



# Increasing Public Health Expenditure in India—Challenges and Prospects

# AUTHOR

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# List of Abbreviations

Bill & Melinda Gates Foundation	BMGF
Central value-added tax	CENVAT
Debt and Fiscal Responsibility Act	Debt Act
Emerging market middle-income economies	EMME
Fiscal Responsibility and Budget Management Act	FRBMA
Five major emerging national economies of Brazil, Russia, India, China	BRICS
and South Africa	
General sales tax	GST
Gross domestic product	GDP
Health-adjusted life expectancy	HALE
Human Development Index	HDI
International Monetary Fund	IMF
Liquefied petroleum gas	LPG
Medium-term budget framework	MTBF
Medium-term expenditure framework	MTEF
Medium-term fiscal framework	MTFF
Medium-term performance framework	MTPF
Middle-income developing country	MIC
Public Finance Statistics	PFS
National Health Accounts	NHA
National Health Mission	NHM
National Institution for Transforming India	NITI Aayog
National Rural Health Mission	NRHM
Official development assistance	ODA
Organization for Economic Cooperation and Development	OECD
Performance indicator	PI
Public expenditure and financial accountability	PEFA
Public financial management	PFM
Public Financial Management Performance Assessment Report	PFMPAR
Public-private partnership	PPP
Sustainable Development Goals	SDGs
Tuberculosis	ТВ
Value-added tax	VAT
World Bank World Development Indicators	WDI

# Introduction and Summary

Given the dominant role that the state plays in economic activity and providing social services in India, fiscal issues have always featured prominently in discussions of economic and social policy, and by implication in political debate. The Indian government needs to significantly increase public investment and social spending to establish the preconditions for sustained high rates of economic growth and poverty alleviation, but financing additional spending is a major challenge. High fiscal deficits and public debt have long been a threat to the economy. While fiscal imbalances diminished in the early 2000s due to adjustment policies and growth that boosted revenue, during the global financial crisis that followed, deficits and debt increased significantly due to growth slowdown and fiscal stimulus measures. Despite recent adjustment, the impact of the fiscal stimulus measures remains a policy concern. Moreover, structural fiscal reform has been piecemeal and incomplete, and the outstanding fiscal and broader economic and social reform agenda is therefore long. In addition, complementary financial, trade, industrial, and labor market reforms must be implemented if India's full potential for economic development and social progress is to be achieved.

It is against a backdrop of demanding fiscal policy and reform challenges that the capacity to increase public health spending in India needs to be assessed. There is widespread concern about how little the government spends on health—1.2 percent of gross domestic product (GDP) according to the latest official figures, but even higher estimates are low by international standards—and the repeated failure to meet what appear to be only modestly ambitious spending targets. The government's Twelfth Plan (2012-13 to 2016-17) targeted an increase in health spending by around 1 percent of GDP over the plan period, which was not achieved; consequently, key health indicators have not improved and pressing health care needs remain unmet.

The ability to create the fiscal space needed to increase public health expenditure in India is constrained by various factors. Slow progress with tax reform limits the ability to increase tax collections, while the macroeconomic vulnerability associated with large fiscal deficits and high government debt suggests that further borrowing is unwise, indeed debt should probably be reduced. Also, because budgeting lacks a strategic medium-term focus, spending prioritization is poor. Heavy government involvement in the economy is a further constraint insofar as the government is unwilling to raise resources through disinvestment (privatization), and the private sector is reluctant to become too involved in sectors dominated by the government. Fiscal decentralization, ineffective economic planning, political economy problems, and bureaucratic inertia further complicate matters.

These constraints imply that the government can free up limited room to increase spending, especially in the near term. Over the medium-term, there is time to do the required policy analysis, and especially to review the rationale for and performance of expenditure programs, and to implement key tax and budgeting reforms. As a result, the medium-term financing outlook is brighter. As shown in Chart 1, if the government is committed to fiscal discipline and the tax, expenditure, budgeting and other elements of the reform agenda are advanced, resource mobilization and expenditure rationalization can together free up total fiscal space equivalent to 9.6 percent of GDP over a five-year period. However, part of this is committed to infrastructure and part needs to be allocated to debt reduction, implying available fiscal space of 6.1 percent of GDP.

#### Chart 1: Fiscal Space Scenario (In percent of GDP)



Source: Author's calculations

To put this figure in perspective, if the aim is to increase government health spending by 1 percent of GDP, this may seem to be an easily achievable objective given the fiscal space that can be created. However, there will be competition for fiscal space from other high-priority pro-poor and infrastructure spending programs. Therefore, not only does a compelling case need to be made for attaching an especially high priority to health expenditure, but also the expenditure planning and budgeting systems must be able to deliver expenditure allocations that favor the funding of health and other high-priority programs over competing claims on public spending.

The approach taken in this paper provides a broad perspective on health expenditure and the functioning of the health system. An obvious limitation is that there is little in-depth discussion of state governments, despite them being primarily responsible for health service delivery. While this paper makes numerous references to the role of state governments, key state-level issues that are critical to the overall functioning of the health system are taken up in a companion paper by Bharali and others (2019). State-level fiscal space, state government expenditure planning and budgeting, the inter-governmental transfer system, and the flagship National Health Mission (NHM) are among the topics discussed in that paper.

It should also be noted that, as a middle-income developing country (MIC), India is exposed to a different environment and faces different challenges, compared to low-income developing countries (LICs), in setting objectives for and designing its health system, and in creating the fiscal space it needs. Another companion paper by Kelly and others (2019) addresses the challenges faced by one of the world's poorer countries, Ethiopia, in building and financing its health system.

The remainder of this paper is organized as follows: Section II provides an overview of the relationship between public expenditure and growth, which provides an analytical justification for increasing public health expenditure. Section III places public and total health expenditure in India in historical and international context, while Section IV looks at the achievements of the Indian health system using various internationally comparable indicators. Section V, the core of this paper, assesses the scope for India to create the fiscal space needed to increase public health expenditure. Section V also discusses how expenditure planning and budgeting can be improved so that fiscal space is used to pay for health and other high priority spending programs. Section VI contains concluding comments. The appendices cover specific topics that supplement the analysis, discussion and conclusions of the main text.

# I. Public Health Expenditure and Economic Growth

In attempting to establish the case for increased public health expenditure, be it in India or any other country, there should be a clearly identifiable payoff. In this connection attention is paid primarily to the economic benefits as reflected in income levels and especially economic growth. These benefits determine whether public health expenditure, human development spending more generally, or aggregate public expenditure is productive or not.<sup>1</sup> While this is the focus of the discussion that follows, an income and growth-based concept of expenditure productivity has its limitations given that all expenditure programs contribute to income and growth via intermediate objectives that may themselves be valuable. This is certainly the case with public health expenditure, which leads to improvements in health status, broader human development and especially reduced inequality and poverty, all of which are income and growth enhancing while also being important objectives in their own right.

Much of the growth and development literature focuses on the impact of human development spending, of which public health spending is a major component. Making a case for such spending is straightforward. In principle, strong links between human development spending and the size, skills and productivity of the workforce point to the positive impact on per capita income and on economic growth, both directly and indirectly via enhanced productivity of capital. This effect is bolstered by the growth payoff to reduced inequality and poverty that is an objective of human development spending. At the same time, the causation is also likely to run from growth to human development spending reflecting Wagner's Law (rising incomes generate increased demand for public services) and Baumol's 'cost disease' (limited scope for productivity improvements in the public sector increases the relative price of public goods and services). The result is a virtuous circle between human development spending and growth, where human development spending promotes growth and growth generates the resources to finance higher human development spending (see Ranis, 2004 for further discussion).

The fact that the causal relationship between human development spending and growth may run both ways complicates attempts to identify the growth consequences of human development spending. There are also issues concerning the other variables that should be included in empirical analyses of this relationship. Developing a comprehensive model that can explain a large part of the cross-country and/or year-on-year variation in human development spending and growth may be too ambitious a task. But it is important to identify variables that might influence both human development spending and growth, since their omission could lead to spurious conclusions about the relationship between the two. It is also important to include variables that could condition the relationship between human development spending and growth, because their omission could mask the existence or strength of such a relationship. Political and institutional variables are often relevant in this connection.

Even when the focus is on the growth impact of public health spending, human development spending more generally may be relevant given the likely strong complementarity between health spending and other elements of human development spending. For example, a healthy population is more able to take advantage of educational opportunities, and an educated population will make better-informed health choices. Given this complementarity, it is possible that public health spending alone has little impact on growth, although it is more likely that public health spending does have an independent impact on growth but that its impact is stronger when human development spending in higher.

<sup>&</sup>lt;sup>1</sup> When discussing public spending this paper uses the terms 'pro-poor' and 'human development' interchangeably, although precise definitions of both terms are lacking.

These methodological considerations place a premium on empirical work based on careful consideration of how public health spending and growth are linked in theory, appropriate choice of relevant variables given what is needed in principle and what data availability suggests is practical, and the use of appropriate empirical techniques. To varying degrees, the enormous empirical literature on the determinants of growth takes on the various methodological challenges it faces. Nevertheless, the results from that part of the literature devoted to the contribution from public expenditure and its key components are routinely challenged on methodological grounds. With that in mind, there is little evidence from empirical studies that total public expenditure has a positive effect on growth, especially when the offsetting impact of tax and debt financing of expenditure is factored in. There is some evidence from these studies that productive spending (a combination of economic and social expenditure) tends to promote growth, but this does not appear to be the case for social expenditure on its own (or any of its components, including health expenditure), except for a few countries at specific times. Moreno-Dobson (2008) reports results along these lines. There are some studies that focus more specifically on human development spending which provide stronger evidence of the potentially positive impact of public health expenditure. For example, Ranis and others (2000) identify virtuous and vicious circles between human development, as reflected in a combination of health and education status, and growth in high- and low-growth countries respectively.

The sizable literature on the causes and impact of improved life expectancy provides indirect evidence about the impact of public health expenditure. Part of this literature is concerned with testing the legitimacy of the Preston curve, which suggests that life expectancy increases with per capita income and therefore that growth can avert deaths (which bolsters the case for growth enhancing policies). For example, Pritchett and Summers (1998) find a positive relationship between income and improved life expectancy and reduced infant mortality. More specifically, a 10 percent rise in income increases life expectancy by 1-1½ months and averts 10 infant deaths per 1000 births. But the more relevant part of the literature is that which suggests that increased life expectancy by one year raises output by 4 percent. However, this result has been challenged on methodological grounds (most notably by Acemoglu and Johnson, 2007), although the size of the growth response seems to be questioned more than its existence. In another study, Bloom and others (2010) find that increased life expectancy was the most important reason for growth in China and India between 1965-70 and 1995-2000. In the case of India, it is estimated that between 1965 and 2000 a per capita life expectancy gain valued at \$1,224 was associated with an increase in per capita income of \$1,553.

Even if there is a growth payoff to increased life expectancy, public health expenditure is only one of the many complex determinants of life expectancy, and there is little clear evidence that public health expenditure contributes to growth, be it via increased life expectancy or through other channels. IMF (2015) may be an exception which suggests that health spending is a source of higher growth rates. This would match up with most people's priors. It is difficult to imagine that public spending on good quality health programs does not have an impact on growth through improved productivity. It also seems reasonable that reducing inequality and poverty by improving the health status of the most disadvantaged members of society will have a growth payoff. While World Bank (2006) concludes that public health expenditure contributes to reduced health inqualities, other studies question whether public health expenditure effectively targets low incomes and health status.

A study by the 2013 Lancet Commission on Investing in Health takes an approach to assessing the payoff to health expenditure which starts with the premise that developing countries should invest in the means to reduce deaths from infectious and communicable diseases with the ultimate aim being convergence to uniformly low mortality levels. The required health interventions are costed and compared with the value of deaths averted, where the latter includes both the economic value of a life (reflected in GDP per capita) and the intrinsic value of life years gained (these together are referred to as full income).

In the case of India, it is estimated that the value of each death averted is ten times the cost of averting that death. While this may suggest that health is very good investment, it should be kept in mind that the Lancet Commission estimates can be challenged on a number of grounds, other sectors in India (e.g., telecoms, power, transport) claim similarly large returns to investment, and the total cost involved is 1.2 percent of GDP, which is large compared to current public health spending of around 1 percent of GDP, and the government's targeted increase by close to 1 percent of GDP which must pay for improvements in a wide range health services. As discussed below, it is also large compared to the government's capacity to finance, or create fiscal space for, higher public health expenditure. While India has a large private health sector that would also play a role covering the cost of convergence, the financial burden will fall mainly on the government, which is consistent with the Lancet Commission focus on the role of public health systems in securing convergence.

Based on this brief discussion, proponents of increased public health expenditure can reasonably argue that public expenditure on well-designed health programs should improve life expectancy and other key health status indicators, which can be a driver of growth and development via productivity increases and reduced inequality and poverty. However, the validity of this argument depends upon supporting policies and institutions which ensure that: health programs are integrated with other pro-poor programs so that a virtuous cycle of human development and growth can be set in motion; public expenditure more generally has justifiable public policy objectives and is not wasteful; and broader fiscal and economic policies emphasize macroeconomic stability and growth objectives.

### Measures

Different public health expenditure measures are used in discussions of health policy in India. The Ministry of Finance's Public Finance Statistics (PFS) show that public health spending, which includes spending by the Ministry of Health and Family Welfare and State Departments of Health and Family Welfare on health and on water supply and sanitation, has varied between 1 and 1.2 percent of GDP during the 2000s. According to the National Health Accounts (NHA) estimates, public health expenditure was 0.9 percent of GDP in 2004-05 and 1.2 percent of GDP in 2013-14.<sup>2</sup> Provisional estimates accompanying the 2004-05 estimate suggested public health expenditure increased from 1.0 to 1.2 percent of GDP between 2005-06 and 2008-09. The NHA figures are slightly lower than corresponding PFS figures because the former excludes spending on water supply and sanitation and this is only partly offset by the inclusion of family welfare spending and health spending by agencies other than the Ministry of Health and Family Welfare and State Departments of Health and Family Welfare.

Choudhury and Nath (2012) produce a measure of public health expenditure that covers the same elements as the NHA measure but is slightly lower for 2005-06 to 2008-09 because it is based on actual figures rather than provisional estimates. They also produce a broader measure that includes spending on water supply and sanitation and nutrition but it falls short of the broad measure that has been used as a Planning Commission target because the latter includes spending on child development. According to this measure, public health expenditure was a stable 1.6-1.7 percent of GDP during 2004-05 to 2010-11. The Planning Commission also targeted a narrower 'core' measure which covers only spending on health care and family welfare, which was close to 1 percent of GDP over the same period. This study makes extensive use of PFS figures and figures from the World Bank's World Development Indicators (WDI); the latter closely track the narrow Choudhury and Nath/NHA estimates. Chart 2 provides a summary comparison of these various measures.<sup>3</sup>

It is important to be aware of the different measures of public health expenditure used in India when thinking about the headline targets that feature in government pronouncements about public health expenditure. Most notably, the Twelfth Plan targeted an increase in the broad measure of public health expenditure from 1.9 percent of GDP in 2011-12 (the final year of the Eleventh Plan) to 3 percent of GDP by 2016-17 (the final year of the Twelfth Plan). The narrower 'core' measure was targeted to increase from 1 to 1.9 percent of GDP over the same period. This was less ambitious than the Eleventh Plan, which targeted an increase in core measure from 1 to 2-3 percent of GDP, in line with the 2005 National Commission on Macroeconomics and Health. Popular discussion has tended to focus on planning objectives, and the need according to either measure to increase public health expenditure by around 1 percent of GDP. The government's National Health Policy (2015) says that, while India should aspire to public health expenditure of 4-5 percent of GDP, 2.5 percent of GDP is a realistic target given the failure to meet previous targets. This clearly refers to the broad planning measure. Although this implies a less than 1 percentage increase in both the broad and core planning measures, the discussion that follows focuses on the challenges posed by the need to increase public health expenditure as reflected in PFS and/or WDI figures by 1 percent of GDP.<sup>4</sup>

<sup>&</sup>lt;sup>2</sup> NHA estimates are only produced periodically; see NHA (2004-5) and NHA (2013-14).

<sup>&</sup>lt;sup>3</sup> National data for India usually refer to the fiscal year, which runs from April to March, while most international data usually refer to the calendar year.

<sup>&</sup>lt;sup>4</sup> With end of five-year planning following the transformation of the Planning Commission in 2015 (which is discussed in Section V), the broad and core planning measures are no longer relevant.



Chart 2: Alternative Public Health Expenditure Measures, 2004-05 to 2014-15 (In percent of GDP)

Note: MPH=Medical and public health, FW= Family welfare, OA=health spending by other agencies, WSS=Water supply and sanitation, NUT=Nutrition, CD=Child development

Sources: Public Finance Statistics, National Health Accounts and Twelfth Plan

#### Trends

Health expenditure data can be taken from national sources or from international databases. The discussion that immediately follows is based mainly on WDI data, since this is a source of broadly consistent financial and nonfinancial data that facilitate the international comparisons that come later. The WDI also reports time series and cross-country data on private health expenditure.

Chart 3 confirms that public health expenditure in India is a relatively small share of total health expenditure, which average 1.1 and 4.2 percent of GDP respectively over the period 2000-14.<sup>5</sup> Both have remained stable over time as a share of GDP, although spending per capita, measured in PPP terms at constant international dollars, has in both cases approximately doubled over the period 2000-14. Clearly, some of the forces that are driving up health expenditure around the world—Wagner's Law and Baumol's 'cost disease' discussed earlier, technological advances, and demographic change in many countries—are at play in India, but they are not being reflected in the increases in health expenditure as a share of GDP seen in many other countries. Chart 4 shows that the income elasticity of public health expenditure over the period 2000-14 has been slightly below 1, implying that public health expenditure per capita has increased more or less in line with the growth in real GDP per capita. This elasticity has varied over the years and was at its highest following the introduction of the National Rural Health Mission (NRHM) in 2005. The NRHM later became the National Health Mission (NHM). The income elasticity of total health expenditure is closer to 1.5 as private health expenditure has increased considerably faster than public health expenditure.

<sup>&</sup>lt;sup>5</sup> For comparison purposes, public health expenditure/GDP series based on WDI and PFS data are depicted. The difference between total and public health expenditure is primarily out-of-pocket health spending; private insurance coverage is very limited.

#### Chart 3: Health Expenditure Trends, 2000-2014



Source. World Development indicators





Source: Author's calculations

As Chart 5 shows, the central government has been responsible for about a fifth of public health expenditure over the 2000s, with the central government share increasing steadily over the period, and especially with the introduction of the NRHM/NHM, which is a central government initiative. However, Chart 5 suggests that central government health expenditure significantly decreased in 2014-15 while an increase in state government health expenditure more than offset this; the central government share of public health expenditure consequently collapsed. While the central government did respond to fiscal pressures by withdrawing budget support for state health spending and for the NHM, other changes occurred in 2014-15 that affect the interpretation of health expenditure trends around that time. These are discussed in Appendix I.



### Chart 5: Central and State Government Health Expenditure, 2000-01 to 2014-15

Source: Public Finance Statistics

#### International comparisons

Much attention has been paid to the low level of public health expenditure in India. Chart 6 places health expenditure in India in an international perspective by presenting 2014 WDI data for India and 24 comparator countries ordered by GDP per capita. The comparators comprise the other BRICS, large developing countries, countries with a similar per capita income to India, and selected other MICs, mainly in Asia. The comparator countries are: Bangladesh, Brazil, Cambodia, Cameroon, China, Cote d'Ivoire, Egypt, Ghana, Indonesia, Jordan, Lao PDR, Malaysia, Mexico, Nigeria, Pakistan, Philippines, Russia, South Africa, Sri Lanka, Sudan, Thailand, Turkey, Vietnam, and Zambia.

Chart 6 shows that total health expenditure, and its public and private components, vary significantly across countries. While health expenditure in India does not appear to be especially low relative to countries at a similar income level, Table 1 suggests while spending the same amount relative to GDP as poorer comparators, total health spending per capita is considerably higher. This is because, relative to India, health expenditure shares are higher in poorer countries than would be expected given their significantly lower average GDP per capita. The picture for public health expenditure is similar, but with a lower public expenditure share in India still producing higher per capita spending. While this may cast health expenditure in India in a somewhat favorable light, it is difficult to justify comparing India only with lower MICs when its aspirations are to achieve the health status of other BRICS and higher-income comparators. Compared to these countries, India has considerable catching up to do. Although Chart 7 suggests that this catching up may occur naturally with increasing GDP, and particularly that growth will generate some of the resources required to pay for increased public health spending, the government will also need to proactively create additional fiscal space.

#### Chart 6: Health Expenditure Across Countries, 2014



Public health expenditure per capita (PPP, current international dollars, left axis)
Private health expenditure per capita (PPP, current international dollars, left axis)



Note: Countries ranked by GDP per capita, PPP, current international dollars Source: World Development Indicators

# Table 1: Health Expenditure in India and Comparator Countries, 2014

	India	All Comparators	Poorer	Richer
			Comparators	Comparators
		Percent		
Total health	4.7	5.2	4.7	5.5
expenditure/GDP				
Public health	1.4	2.4	1.7	2.9
expenditure/GDP				
		PPP, current international dollars		
Total health	265	562	190	827
expenditure per				
capita				
Public health	80	294	73	451
expenditure				
GDP per capita	5377	9661	3837	13807

Source: World Development Indicators



### Chart 7: Health Expenditure and GDP Per Capita, 2014

Source: World Development Indicators

# III. Health Care Capacity, Health Service Delivery and Health Status

Table 2 describes what might be thought of as the health 'production process.' This identifies production stages involving the transformation of: financial inputs (health expenditure) into physical inputs (health care capacity); physical inputs into outputs (health service delivery); outputs into intermediate and final outcomes (health status); and outcomes into final objectives (human development). Indicators relevant to each production stage are included.

### Table 2: Health Production Process

Health expenditure	Financial input=expenditure as share of GDP and
	per capita, public vs. private expenditure
Health care capacity	Physical inputs=assets, personnel, equipment,
	medicines=potential to diagnose, treat, prevent
Health service delivery	Outputs=diagnosis, treatment, prevention
	=consultations, surgeries, prescriptions,
	immunization
Health status	Intermediate outcomes=incidence of illness,
	disease
	Final outcomes=life expectancy, maternal and child
	mortality
Human development	Final objectives=GDP per capita, HDI, inequality and
	poverty reduction

Table 3 reports on various health and other indicators. The data are for 2014 or the latest available year. As for health status, final and intermediate health outcome indicators (life expectancy, maternal mortality, child mortality, incidence of tuberculosis (TB) and deaths from communicable diseases and other conditions) are in nearly all cases considerably better than in poorer counterpart countries but significantly worse than for richer counterparts. The incidence of TB in India is generally low. A similar picture emerges for health service delivery, with output indicators (measles immunization, births attended by skilled health professionals and pregnant women receiving pre-natal care) in India being better than for poorer comparators in the case of two of the three indicators. Relatively few pregnant women in India receive pre-natal care. For health care capacity, the physical input indicator (the number of skilled health professionals), the situation in India is again better than in poorer comparators and worse than in richer comparators. However, there is evidence suggesting that the availability of hospital beds and the nurse/doctor ratio are both low relative to poorer and richer comparator countries.

Chart 8 suggests that the three final-outcome indicators (life expectancy, maternal mortality and child mortality), are each better or no worse than would be expected given India's health expenditure per capita and GDP per capita. It should be noted that Chart 8 describes correlations, not causal relationships. Especially in the case of the link between health outcomes and GDP per capita, the causation is unclear. It must also be remembered that outcomes may depend on a host of factors unrelated to GDP per capita and health expenditure. That said, the data remain consistent with the idea discussed earlier that there is a relationship between health expenditure, health status and income, with a feedback from income to health expenditure. This being the case, increasing health expenditure in countries with unsatisfactory health status indicators, like India, should not only improve outcomes, but also promote growth and development. Related to the latter, Table 3 also indicates that the Human Development Index (HDI), which has income, health and education components, is higher for India than for poorer counterparts and worse than for richer counterparts. Income inequality and head-count poverty are relatively low.

Table 3: Health Status and Other Indicators for India and Comparator Countries, 2014 or latest available year

	India	All Comparators	Poorer	Richer
			Comparators	Comparators
Life expectancy at birth	68.3	68.2	64.8	70.7
(years)				
Maternal mortality rate	174.0	185.2	286.1	113.1
(per 100,000 live births)				
Child mortality rate (per	47.7	39.5	61.2	24.8
1000 live births)				
Incidence of TB (per	167.0	197.0	226.6	175.9
100,000 people)				
Deaths from	28.1	27.2	38.7	18.8
communicable diseases				
and maternal, prenatal				
and nutrition conditions				
(percent of deaths)				
Measles immunization	87.0	86.5	83.2	88.9
(percent of children				
aged 1-2)				
Births attended by	74.0	74.2	59.3	84.8
skilled health				
professionals (percent				
of births)				
Pregnant women	49.7	66.5	55.0	77.0
receiving pre-natal care				
(percent of pregnancies)				
Skilled health	24.1	26.9	10.7	40.4
professionals (per				
10,000 people)				
Human Development	0.63	0.66	0.56	0.73
Index				
Gini coefficient	35.1	41.2	38.9	42.8
Poverty head count	22.0	24.0	32.3	18.3
(percent of population)				

Sources: World Development Indicators, World Health Organization





Source: Author's calculations

# IV. Fiscal Space for Health

### Fiscal space, fiscal policy and public financial management

Fiscal space refers primarily to the <u>capacity to finance additional public spending</u> through resource mobilization and expenditure rationalization. Resource mobilization can involve revenue generation, aid scaling up, and/or increased borrowing. Aid is a potentially important source of fiscal space in many developing countries, but this is not the case in India. However, given extensive public ownership in India, disinvestment proceeds could be important. Expenditure rationalization can be achieved through reallocating spending, improving cost effectiveness and relying more on private provision (e.g., through public-private partnerships, PPPs). Appendix 2 provides some background on fiscal space.

Resource mobilization and expenditure rationalization are sources of fiscal space, but the availability of fiscal space does not mean that fiscal space is used well. For this reason, it is usual to talk about creating fiscal space for some purpose. Uses of fiscal space can refer to some specific category of spending, such as health, pro-poor spending or infrastructure spending, to spending with a shared characteristic, such as productive or development spending, or to spending in pursuit of a general objective such as economic and social development, poverty reduction, or meeting key Sustainable Development Goals (SDGs). Determining the <u>capacity to achieve increased public spending</u> in priority areas should be a principal aim of fiscal space analysis. However, fiscal space does not necessarily have to be used to pay for increased spending; it could instead be used for debt reduction or to lower taxes.

Decisions regarding the sources and uses of fiscal space clearly involve fiscal policy analysis. In this connection, both the macroeconomic and microeconomic dimensions of fiscal policy are important. From a macroeconomic perspective, the government uses total revenue and expenditure to influence aggregate demand as a means of safeguarding macroeconomic stability. This requires fiscal discipline, or ensuring that the overall level of expenditure is consistent with revenue and borrowing levels that do not compromise macroeconomic (i.e., growth, employment, inflation and balance of payments) targets by imposing an excessive tax burden, putting upward pressure on interest rates, prices and exchange rates, or causing an unsustainable build-up of debt. From a microeconomic perspective, the government is primarily concerned with tailoring the tax structure and expenditure composition to secure efficiency in the allocation and use of resources, together with distributional equity.

Public financial management (PFM) is often equated with budget management. This is unsurprising given that the government budget is where, in most countries, the main decisions about fiscal policy are enshrined. Moreover, while revenue and borrowing are key elements in budgeting, the budget is widely regarded as an expenditure budget. However, this is too narrow a perspective. It is better to think of PFM as being concerned with the institutional arrangements that affect the design and implementation of the government's fiscal plans and its overall fiscal performance. Institutional arrangements refer to agencies, laws, systems and procedures, and to capabilities that influence their effectiveness. Thus, while fiscal policy is concerned with fiscal discipline and spending efficiency from a policy design perspective, PFM is concerned with the implementation of specific policies designed to meet these objectives, with a focus on aggregate expenditure control (so that expenditure is consistent resource availability) and the ability to plan, budget for and implement expenditure programs guided by clear policy objectives.

The discussion that follows focuses on the creation of fiscal space through resource mobilization and expenditure rationalization. Ensuring the effective use of fiscal space is taken in Section VI.

### Sources of fiscal space in India

Any discussion of fiscal space needs be framed in the context of overall economic developments and the economic outlook. Chart 9 and Chart 10 summarize the situation in India. Key variables do not point to recent or prospective macroeconomic stress. Growth should remain in the 7-8 percent range while inflation and the current account deficit are held in check. However, there are risks to the outlook, and especially relating to investment if structural reforms falter. Fiscal policy remains a significant challenge, with fiscal deficits and government debt remaining relatively high, the prospects for fiscal adjustment being constrained by unfulfilled expenditure needs and a stubbornly low revenue ratio, and potential fiscal pressures that are considered below.

#### Total investment (right scale) Gross national savings (right scale) Current account balance (right scale) -Gross domestic product, constant prices (left scale) Inflation, average consumer prices (left scale) 12 45 40 10 35 30 Percentage Change 8 Percent of GDF 25 20 6 15 10 4 5 0 2 -5 0 -10 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022

### Chart 9: Economic Developments and Outlook, 2008-2022

Source: IMF World Economic Outlook

#### Chart 10: Fiscal Developments and Outlook, 2008-2022



Note: EMME refers to emerging market middle-income economies Source: IMF Fiscal Monitor

### Taxation and revenue administration

Total government revenue is currently a little over 21 percent of GDP, which is well below the 27 percent of GDP average for EMMEs. Compared to the early 1990s, the tax ratio has risen only by 1 percentage point. The main achievement of extensive tax reform that was started in the mid-1980s has been a major shift from indirect to direct taxation. In the early 1990s, the central government collected more than three-quarters of its tax revenue from indirect taxes in the form of excise duties on domestically produced goods and customs duties on imports. The central government now collects a third of its tax revenue from indirect taxes, with sharp reductions in excise and customs duty collections being in part offset by revenue from services tax (which was introduced in 1994-95). The increase in the share of direct taxes largely reflects a sharp increase in corporate income tax collections.

States also collect taxes, primarily excise taxes and state general sales tax (GST) that account for the bulk of states' own tax revenue. In addition, states receive a share (currently 42 percent) of revenue from major taxes collected by the central government according to formulas recommended by finance commissions that are constituted every five years. This has been problematic in the past because the central government tended to raise revenue by increasing customs duties that it does not share with states, which made tax system unbalanced and created trade distortions. Trade reform has made this much less of an issue. Table 4 provides information about the tax structure in India.

Tax reform proposals in India have been geared toward putting in place a modern tax system that is efficient, fair, and a buoyant revenue source. The main objective of ongoing tax reform has been to introduce a nationwide GST. Significant steps have been taken in this direction over the years, including the addition of a limited credit mechanism for excise duties (modified value-added tax or MODVAT) in the mid-1980s, which was subsequently extended so that excise duties were transformed into the current central value-added tax or CENVAT; introduction of the service tax in the mid-1990s; and the gradual shift to state GSTs during the 2000s. While numerous obstacles resulted in delayed integration of these taxes and the central sales tax on interstate sales into the GST, a GST bill in which states ratified a nationwide GST was passed in 2016 and the GST was formally introduced in June 2017. Another tax reform aim is

to address shortcomings of the direct tax code by rationalizing exemptions and tackling tax avoidance, but progress has been limited. A general feature of tax reform to date has been an emphasis on lowering of tax rates and simplification of rate structures, but tax bases have only expanded by enough to recapture the revenue loss from tax rate changes. Tax expenditures still reduce the aggregate tax base by more than 25 percent. Hence relatively little has been achieved in terms of revenue mobilization.

### Table 4: Revenue Structure, 2015-16 (In percent of GDP)

Total Revenue	21.1
Tax Revenue	17.1
Nontax Revenue	4.0
Central Government	
Tax revenue (gross)	10.5
States' tax share	3.6
Tax revenue (net)	6.9
Direct tax revenue (net)	3.4
Personal income tax	1.3
Corporate income tax	2.1
Indirect tax revenue (net)	3.5
Excise Duties	1.6
Customs Duties	0.9
Service Tax	1.0
State Governments	
Tax revenue	10.2
Own tax revenue	6.6
General sales tax (GST)	4.0
States' tax share	3.6

Source: Reserve Bank of India Handbook of Statistics on Indian Economy, Public Finance Statistics

Revenue administration has been a long-standing concern in India. Despite improvements in the tax structure and lower rates, which are normally expected to improve tax compliance, weak administration and extensive evasion mean that the tax gap—the difference between actual tax collections and what could be collected with full compliance—is around 12 percent, which puts India in the low administrative effort group of countries (see Min Le and others, 2012). Tackling tax evasion is especially difficult in India given the size of the informal economy, which is widely acknowledged to be about 25 percent of GDP but some estimates are double this figure. Moreover, only a very small number of identified tax evaders (i.e., a few hundred or 1-2 percent at most) are prosecuted and most of those are acquitted.

Various aspects of revenue administration are assessed in the 2010 Public Financial Management Performance Assessment Report (PFMPAR), which was prepared by the National Institute of Public Finance and Policy at the

request of the World Bank using the Public Expenditure and Financial Accountability (PEFA) assessment methodology. PEFA summarizes the quality of PFM using 28 high-level performance indicators (PIs), three of which relate to revenue administration. The scores for these three indicators, reported in, Table 5 provide clear cause for concern.

### Table 5: PEFA Revenue Administration Scores

PI-13 Transparency of taxpayer obligations and liabilities C+	
PI-14 Effectiveness of measures for taxpayer registration and tax assessment	B+
PI-15 Effectiveness in collection of tax payments	D+

Note: Scores range from A (highest) to D (lowest).

Source: Public Financial Management Performance Assessment Report, National Institute of Public Finance and Policy, 2010.

Combining these PEFA scores with the results of many other reviews, the key revenue administration strengths and weaknesses can be described as follows:

- There is an explicit legal basis for taxation, but too much discretion is allowed in the application of tax laws. Poor taxpayer services mean that there is a lack of readily available information about how tax liabilities are calculated and how assessments can be appealed, which is a major source of non-transparency.
- Progress has been made with taxpayer registration and audit, but more use could be made of personal account numbers as a basis for information exchange. In addition, there should be a shift to risk-based audit.
- Two-thirds of tax assessments are disputed, and there are extensive and persistent tax arrears. Cumulative arrears are the equivalent of annual tax collections, with less than 10 percent being cleared each year.
- Tax agencies and tax officials are not properly incentivized, nor are they accountable for their performance either in terms of the agencies' tax collection efficiency or the dubious methods their employees use to collect taxes.

A Tax Administration Reform Commission was set up in 2013. Its terms of reference and first report (issued in 2014) cover organizational structure, business processes, dispute resolution, and taxpayer services and education. The government has yet to act upon the Commission's recommendations. Indeed, the only government initiative that is likely to have a significant impact on existing tax evasion and future tax compliance is the demonetization launched at the end of 2016, although neither its benefits nor its costs are yet clear.

While the preceding discussion points to areas where further reform could potentially generate additional revenue from existing taxes, especially as regards administration. However, the fact that a low tax ratio has persisted despite past policy and administrative reforms suggests that there few easy wins to be exploited. In this connection, a companion paper by Glenday and others (2019) suggests that, compared to many other countries, India is actually quite successful in exploiting its tax potential given its economic structure (with a large agricultural sector and extensive informal activity) and its challenging tax policy choices (especially as regards scaling back exemptions and other tax expenditures). This does not mean that India's ability to increase its tax ratio is stymied by these characteristics, but rather that doing so will require a more concerted and successful reform effort than in the past.

On reform option that is not widely discussed, especially after the drawn-out launch of the GST concerns whether India should consider other new taxes. In this connection, and of particular relevance to this study, it has been proposed that India should impose higher taxes on tobacco and alcohol, and especially the former, and use the revenue collected to pay for increased public health expenditure. Another proposal is that a tax surcharge or should be imposed (i.e., a charge is added to existing taxes), with the revenue also being used to increase public health expenditure (in India this is referred to as a health cess). Appendix 3 considers these proposals in some depth, but the main conclusion is that there is a case to be made for taxing alcohol and tobacco at high rates because this will either generate considerable revenue or discourage activities that give rise to higher health costs. However, the case for earmarking tobacco or alcohol tax revenue to health or any other category of spending is weak, while tax surcharges are generally undesirable.

# Borrowing and macro-fiscal management

India's capacity to create fiscal space through borrowing largely depends on the decision made about a mediumterm debt target. It is often claimed that emerging market countries should keep their debt below 40 percent of GDP, but India's debt structure is less risky than that of many other countries because its debt is mainly domestic and has a relatively long maturity. The current consensus seems to be that general government debt should be brought down from the current level of 70 percent of GDP to around 60 percent of GDP.<sup>6</sup> If India continues to run a general government deficit of 6-7 percent of GDP, the current medium-term macroeconomic outlook suggests that the debt ratio will fall, but not fast enough. A phased reduction in the general government deficit by 1 percentage point should be sufficient to achieve a 60 percent of GDP target by 2022. The key issue is whether the required deficit reduction can be delivered.

The 2003 Fiscal Responsibility and Budget Management Act (FRBMA) of 2003 provides a framework for securing fiscal discipline at the central government level. The FRBMA is best known for its original headline targets—reducing the central government's fiscal deficit to 3 percent of GDP and eliminating its revenue deficit (which is roughly equivalent to the difference between revenue and current expenditure), both with effect from 2009-10. However, the fiscal deficit target was reached in 2007-08 and then relaxed for 2008-09 and 2009-10, to 3.5 and 4 percent of GDP respectively, under pressure from lower growth, stimulus programs, and spending in the run up to the 2009 election. The FRBM was then suspended in 2009 for more than two years, before being reinstated for 2012-13. The 3 percent of GDP deficit target was retained, but the revenue deficit target was changed to eliminating the effective revenue deficit (excluding grants for capital projects from revenue expenditure), which amounts to a revenue deficit target of 1.2 percent of GDP. Both targets were to be achieved in phased manner by 2015-16. Chart 11 summarizes central government fiscal performance relative to the FRBMA targets.

State FRBM Acts were introduced between 2003 and 2007 with provisions similar to those of the FRBMA, although with differences across states. Chart 12 shows that the states' fiscal performance has been more impressive than that of the central government, and the subsequent deterioration less pronounced. This in part reflected incentives offered to those states which adopted fiscal responsibility legislation and observed legislated targets. Reductions in state fiscal and revenue deficits was largely based on strict control of wage and salary spending.

In April 2016, the FRBM Review Committee recommended replacement of the FRBM Act with a Debt and Fiscal Responsibility Act (the Debt Act). This proposes the phased reduction in the central government fiscal deficit from 3.5 to 2.5 percent of GDP between 2016-17 and 2022-23, which will bring central government debt down to below 40 percent of GDP. At the same time, the revenue deficit is to be brought down from 2.3 to 0.8 percent of GDP. For the states, the Debt Act envisages a reduction in the fiscal deficit from 3.0 to 2.0 percent of GDP, implying that debt

<sup>&</sup>lt;sup>6</sup> See IMF (2017) and Journard and others (2017).

will rise slightly from its current 21 percent of GDP level but return to this level by 2024-25. At that time, the combined debt of the central and state governments should be under the Debt Act's 60 percent of GDP headline debt target. The Debt Act also proposes a limit on the issuance of new central government guarantees and the creation of a fiscal council to monitor compliance with the Act's provisions.





Note: The revenue deficit is the difference between current revenue and revenue (current) spending Sources: Reserve Bank of India Handbook of Statistics on Indian Economy



### Chart 12: States' Fiscal Performance, 2003/04-2015/16

Source: Reserve Bank of India Handbook of Statistics on Indian Economy

Notwithstanding the need to address shortcomings with the FRBM, and the thoroughness of the thinking and analysis supporting the proposed Debt Act, its provisions seem to be over-engineered. The three targets—debt, fiscal deficit and revenue deficit—are probably two too many. A debt anchor in the form of a path for the debt implies a path for the fiscal deficit (in the absence of the government having to take on any hidden liabilities). And a revenue deficit target has always been problematic given that both current and capital spending have productive and unproductive elements. It would be better to combine a high-level debt rule with operational expenditure ceilings that impose discipline on budget spending and establish accountability for expenditure overruns. The debt rule

would be enshrined in the Debt Act while the expenditure ceilings would be set in the context of a medium-term expenditure framework (MTEF), as discussed in Section VI and Appendix 5.

While a case can be made that a 60 percent of GDP debt target, and maybe even something less restrictive given that the current 70 percent of GDP debt ratio is not an immediate worry, the fiscal position could become a cause for concern if:

- The weak financial positions of public banks, which are aggravated by corporate stress, and state electricity companies could necessitate government bailouts.
- Demonetization adversely affects economic activity and government revenue, and further weakens corporate and bank balance sheets.
- Real interest rates, which have been negative in the recent past, are significantly higher in the future, particularly if financial sector reform and market pressures combine to attach a more significant risk premium to interest rates.

These sources of fiscal vulnerability in India suggest that aiming for a tighter fiscal position now would be a sensible precaution and could help avoid larger deficits and higher debt later.

# Privatization/disinvestment

For many years India has been raising resources by selling equity stakes in public enterprises. This is referred to as disinvestment, which falls short of full privatization. Since the disinvestment program started in the early 1990s, it has raised a total of about 4.5 percent of GDP, primarily from the sale of minority stakes in some of the largest public enterprises in the coal, oil, and natural gas; petroleum; power generation; and telecommunications sectors.<sup>7</sup> As can be seen from Chart 13, the program has been implemented in an erratic manner. The variability in disinvestment proceeds is considerably more than what was targeted, and in many years only a fraction of the amount targeted was collected. This reflects difficulties the government has faced in fixing share prices (or valuing enterprises). Combined with the fact that very large shareholdings are being sold, this has tended to create a lot of price instability. Because of the risk this entails and the limited resources of retail investors, public financial institutions are now the major shareholders of many enterprises.

Public enterprises continue to play a significant role in the Indian economy, with around 220 enterprises contributing more the 20 percent of GDP and correspondingly sizable amounts to investment, employment, and government revenue. Moreover, because the government retains a controlling interest in enterprises that have been privatized, it still dominates key sectors of the economy—coal, oil, and natural gas; petroleum; power generation; and telecommunications. Power distribution is a responsibility of state electricity companies. This suggests considerable scope for further disinvestment. However, while the law permits divestment of up to 74 percent of shares in enterprises outside a few strategic sectors (defense, atomic energy, and railways), but there remains a reluctance to give up controlling interests in economically important sectors, especially where markets are not inherently competitive or need to be regulated for other reasons.

<sup>&</sup>lt;sup>7</sup> These companies are now some of the largest quoted on the Indian stock exchange.



### Chart 13: Disinvestment Proceeds, 1991/91 - 2015/16 (In percent of GDP)

Source: Ministry of Finance

Overcoming the historically ingrained belief that government ownership and control are effective forms of regulation in the majority of markets currently dominated by public enterprises is the key to significantly advancing the disinvestment program and ultimately moving to full privatization. To this end, NITI Aayog (National Institution for Transforming India, which replaced the Planning Commission in 2015—see Section V) has developed a strategic divestment program. Pending the program's implementation, the government, particularly supervising ministries, should take an arm's length approach to their oversight of public enterprises. It is especially important that they hold enterprise boards and managers accountable for performance, and especially for the profits they earn, the taxes and dividends they pay, and hence their contribution to government revenue and fiscal space.

# Expenditure reallocation

General government expenditure in India is slightly more than 28 percent of GDP. This is 1<sup>3</sup>/<sub>4</sub> percentage points lower than in the early 1990s, which is a consequence of fiscal adjustment efforts that have had to emphasize expenditure retrenchment in the face of a stubbornly low revenue yield. Adjustment has been undertaken primarily by the central government and reflects mainly lower revenue (current) expenditure on interest and defense. Capital expenditure has increased slightly, as states have taken on more responsibility for infrastructure investment. Given that general government expenditure in EMMEs averages nearly 30 percent of GDP, India is clearly not a big spender.

Total Expenditure	28.1
Revenue Expenditure	23.6
Interest	4.9
Capital expenditure	4.5
Central Government	
Total expenditure	13.1
Revenue expenditure	11.3
Interest	3.2
Grants to states	3.0
Capital expenditure	1.7
State Governments	
Total expenditure	17.9
Revenue expenditure	14.3
Interest	1.6
Capital expenditure	3.6

### Table 6: Expenditure Structure, 2015-16 (In percent of GDP)

Source: Reserve Bank of India Handbook of Statistics on Indian Economy, Public Finance Statistics

That there may be room to increase expenditure in India is fortunate given that spending in two key areas is lower than required to meet high-profile policy objectives. First, the infrastructure gap to be filled during the Twelfth Plan (2012-13 to 2016-17) was estimated to be \$1 trillion, which is about 60 percent of 2012/13 GDP. The plan would not have closed this gap, but it did envisage infrastructure investment averaging around 7.5 percent of GDP a year, compared to 5 percent of GDP achieved during the Eleventh Plan. The bulk of this increase was to be covered by the private sector, which would increase its share of infrastructure investment from a third to a half, implying that the government and public enterprises would have to finance only about 0.5 percent of GDP a year of additional infrastructure spending. However, as discussed below, while the government has taken steps to encourage private sector participation in infrastructure, the achievements in this area have been limited.

Second, pro-poor spending would seem to be low given the need to improve social indicators. However, it is difficult to estimate the cost involved, in part because the objective is unclear. For India, the aim is to do more than meet a minimum standard, such as achieving relevant SDGs. Instead, India's goal is to move significantly in the direction of reducing poverty to the levels achieved in other MICs and improving its ranking according to the World Bank's HDI to better than 131 out 187 countries.

There is, however, an issue as to what constitutes pro-poor spending. Official statistics highlight an aggregate measure of social spending—education, family welfare, medical and public health, and water and sanitation—that amounted to 4.5 percent of GDP in 2014/15 for the combined central and state governments. As a measure of pro-poor spending, this is probably on the low side. The estimate of pro-poor spending in Table 7—8.0 percent of GDP in 2014/15—adds to the official measure food subsidy, labor market and employment, and rural development spending, which are key poverty reduction programs in India. While this level of pro-poor spending is almost certainly inadequate given India's lagging social indicators, it is difficult to say how much more needs to be spent given a lack

of internationally comparable data on pro-poor spending.<sup>8</sup> But there is no doubt that increasing pro-poor spending would amount to a considerable claim on available financing.

	Central Government	State Governments	General Government
Pro-Poor Spending	2.3	5.7	8.0
Education	0.5	2.9	3.4
Medical and Public Health, Water Supply	0.1 1.2		1.3
and Sanitation			
Family Welfare, Social Security and Welfare	0.2	1.4	1.6
Labor and Employment	0.0	0.1	0.1
Food Subsidies	1.0	0.1	1.1
Rural Development	0.5	1.0	1.5

## Table 7: Pro-Poor and Non-Discretionary Spending, 2014-15 (In percent of GDP)

Table 8: General Government Spending by Spending Category, 2014-15 (In percent of total expenditure)

Spending Category	
Pro-Poor Spending	32.3
Interest	17.3
Defense	6.3
Pensions	7.7
Police, Foreign Service, Administration	5.8
Power, Irrigation, and Flood Control	6.1
Transport and Communications	5.9

Note: General government refers to the combined central and state governments Source: Indian Public Finance Statistics

Table 8 also highlights some of the challenges posed by efforts to secure an increase in pro-poor spending (including health spending). First, pro-poor spending is primarily a state responsibility, so increasing it requires that more resources be shifted to the states. This transfer of funds will have to be achieved in the context of the existing approaches to expenditure planning and budgeting, together with central-state financial relations. The question as to whether these arrangements can deliver the required spending reallocations is taken up below and in a companion paper on health systems and expenditure in Indian states. Second, pro-poor spending accounts for a third total spending, and close to another half could be claimed to be nondiscretionary or high priority (including spending on infrastructure). Like spending in general, the remainder is dominated by wage costs. International standards suggest that wage levels are relatively high in India, but government employment is relatively low, although both of these observations are questionable.<sup>9</sup> In any event, the fact that wages are determined by the

<sup>&</sup>lt;sup>8</sup> The only available estimate of the required increase in pro-poor spending is that it has to rise from 2.7 percent to 9.2 percent of GDP ("Report of the National Commission on Macroeconomics and Health," Ministry of Health and Family Welfare, Government of India, 2005), but coverage of this figure and the basis for the estimated increase are not entirely clear. Pakistan has spent as much as 10 percent of GDP in recent years, although the measure of pro-poor spending is broader than in Table 7 (Embassy of Pakistan, Economics Division, "Pro-Poor Spending, Fiscal Year 2010-11," July 1, 2010).

<sup>&</sup>lt;sup>9</sup> Benchmarks are provided in Clements and others (2010). However, wage levels are measured relative to GDP per capita and employment relative to population. Each of these indicators can be misleading in countries with large agriculture sectors and a lot of informal economic activity.

recommendations of pay commissions that report every 10 years or so, and because the public sector is heavily unionized, wage and employment adjustments are very difficult to achieve.

If there is one area of spending that is widely acknowledged to have been excessive, it is subsidies on food, fertilizer, kerosene and liquefied petroleum gas (LPG). The subsidy bill was 2.5 percent of GDP in 2012-13, 2.0 percent in 2014-15 and 1 percent of GDP in 2016-17. The reduction reflects liberalization of petroleum product prices which eliminated subsidies on gasoline and diesel and curtailed subsidies on kerosene and LPG. While there is scope for further subsidy reduction, because food and fertilizer subsidies can be better targeted, the food distribution system is inefficient and fertilizer is overused, the scope for savings is narrowing. The replacement of subsidies with direct income transfers using unique identification numbers issued to each citizen is beginning to look more likely, <sup>10</sup> possibly in the context of introducing a universal basic income. This should achieve further expenditure savings, but these will be modest.

# Cost effectiveness and expenditure efficiency

Cost effectiveness is an aspect of expenditure efficiency, which has two elements.

- Allocative efficiency is concerned with whether the composition of government expenditure is appropriate, that is whether the government is producing the right outputs given the outcomes it is targeting. In principle, the aim is to equate marginal net social benefits across all sectors and programs. In practice, the most that can reasonably be achieved is to identify clear resource misallocations (e.g., where programs are obviously inconsistent with sector objectives). The discussion in the previous section deals mainly with allocative efficiency.
- *Technical (or productive) efficiency* is concerned with the value-for-money offered by expenditure programs, or whether the input mix is appropriate given the outputs that are produced. This is what most people think of as cost effectiveness.

Expenditure efficiency analysis typically focuses on specific sectors. In the health sector, a common comparison is between health expenditure and life expectancy across countries. These are regarded as an input and output respectively (as discussed above, life expectancy is better viewed an outcome as distinct from an output). If India spends more to achieve the same life expectancy as other countries, the public expenditure saving that can be achieved by spending more efficiently reflects a reduction in *input inefficiency*. The life expectancy improvement that could be achieved by spending more efficiency reflects a reduction in *output inefficiency*. The focus of the following discussion is input efficiency, because an input focus seems to be a better starting point when thinking about questions of fiscal space.

Chart 14 compares life expectancy and total health expenditure (as a share of GDP) in India and the comparator countries used in Section III. The focus is on total rather than public health expenditure because this should be the main determinant of life expectancy and other health status indicators. The most efficient countries—Bangladesh, Lao PDR, Sri Lanka, and China—are those that spend the least at various life expectancy levels, assuming non-increasing returns to spending. India (the triangular data point) lies well inside the frontier, with Table 9 suggesting that input inefficiency in India is 51.5 percent. This implies that, if health spending in India was efficient in the sense that it is on the efficiency frontier given its current life expectancy, it could achieve the same level of life expectancy while reducing health expenditure/GDP by 51.5 percent (i.e., from 4.7 to 2.3 percent). The average for comparator

<sup>&</sup>lt;sup>10</sup> As recommended in the 2011 "Interim Report of the Task Force on Direct Transfer of Subsidies on Kerosene, LPG and Fertilizer" (the Nilekani Report).

countries is 40.2 percent, suggesting that India is somewhat less efficient than the average comparator country. Table 9 reveals a high degree of consistency across the results for other outcome and output indicators. Chart 15 suggests that input inefficiency increases with health expenditure; this is a common finding from efficiency studies, and it points to the importance of paying more attention to efficiency as spending rises. Appendix 4 looks in more detail at expenditure efficiency analysis.



### Chart 14: Health Expenditure Efficiency Frontier

Source: Author's calculations

#### Table 9: Health Expenditure Efficiency Estimates

Output=>	Life expectancy at birth	Maternal mortality rate	Child mortality rate	Deaths from communicable diseases and poor country conditions	Incidence of tuberculosis	Measles immuniza tion	Births attended by skilled professionals	Pregnant women receiving pre-natal care
			I	Input inefficiend nput=Total health e	cy (percent) xpenditure/GDP			
India	51.5	55.4	50.1	51.3	60.2	60.6	48.3	63.8
Comparator average	40.2	33.4	40.6	43.3	48.9	51.1	41.7	42.6

Source: Author's calculations





Source: Author's calculations

While health expenditure in India does not appear to be especially inefficient compared to other countries (there are many less efficient countries), it is nonetheless quite inefficient. Moreover, it is almost certainly more inefficient than suggested in Table 9 because the most efficient countries are themselves inefficient. The data are certainly consistent with less systematic observations about the clear scope to improve efficiency. However, inefficiency reflects both expenditure misallocations, to the extent that outputs are well matched to desired outcomes, and weak cost effectiveness. It is difficult to distinguish the contribution of these two elements to overall efficiency. But, as discussed Section V, expenditure planning and budgeting in India has weaknesses that would point to misallocations across sectors and programs, while the detailed discussion in the companion paper on health systems and financing at the state level suggests that health expenditure offers poor value-for-money.<sup>11</sup>

# Private participation

The Indian government has started to introduce public-private partnerships (PPPs) to provide infrastructure. PPPs delay capital spending because this gets reflected in service delivery costs. PPPs can only create additional scope for spending if they are more efficient than traditional public investment and reduce project costs. Nevertheless, with a pressing need for infrastructure, the ability to delay capital spending on infrastructure and align total (capital and recurrent) costs with the flow of infrastructure services is valuable. Ministry of Finance data for 2011 identified 758 PPP projects at various stages of implementation, with a total value equivalent to about 4.75 percent of GDP. Road, port, and energy projects contributed 85 percent of the total by value, and projects in five states (Andhra Pradesh, Gujarat, Karnataka, Maharashtra, and Uttar Pradesh) accounted for around 60 percent.

The government now sees PPPs as the preferred implementation model for infrastructure projects, including in the social sectors. The Twelfth Plan envisaged the private sector contributing half of the infrastructure investment planned for 2012-13 to 2016-17, compared to the quarter and third achieved under the Tenth and Eleventh Plans respectively. The government has taken a number of steps to encourage PPPs: it issued a national PPP policy document in 2011; it has provided toolkits and related guidance material to aid both government agencies and potential private partners; and it has established a PPP cell in the Ministry of Finance as a government focal point on all PPP-related matters. The road sector appears to be where PPPs are attracting the most attention and

<sup>&</sup>lt;sup>11</sup> For a good overview of the sources and consequences of inefficiency in the health sector in India see Journard and Kumar (2015). The Bharali and others (2019) delve more deeply into inefficiency at the state level.

advancing furthest, yet the government is still experimenting with a number of PPP models which differ mainly in their risk sharing characteristics.

Nevertheless, expanding the PPP program will need a proper enabling environment, which brings up several areas of concern:

- First, there remain many obstacles to doing business in India, including excessive and unpredictable regulation, taxation with a large discretionary element, a cumbersome legal system, corruption, red tape and other bureaucratic hurdles, and restrictive labor laws and practices. According to the latest World Bank "Doing Business" survey, India ranks 130 out of 190 countries in terms of the ease of doing business, and near the bottom when it comes to granting construction permits and enforcing contracts, both of which are crucial for PPPs.
- Second, there are financing constraints. Domestic financing for investment is provided mainly by banks, but
  this is limited by the fact that using short-term deposits as a basis for extending long-term infrastructure
  loans creates risky maturity mismatches. The bond market, which provides infrastructure financing in many
  countries, is underdeveloped. Foreign direct investment in infrastructure is treated favorably under India's
  capital control regime, and has picked up in recent years as a result. But it is very sensitive to factors that
  affect business decisions in general, and recent policy uncertainty has not helped.
- Third, government capacity to develop and implement PPP projects needs to be enhanced. This covers the
  selection of projects to be considered for public financing and PPPs, negotiating and contracting with the
  private sector, fulfilling government commitments (especially land acquisition), project monitoring to
  ensure that private partners meet their commitments, and limiting government risk exposures. These are
  issues at both the central and state government levels that have to be addressed by developing the capacity
  of agencies responsible for the sectors where PPPs are being implemented.

To address these problems, the government needs to reinvigorate reforms in a number of areas. It must also guard against some tendencies that have developed with PPP programs elsewhere, such as:

- Believing that a PPP model that can be successfully applied in areas of economic infrastructure necessarily offers the same advantages when it comes to social infrastructure, particularly when the private sector has little interest in or experience providing social services.
- Assuming that just because a public project passes standard cost-benefit tests it is a candidate for a PPP; the costs and benefits of PPPs and traditional public procurement have to be compared.
- Giving in to the temptation to make expensive concessions to the private sector to "buy" its participation, which can make PPPs more expensive than traditional public investment.

# Fiscal space scenario

Creating fiscal space is never easy and doing so is especially challenging in India because of the constraints identified above. Obstacles to further progress with tax reform limits the ability to increase tax collections, while large fiscal deficits and high government debt argue against further borrowing. Expenditure planning, budgeting, and fiscal decentralization arrangements complicate expenditure restructuring and the scope for cost savings. Heavy government involvement in the economy is a further constraint insofar as the government is unwilling to raise resources through disinvestment, and the private sector is reluctant to become too involved in sectors dominated by the government. Political economy problems and bureaucratic inertia further complicate matters.

These constraints imply that the government can free up limited room to increase spending, especially in the near term. Over the medium term, there is more time to do the required policy analysis, and especially to review the rationale for and performance of expenditure programs, and to implement key tax and budgeting reforms, and so the fiscal space outlook is more promising. Table 10 summarizes a five-year fiscal space scenario that is based on a fairly optimistic view about the government's willingness and capacity to overcome the constraints it faces.

India undoubtedly has the scope to increase its tax yield. A nationwide GST should give the government a buoyant revenue source while a revamped direct tax code would eliminate many tax loopholes. However, India's history of tax reform suggests that the tax yield is difficult to increase, and there remain concerns about revenue administration. A priority objective should be to improve administrative procedures and practices so that the revenue yield of all taxes is increased.

In terms of the potential to generate additional revenue, the 2001 "Report of the Advisory Group on Tax Policy and Tax Administration in the Tenth Plan" suggested that the need was for more than 3.5 percentage points of GDP in additional tax revenue to be generated between 2000-01 and the end of the Tenth Plan period (2001-03 to 2006-07). With a stagnant tax ratio over the 2000s, such a target increase remains appropriately aspirational, although it will require successful implementation of the GST and a revamped income tax code, possible increases in some tax rates and, as already emphasized, supporting administrative reforms.

	Year 1	Year 2	Year 3	Year 4	Year 5
Resource Mobilization	0.8	1.3	1.8	2.8	3.8
Tax Revenue	0.5	1.0	1.5	2.5	3.5
Borrowing	0.0	0.0	0.0	0.0	0.0
Divestment Proceeds	0.3	0.3	0.3	0.3	0.3
Expenditure Rationalization	1.2	2.2	3.1	4.5	5.8
Spending Reallocation	0.3	0.6	0.9	1.6	2.3
Cost Effectiveness	0.5	0.8	1.0	1.3	1.5
Private Participation (PPPs)	0.4	0.8	1.2	1.6	2.0
Total Fiscal Space	2.0	3.5	4.9	7.3	9.6
Identified Use of Fiscal Space	0.7	1.4	2.1	2.8	3.5
Public Investment	0.5	1.0	1.5	2.0	2.5
Debt Reduction	0.2	0.4	0.6	0.8	1.0
Available Fiscal Space	1.3	2.1	2.8	4.5	6.1

# Table 10: Fiscal Space Scenario (In percent of GDP)

Source: Author's calculations

Turning to borrowing, the government is facing a binding fiscal constraint that is likely to get tighter rather than looser. In the worst-case scenario, where adverse developments expose India's fiscal vulnerabilities, the government could find its fiscal policy room to maneuver severely constrained. However, the government's financing needs (both in terms of new borrowing and rolling over existing debt) are not burdensome given the government's access to financing on favorable terms. The concern is that, if the government were to come under severe financing pressure, the response would likely be some combination of hastily designed and implemented tax increases, expenditure cuts and disinvestment, a halting or even a reversal of financial reforms to provide the government with even easier access to financing, and easing the fiscal constraint by inflating away part of government debt. To avoid these undesirable outcomes, India should aim to bring the debt ratio down to around 60 percent of GDP, which implies that 1 percent of GDP of fiscal space created elsewhere is required for debt reduction. The implied fiscal adjustment is consistent with that called for in the 2012 Kelkar Report of the Committee on Fiscal Consolidation, although this focused only on the central government.

The Kelkar Committee also argued that accelerating the disinvestment program can make a major contribution to fiscal adjustment in the coming years, but it is important to let the market determine sale prices and attract retail investors. To these ends, selling shares in smaller lots will reveal market prices quite quickly while reducing volatility. In addition, exchange traded funds will allow retail investors to spread risk across many divested enterprises. It has also been noted that the government could supplement the resources raised through disinvestment by appropriating the excess cash balances of public enterprises as a special dividend and selling minority stakes in private firms, as well as disposing of government holdings of land that can be put to more productive use. On this basis, divestment proceeds could be 0.3 percent of GDP a year higher than they have been in recent years. The Kelkar Committee argues that disinvestment proceeds should be used to pay for public investment spending.

Expenditure rationalization could clearly provide the scope to increase high-priority spending in India, but making the necessary adjustments to spending patterns and delivery mechanisms is a challenge because it requires the political will to take on vested interests that have a stake not only in current spending programs but also in the processes that determine how spending decisions are made. While subsidies remain an ineffective way of helping the poor, the subsidy bill has been significantly reduced and replacing remaining subsidies with better-targeted alternatives can only contribute modest savings. Thus, the near-term prospects for significant savings from expenditure rationalization seem unpromising. More can be done over the medium term, especially if there is: a comprehensive spending review to assess program objectives, costs and outcomes, and to establish priorities; a shift to full-fledged, medium-term budgeting where spending patterns can be changed to reflect these priorities; and much more emphasis on program and agency performance as a guide to funding decisions.

If the tax reform agenda and divestment program are accelerated while the government remains committed to debt reduction, the scenario in Table 10 assumes that India could mobilize resources amounting to 3.8 percent of GDP over the medium term. With significant savings from reallocating spending and improving cost effectiveness, and creation of the pre-conditions for successful PPPs that generate 2 percent of GDP in additional infrastructure financing, the scenario in Table 10 assumes that India could gain fiscal space form rationalizing expenditure amounting to 5.9 percent of GDP over the medium term. Thus, gross fiscal space of 9.6 percent of GDP can be created. However, 3.5 percent of GDP needs to be allocated to increasing public investment (including PPP investment) and reducing debt, leaving 6.2 percent of GDP of net fiscal space available to finance new spending.

Table 10 is based on an assumption that creation of fiscal space is back loaded because it will take time for required tax and expenditure reforms to be identified, agreed and implemented. Despite this, it may appear that the fiscal space needed to finance a 1 percent of GDP increase in public health spending, and possibly a larger increase (e.g., to finance the health investments envisaged by the Lancet Commission or to move to universal health coverage, is readily available, even in the near term. However, there will be competition for resources from other programs, so the question is whether the public health sector can make a legitimate claim on  $1/6^{th}$  of newly created fiscal space, especially when public health expenditure is only  $1/27^{th}$  of total public expenditure? And if so, how can resources be secured and safeguarded? These questions are taken up in Section V.

# V. Expenditure Planning and Budgeting

The future of expenditure planning and budgeting is clouded by some uncertainty following the transformation of the Planning Commission into NITI Aayog in 2015. The Planning Commission had played major role in expenditure planning and budgeting by formulating five-year plans that governed some two-thirds of government expenditure at the central and state government levels. NITI Aayog is a think tank that aims to bring the latest research and best practices to bear on economic policies and strategies based on cooperative decentralization in which the central and state governments are equal partners. This creates uncertainty and poses questions about what form of expenditure planning will replace that previously undertaken by the Planning Commission and whether, in the process, past weaknesses will be addressed.

Budget management in India is certainly complicated by the country's federal structure. As already noted, Indian states are assigned significant expenditure responsibilities and receive shares of central government revenue and grants to cover a large part of the associated costs. Transfers to the states (including tax shares, grants, and loans) are based on the recommendations of finance commissions. While the work of these commissions is supposed to focus on such transfers, their sphere of influence has widened over time to cover state finances more broadly and fiscal reform, which has created some conflict with other economic agencies, especially the Planning Commission.

While the 2010 PFMPAR gives India high scores when it comes to procedural aspects of budget management, the policy aspects of the budget framework, which is the ex-ante content of budgets and ex post budget outcomes, are long-standing problems that were highlighted in the 2001 fiscal transparency Report on the Observance of Standards and Codes and have persisted since. Table 11 summarizes key budgeting strengths and weaknesses. Table 12 provides more detail about some of the weak areas identified in the PFMPAR as reflected in PEFA scores.

Procedural Strengths	Policy Weaknesses
Legislation	Multiyear planning
Classification	Spending strategies
Accounting and reporting	Expenditure control
Budget timetable	Fiscal risk management
Role of legislature	External scrutiny

# Table 11: Budgeting Strengths and Weaknesses

Source: "Public Financial Management Performance Assessment Report," National Institute of Public Finance and Policy, 2010.

#### Table 12: Selected PEFA Budgeting Scores

Performance indicator	Score
PI-1 Aggregate expenditure outturn compared to original approved budget	С
PI-9 Oversight of aggregate fiscal risk from other public entities	С
PI-12 Multiyear perspective in fiscal planning, expenditure policy, and budgeting	D
PI-16 Predictability in the availability of funds for commitment of expenditure	C+
PI-18 Effectiveness of payroll controls	C+
PI-20 Effectiveness of internal controls for non-salary expenditure	D+
PI-21 Effectiveness of internal audit	D+
PI-26 Scope, nature, and follow-up of external audit	D+
PI-28 Legislative scrutiny of external audit reports	D+

Note: Scores range from A (highest) to D (lowest)

Source: "Public Financial Management Performance Assessment Report," National Institute of Public Finance and Policy, 2010

Some of the policy weaknesses noted in Table 11 would be addressed if India engaged in meaningful medium-term budgeting, where spending is constrained by a realistic resource envelope, national and sector strategies guide spending priorities, binding expenditure ceilings are set for spending agencies, and results achieved by spending programs influence program funding. These are characteristics of an MTEF. Appendix 5 provides some background on MTEFs.

According to World Bank (2013) India has had an MTEF since 2003, when the FRBMA required the publication and presentation to parliament of three documents: a Macroeconomic Framework Statement, a Medium-Term Fiscal Policy Statement, and a Fiscal Policy Statement. On this basis, it was concluded that the most basic MTEF variant, a Medium-Term Fiscal Framework (MTFF), was in place. An MTFF is a multiyear macro-fiscal framework that is used to impose a top-down resource constraint on aggregate spending that is translated into agency expenditure ceilings. On closer inspection, it is hard to argue that India has a meaningful MTFF.

An MTFF should be based on a clearly articulated macroeconomic model and realistic macroeconomic and fiscal forecasts. However, the government's Macroeconomic Framework Statement is a retrospective review of developments and only contains a growth forecast for the budget year with no accompanying details. The Medium-Term Fiscal Policy Statement contains deficit and debt targets for the budget year plus two out-years, but contains more discussion of the past than the future and offers no indication of how the targets were derived. The Fiscal Policy Statement has a medium-term focus, insofar as it emphasizes the need for fiscal consolidation to ensure debt sustainability, but then it too focuses on the recent past and the budget year. The government also now publishes and presents to parliament an MTEF statement that links spending with fiscal targets. This statement contains projections of key categories of spending for the budget year and two out-years, but the link between the expenditure projections and the resource envelope is not fully explained. These documents are informative and are part of the reason that the FRBMA has contributed to fiscal transparency. Moreover, the annual budget is resource constrained. But India does not have an MTFF in the sense that the resource envelope the government has to work with over the coming years is well understood and has a clear rationale.

India practices annual budgeting augmented by selected elements of medium-term budgeting that likely have little impact on fiscal discipline or spending efficiency. In the final analysis, the current budget process retains perhaps the worst characteristic of traditional annual budgeting, namely spending allocations that can be changed only incrementally and in response to whatever is politically expedient rather than economically or socially desirable.

What would it take for India to introduce a well-functioning MTEF? The most promising route to achieve this is properly integrated planning and budgeting processes. In the past, and as noted by the 2011 Planning Commission Expert Committee on Expenditure Management, planning and budgeting were much less well integrated in India than they might appear. While five-year plans had a significant influence on the structure of annual spending, given that plan expenditure has been more than two-thirds of total government expenditure, annual budgets had to balance the funding of the plan against non-plan spending needs and resource availability. With limited success in containing non-plan spending, it has in general proved impossible to finance the ambitious increases in spending proposed in five-year plans, with the result that plan realization has fallen well short of plan targets.

Table 13 shows that the Eleventh Plan was only 80 percent funded because its resource estimates turned out to be overly optimistic. Part of this is explained by the revenue impact of the economic slowdown, but central government public enterprises also contributed much smaller surpluses than anticipated, as is often the case, in particular because of constraints on their ability to raise prices as costs increase. Additionally, non-plan spending includes many politically sensitive programs, so financial constraints resulted in plan spending being crowded out. The consequence was that the central government had to borrow far more than expected to finance a less ambitious plan. Moreover, the fact that new plans had to meet the unfulfilled expectations of previous plans undermines the effectiveness of planning as a means of reallocating resources to new priorities. State resources were less affected than those of the central government, mainly because the central government maintained its financial support of state plans.

	Eleventh Plan 2007/08 - 2011/12 (Percent of GDP)	Realization 2007/08 - 2011/12 (Percent of GDP)	Realization Rate 2007/08 - 2011/12 (Percent)	Twelfth Plan 2012/13 - 2016/17 (Percent of GDP)
Plan Total	13.6	11.0	80.1	11.8
Central Plan	8.0	6.0	74.8	6.4
State Plans	5.6	5.0	90.6	5.4

### Table 13: Plan Targets and Realization

Source: "Twelfth Five-Year Plan 2012-17," Planning Commission, Government of India

Integrated expenditure planning and budgeting could provide a basis for introducing effective medium-term budgeting. Ending the distinction between plan and non-plan spending is a good start. The Finance Ministry should now develop an MTEF which is a comprehensive, rolling expenditure plan that evolves each year to reflect the emerging resource outlook and changing expenditure needs. The first-year plan would be the annual budget and subsequent year allocations would indicative of future spending levels. An implication is that there would be a medium-term macroeconomic framework, a comprehensive national spending strategy supported by sector strategies and spending agency business plans, and parliamentary approval of a medium-term expenditure plan along with the annual budget. This arrangement could be replicated at the state level. While there is much to be worked out in the detail of such a transition, it is a potential way forward that would establish a level playing field for all spending proposals to be evaluated on their merits and to compete on equal terms for funding. Jena (2017) discusses a possible transition path to an MTEF for India in more detail.

# VI. Concluding Comments

This paper provides a broad overview of the issues involved and the problems that need to be addressed in improving health outcomes in India, with a particular focus on financing increased public health expenditure. Key points include:

- Health status indicators for India are worse than in many other MICs;
- Low public health expenditure limits the capacity to tackle infectious and chronic disease, and results in high private out-of-pocket health spending;
- Low public health expenditure is indicative of low pro-poor spending which means that key human development objectives are compromised;
- While India has targeted increased public health expenditure it has consistently failed to deliver higher spending levels, especially on primary health care;
- Creating the fiscal space to pay for increased public health expenditure requires tax reform, fiscal discipline, expenditure restructuring and greater cost effectiveness, and appropriate private sector support;
- Ensuring that an appropriate share of newly created fiscal space is allocated to health and complementary pro-poor programs requires a more sophisticated approach to expenditure planning and budgeting;

A key objective of this paper is to establish the case for increased public health expenditure in India and to suggest areas where the required fiscal space can be created. Appendix 6 provides a tabular summary of the key fiscal policy and PFM options related to fiscal space that can inform the development of public health expenditure financing strategy. If there is an area where a more detailed focus is warranted, it is state health care programs, financing and efficiency. This is because states are primarily responsible for health service delivery. As already noted, Bharali and others (2019) address health issues and problems at the state level, including analysis of the flagship NHM.

Finally, if a serious case is to be made for increased health care expenditure, this will easier if there is major PFM reform. With annual budgeting and an April-March fiscal year, budget preparation is at its most intensive during the third quarter (September-December) and this is when budget allocations are largely determined. It is difficult to have much of an impact on allocations outside this timeframe, indeed attempting to do so can undermine effective expenditure planning and budgeting. However, with the more strategic approach that characterizes an MTEF, health ministries at the central and state levels should be developing and modifying sector spending strategies well in advance of budget preparation, indeed strategies should evolve on a continuous basis. This not only provides more opportunities to influence budget allocations, but also the very existence of a health sector strategy should make expenditure planning and budgeting more responsive to health sector needs and priorities.

# Appendix 1: Central Government Health Expenditure

Understanding health expenditure trends is complicated by financial relations between the central government and state governments that are primarily responsible for health service delivery. Confusion about health expenditure changes during 2014-15 and in the 2015-16 budget illustrate the point. As 2014-15 progressed, there were emerging concerns about: revenue forecasts in the 2014-15 central government budget that were based on over-optimism about economic growth and revenue buoyancy; fiscal deficit pressures that were compromising FRBMA targets; the impact of expenditure cuts needed to restore fiscal discipline on spending and service delivery in the social sectors, including health; and the possibility of continuing expenditure restraint in the 2015-16 budget. As for health expenditure, the 18 percent reduction during 2014-15 compared to the budget for that year was a particular concern, and things became more concerning when the 2015-16 budget allocation for health was 15.7 percent lower than in the previous year's budget. Table 14 provides details.

# Table 14: Central Government Health Expenditure and Budget Developments, 2013-14, 2014-15, and 2015-16

	2013-14	2014-15	2014-15	2015-16
	Actuals	Budget Estimate	Revised Estimate	Budget Estimate
Billions of rupees				
Health expenditure	301.3	380.0	311.5	320.4
(Percent of GDP)	(0.24)	(0.30)	(0.25)	(0.23)
(Percent of expenditure)	(1.93)	(2.11)	(1.85)	(1.80)
(Percentage change)			(-18.0)*	(-15.7)*
(Percentage change)		(26.1)**	(3.3)**	(2.9)***
Of which:				
Ministry of Health and Family	271.5	106.7	102.5	113.6
Welfare				
State Health Plans		242.0	185.9	180.0
Other	29.8	31.3	23.1	26.8
Of which:				
NHM	186.3	219.1	176.3	183
(Percentage change)			(-19.5)*	(-16.5)*
(Percentage change)		(17.6**)	(-5.4)**	(3.8)
States' tax share (percent)	23.9	25.9	23.1	31.4
Percent of GDP				
Revenue (excl. states' tax	9.0	9.4	8.9	8.1
share)				
Expenditure	13.9	14.2	13.3	12.6
Fiscal deficit (official)	4.5	4.2	4.1	3.9

\*Relative to 2014-15 budget estimate

\*\*Relative to 2013-14 actuals

\*\*\*Relative to 2014-15 revised estimate

Source: 2015-16 budget documents

However, comparisons with the 2014-15 budget are misleading given the optimistic assumptions underlying it and the ambitious expenditure plans that resulted; the appropriate comparison is with 2013-14, although even this comparison is not straightforward because of two developments related to the changing way in which state health (and other) spending is financed. First, in 2014-15, Ministry of Health and Family Welfare transfers to district and lower level state spending units to cover their plan spending, including NHM spending, were replaced by a central plan transfers to state treasuries. And second, in 2015-16, following the recommendations of the 14<sup>th</sup> Finance Commission, increased fiscal autonomy for states was reflected in a sharp increase in central government tax collections transferred to the states (from 32 to 42 percent of sharable taxes) and a reduction in plan transfers to states. This latter development explains the shift in the balance of central and state government health expenditure in 2014-15 highlighted in Chart 5.

Taking these developments into account, the key points emerging from Table 14 are modest increases in central government health expenditure during 2014-15 and in the 2015-16 budget that imply reductions in real terms, and decreased NHM spending in 2014-15. Lying behind these developments is a claim that implementation bottlenecks at the district level and below were holding down state government health expenditure, which justified a cutback in central government support for the NHM and state health plans more generally, especially when the central government faced broader fiscal pressures.

While it is reasonable for the government to further devolve the responsibility for health care, since states should be better placed to implement effective health policies, there remains an unresolved issue as to whether states have been making an effort to ramp up their health spending, including by addressing the implementation bottlenecks described and discussed in Bharali and others (2019).

# Appendix 2: Fiscal Space

The term 'fiscal space' entered common usage in the early 2000s, when fiscal deficit targets under IMF programs in several Latin America countries limited their ability to access available financing for major infrastructure projects. In the resulting debate about whether IMF fiscal targets should be relaxed, proponents of increased flexibility on the part of the IMF, including the World Bank and the Inter-American Development Bank, argued that many countries had the fiscal space to borrow more because good projects would create the economic capacity to repay the debt incurred.

In an early IMF paper, Heller (2005) defines fiscal space as the "room in a government's budget that allows it to provide resources for a desired purpose without jeopardizing the sustainability of its financial position or the stability of the economy." While fiscal space analysis typically focuses on four sources of fiscal space—potential to mobilize revenue, scope for additional borrowing, prospects for higher official development assistance (ODA), and savings from expenditure rationalization—the IMF has tended to emphasize the importance of the borrowing constraint, which is not surprising give its concerns about debt sustainability and macroeconomic stability. Indeed, more recent IMF papers define fiscal space as the difference between a country's current debt level and a country-specific debt limit (see Kim and others, 2010 and IMF, 2016), although debt limits reflect other sources of fiscal space.

Joint IMF/World Bank work has focused on fiscal space more generally (e.g., see IMF/World Bank, 2006), although the World Bank has paid the most attention to the different sources and uses of fiscal space in many sector and country specific studies (e.g., see Okwero and others, 2010 and Lofgren, 2013). In addition, the World Bank has produced a comprehensive cross-country analysis of the challenges involved in creating fiscal space to meet the Sustainable Development Goals (Gable and others, 2015). The United Nations also concerns itself with fiscal space, and has often been critical of what it sees as the narrow approaches adopted by the IMF and the World Bank for not paying enough attention to the different constraints on the creation and alternative uses of fiscal space, or to the longer-term benefits of using fiscal space well (Roy and others, 2007). While it is far from clear that this criticism was ever warranted, it is certainly not valid now. Finally, WHO (2016) has emphasized the importance of the PFM aspects of creating fiscal space, but it places too much emphasis of securing financing for health as opposed to other propoor spending.

# Fiscal space is often depicted using the fiscal space diamond shown in

Figure 1. This construct was first used extensively in IMF/World Bank (2006), and it has since been used quite to represent the main sources of fiscal space in a country, and for comparing fiscal space across countries and over time. Fiscal space is measured along the horizontal and vertical axes, usually in percent of GDP, and not by the area of the diamond which can decrease (increase) when fiscal space increases (decreases).

Figure 2 shows depicts fiscal space in India based on the scenario in Table 10. Since India is not reliant on ODA, the contribution from the private sector (in the form of disinvestment proceeds and private participation in infrastructure through PPPs) has been separately identified. Revenue mobilization (excluding disinvestment proceeds) contributes 3.5 percent of GDP to fiscal, expenditure rationalization (excluding PPPs) contributes 3.8 percent of GDP, and private participation contributes 2.3 percent of GDP, giving total fiscal space of 9.6 percent of GDP. Of this, 1 percent of GDP is used for debt reduction (implying that the scope for additional borrowing is negative and the fiscal space 'diamond' is not in fact a diamond) and 2.5 percent of GDP is allocated to infrastructure investment. Thus available fiscal space is 6.1 percent of GDP.

# Figure 1: Fiscal Space Diamond



# Figure 2: Fiscal Space in India



# Earmarked sin taxes

The proposal that India should impose higher taxes on tobacco and alcohol, and especially the former, and use the revenue collected to pay for increased public health expenditure should be looked at as two separate but related proposals—imposing so-called sin taxes and earmarking (or hypothecating) sin tax revenue for health expenditure.

It is widely held view that sin taxes should be a feature of a modern tax system because they offer win-win outcomes. At one extreme, consumption of tobacco and alcohol will be unresponsive to higher taxes (i.e., if demand is highly inelastic), in which case the government can collect considerable revenue from sin taxes without distorting consumption choices. At the other extreme, consumption of these products will be drastically curtailed (i.e., if demand is highly elastic). The government may not collect much revenue from sin taxes, but health and other social costs associated with tobacco and alcohol consumption will be reduced, which will in part be reflected in lower public expenditure either now or in the future. In practice, the response is likely to be a combination of these desirable outcomes (i.e., demand is moderately elastic). If there is a downside to sin taxes it is that tobacco and alcohol account for a larger share of expenditure by the poor and sin taxes are therefore regressive. However, given that direct taxes are much better suited than indirect taxes to redistributing income and consumption, it is unclear that regressivity is a compelling argument against sin taxes.

The earmarking of sin tax revenue for health (or any other purpose) is more problematic. Earmarking is normally defended on the following grounds. First, it exploits the benefit principle of taxation, which is based on the notion that those who benefit from public programs like health will be more willing to cover the costs of such programs. Earmarking highlights the fact that costs are linked to benefits. Second, earmarking safeguards the financing of priority programs that might otherwise suffer in the face of resource constraints and new spending pressures. And third, earmarking makes the cost of public programs transparent and provides a basis for holding policymakers accountable for program performance. However, these alleged advantages do not survive scrutiny.

The benefit principle is often undermined by an imprecise link between taxes and benefits, even for a program like social security. The original intention in most countries was that social security taxes should be regarded as contributions and benefits (mainly retirement pensions) and linked to contributions, but this link has in most cases been broken and social security and general budget funding are usually co-mingled. More generally, to the extent that earmarked revenue is diverted to other than its intended purpose, the benefit principle is compromised. When it comes to safeguarding resources through earmarking, the fact is that earmarking is often a response to poor spending prioritization that introduces budget rigidities which constrain the ability to prioritize. Moreover, widespread earmarking is often the consequence of lobbying on the part of those receiving and spending earmarked revenue, and the more earmarking there is, the more difficult changing priorities becomes. Finally, transparency and accountability are not served well by using earmarked revenue for other than its intended purpose, or by the inadequate scrutiny of earmarked spending, which is a more of a problem when off-budget entities (or extrabudgetary funds) are set up to manage earmarked revenue.<sup>12</sup>

<sup>&</sup>lt;sup>12</sup> For a fuller discussion of earmarking and extra budgetary funds, see Allen (2013).

#### A health cess

The proposed health cess is a tax surcharge added to existing taxes, the revenue from which is used to increase public health expenditure. The health cess is modeled on the existing education cess.<sup>13</sup> The education cess was introduced in 2004 as a 2 percent surcharge on central government tax revenue which is earmarked for increasing public expenditure on primary education. Mention was made of both general and specific objectives (e.g., ensuring universal access to quality primary education and providing each child with a nutritious midday meal). In response to meeting broader education objectives, a secondary and higher education cess of 1 percent has since been introduced to give a combined cess of 3 percent. In response to the fact that public education spending did not increase to match the yield of the cess, the use of cess revenue for purposes other than education is now formally permitted. In this connection, its use to finance increased primary health spending has been mentioned.

It should be apparent that the case for and against a health cess is much the same as that for and against earmarked sin taxes. Clearly a health cess is not the same as a sin tax. A health cess is a broad-based tax on economic activity, while sin taxes are levied on activities that are to some extent linked to the use of health services. User charges for health services go further in that they are tax directly on the use of health services. The case for sin taxes (and user charges) is stronger than the case for a health cess in that the latter complicates the tax system and has no payoff beyond its revenue yield, while the former has revenue and efficiency in its favor.

More specifically in the Indian context, proponents of the education cess argue that its imposition is an indication of the high priority the government attaches to education. Critics argue that this is disingenuous and that the need for an education cess suggests that the government's priorities are mistaken, since the cess is only needed because less meritorious programs have a higher-priority claim on general revenue.<sup>14</sup> The truth is that in the absence of fundamental tax reform that would broaden the tax base, the government has little scope to raise general tax rates and is unwilling to take on those who have a vested interest in existing spending programs. As a consequence, it has to resort to levying a cess, which the government hopes will meet minimal resistance because it pays for high-priority spending. However, hardly anybody is taken in by this. The education cess is widely regarded as just another tax which, like other surcharges, complicates the tax system and encourages further use, ostensibly for whatever purpose is deemed most pressing, but in reality, surcharges are used to avoid taxpayer resistance to higher general tax rates.

### Experience with earmarked taxes for health

Some countries in Asia have earmarked taxes on tobacco and alcohol. In particular: Thailand levies a surcharge on excise duties applied to tobacco and alcohol, and earmarks the revenue collected to health promotion, public broadcasting and provincial governments; Taiwan imposes a health and welfare surtax on tobacco excise duty and earmarks some of the revenue to health, although the national insurance reserve is the main beneficiary; Korea also levies an earmarked surtax on alcohol excise duty, but the revenue is earmarked for education.

<sup>&</sup>lt;sup>13</sup> The term 'cess,' which is an abbreviated form of 'assess,' is a distinctly old-fashioned word for a tax. It was never widely used and is hardly used at all today. The term 'surcharge' (or sometimes 'surtax') is much more widely used to describe an addition to a general tax rate that may be a charge against an existing tax base or tax collected, which may or may not be intended for a specific purpose. The Indian tax system includes a number of surcharges and cesses.

<sup>&</sup>lt;sup>14</sup> As one commentator said, the government should impose a 'fuel subsidy for the middle classes' cess on taxpayers and see what reaction they get!

A study of these earmarked taxes (Oxford Economics, 2013) has identified numerous problems with them. In each case, the loose or even non-existent link between the source and use of the tax undermines the economic rationale for earmarking. There is little oversight of the agencies receiving and spending the proceeds of earmarked taxes (e.g., the Thai Health Promotion Board and the Bureau of Health Promotion in Taiwan). In Korea, almost 30 percent of government revenue is earmarked, which seriously impedes budget flexibility. In Taiwan, there is always lobbying from health agency beneficiaries to increase the surtax rather than the excise duty to which the surtax applies. Finally, there are some distributional anomalies in that Thai smokers and drinkers pay more for public television than non-smokers and non-drinkers and Taiwanese drinkers pay more for education than non-drinkers.<sup>15</sup>

# A pragmatic policy

In terms of generating fiscal space for increased public health expenditure, the ideal solution is to generate additional revenue through tax reform that broadens the tax base, and then to implement budget reforms that support more effective spending prioritization. Broadening the tax base involves eliminating unwarranted income tax exemptions and deductions, moving to a national VAT (value-added tax), and increasing sin taxes. An MTEF is key to ensuring that high-priority spending programs are properly funded—see Appendix 5. However, it has to be acknowledged that tax and budget reforms will take time to implement, which is a problem when increasing public expenditure on health is a matter of some urgency. Pending such reforms, it is inevitable that some of the arguments against earmarked sin taxes and a health cess will, for the time being, have to be set aside.

Increasing taxes on tobacco and alcohol should be an immediate priority given the need for additional revenue and the fact that they would be retained as part of a reformed tax system. The revenue collected should be earmarked in its entirety to public health expenditure or programs that are closely related to health but may be the responsibility of non-health agencies. This will increase the chances that any benefits associated with earmarking outweigh potential costs.

While earmarked sin taxes are preferable to a health cess, the fact that there is an education cess may nonetheless make the idea of a health cess more attractive than earmarked sin taxes. This being the case, it may be better to argue for an integrated education and health cess with all the revenue collected going to these two programs. This would provide some flexibility in the use of revenue, while again exploiting whatever benefits earmarking has to offer.

Whichever approach is adopted, it should be emphasized that both earmarked sin taxes and a health (and education) cess offer a temporary solution to the specific need to increase public health and education expenditure. Not only should they not be considered permanent sources of finance, but also their introduction should not be used as an excuse to put off tax and budget reforms. Ideally, the introduction of earmarked sin taxes, or a health and education cess, should be accompanied by a timetable for their eventual demise as tax and budget reforms take effect.

# Revenue potential

Tobacco taxes have been the subject of extensive discussion, including in India. India is not high on the list of countries according to national tobacco consumption. However, smoking is prevalent among men in India, especially

<sup>&</sup>lt;sup>15</sup> In Taiwan, smokers contribute more to the national insurance reserve than non-smokers. This is fine insofar as national insurance covers health care, but not when it comes to retirement pensions where smokers should actually contribute less because they do not live as long as non-smokers.

of low-priced bidis which account for 85 percent of tobacco sales by quantity, and smoking is a major cause of premature death. A BMGF-supported study has recommended that increasing the tax rate on bidis from 9 to 40 percent and on cigarettes from 38 to 70 percent would save 18.9 million lives.<sup>16</sup> The current average tax rate on tobacco products is 27.7 percent, which is closer to 40 percent than 9 percent because bidis account for only 35 percent of tobacco sales by value.<sup>17</sup> Changing the tax rates on bidis and cigarettes would increase the average tax rate on tobacco products to 65.6 percent. This is at the lower end of the 65-80 percent range generally recommended by the World Bank, but it is high by international standards. Indeed, it is exceeded in only ten countries (including Argentina, Egypt, Poland, and United Kingdom), although a larger number of countries have tax rates in the 60-65 range.

The revenue yield of the increases in tobacco taxes is estimated at Rs. 183.2 billion, which is about 0.15 percent of GDP.<sup>18</sup> A recent study by the Asian Development Bank suggested that raising the tax on tobacco products such that retail prices increase by 25 to 100 percent could raise revenue by 0.1 to 0.4 percent of GDP: since the tax increases discussed above results in a 29 percent increase in retail prices, a 0.15 percent of GDP revenue gain may be slightly optimistic, but it nonetheless seems reasonable (See Asian Development Bank, 2012).<sup>19</sup>

There is much less discussion of taxes on alcohol (i.e., alcoholic drinks) in India and more generally, and little information available about alcohol taxation in India beyond the fact that taxes on imported alcohol are high, while taxes on domestically produced alcohol are relatively low. Moreover, most of the pressure, especially from exporting countries, is for India to reduce duties on imported alcohol and this is the direction in which things are currently moving. While this will increase sales, alcohol consumption in India is not high; that said, it is increasing the attention being given to health and other consequences of excessive alcohol consumption. The implications of this for alcohol taxation are unclear. However, it seems unlikely that there is sufficient support to increase domestic taxation of alcohol enough to compensate for reductions in import duties.

The education cess (including the cess on secondary and higher education) yielded Rs. 341.7 billion in 2012-13. This is slightly less than 3 percent of central government tax collections because some minor taxes are exempt from the cess, and equivalent to about 0.3 percent of GDP. If a health cess, equal in size to the education cess, was levied 0.3 percent in additional revenue would be raised. If tobacco taxes were also increased in line with the recommendations discussed above, the combined yield would be 0.45 percent of GDP, and this could rise to 0.5 percent, or slightly more, with a small contribution from increased alcohol taxes. This may not seem like a lot, but it takes on considerable significance in the context of plans to increase public health expenditure by 1 percent of GDP.

<sup>&</sup>lt;sup>16</sup> This study is "Tobacco Taxation in India," which is based on R.M. John and others "Economics of Tobacco and Tobacco Taxation in India," which is an undated study funded by Bloomberg Philanthropies and BMGF.

<sup>&</sup>lt;sup>17</sup> The 27.7 percent figure is taken from the Tobacco Atlas, which was accessed at <u>www.TobaccoAtlas.org</u>. Information on comparative tax rates referenced below is from the same source.

<sup>&</sup>lt;sup>18</sup> The estimated tax yield, and the 65.6 percent effective tax rate referred to above, take into account reduced tobacco consumption in response to higher taxes and prices.

<sup>&</sup>lt;sup>19</sup> Asian Development Bank (2013) is much less optimistic about the potential for tobacco tax increases to save lives, estimating that 2-8 million lives could be saved by the proposed 25 to 100 percent price increase.

# Appendix 4: Health Expenditure Efficiency

This appendix provides more detail about the efficiency analysis discussed in Section V. Data envelopment analysis is used to identify an efficiency frontier linking specific combinations of health expenditure and life expectancy that are the most efficient of all country observations included in a data set. This is illustrated in Figure 3, which reflects an assumption of non-increasing returns to scale to health spending and where the inflection points of the efficiency frontier correspond to the most efficient countries.<sup>20</sup> The focus on life expectancy as an output is justified by the fact that it is a comprehensive indicator of the health of a population and the achievements of the health system.



# Figure 3: Efficiency Frontier and Inefficiency Measurement

There are other approaches to assessing efficiency, but the technical merits of alternative approaches are subject to debate (about both the appropriate approach and the consequences of choosing one approach rather than another).<sup>21</sup> Consequently, efficiency estimates deriving from any of them have to be treated with caution. At best, inefficiency measures provide an indication as to where efforts to improve efficiency offer the largest potential payoff. Because countries on the efficiency frontier could themselves be quite inefficient, they too should not ignore the need to make such efforts.

<sup>&</sup>lt;sup>20</sup> Whether returns to scale in health spending are constant, decreasing or increasing is an issue that is unresolved, although management inefficiencies alone may be a sufficient reason to exclude increasing returns to scale.

<sup>&</sup>lt;sup>21</sup> Free disposal hull (FDH) analysis is more flexible in determining the efficiency frontier, while stochastic frontier analysis (SFA) is a regressionbased technique for assessing efficiency that utilizes more information than DEA and FDH analysis to estimate an efficiency frontier. In particular, it takes into account other determinants of output variables, but in the process it imposes a specific functional form on the input/output relationship.

As noted in Section V, Table 9 includes both output and outcome indicators. Table 15 focuses on the link between a physical (as distinct from financial) input—the number of skilled medical professionals—and the three output indicators in Table 9. Again, absolute and relative inefficiency in the case of India is revealed.

Output=>	Measles immunization	Births attended by skilled medical professionals	Pregnant women receiving pre-natal care	Joint output
		Input inefficie	ency (percent)	
	Input	measure= Skilled medica	l professionals per 100	0 people
India	76.6	71.6	81.8	59.2
Comparator Average	58.4	46.3	56.7	41.4

### Table 15: Efficiency in Producing Outputs

Source: Author's calculations

This discussion highlights the point that there are two input-output relationships, the one that is the core focus intermediate and final outcomes depend on financial inputs—and the one that determines this relationship outputs depend on physical inputs. Final outcomes like life expectancy are difficult to influence directly because they are affected by a wide range of non-health factors and they tend to change slowly in response to the cumulative effect of their many determinants. Intermediate outcomes such as disease incidence are influenced more directly and quickly by health policies and interventions, and the key to doing this is the use of physical inputs to create health care capacity, which is then used produce outputs in the form of health services. In thinking about doing these things efficiently, decisions have to be made about both allocative and technical efficiency. This is the case even if the focus is just on input efficiency. Table 16 provides more information on inputs, outputs and outcomes.

Table 17 reports on the achievement of human development objectives, as reflected in the HDI, Gini coefficient and poverty headcount. India is, on the whole, more inefficient than comparators in achieving these objectives. This is the case using both health expenditure and government expenditure as an input.

Finally, Table 18 looks at the sensitivity of inefficiency estimates to some of the choices made in undertaking the efficiency analysis. Use of health-adjusted life expectancy (HALE) rather than life expectancy, public health expenditure rather than total health expenditure, and the Multi-Dimensional Poverty Index rather than the poverty headcount does not significantly affect estimates of input inefficiency.

Interestingly, the output inefficiency measure for India corresponding to the 51.5 percent input inefficiency measure is 10.7 percent, implying that if health spending was efficient, life expectancy could be increased by 10.7 percent at the current level of health spending. The fact that measured input inefficiency is significantly larger than measured output inefficiency is not significant in and of itself. Technically, the result is simply a consequence of decreasing returns to scale of the efficiency frontier. In principle, it means that if India was on the efficiency frontier it could use the 51.5 percent expenditure saving for health programs that would increase life expectancy by 10.7 percent. However, a 6½-7 years life expectancy improvement is not feasible over any policy relevant time period.<sup>22</sup> Rather

<sup>&</sup>lt;sup>22</sup> It took industrial countries from 1930 to 1960 to achieve this. Part of the problem is that potential life expectancy gains are overestimated because life expectancy depends on other factors unrelated to health spending. Grigoli and Kapsoli (2013) use SFA to control for this and in a

the objective should probably be to use part of the expenditure gain to secure more practical and modest life expectancy gains that are nonetheless still important in terms of human development, and to use the remainder to pursue other high-priority health and non-health objectives.

# Table 16: Inputs, Outputs and Outcomes

Inputs	Outputs	Outcomes
<ul> <li>Creating health care capacity</li> <li>Investing in health facilities</li> <li>Hiring health workers</li> <li>Purchasing health equipment and medicine</li> </ul>	<ul> <li>Providing health services</li> <li>Making diagnoses</li> <li>Providing treatment and medicines</li> <li>Performing surgery</li> <li>Nursing</li> <li>Immunizing children</li> <li>Preventing illness</li> </ul>	<ul> <li>Improving health status</li> <li>Improving life expectancy</li> <li>Reducing mortality</li> <li>Lowering disease incidence</li> <li>Addressing health inequalities and reducing poverty risk</li> </ul>
Indicators—what is spent, what is purchased	Indicators—service provision	Indicators—controllable and uncontrollable objectives
<ul> <li>Financial inputs</li> <li>Total and public health expenditure/GDP</li> <li>Total and public health expenditure per capita</li> <li>Spending on primary and preventative care and other high-priority activities</li> </ul>	Outputs <ul> <li>Health care activity         <ul> <li>(consultations, surgeries, drugs prescribed, immunizations etc.)</li> </ul> </li> </ul>	Intermediate outcomes <ul> <li>Burden of disease</li> <li>Access and affordability (qualitative assessment)</li> <li>Net benefit incidence</li> <li>Reduce OOP spending by the poor</li> </ul>
<ul> <li>Physical inputs <ul> <li>Assets</li> <li>Personnel</li> <li>Equipment</li> <li>Medicines</li> </ul> </li> <li>These create the capacity to diagnose, treat and prevent illness</li> </ul>	Output efficiency indicators <ul> <li>Doctor-nurse ratio</li> <li>Personnel expense ratio</li> <li>Availability of essential drugs</li> </ul>	<ul> <li>Final outcomes</li> <li>Life expectancy at birth*</li> <li>Maternal mortality ratio*</li> <li>Child mortality rate*</li> <li>* Used by the Ministry of Health and Family Welfare</li> </ul>

communication with the author point to an output inefficiency estimate for India that translates into a HALE gain of 2.4 years (compared to the 6½-7 year life expectancy gain referred to in the main text).

# Table 17: Inefficiency in Achieving Human Development Objectives

Final objective=>	Human Development Index Gini coefficient			Poverty hea	dcount	
	Input inefficiency (percent)					
Input measure=>	Health Exp./GDP	Government Exp./GDP	Health Exp./GDP	Government Exp./GDP	Health Exp./GDP	Government Exp./GDP
India	52.8	46.6	52.4	49.2	55.2	49.4
Comparator average	41.4	33.2	45.5	39.1	57.1	44.3

Source: Author's calculations

# Table 18: Sensitivity Analysis

Outcome/final	Life	HALE	Life	Multidimensi	onal Poverty	Life
objective	expectancy		expectancy	Index		expectancy
measure=>						
		Input inefficiency (percent)				Output
						inefficiency
						(percent)
Input measure=>	Не	alth	Public Health	Health	Government	Health
	Ex	o./GDP	Exp./GDP	Exp./GDP	Exp./GDP	Exp./GDP
India	51.5	54.0	46.8	65.4	50.9	10.7
Comparator	40.2	44.0	42.8	38.4	30.2	10.8
average						

Source: Author's calculations

# Appendix 5: Medium-Term Expenditure Frameworks

This appendix draws heavily on World Bank (2013).

It is useful to think of three stages of MTEF development: an MTFF, a medium-term budget framework (MTBF), and a medium-term performance framework (MTPF). Table 19 summarizes what each MTEF stage involves.

# Table 19: MTEF Stages

Stage 1 = MTFF	Stage 2 = MTBF	Stage 3 = MTPF
<ul> <li>Top-down budgeting based on determination of a multi-year resource envelope</li> <li>A rolling framework covering the next annual budget plus 2 or more out-years</li> <li>Focused primarily on funding inputs</li> <li>Aggregate agency ceilings</li> <li>Possibly some focus on large programs</li> </ul>	<ul> <li>Developed from an MTFF</li> <li>Coordinated top-down and bottom-up budgeting, and reconciliation of agency spending plans with the resource envelope</li> <li>Agency spending plans reflect medium-term strategic priorities (with some reference to outputs and outcomes)</li> <li>Shift to program budgeting</li> <li>Agency and program ceilings</li> </ul>	<ul> <li>Developed from an MTBF</li> <li>Focused on producing outputs and achieving outcomes</li> <li>Indicator based assessments of performance</li> <li>Funding (i.e., ceilings) linked to or informed by results</li> </ul>

Source. World Bank eLearning Module on Medium-Term Expenditure Frameworks

Of the 131 countries that had some form of MTEF in 2008, 36 percent had only a fiscal framework, 49 percent had a fiscal and budget framework; and 15 percent also had a performance framework. While MTEFs began to spread across industrial countries and Africa during the 1990s, it was not until the 2000s that they took off in other parts of the developing world. However, full-fledged performance frameworks of the sort adopted by many industrial countries are much less common in developing countries (Chart 16).

There are few studies about experience with MTEFs, and these are focused on the donor-led push to establish MTEFs in Africa during the 1990s with a view to ensuring adequate funding for anti-poverty programs. Two comprehensive studies undertaken in the early 2000s (by the World Bank and the United Kingdom's Overseas Development Institute) highlighted the importance of initial conditions in determining whether an MTEF results in improved PFM, drawing particular attention to the dangers of introducing MTEFs when weaknesses in budget processes and procedures mean that a country does not have an effective annual budget. Perhaps the most important point to make about an MTEF is that it is not the answer to a badly functioning budget system. Trying to impose a medium-term perspective on a system with underlying weaknesses that result in unrealistic budgets and poor fiscal outcomes, will often make matters worse rather than better. Under such circumstances, fundamental reform to improve budget management is a pre-requisite for a successful MTEF implementation.

#### Chart 16: MTEF Adoption



Source: Beyond the Annual Budget: Global Experience with Medium-Term Expenditure Frameworks, World Bank, 2013

In addition to the quality of budget management, there are a number of other considerations that will influence the success of an MTEF. These include:

- The macroeconomic and fiscal situation. As a general rule, fundamental reform is best undertaken without the distraction of having to address short-term stabilization needs. An MTEF should be seen as a way of consolidating improvements in fiscal outcomes or bolstering a demonstrated commitment to fiscal discipline and spending efficiency (e.g., as evidenced by the introduction of a fiscal rule and/or comprehensive spending reviews).
- Political support. Traditionally, the finance ministry takes the lead in budget preparation, with cabinet/parliament, the finance ministry and spending agencies then respectively authorizing, controlling and administering spending. Under an MTEF these roles change, with the cabinet/parliament providing strategic guidance on budget priorities and approving expenditure ceilings, the finance ministry focusing on the macro-fiscal framework, high-level spending priorities and aggregate budget management, and spending agencies formulating sector strategies and spending plans, and managing and evaluating programs. There must be commitment to these new roles, and to the idea that the MTEF is the exclusive means of allocating budget resources (the annual budget reflects the MTEF).
- Technical capacity. New roles for the finance ministry and spending agencies have to be matched by the
  necessary skills, so that the finance ministry can make well-informed sector prioritization decisions and
  spending agencies take a more strategic approach to securing and allocating resources. A key technical
  requirement for the finance ministry is the ability to produce high-quality fiscal forecasts, while spending
  ministries have to be able to cost existing and new programs. Civil service reform may be necessary to
  ensure that appropriately skilled personnel can be hired or trained.

- Design details. An MTEF can be undone by poor design. If its coverage is narrow, and especially if too much spending is determined to be non-discretionary and therefore outside its scope, then an MTEF will be of limited effectiveness in promoting fiscal discipline and spending efficiency. Expenditure ceilings should not be so disaggregated that they rob spending agencies of essential discretion to reallocate resources across programs as circumstances require. Building a contingency reserve into an MTEF to handle unexpected spending needs or resource shortfalls reduces the chances that MTEF allocations have to be reconsidered during the budget year.
- Sequencing. MTEF implementation should be geared to the quality of budget management and the capacity
  to handle the requirements an MTEF. Since the fiscal, budget and performance sub-frameworks make
  increasing demands on systems and personnel, they could be introduced in sequence as capacity is built
  up. Moreover, it is important to coordinate with existing medium-term planning instruments, such as a
  public investment program, since part of the payoff to an MTEF will come from using it to ensure that the
  medium-term priorities they establish are adequately funded.

# Appendix 6: Fiscal Space—Key Options

	Revenue	Borrowing	Disinvestment	Expenditure	Public-Private
				Efficiency	Partnerships
Fiscal Policy	India has gone a long	There has been a	The	Spending is not	PPPs can be
	way towards creating	failure to	disinvestment	high by	more widely
	a modern tax system,	consistently meet	program should	international	used, including
	but the revenue yield	fiscal targets that	be advanced.	standards, but	in social sectors,
	remains stubbornly	are consistent with		there are	as long as there
	low.	macroeconomic	Disinvestment	infrastructure	is an appropriate
		stability and debt	should give way	gaps, and social	enabling
	Tax reform should	sustainability.	to full	programs are	environment.
	have increasing		privatization of	underfunded.	
	revenue as a primary	The government	most		The financial
	objective. To this	should set and	enterprises,	The government	implications of
	end, the two tax	stick to more	which will	should undertake	PPPs for the
	reform priorities are	ambitious fiscal	increase	or request a	government
	to ensure a successful	targets, with public	divestment	comprehensive	should be
	transition to the new	debt being brought	proceeds in the	spending review	assessed.
	national GST and to	down to below 60	near term and	to identify	
	scale back	percent of GDP	should increase	programs to be	
	exemptions under	over the medium	efficiency over	cut back or	
	the income tax.	term.	the longer term.	eliminated and	
				possible cost	
	Increasing revenue	Consequently,	Disinvestment	savings.	
	through tax policy	additional	proceeds can be		
	changes will be	borrowing will not	used to pay for	Modest near-	
	politically difficult in	be possible in the	infrastructure	term savings can	
	the near term.	foreseeable future,	investment.	be made by	
		naeed borrowing		improved	
		reduced			
		Teduced.		subsidies	
Public Financial	Revenue collections	The Fiscal	Institutional	Budgets lack	The canacity of
Management	are undermined by a	Responsibility and	impediments to	credibility	government
management	large informal sector	Rudget	widespread	because approved	ministries to
	and rampant tax	Management Act	ownership of	budgets are not	manage PPPs
	evasion.	enhances fiscal	privatized firms	implemented as	should be
		transparency, but	should be	planned.	strengthened.
	Improving tax	institutional	removed.		0
	compliance through	accountability is		Spending rigidity,	Particular
	more effective	weak.		which is a	attention should
	administration is the			common feature	be paid to
	most likely source of	Setting up a fiscal		of annual	determining
	higher revenue over	council or similar		budgeting, makes	which projects
	the near term.	body, as		reallocations	the government
		recommended by		difficult.	should manage
	The quick	the proposed Debt			as traditional
	implementation of	Act, would allow			public

recommendations by	the sort of	A shift to strategic	investment and
the recently	independent	medium-term	which should be
constituted tax	scrutiny that can	budgeting is	PPPs.
administration	provide markets	needed. The	
committee is	and voters with	existing planning	
essential.	unbiased	process should be	
	information about	better integrated	
	fiscal plans and	with budgeting.	
	performance.	This should be	
		done by	
	The fiscal targeting	introducing an	
	framework	MTEF.	
	proposed by the		
	Debt Act should be		
	streamlined by		
	relying on a debt		
	target and		
	expenditure ceiling		
	established under		
	an MTEF.		

# References

Acemoglu, D. and S. Johnson, "Disease and Development: The Effect of Life Expectancy on Economic Growth," Journal of Political Economy, Vol. 115, pages 925-984, 2007

Allen, R., *"Managing Extrabudgetary Funds,"* in Allen, R., R. Hemming and B. Potter (eds.), The International Handbook of Public Financial Management, Palgrave Macmillan, 2013

Asian Development Bank, *Tobacco Taxes: A Win-Win Measure for Fiscal Space and Health*, Asian Development Bank, November 2012

Bharali, I., Shukla G.P., and Goel S. Public Financial Management of Health by States in India: Experiences from Uttar Pradesh, Karnataka and Assam, The Center for Policy Impact in Global Health. Duke Global Working Paper (forthcoming)

Bloom D.E., D. Canning and J. Sevilla, "The Effect of Health on Economic Growth: A Production Function Approach," World Development, Vol. 32, pages 1-13, 2004

Bloom, D. E., D. Canning, L. Hu, Y. Liu, A. Mahal, A. and W.Yip, *"Contribution of Population Health and Demographic Change to Economic Growth in China and India,"* Journal of Comparative Economics, Vol. 38, pages 17-33, 2010

Choudhury, M. and H.K. Nath, "An Estimate of Public Expenditure on Health," National Institute of Public Finance and Policy, May 2012

Clements, B., S. Gupta, I. Karpowitcz and S. Tariq, *Evaluating Government Employment and Compensation*, IMF Technical Notes and Manuals, September 2010

Gable, S., H. Lofgren and I. Osorio Rodarte, *Trajectories for Sustainable Development Goals: Framework and Country Applications*, World Bank, 2105

Gill, I., I. Bharali, G. Glenday. 2019. "Domestic revenue mobilization: estimating the gaps between ability and effort." CPIGH Policy Brief. Durham, NC: Center for Policy Impact in Global Health. http://centerforpolicyimpact.org/wp-content/uploads/sites/18/2019/04/CPIGH-Policy-brief\_Domestic-Revenue-Mobilization\_\_April-2019\_FINAL.pdf

Glenday G, Bharali I., Wang Z., *Enhancing Domestic Revenues: Constraints and Opportunities: A cross-country comparative study of tax capacity, effort and gaps.* 2019, Center for Policy Impact in Global Health. Report number: 2, 2019.

Global Health 2035: A World Converging Within a Generation, The Lancet Commission, 2013

Grigoli, F., and J. Kapsoli, *Waste Not, Want Not: The Efficiency of Health Expenditure in Emerging and Developing Economy*, IMF Working Paper 13/187, August 28, 2013

Heller, P., "Back to Basics—Fiscal Space: What It Is and How to Get It," Finance and Development, Volume 42, Number 2, June 2005

International Monetary Fund/World Bank Development Committee, Fiscal Policy for Growth and Development: An Interim Report, April 23, 2006

International Monetary Fund, Fiscal Policy and Long-Term Growth, IMF Policy Paper, 2015

International Monetary Fund, Assessing Fiscal Space: An Initial Consistent Set of Considerations, November 18, 2016

International Monetary Fund, Assessing Safe Debt Levels for India, India—Selected Issues, International Monetary Fund, January 10, 2017

Jena, P.R., *India Variant of MTEF*, National Institute of Public Finance and Policy Working Paper No. 185, January 6. 2012

Joumard, I. and A. Kumar, *Improving Health Care and Health Outcomes in India*, OECD Economics Department Working Papers. No. 1184, OECD Publishing, Paris, 2015

Joumard, I., P. Hoeller, J-M. Founier and H. Morgavi, *Public Debt in India: Moving Towards a Prudent Level?* OECD Economics Department Working Papers. No. 1400, OECD Publishing, Paris, 2017

Kelly R, Hemming R, Glenday G, Bharali I, Alebachew A. *Public financial management perspectives on health sector financing and resource allocation in Ethiopia*. The Center for Policy Impact in Global Health. Duke Global Working Paper Series: number 18, January 2020.

Kim, J., A. Ghosh, M. S, Qureshi and J. Ostry, *Fiscal Space*, IMF Staff Position Note No. 2010/11, September 2010

Lancet Commission, Global Health 2035: A World Converging within a Generation, 2013

Lofgren, Hans, *Creating and Using Fiscal Space for Accelerated Development in Liberia*, World Bank Policy Research Working Paper No. 6678, October 2013

Min Le, T,. B. Moreno-Dobson and N. Bayraktar, *Tax Capacity and Tax Effort: Extended Cross-Country Analysis from* 1996 to 2009, World Bank, October 2012

Moreno-Dodson, B., Assessing the Impact of Public Spending on Growth: An Empirical Analysis of Some Fast-Growing Countries, Policy Research Working Paper No. 4665, World Bank, July 2008

National Health Accounts, India, 2004-05, Ministry of Health and Family Welfare

National Health Accounts, Estimates for India, 2013-14, Ministry of Health and Family Welfare

National Health Policy 2015 (Draft), Ministry of Health and Social Welfare, December 2014

Okwero, P., A. Tandon, S. Sparkes, J. McLaughlin and J. Hoogeveen, *Fiscal Space for Health in Uganda*, World Bank Working Paper No. 186, 2010

Oxford Economics, Are Earmarked Taxes on Alcohol and Tobacco a Good Idea? Evidence From Asia, International Tax and Investment Center Special Report by Oxford Economics, September 2013

Pritchett, L. and L.H. Summers, "Wealthier is Healthier," The Journal of Human Resources, Vol. 31, pages 841-868, 1996

Ranis, G., *Human Development and Economic Growth*, Economic Growth Center Discussion Paper No. 887, Yale University, May 2004

Ranis, G., F. Stewart, F. and A. Ramirez, *"Economic Growth and Human Development,"* World Development, Vol. 28, pages 197-219, 2000

World Bank, Equity and Development, World Development Report, 2006

World Bank, Beyond the Annual Budget: Global Experience with Medium-Term Expenditure Frameworks, World Bank, 2013

World Health Organization, Fiscal Space, Public Financial Management and Health Financing: Sustaining Progress Towards UHC, April 26-28, 2016