levels. SughaVazhvu, currently focused on providing primary and preventive care in rural Tamil Nadu, offers one interesting approach. It taps into the large Ayurveda, Siddha, and Unani talent pool of 750,000 registered practitioners qualified in different forms of alternative medicine. They receive a three-month training and certification programme to provide health services as physicians and are supported by strong protocols for detection and treatment. In addition, the programme trains someone from each community to assist the physician as a health extension worker who facilitates screening, follow-up visits, and community engagement activities. Another notable example is the Health Management and Research Institute (HMRI), which provides mobile and remote health services in Andhra Pradesh; it has trained almost 24,000 rural medical practitioners. Overseas, Zambia's home-based care model for HIV/AIDS and tuberculosis has mobilised teams of community nurses and health workers to care for patients at home and train family members to provide additional care themselves, thus relieving some of the pressure on the overburdened formal health-care system. In Malawi, RapidSMS allows health workers to enter a child's data from automated basic diagnostic tests that use a feedback loop system to instantly alert field monitors to their patients' nutritional status. This system strengthens local ownership of the surveillance programme through a two-way information exchange at a much lower cost than traditional data collection systems. Pakistan's Greenstar Social Marketing has trained more than 24,000 health-care providers who now earn a living by providing birth control consultation, guidance, and sales of basic products to families out of a network of 80,000 retail outlets.
- **Engage with the community.** Given the high degree of trust involved in health care, almost all successful models focus on building relationships with the community. In return, the community provides human resources, facilities, cooperation, and valuable information on local health needs. In Iran, Behvarz village health workers undergo an extensive two-year training programme and earn incentives if they can lower the rate of illnesses reoccurring in their communities. In India, Chunampet Rural Diabetes Prevention Project, a successful model of chronic disease detection and treatment, focused on engagement through various approaches (an extensive awareness campaign; training of health-care workers to detect symptoms and refer patients to clinics; and treatment delivered at the patient's doorstep). CARE Rural Health Mission trains local workers as "village health champions" (VHC) who can deliver some primary care and basic services in homes across 50 villages while also focusing on patient compliance with treatment regimes. Each VHC is equipped with electronic devices that connect with doctors if more complex cases arise.

- **Use technology to augment the system.** Using the latest medical technology has a direct impact on improving outcomes, but even simple use of computers, mobile phones, and tablets can go a long way in streamlining operations and overcoming constraints (see Box 22, “OpASHA: Transforming tuberculosis treatment”). For example, Medicall Home in Mexico provides remote care to people in rural areas through the use of mobile phones. Arogya Ghar in India creates a database of symptoms and diseases to provide better diagnosis in the future. Healthpoint Services offers video-conferencing services with urban doctors in more than 70 health points (micro-clinics) in Punjab. SughaVazhvu provides each patient with a bar-coded identity card that a physician can use to track medical records. New products are being developed to transform the delivery of basic services, such as the Swasthya Slate (health tablet), which is being used in India to perform diagnostic tests (such as blood pressure or blood sugar readings, haemoglobin, heart rate, and ECG monitoring) remotely, at a fraction of the cost of traditional diagnostics.
- **Emphasise systems and protocol.** Standardised approaches to diagnosis and adherence to treatment protocols are vital to maintaining standards of care and addressing the shortage of highly trained practitioners. Medicall, for example, uses standard telemedicine clinical protocols for diagnosis (developed by the Cleveland Clinic in the United States) and outlines criteria for escalating to urgent or non-urgent referrals. Strong protocols have been designed by SughaVazhvu in partnership with the University of Pennsylvania.

### **Box 22. OpASHA: Transforming tuberculosis treatment**

India has the highest burden of tuberculosis in the world, with an estimated two million cases annually (over 20 percent of global incidence). The World Health Organisation estimates that nearly 300,000 Indians die of TB every year.

Operation ASHA is revolutionising new approaches to fight TB—and doing so at one-nineteenth the cost of conventional treatment. Operating in India and Cambodia, it reaches out to 6.1 million people in 3,000 slums and villages. The programme has treated more than 30,000 tuberculosis patients in both countries and prevented millions of additional cases. Its eCompliance tracking system verifies patient enrolment and treatment against records from government labs, hospitals, and medicine warehouses. A portable biometric identification system using fingerprints is employed every time the patient receives a dose of medication, and programme managers receive a text message to follow up whenever a patient misses a dose. Local semi-literate youth are recruited as counselors and assigned to canvas slums and villages to spread awareness, administer treatment, and follow up in case of lapses. They ride from village to village on motorcycles providing TB medication and collecting sputum samples for testing and diagnosis. Additional TB centres have been located in the homes and offices of local micro-entrepreneurs, and homemakers in order to expand the programme’s reach.



The delivery of basic services is uniquely challenging in a nation of 1.2 billion people with pressing needs. Limited budgets and a shortage of skilled human resources magnify the difficulties of extending vital services to city slums and remote villages alike. But a wave of innovation and a greater sense of accountability in the public sector can overcome these hurdles. India has the opportunity to achieve a 50 percent improvement in the efficiency of public spending on basic services, but a business-as-usual approach will not be enough to make rapid gains of this magnitude. Fresh solutions, from simple process improvements to the introduction of technology, can ensure that every rupee spent delivers more impact. Many of these ideas can be readily applied—and if governments at all levels are willing to take bold action, these reforms can have an immediate impact on India's human development.



## 10. The way forward

It is a harsh reality that 680 million Indians lack the means to achieve minimum acceptable standards of living. If India's recent slowdown in economic growth continues, it is likely that some 470 million of them would remain below the Empowerment Line in 2022, and 12 percent of the population would remain trapped in extreme poverty. Beyond the economic and political implications of these numbers, they represent millions of lives spent in hardship.

India can and must do better—and today there is an opportunity to change those outcomes. Looking ahead to 2022, it is possible to create much better odds that the average Indian family can meet their essential economic needs. The path of inclusive reforms has the potential to bring the share of those below the Empowerment Line to 7 percent by 2022 and come close to eradicating extreme poverty by bringing it down to less than 1 percent of the population.

Unleashing the level of productivity growth and job creation needed to raise living standards, however, will require deep reforms that remove barriers to competitiveness and investment. Policy makers can set this process in motion by focusing on infrastructure, the administrative and regulatory burden facing businesses, tax and product market reforms, land market reform, labour market flexibility, and vocational education. These changes can set off a virtuous cycle of growth that generates more revenue, enabling India to meet its fiscal targets even as it ploughs additional funding back into social infrastructure.

The first step towards this goal is focusing political will on the four major priorities outlined in this report: creating jobs, raising farm yields, expanding access to basic services (especially health care, water, and sanitation) through moderate spending increases, and delivering basic services more efficiently. The central government can set an agenda that advances these national priorities, with funding commitments to match, and can put in place the enablers that will support broad economic growth: infrastructure for power and logistics, the right taxation structure, investment in job-creation engines, and measures that expand financial and digital inclusion.

While action is needed at the central level, much of the innovation and leadership can come from India's states, which have the ability to start implementing various reforms and governance ideas almost immediately. State governments can, for example, select four to six high-priority initiatives based on their most urgent needs and then harness the energy and resources needed to see them through—whether the goal is creating one million jobs in the tourism sector or improving the PDS efficiency rate by 20 percentage points.

In some areas, states may need to frame new investment programmes. For example, the initiatives for job creation would vary based on the natural resources, competitive advantages, skills, and capital available in each region; it may be textiles or leather complexes in one region, education or IT service hubs in others, tourism or agro-processing zones elsewhere. The state government would need to develop master plans for these undertakings, each with a strong business case. In other areas, the states can start implementing ideas rapidly, especially those that involve simplifying and rationalising existing procedures and programmes. These may include reforming the PDS, reducing the red tape hindering businesses, modernising land records, or creating coordinated agricultural missions.

Another key element will be changing the focus of public servants from process and procedures to achieving meaningful outcomes; this will involve establishing the right metrics for success and continuously monitoring progress towards those goals. One approach could involve setting up an implementation office to support each chief minister in establishing targets with concrete milestones and ensuring results. This office would enable top leadership to monitor progress through weekly reports and daily interventions. It would also ensure a high level of disclosure and public transparency. Each state government could, for example, publicise its targets and give a “report card” to the people every quarter on progress towards outcomes within each priority area. Such models have been successful in other countries in accelerating critical national missions such as rural drinking water and schooling.<sup>99</sup>

Governments at every level have a role to play in spurring job creation and delivering basic services. Some of these potential themes are relevant for the central government, some for the states—and still others may have areas of overlap that require partnership and coordination. Exhibit 83 summarises the broad ideas for reform outlined in this report and offers a breakdown of how these lines could be drawn.

The government’s efforts to create a business climate that is more conducive to growth will be critical to building greater confidence among the companies, investors, and entrepreneurs who ultimately will have to drive most of the job creation and productivity gains that can raise incomes. It will also be important to find ways to work with the private sector—along with the social sector and NGOs—to bring in greater innovation and new operating models that can better deliver basic services. And above all, citizens can do their part by adding their voices to the growing public call for greater accountability that can push through comprehensive reforms.

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99 Eoin Daly and Seelan Singham, “Jumpstarting Malaysia’s growth: An interview with Idris Jala”, *The McKinsey Quarterly*, October 2011.



**Exhibit 83**  
**Both central and state governments can advance inclusive reforms**

Priority	Key themes	Most relevant to	
		Centre	State
Accelerating non-farm job creation	Building critical infrastructure for power and logistics	●	●
	Reducing the administrative burden on businesses		●
	Removing tax and product-market distortions	●	●
	Rationalising land markets		●
	Taking phased steps to make labour markets more flexible	●	●
	Helping poor workers build skills with government-funded mechanisms		●
	Investing in job-creation engines	●	●
Improving farm productivity	Enabling private trade by reforming APMC acts		●
	Using technology for better price discovery		●
	Rationalising price supports for agricultural produce	●	●
	Introducing hybrid public-private crop insurance programmes	●	●
	Providing financial incentives to adopt new technology	●	●
	Overhauling the public extension network and enhancing private-sector participation		●
	Improving farmers' access to credit	●	●
	Reforming land markets and creating an institutional framework to promote leasing		●
	Integrating governance of agriculture at a grassroots level		●
Increasing public spending on basic services	Increasing spending at about 7 percent per annum over the next 10 years	●	●
	Rebalancing spending to focus on health care	●	●
	Taking into account current levels of access deprivation when allocating spending by district	●	●
Improving the efficiency of public spending	Reforming the Public Distribution System		●
	Launching pilots for cash transfers in urban areas		●
	Improving delivery of micronutrients	●	●
	Innovating to improve learning outcomes		●
	Integrating technology and human resource innovations in health care		●
Key governance themes	Setting up empowered agencies for high-priority initiatives, with operational flexibility but strict accountability for outcomes	●	●
	Creating public transparency through greater government disclosure and technology in government	●	●
	Decentralising funds, functions, and functionaries	●	●
	Introducing talent development and performance management in government	●	●
	Building a robust anti-corruption framework	●	●
	Simplifying laws and building legal and judicial capacity	●	●

SOURCE: McKinsey Global Institute analysis



Today a new generation of Indians is increasingly unwilling to accept anything less than a decent standard of living for all. They aspire to build a nation where all citizens can fulfil their inherent rights to food, shelter, health care, basic dignity, and economic opportunity. The priorities and approaches outlined in this report can provide the building blocks for a new reform agenda, and India's central and state governments could move rapidly to advance these goals. With sufficient political will, a commitment to good governance, and a more innovative approach to service delivery, India can shape a future without the scourge of poverty—a future in which the poor are finally empowered to realise their own economic and human potential.

सर्व शिक्षा अभियान  
सब पढ़ें सब बढ़ें

Chalta Firta School





## Appendix: Technical notes

These technical notes provide detail on some of the definitions and methodologies used in this report. We address the following points:

- A. Estimating the Empowerment Line
- B. Estimating the value of public spending on basic services that reaches the population
- C. Calculating Access Deprivation Scores and determining district archetypes
- D. Constructing scenarios
- E. Framework for strengthening accountabilities
- F. Major government programmes

### Appendix A: Estimating the Empowerment Line

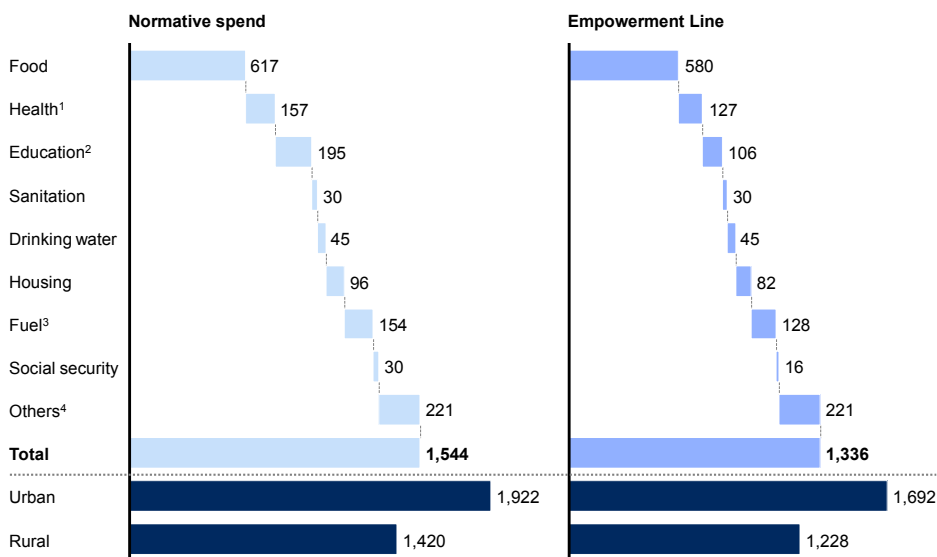
To construct the Empowerment Line, we first estimate the economic cost per capita (the “normative spending requirement”) of a minimum acceptable level of consumption across eight basic services: food, health care, education, sanitation, drinking water (including water for domestic use, such as ablutions), housing, fuel, and social security. In addition, there is a residual category, “others”, that captures other consumption requirements essential to ensuring a minimum decent standard of living (e.g., clothing, footwear, communication, and entertainment).

We then subtract current public spending on these basic services that is estimated to reach the population (an approach detailed in Appendix B) to arrive at the minimum acceptable level of per capita consumption needed for a citizen to be considered economically “empowered”. After accounting for current government spending, the national Empowerment Line is approximately 13 percent less than the normative spending requirement for 2011–12 (Exhibit A1).

The National Sample Survey Office (NSSO) conducts consumption surveys that detail the monthly per capita expenditure (MPCE) of households across the country. These MPCE estimates are “net” of the benefits that people receive; for example, they take into account the money that people spend in buying subsidised rice from the Public Distribution System. Thus, to estimate the extent of poverty in relation to a normative line and to the MPCE metrics, we need to subtract the current public spending on basic services that are already reaching the people.

**Exhibit A1****The average Indian requires INR 1,544 per month to achieve an acceptable minimum standard of living; after adjusting for government subsidies, the All-India Empowerment Line is INR 1,336 per month**

Total monthly expenditure per capita required for a minimum acceptable standard of living, 2011–12  
INR



1 Adjustment for value of subsidies in sanitation and drinking water is included under health, since they form part of the government health budget.

2 Includes elementary and secondary education.

3 Includes under recoveries by oil marketing companies.

4 Includes clothing, footwear, travel, entertainment, communication, domestic appliances.

NOTE: Numbers may not sum due to rounding.

SOURCE: McKinsey Global Institute analysis

Estimates of normative spending requirements were done for each state (and across both rural and urban parts of the state). The national Empowerment Line is calculated by taking the population-weighted average of Empowerment Lines for each state at the rural and urban levels (e.g., rural Odisha, urban Maharashtra).

To ensure that the Empowerment Line is relevant in the Indian context, we have relied on externally determined benchmarks across basic services. For example, our water benchmarks (70 litres per capita per day in rural areas and 135 litres per capita per day in urban areas) are drawn from the work of the High Powered Expert Committee on Urbanisation to the Planning Commission and the Department of Drinking Water and Sanitation.

The following methodologies for determining normative costs were applied to each basic service:

- Food:** The minimum requirements of 2,400 calories per day for a rural resident and 2,100 per day for an urban resident were first recommended by the Alagh Committee in 1979. We validated these using activity-based calorie norms set by the Indian Council of Medical Research and the current mix of occupations in rural and urban areas. The current daily requirements are estimated to be around 2,300 to 2,400 calories per day for an average individual in rural areas and about 2,000 to 2,100 calories for an average individual in urban areas, so we have retained the norms set by the Alagh Committee. The normative cost of food required to meet these calorie requirements was estimated

by taking the ratio of rupees per calorie for those at the official poverty line and multiplying that by the minimum calorie requirements. For example, in Chhattisgarh, the average person living in a rural area at the official poverty line consumes 2,207 calories at a cost of Rs. 286 per month.<sup>100</sup> To consume the target of 2,400 calories, an individual would need to spend an average of Rs. 311 per month. We also recognise that in addition to calories, people require other macronutrients. To this end, we estimated the gap in protein and fat consumption against benchmarks set by the Council of Medical Research; these were proportionately less than the calorie gap. For a typical poor person deficient in calories, protein, and fat, any effort to bridge the calorie gap through a greater consumption of the food basket is assumed to bridge the gap in protein and fat consumption as well.

- **Drinking water:** This actually refers to water used for all domestic purposes, including drinking, washing, and cleaning. For rural areas, the Department of Drinking Water and Sanitation estimates an individual should have access to 70 litres per day. We use the per capita monthly cost of piped water supply, according to official statistics, and index the cost by state on the basis of an index of construction costs. For urban areas, the High Powered Expert Committee on Urbanisation to the Planning Commission estimates an individual should have access to 135 litres of water per day. We estimate the per capita monthly cost of piped water supply, including investment and operations and maintenance (O&M) costs, by state using an index of construction costs.
- **Sanitation:** For rural areas, we estimate the amortised annual capital cost and O&M cost of providing a household latrine in both general and hilly states, based on assumptions provided under the Indian government's Total Sanitation Campaign. This is then converted into a per capita monthly cost and is indexed by state according to our construction index. For urban areas, based on assumptions used by the High Powered Expert Committee on Urbanisation to the Planning Commission, we estimate the per capita investment cost for sewerage and solid waste management as well as per capita O&M costs for each, which is likewise indexed by state according to our construction index.
- **Housing:** A rural house has been assumed have a plinth area (interior space plus walls) of 20 square metres or 215 square feet, based on norms used in the Indira Awaas Yojana (IAY). For rural areas, we estimate the amortised annual capital cost (based on estimated used for capital cost in IAY) and O&M cost of providing a house in both general and hilly states, which is then converted into a per capita monthly cost. This is indexed by state according to our construction index. For urban areas, we used estimates of the cost of an average house by three tiers of cities based on population (the bigger cities having, on average, more expensive housing) plus the annual operating cost of a dwelling. In estimating the cost of a house, the land cost, construction cost, and a profit margin for the developer have been assumed. These assumptions were first highlighted in an earlier report by MGI on urbanisation.<sup>101</sup>

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100 National Sample Survey Office, 68th round.

101 *India's urban awakening: Building inclusive cities, sustaining economic growth*, McKinsey Global Institute, April 2010.

- **Education:** The normative spending requirement on education is determined through a bottom-up cost estimate for providing a “quality” education for each child, with infrastructure-related “quality” determined by adherence to Right to Education norms on pupil-teacher and student-classroom ratios. The cost includes the teacher salary, classroom costs, equipment costs, and other expenses. These are developed for primary and secondary schools in both rural and urban areas. The cost per child is then indexed by state according to the wages of salaried employees (to reflect the likely differences in teacher salaries) as an indexing factor. Based on multiple expert and practitioner interviews, and McKinsey’s experience working with Indian schools, this level of expenditure is seen to be sufficient to deliver learning outcomes at a par with the nation’s better-functioning schools.
- **Health care:** We use the estimates of the cost of providing universal health coverage as developed by the National Commission for Macroeconomics and Health in 2005. These are provided for both “general category” states and “special category” states. Both estimates are adjusted according to the cost inflation index cited by High Level Expert Group on Universal Health Care to the Planning Commission. The cost of providing universal health coverage was estimated by constructing a package of basic health-care interventions, including, for example, outpatient treatment for childhood and maternal diseases, vector-borne diseases, and tuberculosis; basic health-care services provided at community health centres, such as inpatient treatment for hypertension and major surgeries; secondary care at district hospitals for cancer and cardiovascular disease; and other treatments.
- **Fuel:** We use Khandker’s estimates of the minimum monthly per capita cost of energy for both rural and urban populations.<sup>102</sup> This is indexed on the basis of relative electricity costs by state for those in the relevant deciles of consumption. As part of this effort, we have not made any judgments on the sources of fuel but only on the amount of money that needs to be set aside for fuel-related expenses.
- **Social security:** On the basis of a benchmarking of public and private social security and insurance programmes, we estimate a premium-to-coverage ratio of 2 percent. Coverage in this case is the normative spending requirement for the eight basic services plus others.
- **Others:** Consumption of all other items is measured for those at the official poverty line and held constant for the purposes of the Empowerment Line. This is a conservative assumption, as households above the poverty line (but below the Empowerment Line) are likely to allocate a greater amount of their consumption budget to other items beyond the basket of eight essential services due to their higher spending power, but we retain the minimum acceptable standard at the level of the official poverty line for this element of consumption.

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<sup>102</sup> Shahidur Khandker, Douglas F. Barnes, and Hussain A. Samad, “Are the energy poor also income poor? Evidence from India”, *Energy Policy*, volume 47, August 2012.



## Appendix B: Estimating the value of public spending on basic services reaching the people

India's public spending on basic services was about Rs. 570,000 crore (\$118 billion) at current prices in 2012. This was calculated based on information published annually as part of the Indian Public Finance Statistics by India's Ministry of Finance. Estimating how much of this spending actually reaches the people by way of benefits is crucial to determining the effectiveness of public spending.

In an ideal scenario, the best way to estimate the efficiency of public spending would be to look at the flow of money across the physical value chain up to the end consumer. In the absence of a financial audit that reveals this information and given the limitations of available data, we relied on estimates. These approximate calculations and estimates point to the broad extent of inefficiencies in public spending on basic services.

We use the terms "efficiency" and "effectiveness" interchangeably. We typically use "efficiency" whenever we can estimate the amount of money spent vs. the amount that reaches the people (or the end customer), as with food and fuel subsidies and the MNREGA programme. We typically use "effectiveness" when we compare spending levels against outcomes and assess whether outcomes achieved are commensurate with the level of spending on the basic service (e.g., in education and health care). We combine both "efficiency" and "effectiveness" estimates to arrive at the overall efficiency of public spending (that is, the value of goods reaching the people as a percent of the total public spending on basic services). Below we describe our methodology for arriving at these estimates for food and nutrition, fuel, education, health, MNREGA, and housing.

### FOOD AND NUTRITION

Public spending on food can broadly be categorised into spending on the Public Distribution System (PDS) and spending on other nutrition schemes (such as midday meal schemes or nutrition schemes for women and children). In total, the government directed Rs. 77,000 crore (\$16 billion) to food and nutrition in 2011–12. We use the estimated efficiency of the PDS, which accounted for about 85 percent of spending on food and nutrition in 2009–10, to estimate the value of spending reaching the people.

For PDS efficiency, we estimated the annual worth of subsidies allocated to the PDS channel. This is done by multiplying the quantity of food grain, in weight, that is allocated to the PDS and the economic cost per unit weight of the grains allocated; both figures are provided by the Food Corporation of India. The allocated subsidy, in effect, is the input into the PDS channel. We then calculate the economic worth of grains received by citizens, based on the NSSO consumption survey for 2009–10. The ratio of the economic worth received by the people to the amount allocated to the PDS is the estimated efficiency of public spending on food.

It is important to note that these efficiency estimates do not include the potential to reduce costs further (and hence reduce the economic cost per unit of grain delivered) via improved operational efficiencies in the Food Corporation's supply chain.

## ENERGY

We consider public spending on sources of fuel that are used by households for cooking and lighting (kerosene, electricity, and liquefied petroleum gas, or LPG). We have not considered diesel subsidies in this calculation, as petrol and diesel represent a miniscule proportion of fuel used for cooking and lighting (they account for 0.2 percent of expenditure in rural areas and 0.3 percent in urban areas).<sup>103</sup>

In addition to the subsidies covered by the Indian Public Finance Statistics, we have added under recoveries by the oil companies for kerosene and LPG, as reported by the Petroleum Planning and Analysis Cell of India's Ministry of Petroleum and Natural Gas and for electricity as reported by the Power Finance Corporation.<sup>104</sup> All together, energy subsidies for households were about Rs. 79,000 crore (\$16 billion) in 2011–12.

Kerosene sold through the PDS accounted for about 43 percent of public spending on fuel in 2009–10 (including under recoveries). Its efficiency is estimated based on an approach similar to that for food grains, highlighted in the food and nutrition section above. The efficiency of spending on LPG (which accounts for 38 percent of public spending) and electricity (19 percent) was harder to estimate due to a lack of reliable and complete information. As a result, the efficiency of delivering kerosene is used as the proxy for other sources of fuel.

## EDUCATION

The government spent an estimated Rs. 237,000 crore (\$49 billion) on primary and secondary schooling in 2011–12. The effectiveness of this spending is difficult to quantify, as benefits received by households from government-run schools are not reported or captured in surveys. Therefore, we examined relative effectiveness across India's states, which vary greatly in terms of education spending per capita and educational outcomes.

Our approach to measuring the efficiency of educational spending is based on the concept of the "efficiency frontier" (or the "productivity possibility frontier"). There are multiple techniques for using this concept; the approach we found most relevant (one that has commonly been used in the context of expenditure analyses) is data envelopment analysis (DEA). It does not involve statistical estimation but uses linear programming (or some other form of mathematical programming) methods to characterise a set of efficient observations and estimate efficiency based on the degree to which inefficient elements deviate from the most efficient ones.<sup>105</sup>

In a general sense, education provision is efficient if it makes the best possible use of available "inputs" (in this case, spending). Inefficiency would mean either that learning outcomes could be improved without increasing spending or that spending could be reduced without affecting learning outcomes (provided that more efficiency is assured).

<sup>103</sup> *Energy sources of Indian households for cooking and lighting*, National Sample Survey Office, 66th round, Government of India, 2012.

<sup>104</sup> The loss to oil companies because of the difference in international prices of refined products such as diesel and petroleum, and the price at which they are sold in the Indian market.

<sup>105</sup> See Aleksander Aristovnik, *An analysis of the efficiency of education spending in Central and Eastern Europe, 2011*; and *Key education indicators on social inclusion and efficiency*, European Research Associates, October 2006.

To measure the relative efficiency of states in education using the DEA approach, we used elementary education as being representative of the efficiency in the system. We found that a “one-input and one-output” assumption was optimal given the sample size and the need to ensure stability of the results.<sup>106</sup> We use two variables to create the input metric: spending as a percentage of GDP, weighted with average years of schooling in the state. Two variables are used to create the output metric: net enrolment rate weighted with learning outcomes. The learning outcomes are measured based on an average pass percentage of students in classes 1–8 (that is, passing ASER tests for relevant learning levels).

Based on these, we arrived at the efficiency of education across various states and found that the mean efficiency is 51 percent.

## HEALTH

Public spending on health includes health care, drinking water, and sanitation, and it came to Rs. 118,000 crore (\$25 billion) in 2011–12. The DEA approach used to calculate the efficiency of education spending (described above) was also used here.<sup>107</sup>

In this context, the input metric used was spending as a percentage of GDP, weighted by infrastructure density (defined as the number of health sub-centres, primary health centres, community health centres, and district hospitals per capita). For the output, we used the infant mortality rate as the indicator.

An alternate input variable was also used: spending as a percentage of GDP, weighted by human resources density (defined as the number of doctors and physicians per capita).

Using the “one-input and one-output” DEA for health spending results in an average efficiency of 34 to 38 percent across all states. The mean efficiency was 36 percent.

## MNREGA

The MNREGA, or Mahatma Gandhi National Rural Employment Guarantee Act, aims “to provide 100 days of guaranteed wage employment in a financial year to every rural household whose adult members volunteer to do unskilled manual work”.<sup>108</sup> In 2011–12, some Rs. 38,000 (\$8 billion) crore was spent on this programme.

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106 Miguel St. Aubyn et al., *Study on the efficiency and effectiveness of public spending on tertiary education*, Economic papers 390, Directorate-General for Economic and Financial Affairs, European Commission, November 2009.

107 This approach has been employed, for example, in studies such as Isabelle Jourard, Christophe André, and Chantal Nicq, *Health care systems: Efficiency and institutions*, OECD Economics Department working paper number 769, May 2010; and Laura Asandului and Puiu Fatulescu, *Measuring the efficiency of EU health systems using data envelopment analysis*, 2012.

108 Ministry of Rural Development, Government of India.

To estimate its efficiency, we looked at the wage component of MNREGA spending, which is typically in the range of 65 to 70 percent of total MNREGA spending. We then looked at the average wage paid to individuals and the number of days of work created under the MNREGA scheme to arrive at an estimate of money reaching the households. Both these variables are obtained from the National Sample Survey for 2009–10. The efficiency of MNREGA spending, or the ratio of money reaching the targeted beneficiaries to the wage component of MNREGA, is about 52 percent.<sup>109</sup>

## Appendix C: Calculating Access Deprivation Scores and determining district archetypes

### CALCULATION OF ACCESS DEPRIVATION SCORES

There are several ways to aggregate the level of access to different basic services across states and districts.<sup>110</sup> We have created the Access Deprivation Score (ADS), which uses six of the eight basic services in the consumption bundle that makes up the Empowerment Line (health care, education, drinking water, sanitation, housing, and energy). We do not include food, because access is virtually universal and consumption is determined by factors that are not easily quantifiable (for instance, Tamil Nadu and Kerala have low per capita calorie consumption, probably driven by their low share of manual labourers). Nor do we include social security, as access is sparse and data on the programmes are not generally available at a district level.

The ADS represents the rough percentage of basic services to which an average citizen of the district lacks access. A higher ADS implies greater deprivation—that is, an ADS of 100 percent would imply complete deprivation in basic services, while an ADS of 0 percent implies no deprivation. The average citizen of the Araria district in Bihar, with an ADS of 67 percent, for example, lacks access to 67 percent of the basic services and is worse off than a citizen in the Shimla district of Himachal Pradesh with an ADS of 24 percent.

Along each of nine metrics, we use the percentage of households that lack access. For instance, we use the percentage of households lacking access to good or satisfactory housing. For education and health infrastructure, we use well-accepted per capita norms to arrive at deprivation scores. Across all the indicators, if the access metrics are better than norms, we assign a zero deprivation score.

The nine metrics used to calculate the ADS are as follows:

- **Oral rehydration solution (ORS) usage:** The percentage of children who had diarrhoea in the two weeks before the survey and did not receive ORS. For instance, 18 percent of the surveyed children in the Meerut district of Uttar Pradesh who needed ORS treatment had received it; hence, ORS deprivation

109 This approach was highlighted by economist Surjit S. Bhalla in his article written with Sunil Jain, “More bang for the buck from non-NREGA work”, *Financial Express*, February 24, 2011.

110 For other studies examining these differences across various regions of India, see Report of the Committee for *Evolving a Composite Development Index of States*, Ministry of Finance, Government of India, September 2013; and Bibek Debroy and Laveesh Bhandari, eds., *District-level deprivation in the new millennium*, Konark, 2003.

in Meerut is 82 percent. The data are drawn from the District-Level Health Survey (DLHS), 2007–08.

- **Immunisation rate:** The percentage of children between the ages of 12 and 23 months who are fully immunised with BCG (which prevents tuberculosis), three doses each of DPT (which protects against diphtheria, pertussis, and tetanus), polio, and measles. For example, 79 percent of surveyed children in the Patiala district of Punjab are fully immunised, which translated into immunisation deprivation of 21 percent. The data are drawn from the DLHS, 2007–08.
- **Health infrastructure:** The ratio of per capita availability of subcentres, primary health centres, community health centres, and district hospitals in a given district to the norms recommended by the National Commission on Macroeconomics and Health, 2005, for a given population. We have used the norms for plains, which is one sub-centre for 5,000 residents, one primary health centre for 30,000 residents, and one community health centre for 1.2 million residents. Data are drawn from the Rural Health Survey 2011, which also provides data for urban health infrastructure.
- **Enrolment ratio:** The average of the non-enrolment ratio at the primary and upper primary levels. For example, if 10 percent of primary-age students and 30 percent of secondary-age students in a district are not enrolled, the enrolment ratio deprivation is 20 percent. The data are drawn from India's District Information System for Education (DISE), 2009–10.
- **Pupil-teacher ratio and student-classroom ratio:** The average student-classroom ratio (SCR) and pupil-teacher ratio (PTR) at the primary, upper primary, secondary, and higher secondary levels, compared with the most stringent Right to Education norm of 30 each. Based on principal component analysis, these metrics were seen to be correlated and hence have been combined by taking a simple average of the two. For example, if both ratios in a district are 40, then the deprivation score is 25 percent. The data are drawn from DISE, 2009–10.
- **Electricity usage:** The percentage of households in a district that do not have access to electricity. For example, 62 percent of households in the Varanasi district of Uttar Pradesh use electricity, so electricity deprivation there is 38 percent. The data are drawn from the Census 2011.
- **LPG usage:** The percentage of households in a district that do not use liquefied petroleum gas (LPG) for cooking. LPG is taken as a proxy for modern cooking fuels. If alternatives such as smokeless Chulhas (cooking stoves) are available at a similar cost, they should be an acceptable substitute. As an illustration, 44 percent of households in the Visakhapatnam district of Andhra Pradesh use LPG for cooking, making LPG deprivation there 56 percent. The data are drawn from the Census 2011.
- **Drinking water and sanitation:** Average of the percentage of households that do not have access to a toilet facility and the percentage of households that do not have access to drinking water within or near their homes. Based on principal component analysis, the two metrics on drinking water and sanitation were seen to be correlated and hence have been combined by taking a simple average of the two. For instance, 6 percent of households in the Bangalore

district of Karnataka do not have access to drinking water inside or near their homes, while 4 percent do not have toilets inside their homes. Hence, drinking water and sanitation deprivation there is 5 percent. The data are drawn from the DLHS, 2007–08.

- **Housing:** The percentage of households living in dilapidated housing, or houses that are not classified as “good” or “acceptable” according to the census definition. For instance, 84 percent of households in the Murshidabad district of West Bengal live in good or acceptable housing, which makes the district’s housing deprivation 16 percent. The data are drawn from the Census 2011. It must be noted, however, that urban slums are not necessarily labeled dilapidated for the purpose of the census.

Since the overlap between the deprived households along each of the nine dimensions is unknown, we use a sum-of-square method to aggregate them. We combine these nine metrics using the following formula:

$$\text{ADS} = \frac{\sqrt{a_1^2 + a_2^2 + a_3^2 \dots + a_9^2}}{\sqrt{9}}$$

where  $a_1, a_2, a_3 \dots a_9$  are the deprivation scores along each of the nine dimensions.

Geometrically, the ADS represents the “distance” of a district from the point of no deprivation—in economic terms, this gives a relative sense of the effort or distance that a district must cover to completely remove deprivation. Most importantly, by using a sum-of-squares methodology to aggregate the nine metrics, we assume imperfect substitutability between different basic services (for example, good health-care infrastructure cannot compensate for poor electricity usage). For instance, a 25 percent deprivation in both health care and education results in a lower deprivation score than 20 percent deprivation in health care and 30 percent deprivation in education—that is, the greater the divergence, the higher the deprivation score.

The ADS reflects India’s uneven development. Consider the case of Madhya Pradesh, India’s fourth-most-deprived state. Singrauli, Madhya Pradesh’s most deprived district, has an ADS of 64 percent (worse than the average district of Bihar)—but the state capital of Bhopal has a dramatically lower ADS of 34 percent (better than the average in Karnataka and Maharashtra states).

## DETERMINING DISTRICT ARCHETYPES

To draw insights from the ADS, we grouped districts into five clusters based on their access to basic services, using the nine metrics. We used 584 of India’s 640 districts for the clustering, omitting some because data are unavailable; Rural Health Survey (RHS) 2011 data were unavailable for all of Arunachal Pradesh, for example. The other districts were then assigned to one of the clusters.

After the selection of the metrics, the following steps are carried out:

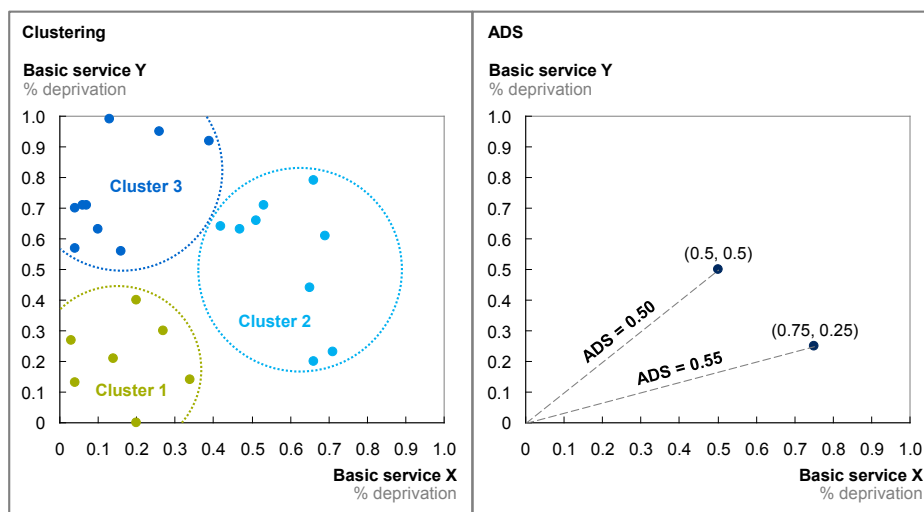
- **District plotting:** We mapped each district to a point in a nine-dimensional Euclidean space, with each dimension reflecting its relative deprivation along that metric. For example, the Gorakhpur district in Uttar Pradesh occupied a point (0.75, 0.53, 0.55, 0.51, 0.12, 0.57, 0.78, 0.08, 0.41) that implies that the district has a deprivation of 75 percent for ORS, 53 percent for immunisation, 55 percent for health infrastructure, and so on. Compared to this, the Hisar district in Haryana occupied a point (0.75, 0.44, 0.32, 0.29, 0.0, 0.12, 0.66, 0.05, 0.30) that represents lower deprivation along virtually all dimensions.
- **K-means clustering:** We carried out statistical clustering based on the k-means methodology. The inputs into the statistical program were the desired number of clusters “k” and the estimated centroids of each of the “k” clusters. Every district is then assigned to the centroid closest to it in a nine-dimensional Euclidean space. Subsequently, the centroid of each of the clusters is recalculated, and this process is repeated until the centroids are stable. After observing the results for different values of “k”, we chose k = 5 because further increasing the number of clusters did not yield significantly different results.
- **Allocation of other districts:** The remaining 56 districts, for which data are only partially available, are assigned to the cluster that is closest to them along the dimensions for which data are available. For instance, if only electricity and sanitation scores are available for a district, we calculate distance from the centroids of the clusters only for these two basic services and assign the district to the cluster nearest to it.

Each of the clusters can thus be imagined as a sphere in a nine-dimensional space (Exhibit A2 presents a simplified two-dimensional illustration of the process).

**Exhibit A2**

**Access Deprivation Score and clustering can be understood by visualising them in a two-dimensional space**

● District



SOURCE: McKinsey Global Institute analysis

## Appendix D: Constructing scenarios

We have created a simulation based on several interconnected models to project the future performance of the Indian economy. The objective of the model is to create two snapshots of the Indian economy in 2022 based on certain assumptions around investment levels and productivity, yielding contrasting “stalled reforms” and “inclusive reforms” scenarios. The components of the model are described below.

### INVESTMENT REQUIREMENT

The investment model projects the investment that the government and private sector need to undertake to sustain the GDP growth implicit in each scenario, by considering the historical incremental capital output ratio (ICOR) of each sector. Based on the ICOR ratios, we estimate the gross fixed capital formation (GFCF) required for each sector, given its GDP at factor cost (GDPfc). We then arrive at the investment rate<sup>111</sup> by using constant multiples (used by the Planning Commission) of GFCF to gross capital formation (1.099) and GDPfc to GDP at market prices (0.93). Based on our estimates, India needs to increase its investment from 36 percent of GDP over 2005–10 to an average of 38 percent in the next decade to achieve the inclusive reforms scenario. In the stalled reforms scenario, both the need and ability to spend are lower due to a lower GDP growth rate and thus lower tax revenue. In this case, investment would drop to 34 percent of GDP.

### PRODUCTIVITY GROWTH AND JOB CREATION

Based on historical growth rates and sector-specific interventions, we estimate that the Indian economy can grow at 7.8 percent over the next decade. For this growth to be inclusive (that is, to achieve the inclusive reforms scenario), it will need to involve significant job creation in the industrial sector, even as we anticipate continued high productivity growth in the services sector. We assume an aggressive 6 percent annual growth in agriculture, led by increasing yields per hectare. For the industrial and services sectors, we assume rates of growth similar to those experienced from 2000 to 2010. However, we assume a change in the composition of growth towards more labour-intensive sectors. This results in lower average productivity growth in manufacturing and construction than would have been the case in a path led by growth in knowledge- and capital-intensive sectors. In the inclusive reforms scenario, we estimate that the industrial sector can create 75 million to 80 million new jobs, while the services sector can create 35 million to 40 million jobs (Exhibit A3).

In the stalled reforms scenario, however, job creation is assumed to be much slower, with the industrial sector contributing about 50 million new jobs and the services sector about 25 million.

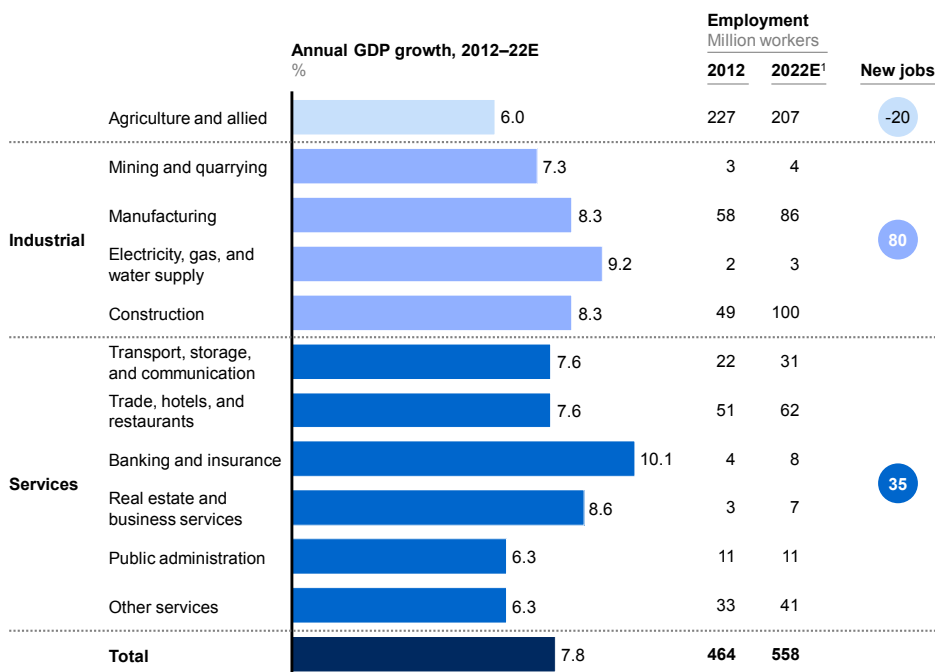
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<sup>111</sup> Investment rate is defined as the ratio of gross capital formation (GFC) to GDP at market price. Since investment is an expenditure item, it is expressed in terms of market price, not factor cost.



**Exhibit A3**

**In the inclusive reforms scenario, high growth can result in an additional 80 million industrial and 35 million services sector jobs**



<sup>1</sup> Estimates are for high industrial growth scenario.

NOTE: Numbers may not sum due to rounding.

SOURCE: National Sample Survey Office, 68th round; McKinsey Global Institute analysis

**SUBSIDY PROJECTION**

We estimate that public spending on basic services needs to almost double in real terms, rising from Rs. 570,000 crore (\$118 billion) in 2012 to Rs. 1,088,000 crore (\$226 billion) in 2022. We arrived at these estimates after evaluating existing government spending and setting realistic targets for each service, taking into account expected population growth.

Once the target level of access for each basic service is set, we have estimated the cost of meeting those goals using a combination of published reports and expert interviews.

- **Health care:** We estimated what it would cost to build out the network of primary health-care infrastructure and hire the requisite number of doctors and health-care workers to meet national levels of bed density and health-care worker density recommended by the High Level Expert Group on Universal Health Coverage, constituted by the Planning Commission of India in 2005. We estimate the broad cost of building and operating a primary care network based on the current tiered health-care structure of the government, although the actual shape and design of the network could vary in the future (perhaps on a state-by-state basis). We further assume that the government absorbs the entire cost of building adequate health-care density, although the mix of state-run and privately run network points could take different forms, with the government providing financial support in different ways. The assumption that the build-out of health-care system should be heavily underwritten or financed by the government reflects the urgency of the need as well as evidence

pointing to the fact that across countries, national health outcomes tend to be heavily correlated with per capita public spending, not private spending.

- **Education:** The cost of education has been estimated by assessing the cost of building the physical infrastructure for primary and secondary schools and hiring sufficient teachers to reach targeted secondary school enrolment rates of 100 percent in urban areas and 70 percent in rural areas by 2022 and primary school enrolment rates of 100 percent in urban areas and 90 percent in rural areas. This translates into a need for one million additional primary school classrooms and 280,000 additional secondary school classrooms, assuming the student-classroom ratio is 30 for primary and 40 for secondary, and pupil-teacher ratio is maintained at 30 for both levels. We assume that the government would fund the build-out and operating costs of about 55 percent of the new schools required (which would maintain the current mix of private and public schools) and continue to pay for public schools already in operation.
- **Fuel:** To build estimates of the government spending required to improve energy access, we focus on two basic types of energy supply: electricity for lighting and LPG for cooking (although other sources of fuel, such as solar-powered smokeless Chulhas, would be acceptable if they were available at similar or lower cost). We estimated the cost of government support for fuel usage by keeping the current subsidy per unit of improved energy constant (using electricity, LPG, and kerosene subsidies as proxies) but accounting for higher numbers of improved energy users and higher consumption per user in future. For LPG and kerosene, provision has been made for depreciation of the rupee and an increase in the price of crude oil.
- **Food:** In keeping with the provisions of the National Food Security Act of 2013, we account for 5 kg of subsidised food grain consumption per capita (and 7 kg per capita for the population covered under the Antyodaya Anna Yojana scheme for 50 percent of households in urban areas and 75 percent in rural areas). Holding constant the economic cost of food grain procurement and distribution (as reported by the Food Corporation of India in 2012), and in keeping with the new issue price set by the food security act, we arrive at a subsidy of Rs. 18 per kg for rice and Rs. 14 per kg for wheat. Based on published reports, we also make provisions for other expenses such as setting up state food commissions, intrastate transportation, and maternity benefits.<sup>112</sup> We are agnostic about the actual distribution of this subsidy; if, for example, through a future process of self-selection, only the poorest three deciles of the population opt for food subsidies, then we would assume that the budgeted amount remains the same but is shared by a smaller group and meets their needs to a fuller extent.
- **Drinking water and sanitation:** In drinking water and sanitation, where there is an existing government financial support programme, we keep the per person public service expense or subsidy constant and account for increased access. For sanitation, we expect the government to target subsidy support to the poorest 25 percent of the population. For drinking water, we use the cost estimates of the Planning Commission to account for improved drinking water

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112 For more details of the methodology, refer to Prachi Mishra, "The National Food Security Bill: Incremental financial and distributional implications, 2013–14 to 2015–16", *Economic and Political Weekly*, volume 48, number 39, 2013.

coverage to reach 92 percent of the population by 2022—95 percent for urban areas and 90 percent for rural areas.

- Housing and social security:** There are existing programmes for housing (Indira Awaas Yojana and JNNURM, the Jawaharlal Nehru National Urban Renewal Mission) and social security (MNREGA). We have assumed that these programmes remain unchanged and grow at their historical rates to account for growth in population. For housing, this implies that we have kept rural spending constant while increasing urban spending at an annual rate of 7 percent. For MNREGA, we have accounted for the increase in number of rural households from 180 million in 2012 to 200 million in 2022.

### FISCAL CONSTRAINTS

The fiscal constraint model broadly projects the revenue and capital receipts and expenses of the government for the next ten years and the level of borrowing this is likely to imply. The model makes allowance for productive investments required to sustain the rate of GDP growth in each scenario, and the basic service spending that can be achieved while reducing the central plus state government's fiscal deficit linearly from 8.2 percent in 2012 to 6 percent by 2017. The model accounts for government borrowing to fund the deficit and links the interest payments with the size of government debt.

### INCLUSIVENESS OUTCOMES

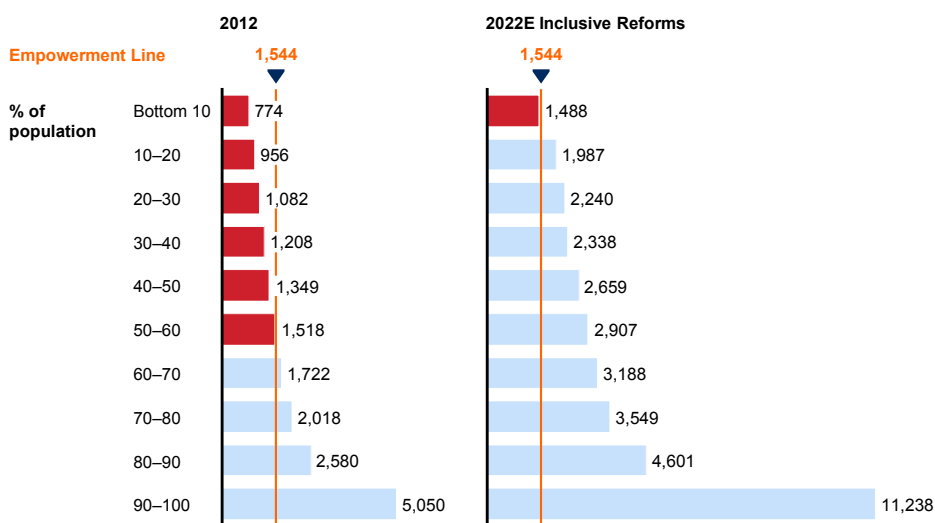
The inclusiveness model projects the monthly per capita expenditure for each decile of the population in 2022 based on the distribution of jobs and productivity growth for each sector, leading to income growth and potential consumption growth for each decile based on historical wage-productivity correlations (Exhibit A4).

#### Exhibit A4

**By 2022, only 7 percent of the population will be below the Empowerment Line in the inclusive reforms scenario**

ESTIMATES

Monthly per capita expenditure<sup>1</sup>  
INR, 2011–12 rupees



<sup>1</sup> Includes public spend on basic services, at 50 percent efficiency in 2012 and 75 percent efficiency in inclusive reforms.  
SOURCE: National Sample Survey Office, 68th round; Indian Public Finance Statistics; McKinsey Global Institute analysis

## Appendix E: Framework for strengthening accountabilities

Multiple agencies and institutions carry out the government's agenda—and they all need to feel accountable to other stakeholders. A system of checks and balances can drive performance and impose consequences for failures. This is valid both for the government's divisions and for private players involved in governance (for example, as a service provider). The process of strengthening accountability can take multiple forms (Exhibit A5).

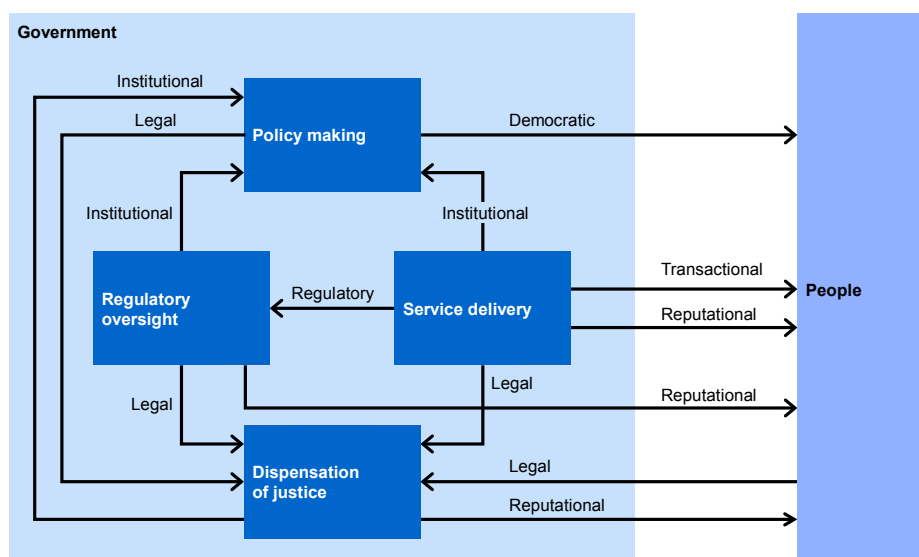
### Exhibit A5

**In an environment of good governance, each government role is subject to various checks and balances**

“Web of accountability”

NOT EXHAUSTIVE

→ Accountable to



SOURCE: McKinsey Global Institute analysis

Several types of accountabilities can be imposed:

- **Legal accountability:** The government can enact laws that mandate certain behaviour from public officials or private service providers, including the right to judicial remedy. For example, the Right to Public Services has been enacted in several states such as Madhya Pradesh, where a bureaucrat may be personally penalised Rs. 250 per day if a service is not rendered promptly.
- **Reputational accountability:** Reputational accountability induces better performance through the disinclination of an institution or individual to be viewed negatively by peers or the public at large. Reputational accountability can be enhanced by creating more transparency on government functioning and its outcomes; the citizen scorecards pioneered in Bengaluru in the 1990s represent one potential approach.
- **Institutional accountability:** Government functionaries feel subject to review by those in political power—and this can be a double-edged sword. Accountability to political leadership can be counterproductive and degenerate into a loose, personality-based system rather than one driven by outcomes that are transparent and clearly communicated. The recent decision from

India's Supreme Court to grant bureaucrats a "minimum assured tenure" is an attempt to insulate public-sector workers from political interference.

- **Regulatory accountability:** An independent, well-managed regulatory authority can be a powerful source of accountability for private service providers or public functionaries. For instance, banks in India feel accountable to the Reserve Bank of India.
- **Transactional accountability:** Many functions of the government are "services" provided to businesses and citizens. As in the case of market-driven service providers, public-sector providers should feel greater accountability to their "customers". Promoting private participation is an effective way of introducing competitive pressure to improve customer orientation; allowing private telecom companies to serve consumers, for instance, has improved the accountability felt by the state-owned telecom provider.
- **Democratic accountability:** In a democracy, the ultimate accountability is the will of the people, and any agency derives its mandate from the democratic process. For democratic accountability to be strengthened, the foundations of electoral reform are critical. India has made strides in this regard, as the independent Election Commission has helped ensure free and fair elections to a great extent. But much more can be done. Activist movements in India are focusing on several areas, including providing more transparency in electoral funding and introducing the right to recall.

## Appendix F: Major government programmes

The government of India runs multiple programmes to deliver basic services, especially to poor households. The following is a list of such programmes referred to in this document:

- **Right to Information Act (RTI):** In force since 2005, the act allows any citizen to request information from a public authority, under certain safeguards. The information must be provided within 30 days; if it is not, the concerned citizen can seek redress from the chief information commissioner.
- **Right to Education Act (RTE):** Enforced in 2010, the act makes education a fundamental right of every child between the ages of 6 and 14. It also specifies minimum infrastructure norms in elementary schools and reserves 25 percent of seats in private schools for students from economically disadvantaged segments. Among other things, it mandates that no child be held back or expelled until the completion of elementary education.
- **Mahatma Gandhi National Rural Employment Guarantee Act (MNREGA):** Launched in 2006 in 200 districts of India, the programme was expanded to all districts in 2008. It entitles one adult member of every rural household to 100 days of unskilled manual labour per year within 5 km of the household's village. The people are to be employed in creation of durable assets and public works that would benefit the household. In case the government is unable to create employment, it is obligated to pay an unemployment allowance.

- **Indira Awaas Yojana (IAY):** Aimed at families below the official poverty line in rural areas, the scheme provides financial assistance worth Rs. 35,000 (in plains) or Rs. 38,500 (in hills) for the construction of the house. Sanitary latrines and smokeless chullah are required to be constructed along with each IAY house, for which additional funds are provided from the Total Sanitation Campaign.
  
- **National Food Security Act:** Enacted in 2013, the act entitles the poorest 75 percent of the rural population and 50 percent of urban population to subsidised food grains. Coarse grains, rice, and wheat are to be provided at Rs. 1, Rs. 2, and Rs. 3 per kg, respectively. While the “poorest of the poor” (also known as “priority” households) will receive 35 kg of grain per household per month, others (“general” households) will receive 5 kg per capita per month. The programme also provides for free meals for pregnant women, lactating mothers, and certain categories of children. In case these entitlements are not received, the state government is mandated to provide a food security allowance.

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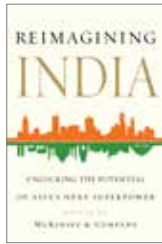
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