

INDIA DEVELOPMENT UPDATE

India's Growth Story

March 2018



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List of Abbreviations

ASEAN	Association of South East Asian Nations
BOE	Bank of England
BOJ	Bank of Japan
BRICS	Brazil, Russia, India, China and South Africa
CAD	Current Account Deficit
CEA	Chief Economic Advisor
CEPR	Center for Economic Policy Research
CGST	Central Goods and Services Tax
CMIE	Center for Monitoring Indian Economy
CPI	Consumer Price Index
CSO	Central Statistics Office
DTF	Distance to Frontier
ECB	European Central Bank
EM7	Emerging Market 7
EMDE	Emerging Market and Developing Economies
EPFO	Employee Pension Fund Organization
ESIC	Employee Social Insurance Corporation
FDI	Foreign Direct Investment
FE	Fixed Effects
GDP	Gross Domestic Product
GEM	Global Economic Monitor
GFC	Global Financial Crisis
GNPA	Gross Non-Performing Assets
GSDP	Gross State Domestic Product
GST	Goods and Services Tax
GSTN	Goods and Services Tax Network
GVA	Gross Value Added
HRA	House Rent Allowance
IFS	International Financial Statistics
IGST	Integrated Goods and Services Tax

ILO	International Labor Organization
INR	Indian Rupees
LPG	Liquefied Petroleum Gas
MPC	Monetary Policy Committee
MSMEs	Micro, Small and Medium Enterprises
NCLT	National Company Law Tribunal
NITI	National Institution for Transforming India
NPAs	Non-Performing Assets
NPLs	Non-Performing Loans
NRI	Non-Resident Indian
PPP	Public Private Partnerships
PSBs	Public Sector Banks
OPEC	The Organization of the Petroleum Exporting Countries
RBI	Reserve Bank of India
RER	Real Exchange Rate
RHS	Right Hand Side
ROA	Return on Assets
ROE	Return on Equity
SCB	Scheduled Commercial Banks
SGST	State Goods and Services Tax
SLR	Statutory Liquidity Ratio
SMEs	Small and Medium-Sized Enterprises
TFP	Total Factor Productivity
UNCTAD	United Nations Conference on Trade and Development
USD	US Dollar
WDI	World Development Indicators
WTO	World Trade Organization

Executive Summary

India has achieved much in the last 25 years. Since the early 1990s, when reforms began, growth rates have been higher and more stable, the economy has become more modern and globally integrated, macroeconomic stability has improved, and the average citizen is better educated and lives longer. In addition, the business environment and governance standards have improved, there is political stability, and the geopolitical environment is relatively stable. Yet an economic deceleration in the last few quarters has generated worried commentaries about India's growth potential. The questions being raised are: Is the deceleration in economic growth structural or cyclical? Is the Indian growth story over? What is the "new normal" for India's growth potential? What sets of policies, structural or cyclical, might be needed to revive growth?

In this report, we take a long-term perspective on India's growth outlook. Looking back at the last 50 years, we note that India's average growth has accelerated slowly but steadily across sectors - agriculture, industry and services - and become more stable. This is reflected in increasing labor productivity and total factor productivity. The long-term trend toward acceleration and stability has, however, not been linear. There have been periods when growth accelerated rapidly, and periods when it slowed relative to the long-term trend. We note two such deviations.

First, during 2004–08, we see a rapid pace of growth, with the average growth rate reaching an unprecedented high of 8.8 percent a year. This can be attributed to a combination of external and domestic factors. Among external factors, high growth reflected a global economic boom in which large parts of the world economy, including the Indian economy, grew rapidly. On the domestic front, as has been documented elsewhere, this period was preceded by a decade of substantial reforms across sectors. During this time, all sectors contributed to accelerating growth, including investment, and exports.¹

In the wake of the 2008–09 global financial crisis, the Indian economy slowed. This was reflected most remarkably in a slowdown in investment, exports, credit, manufacturing, and construction. The slowdown can be traced back to tepid global growth that dragged the Indian economy with it. It can also be attributed to the broader macroeconomic management of the economy, including an excessive fiscal response to the crisis that led to worsening macroeconomic stability and slowed recovery.² Besides, prior to the crisis, high credit growth and capital flows had temporarily inflated growth. As capital flows reversed, and credit growth slowed down, GDP growth adjusted downward too. Finally, the emergence of policy bottlenecks, including delays in regulatory clearances, and slowing reform momentum added to the slowdown and further impacted investment.

The second deviation from the trend has been in more recent quarters, when growth decelerated temporarily to below 7 percent. This deviation is not in continuation of the long-term-growth dynamics.

¹ In hindsight, the period also reflected symptoms of a credit boom, a surge in capital inflows, and a remarkably fast pace of investment growth. Experiences from around the world show that a proportion of such episodes of high growth unravel within years (see e.g. Berg et al. (2008); and Pritchett and Summers (2014)).

² We define a period of low macroeconomic stability as one with high inflation, budget deficit, and current account deficit, and vice versa.

We argue that the deceleration to growth rates below 7 percent between Q3 2016–17 and Q2 2017–18 was an aberration, attributed to temporary disruptions in economic activity due to the twin policy events, as businesses prepared for implementation of the Goods and Services Tax (GST, an important indirect tax reform), and the economy adjusted to demonetization. At present, there are indications that the economy has bottomed out and, in the coming quarters, economic activity should revert to the trend growth rate of about 7.5 percent.

Our analysis shows that despite recovering to a 7.5 percent growth rate, attaining growth of 8 percent or higher on a sustained basis is dependent on the effective implementation of the existing structural reform agenda. In the last five decades, there have been six episodes when growth exceeded 8 percent, touching this high about once in each decade. The only durable episode of high growth, which lasted for five years, was from 2004 to 2008 when growth reached 8 percent in each of these years. As discussed, this episode benefited from the combined effect of reforms undertaken in the 1990s and early 2000s, and was dependent on an unusual buoyancy in the global economy and easy global liquidity, leading to growth acceleration across sectors and all components of GDP. However, this period also raised concerns about potential reversals of exceptionally high credit and investment inflows.

All other episodes of acceleration lasted only one to two years, and corrected sharply in the years after. In some of these periods, high growth was due to a low base impact of slow growth in previous years followed by unusually good agricultural output (1976, 1989), in others it was due to an unsustainable fiscal deficit or another macroeconomic policy (such as in 2010–11).

In the last few years, recovering from a slowdown in reform and the buildup of macroeconomic unsustainability in the aftermath of the global financial crisis, India has exhibited a renewed impetus for reform. Reforms have been designed and successfully implemented in a number of areas—a new inflation targeting framework has been implemented, energy subsidy reforms have decisively reduced the level of subsidies, the level of fiscal deficit has been contained, fiscal deficit frameworks have been reinstated, fiscal federalism has been strengthened, and the quality of fiscal expenditure has improved.³ The impact of some of these reforms is evident in a significant improvement in macroeconomic stability.⁴

In addition, the states and the center are playing an important collective role in the implementation of the reform agenda. There have been continuous efforts to improve the business environment, to ease inflows of foreign direct investment (FDI), and to improve the credit behavior through the introduction and strengthening of an insolvency and bankruptcy framework. These reforms have been complemented by measures to widen access to financial services, promote digital payment systems, and the implementation of the historic GST code. The latter has harmonized the tax rates across states for goods and services, and has the potential to boost interstate trade, formalize the economy, and expand the tax base.

³ A sharp decline in oil prices, starting in mid-2014, globally low inflation, and continued easy liquidity conditions globally provided the conditions to help implement some of these reforms.

⁴ In addition to macroeconomic reforms, India has taken important steps in recent years to assure increased reliability and sustainability of energy supply through the 24X7 electrification and Renewable Energy campaigns. The business environment will also benefit from the “Make in India Initiative”.

However, despite the ongoing reform effort, the slowdown in investment, exports, and other areas of the economy has persisted. In this context, we offer the following perspectives:

Continuing subdued rate of investment is worrisome and needs to accelerate. Private investment in India is constrained by several factors. Issues relate to past leverages, credit availability, market demand, and policy certainty. Understanding and relieving the generic, spatial, or sector-specific constraints to investment growth is important. To spur the rate of investment, the private sector needs to be de-risked and policy certainty ensured. Adopting a “Maximizing Finance for Development” approach that evaluates the comparative advantages of private vs. public financing would be helpful. The approach would necessitate seeking an efficient mix of public and private resources to finance India’s long-term investment needs.

Reviving bank credit to support growth is critically important. The banking sector is experiencing high balance sheet stress. The genesis of the problem can be traced to the period of exuberant bank credit growth during 2004–08, and to the response to the global financial crisis, which entailed evergreening of loans. Decisive reforms will be needed to enable the Indian banking sector to help finance India’s growth aspirations. While India’s public-sector banks have a larger share in development social loans, and more rural branches, than private sector banks, the allocative and operational efficiency of the public-sector-dominated Indian banking sector is considered to be low across sectors and regions. The implementation of the new Insolvency and Bankruptcy Code is an important step towards improving the credit behavior. However, the policy may take time to be effective in cleaning the balance sheets. Several complementary avenues to improve the functioning of the sector need to be considered. Besides recapitalization, a consolidation of public sector banks, revising their incentive structure to align it more closely with their commercial performance, ensuring a level playing field for private banks, and opening the space for greater competition would be important measures to durably enhance the stability and efficiency of the banking sector.

Making exports competitive again. While private investment is likely held back primarily by domestic factors, export growth is constrained by both domestic and external reasons. Despite growth in Indian exports more recently, India has barely managed to keep pace with the growth in world exports in the last few years, reflected in its declining market share in the world (see Selected Issue Notes). Significant improvements in the competitiveness of Indian firms is key to developing India’s role as an exporter. Among the many preconditions for India to improve its competitiveness are an infrastructural boost to bring it on par with the world’s current manufacturing hubs. In addition, reforms to land, labor and financial markets would be needed to assure the continued competitive supply and use of key production inputs. Finally, building on recent improvements to its doing business ranking, India can benefit from further strengthening the competitive business environment.

Leveraging external conditions. Real external conditions seem to be turning more supportive of growth, as the global economy is poised to grow faster and global trade volumes are increasing. However, the financing conditions are expected to tighten due to a further normalization of monetary policy by the United States and other advanced economies, and may have implications for India’s cost of financing and

financial markets. Hence, enhancing resilience and efficiency in domestic financing conditions will be even more important. Given the benign prognosis of oil prices, a further large hike in oil prices and its fall out on the Indian economy is not perceived to be a major risk.

Limited room or rationale for countercyclical measures in the presence of structural constraints to growth. In the midst of complex and persistent structural constraints, fiscal, monetary, or exchange rate policies can play a limited role in boosting growth. Even if used, these can only provide a temporary reprieve; by their very nature, countercyclical policies ought to be used temporarily and should be reversed within a reasonable period of time. Given the structural nature of weak exports and investments, the effectiveness of transitory countercyclical policies is likely to be limited.

In summary, the Indian economy is likely to recover from the impact of demonetization and the GST, and growth should revert slowly to a level consistent with its proximate factors—that is, to about 7.5 percent a year. Reaching growth rates exceeding 8 percent will require continued reform, and a widening of their scope, aimed at resolving issues related to credit and investment, and enhancing the competitiveness of India’s exporting sector. Maintaining hard-won macroeconomic stability, providing a definite and durable solution to the cleaning up of banks’ balance sheets, realizing GST’s growth and fiscal dividend, and regaining momentum on the unfinished structural reform agenda will be key for realizing these rates of growth. Accelerating the growth rate will also require continued integration into the global economy. As highlighted by India’s Systematic Country Diagnostic, for the country to achieve middle class status by 2047 growth rates must be sustained above 8 percent for multiple decades. This requires a reform focus on moving to a more resource efficient growth path, making growth more inclusive and enhancing the effectiveness of the Indian public sector.

Part I
A Long-Term Perspective on the Indian Economy

I India's Growth Story

I.1 Introduction

In the first part of the India Development Update, we examine India's growth dynamics since the 1970s to offer perspectives on its growth prospects. We analyze India's long-term growth patterns in several ways. We decompose GDP growth across sectors—agriculture, industry, and services; and across uses—consumption, investment, exports, and imports. We analyze the proximate factors that determine long-term GDP growth, such as capital, labor, productivity growth, trade openness, size of the external market, and institutions. We compare India's growth experience with that of the other large emerging market economies.⁵

We observe several stylized facts. First, India's long-term economic performance has been impressive. Despite variation around the long-term growth rate, average growth over any continuous 10-year period has steadily accelerated, and has never reversed for a prolonged period. Acceleration in growth rate is consistent with India's steadily improving proximate determinants of long-term growth. Economic growth has also become more stable—partly due to growth rates stabilizing within each sector, and due to the transition of the economy toward the services sector, which has a more stable growth rate.

Second, growth acceleration has been characterized by productivity gains and not just by an increase in factor inputs. Productivity gains are reflected in both labor productivity and total factor productivity. The contribution of productivity gains to growth has increased in recent decades. Productivity gains are attributed to both “within sector” gains, and to the reallocation of resources to more productive sectors.

Third, we reconcile the long-term growth potential of the economy with the perception of an ongoing slowdown in the economy. We do so by dividing the post-reform period since the early 1990s into three phases and closely analyzing the growth rate over each phase. The first phase of growth acceleration lasted from 1991 to 2003, when GDP grew at an average rate of 5.4 percent a year. It marked a growth acceleration of 1 percentage point a year over the previous two decades. A short second phase of unusually high growth followed during 2004–08, when growth was aided by rapid global growth and easy global liquidity, and by the impact of important reforms that were undertaken in prior years. During this phase, GDP grew at an average annual rate of 8.8 percent. The period of growth acceleration was propelled by a rapid increase in rate of investment, financed by high credit growth and a surge in capital flows.

A third phase of a growth slowdown then ensued, aligning with the slowdown in the global economy and the onset of the global financial crisis (GFC) in 2008–09, and continuing since then. Growth

⁵ Years refer to fiscal years in the report unless otherwise indicated. E.g. 2015 refers to fiscal year 2014-15, which runs from April 1, 2014, until March 31, 2015. GDP refers to GDP at market price, unless otherwise indicated.

slowdown reflected most profoundly in investment, credit, manufacturing, construction, and exports. The period was marked by initially worsening macroeconomic stability, in part due to the fiscal response to the crisis, but also due to the broader macroeconomic management of the economy, which has recovered since.⁶ The slowdown aligned India's growth rate to the trend growth rate of the preboom period.

Fourth, even as the economy has slowly reverted to the trend growth rate and stabilized in recent years, the revival is not firmly anchored in investment, exports, and the industrial sector. Investment rates have declined in recent years and India has been losing global export market shares (see Selected Issue Notes). Further, the credit slowdown initiated by the crisis has been protracted: even though the initial extent of the slowdown was comparable to that in other emerging markets after the global financial crisis, recovery in investment and credit has been more protracted than in other countries. This may have implications for sustaining the current growth rate, for accelerating growth to India's potential, and for enhancing the potential growth itself.

Finally, the growth deceleration of the last few quarters is not in continuation of the long-term growth dynamics. While the deceleration of growth to the average rate of about 7 percent is structural, a further decline in growth rate to levels below 7 percent between Q3, 2016–17 and Q1, 2017–18 has been an aberration. This additional slowdown can be attributed to temporary disruptions in economic activity due to the twin policy events, as businesses prepared for implementation of the Goods and Services Tax (GST), an important indirect tax reform, and as the economy adjusted to demonetization. There are indications that the economy is recovering, with growth reverting to the trend rate of growth of about 7.5 percent in the coming quarters: GDP growth accelerated to 6.3 percent in Q2, 2017-18; and further to 7.2 percent in Q3, 2017-18. Besides, high frequency indicators, such as the Purchasing Manager Index and the Index of Industrial Production, show a recovery after a sharp slowdown in the months surrounding GST introduction (and demonetization).⁷

Our analysis shows that despite the growth rate recovering, attaining a growth rate of 8 percent or higher on a sustained basis is not guaranteed in the absence of an effective structural reform agenda. There have been six episodes in the last five decades when growth rates exceeded 8 percent, about once in each decade. Most episodes of acceleration lasted only one to two years, and corrected sharply in the years after. In some of these, high growth was due to a low base impact of slow growth in previous years followed by an unusually good agricultural output (1976, 1989); in others, it was due to an unsustainable fiscal deficit or another macroeconomic policy (such as in 2010–11). The only durable episode of growth sustaining at levels above 8 percent for 5 continuous years is the one which lasted from 2004 to 2008. This episode benefited from the combined effect of important reforms undertaken in the 1990s and early 2000s

⁶ Macroeconomic stability is measured as a period of low inflation, budget deficit and current account deficit.

⁷ The South Asia Economic Focus of the World Bank (2017), using night light data, points out that disruptions caused by demonetization only temporarily affected aggregate economic activity. Our view of a swift recovery from GST disruptions is consistent with the Monetary Policy Committee of the RBI (https://rbi.org.in/scripts/BS_PressReleaseDisplay.aspx?prid=42012). The transient adverse impact of GST is reflected in the fact that the wait times for trucks at internal borders have reduced by 90 minutes due to GST (Crisil, 2017), an ongoing consolidation process of GST rates and administration (see Selected Issue Notes), and estimates suggesting that GST can raise India's GDP by 4.2 percent in the long-run (Van Leemput (2017)).

(as highlighted by Panagariya (2018)), and from an unusual buoyancy in the global economy and easy global liquidity, leading to high sustained growth across sectors and all components of GDP.⁸

Sustaining a growth rate higher than that indicated by the trend growth rate of 7.5 percent, and reaching an aspirational growth rate of 8 percent or higher, will require contributions from all domestic sectors and support from the global economy.⁹ Achieving this would require a concerted reform effort that maintains the reform momentum and widens its scope, and succeeds in decisively reversing the slowdown in investment, credit supply and exports. Maintaining the hard-won macroeconomic stability, a definite and durable solution to the banking sector issues, realization of the expected growth and fiscal dividend from the GST, and regaining the momentum on the unfinished structural reform agenda are other key components of attaining a growth rate of 8 percent or higher. As pointed out by the World Bank's Systematic Country Diagnostic for India, a reform focus on moving to a more resource efficient growth path, making growth more inclusive, and enhancing the effectiveness of the Indian public sector can assure that these rates are sustained, moving more and more Indians into a status comparable to the global middle class.

I.2 India's Long-Term Growth Dynamics

Below we look at the trends in the pace of economic growth in India starting in 1971.¹⁰ The long-term average growth rate has accelerated slowly in India, and despite significant variation around the long-term average, the growth rate has never reversed for a prolonged period (Figure 1). This steady acceleration is mirrored in the average growth rate accelerating over continuous 10-year period (Table 1). Compared to a significant trend coefficient of 0.103 for the rolling 10-year growth rate for India, the coefficient of a similar linear trend for 10-year average growth rates for other large emerging markets is negative, though small in magnitude.¹¹

⁸ The period also showed some signs of unsustainably high credit growth, capital inflows and rate of investment.

⁹ Arvind Panagariya has highlighted the importance of reviving bank credit to reach growth rates exceeding 8 percent: <https://blogs.timesofindia.indiatimes.com/toi-edit-page/how-to-revive-bank-credit-government-should-to-begin-with-offer-psbs-bonds-in-return-for-equivalent-equity/>. In a recent interview, Arvind Subramanian (Chief Economic Advisor) has pointed out that reaching growth rates around 8.5 percent is conditional on a reform agenda that addresses banking sector and other issues: <http://www.livemint.com/Politics/OUuLchx0uBAO32P1xhSYAN/India-can-return-to-85-growth-rate-Arvind-Subramanian.html>,

¹⁰ The source of data is the Central Statistics Office. See Appendix 1 for details on the data used and on how we spliced the GDP series for different base years.

¹¹ The comparator set of countries includes some of the largest emerging market economies, including Brazil, Indonesia, Malaysia, Mexico, Russia, South Africa, and Turkey, referred to as EM7. As per the World Development Indicators, in 2016 these countries accounted for 12 percent of the world population (30 percent when India is included), 13 percent of world GDP (20 percent when India is included), and an average per capita income of \$16,678 in 2011 PPP \$.

Table 1: Trend in the pace of long-term growth of India and EM7 countries

VARIABLES	(1) GDP growth 10-year rolling averages	(2) GDP growth 10-year rolling averages	(3) GDP growth 10-year rolling averages
Trend	-0.027** (2.98)	0.114*** (19.95)	-0.027** (3.19)
India * Trend			0.142*** (6.29)
Countries	EM7	India	EM7 and India
Country FE	Yes	No	Yes
Observations	240	37	277
R-squared	0.478	0.930	0.550

Note: Robust t-statistics (controlling for country-level clusters in columns 1 and 3) added in parentheses. Columns 1 and 2 present estimates of a regression of real GDP growth, calculated as a 10-year rolling average, on a linear time trend. Ten-year rolling averages of growth rates are for the current year and the preceding nine years. Column 1 employs data from the EM7 countries, column 2 uses Indian data, and column 3 combines EM7 and India data and regresses 10-year rolling average GDP growth on a linear time trend and a linear time trend interacted with an indicator for India. EM7 = Malaysia, India, Brazil, Russia, Mexico, Indonesia, and Turkey. FE = fixed effects. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

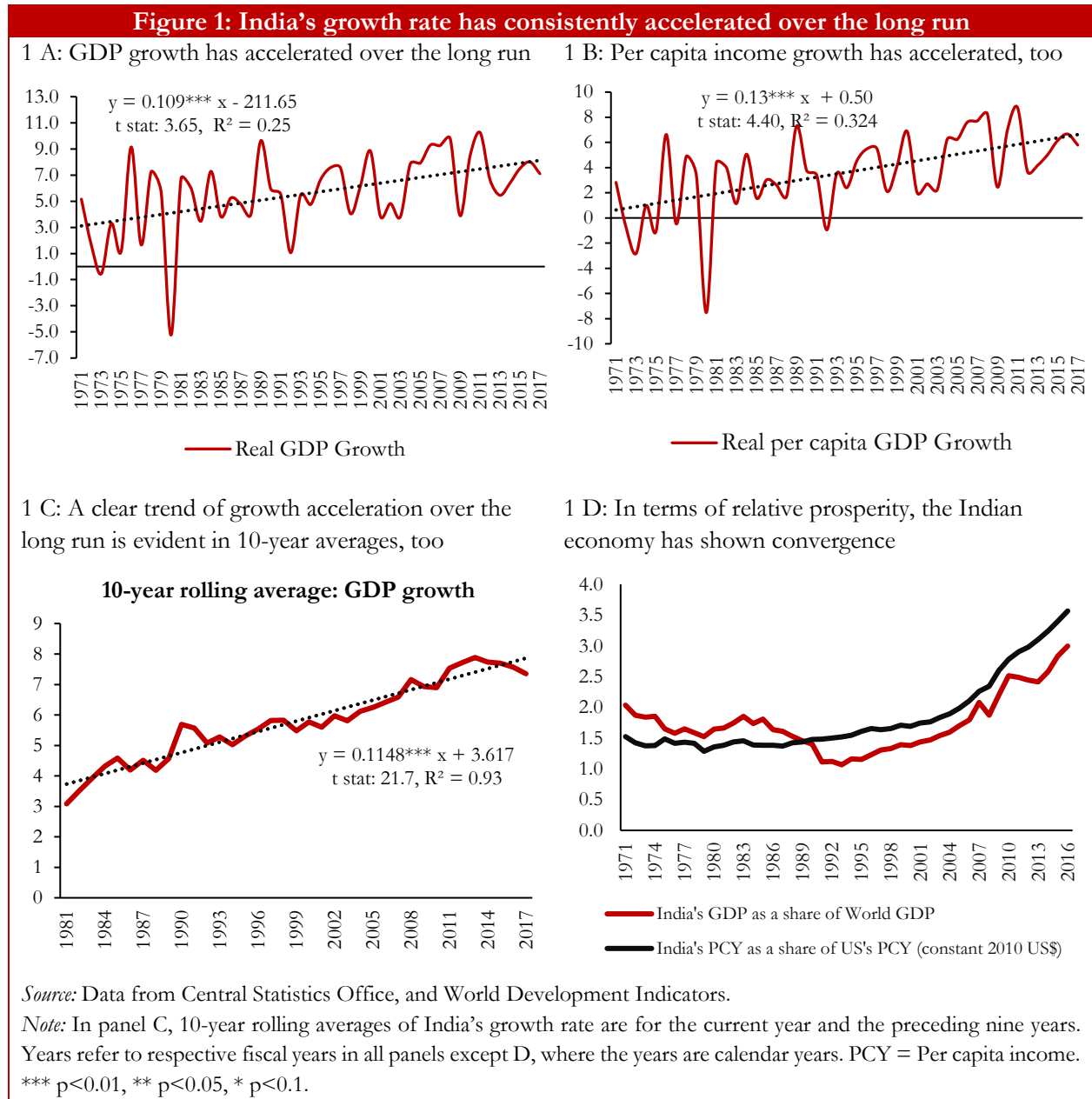
A. Composition of GDP and Growth

While India's growth has been well diversified, the pace of growth acceleration has differed across sectors. The acceleration of value added has been fastest in services, followed by industry, and there has been no evident pattern of acceleration in agriculture. The most remarkable achievement in agriculture has been the greater stability of growth, but not necessarily a higher average growth rate, (Figure 2). Consistent with the experience of other countries, the contribution of agriculture and allied activities in GDP growth has declined, while that of the nonagricultural sectors has increased. Existing research has highlighted the exceptionally fast growth of the services sector in India, accounted for in a large part by modern services, comprising financial services, communications, and the IT sector (Eichengreen and Gupta 2011); and the skill bias of its manufacturing and services activities (Kochhar et al. 2006).

The fact that growth has not just accelerated, but has also become more stable over time is reflected in its steadily declining standard deviation, and a declining coefficient of variation (Figure 3).¹² Particularly remarkable is the sharp increase in the stability of GDP growth in the post-reform period since 1991.¹³ This implies that even if growth has accelerated episodically in the decades prior to 1991, it was punctuated by large annual variations, and often failed to sustain. Thus, growth has not just accelerated post-liberalization, but has also become more stable.

¹² While the figure only shows the coefficient of variation, the results are very similar for standard deviation.

¹³ The figure also documents a decline in the coefficient of variation in the 1980s, coinciding with some acceleration in growth in the 1980s.



Looking at the composition of GDP on the uses side, the main trend that emerges is that of a consistently declining share of consumption in GDP, particularly private consumption, while the share of investment and exports has increased (Figure 4). While private consumption accounted for nearly four-fifths of GDP in the early 1970s, this share declined to about three-fifths in 2017.¹⁴ After a small increase over recent decades, government expenditure has stabilized at nearly 12 percent of GDP. Equally salient is the steady increase in the rate of investment. The rate of investment peaked at nearly 36 percent in 2007–08, but has declined to a rate more aligned with the long-term trend rate in the last few years.

¹⁴ Despite its declining share, consumption growth has been a key driver of aggregate GDP growth, contributing on average 3.76 percentage points to growth annually between 1971 and 2017.

Historically, public and private investment contributed approximately equally to total investment, but the role of public investment in growth has diminished over time. After peaking at 12.7 percent of GDP in 1986–87, public and private investment started to diverge, with public investment accounting for only approximately 7 percent of GDP in more recent years, compared to private investment exceeding 20 percent of GDP.

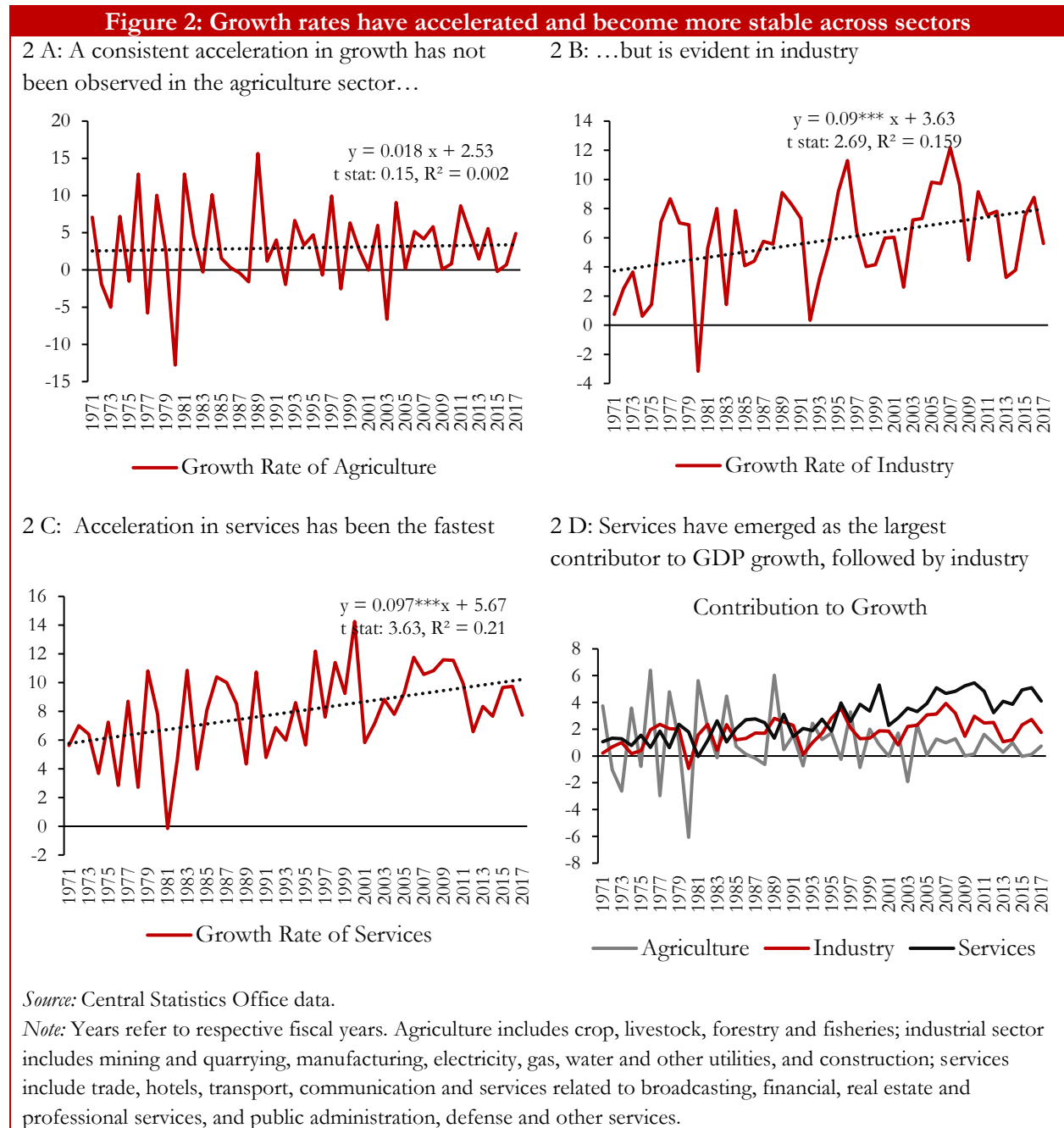
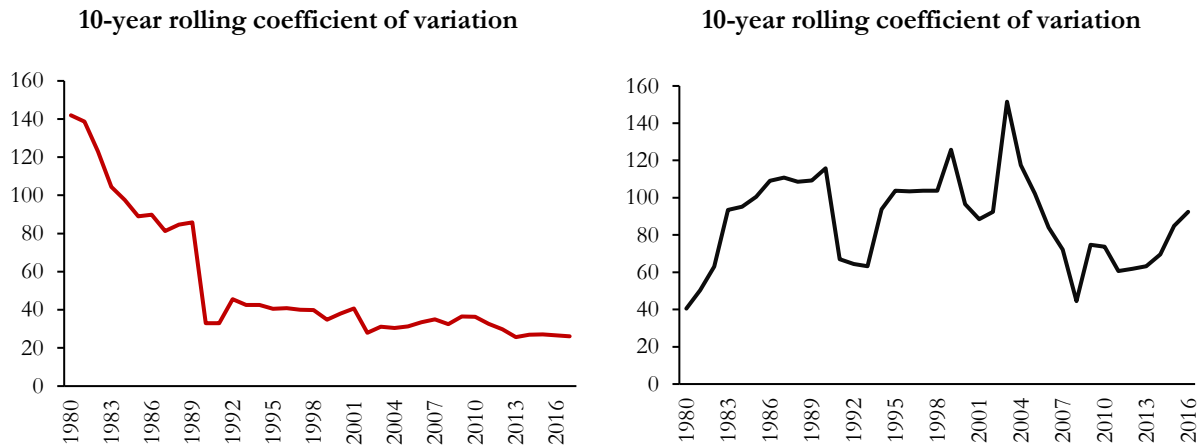


Figure 3: India's long-term growth rate has become increasingly more stable

3 A: Coefficient of variation, GDP growth, India

3 B: Coefficient of variation, GDP growth, EM7
median*Source:* World Development Indicators data.*Note:* Years refer to respective fiscal years for India. Coefficient of variation is calculated as the standard deviation divided by the mean for rolling 10-year periods. For EM7, it is the median of the cross-country series for every year.

India has also become more integrated into the global economy, with its trade ratio—the ratio of exports and imports to GDP—adding up to about 40 percent of GDP in 2017, five times the ratio of 7.6 percent in 1971, yet lower than the peak ratio of 57 percent in 2014. Exports as a percent of GDP tripled from 7.3 percent in 1991 to 22 percent in 2007, and were 25.5 percent of GDP in 2014. The contribution of net exports to growth has been muted, with import growth exceeding export growth in a majority of years.

B. Sources of Growth: Inputs and Productivity Growth

The preceding section highlighted how different components of GDP have evolved. To understand the underlying determinants of the Indian growth experience, we now turn to a decomposition of output growth into input usage and total factor productivity (TFP) growth. Decomposing TFP further, we analyze the trends in labor productivity and ask whether productivity growth was driven by within-sector productivity gains or the reallocation of labor to more productive sectors.

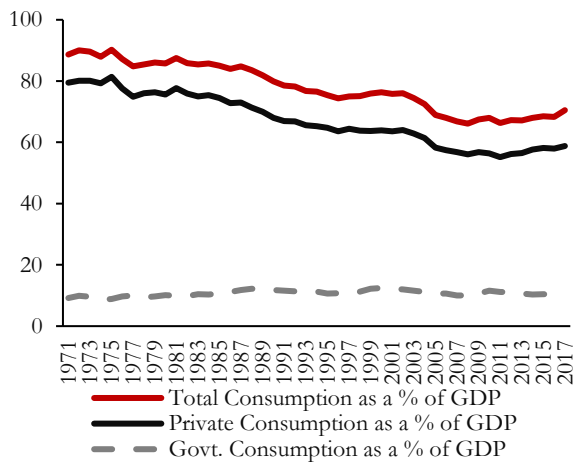
To decompose output growth, we employ a growth accounting framework that assesses whether increased employment, higher capital, or increases in TFP have been the major contributors to growth.¹⁵ Our results are presented in Figure 5. We find that capital, labor, and TFP contributed in about equal measure to growth in the early 1990s, and that TFP gained a more prominent role afterward.¹⁶

¹⁵ By doing this, we extend the analysis by Bosworth and Collins (2008) to account for more recent data. We assume a Cobb-Douglas production function with labor and capital as the only factors of production: $Y_t = A_t K_t^\alpha (L_t)^{1-\alpha}$. The share of capital or α is assumed to be 0.30, and TFP is estimated as the Solow residual.

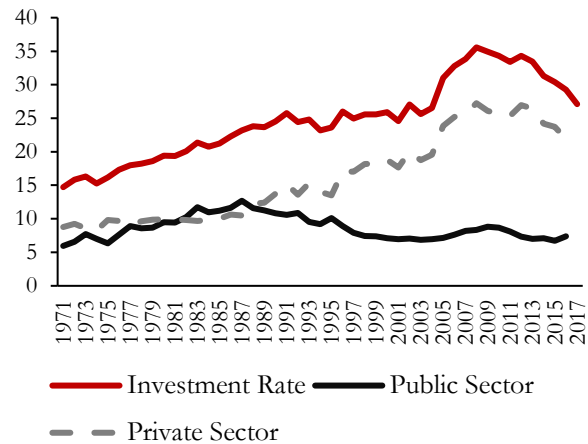
¹⁶ This finding is consistent with the empirical literature (for example, Bosworth and Collins 2008) which finds that growth during the 1960s and 1970s was mostly associated with increases in factor inputs. After this initial period of capital

Figure 4: Consumption share in GDP declined, while export and investment shares increased

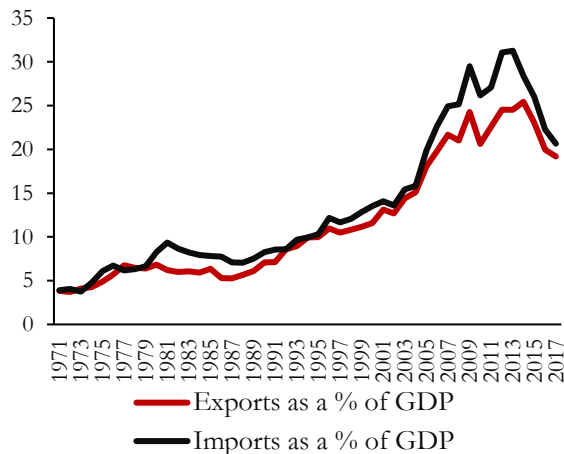
4 A: Share of private consumption in GDP has declined; government consumption has been stable



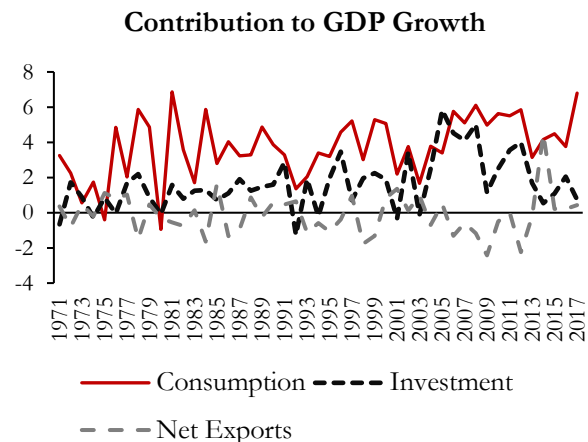
4 B: Share of private investment in GDP has increased while that of public investment has declined



4 C: Share of exports and imports in GDP has increased as the economy progressively opened up



4 D: Consumption growth remains a key contributor to growth, followed by investment



Source: Central Statistics Office data.

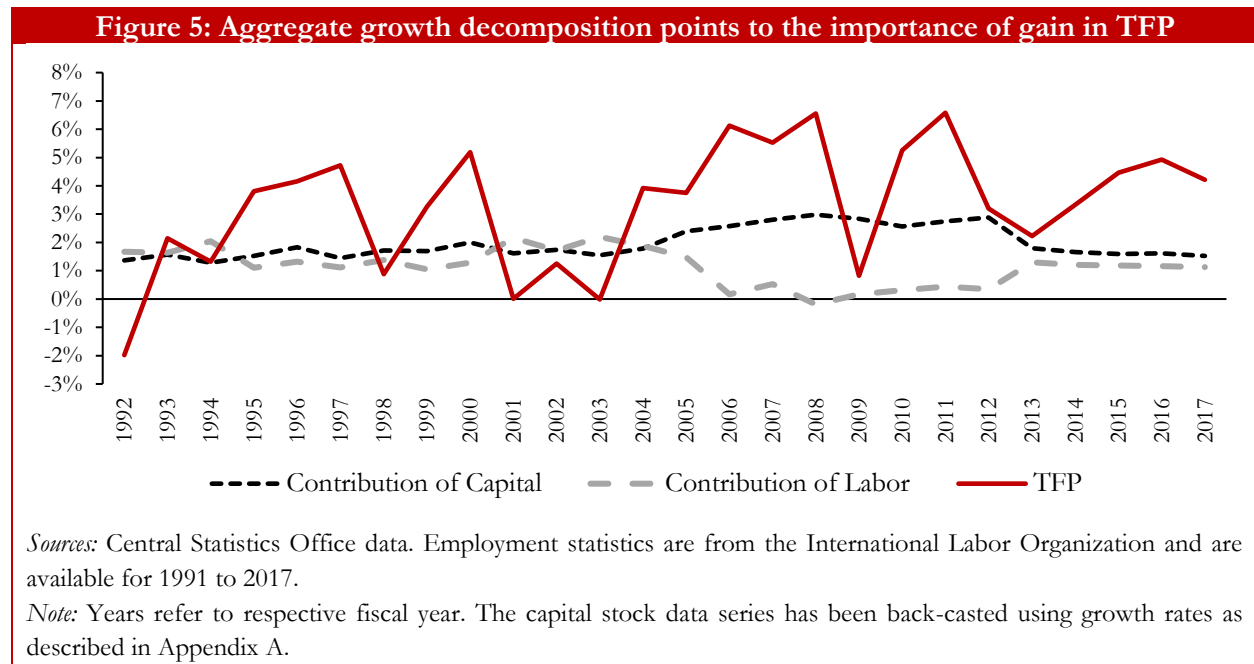
Note: Years refer to respective fiscal year. Investment rate is defined as gross fixed capital formation as a percentage of GDP. Net exports are the difference between exports and imports of goods and services.

Investment rates in India have slowed in the years after the GFC, which has reduced the role of capital accumulation in growth further—the contribution of capital declined sharply after 2012 and has since stabilized at around 1.5 percent a year. In addition, increases to labor inputs were only modest drivers of aggregate growth. The already low contribution of labor to growth diminished further between 2004 and 2008, with labor growth during the boom years contributing only marginally to growth. After the global financial crisis, employment growth’s contribution to aggregate growth stabilized at around 1 percent a year.

accumulation, TFP and capital accumulation contributed approximately in equal proportion to growth, with TFP improvements, especially in the service sector, gaining importance between 1980 and 2004.

Taken together, the growth accounting analysis shows that the growth momentum in India since the 1990s has been fundamentally supported by increases in TFP, which accounted for an average of 60 percent of overall growth between 1990 and 2011 and, since 2013, has again emerged as a key driver of growth. Both the diminishing role of capital accumulation and the comparatively limited importance of human capital in driving growth contrast the Indian growth experience to East Asia, as especially China relied on strong investment and capital accumulation.¹⁷

While decomposing sectoral growth rates is beyond the scope of this analysis, we note the patterns observed by Bosworth and Collins (2008) and Bosworth, Collins, and Virmani (2007). They indicate that India's growth since 1980 was fueled by a rapid expansion of TFP in services. In contrast to the service sector, productivity increases in Indian agriculture were modest, and industrial growth relied on employment increases and experienced comparatively low TFP gains.



Turning to the sources of labor productivity, India has experienced two significant boosts to labor productivity, with the first one commencing in 1993 and the second one in 2003 (Figure 6). The rate of productivity increase during these episodes is larger than that experienced by the East Asian countries during the periods of very high growth, but is smaller than the labor productivity increases realized in

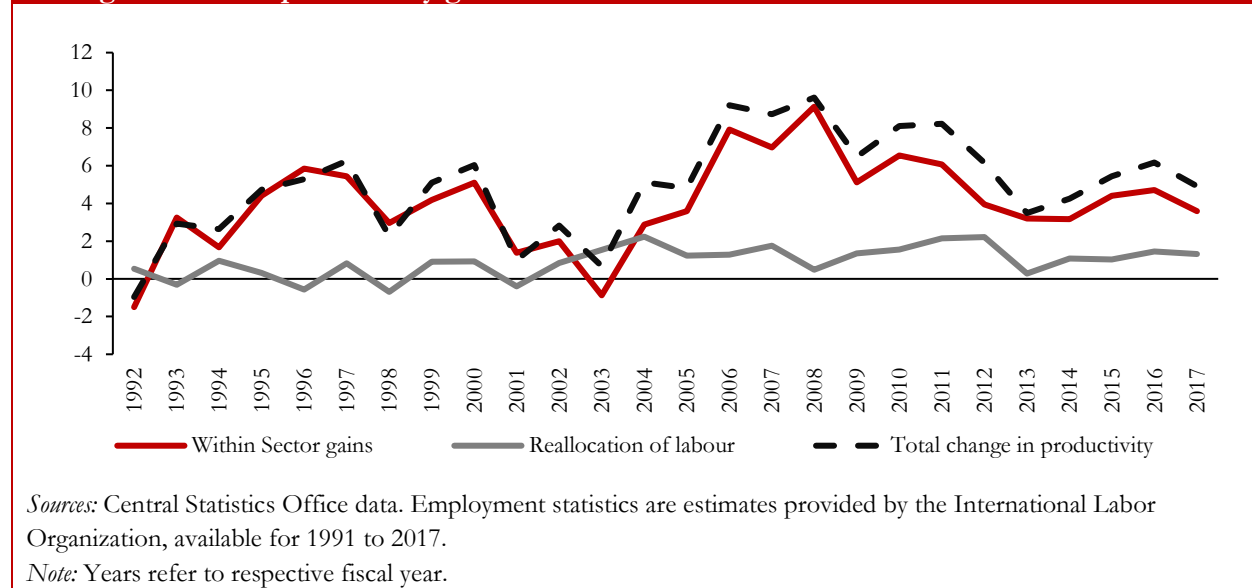
¹⁷ See Bosworth, Collins, and Virmani (2007) for an overview of the historic drivers of Indian growth. Bosworth and Collins (2008) provide an additional perspective by comparing the Indian growth experience with China, and highlighting the more important role of TFP increases in the early years of growth for India as compared to China. See also Young (1995) and Young (2003), who argues that productivity growth in China was much more muted, accounting for biases in official deflators and the measurement of human capital; and Brandt and Zhu (2009) for a more recent update of Young's (2003) calculations.

China, which increased output per worker by 8.5 percent between 1993 and 2004, compared to 4.6 percent in India.¹⁸

Gains in labor productivity may be attained due to the reallocation of labor toward sectors with higher productivity. Such reallocation can help overcome the misallocation of factor inputs to comparatively unproductive sectors and firms.¹⁹ Alternatively, labor productivity gains can also arise from workers becoming more productive within their sectors. This can, for example, be driven by labor-augmenting capital accumulation or technology improvements.²⁰

We compare the contribution of labor reallocation across sectors and the within-sectoral productivity gains to explain aggregate improvements in labor productivity for data extending until 2015.²¹ Over India's two phases of high labor productivity growth, within-sector productivity improvement has been the key driver of growth in labor productivity (Figure 6). Until the early 2000s, reallocation contributed only approximately 1 percentage point to annual growth.²² Even though productivity increases driven by labor reallocation have grown in importance since the early 2000s, the contribution of labor reallocation to total labor productivity gain has remained comparatively modest, at around 1.5 percent.²³

Figure 6: Labor productivity growth in India: Gains within sector and from reallocation



¹⁸ See Bosworth and Collins (2008) for a discussion.

¹⁹ See Hsieh and Klenow (2009) for a discussion of the potential magnitude of these effects in manufacturing.

²⁰ Within sector productivity gains are likely to be substantive on aggregate, as evidence from development accounting exercises points to the fact that cross-country differences in income levels are more likely to be explained by sectoral productivity differences instead of the sectoral composition of the economy (Caselli 2005).

²¹ The methodology is described in Appendix B. Implementing it requires data on sectoral output and labor shares. While sectoral output data is readily available through national accounts, we rely on the International Labor Organization for labor data, which is available with gaps from 1990. The ILO imputes data for missing years.

²² This is consistent with the literature. See, for example, Bosworth, Collins and Virmani, 2007.

²³ This contrasts with earlier periods, for which the literature estimates that reallocation contributed approximately 1 percentage point to annual growth until 2001 (Bosworth, Collins, and Virmani, 2007).

C. Long-term/Proximate drivers of growth

As discussed in the previous section, India's long-term growth is driven by factors that can be summarized in two broad categories: Factor accumulation and total factor productivity. With regard to factor accumulation, India has experienced increases in capital, labor, and human capital. Capital was accumulated through rising investment and savings rates between 1975 and 2008.²⁴ In addition to capital, India has experienced rapid population growth, which contributes to a growing labor force; and the population's human capital has increased. For example, literacy rates as a proxy for human capital increased by over 8 percentage points between 2001 and 2011.

In addition to factor accumulation, the previous section showed that the largest part of India's GDP growth was fueled by increases in total factor productivity. To understand the underlying determinants of this increase, we leverage results from the academic literature, which has identified various proximate factors thought to impact total factor productivity, and aggregate growth more generally.²⁵ The following proximate factors are important in India.

First, while India's integration into the world economy was persistently low for the decades after independence, the country experienced unprecedented growth rates in its trade share of GDP from the early 1990s until the onset of the global financial crisis (Figure 4 C). Given the strong causal link between trade openness and GDP growth identified in the academic literature, driven by, among others, knowledge and technology transfers, India's rapid economic expansion can be partially attributed to its increased integration into the world economy.²⁶

Second, there is robust evidence that financial development is not only a by-product of growth, but can also foster and support economic development through its effect on factor accumulation and productivity.²⁷ After independence, India started off with comparatively low levels of financial development as measured by its credit-to-GDP ratio. It has since, however, experienced two significant and stable phases of growth, the first one ranging from approximately 1960 to 1980 and the second one from the early 2000s until the global financial crisis. India's financial development also extends to individuals, as it has experienced a significant increase in bank account coverage in recent years: the number of basic savings bank deposit accounts has increased by more than 600 percent between 2010 and 2017, driven in large part by the Pradhan Mantri Jan-Dhan Yojana Scheme, which alone has led to the opening of more than 300 million bank accounts since its inception. Given the causal link from financial to aggregate economic development identified in the academic literature, India's remarkable growth experience and the potential to grow further can be partially attributed to patterns in its financial development.

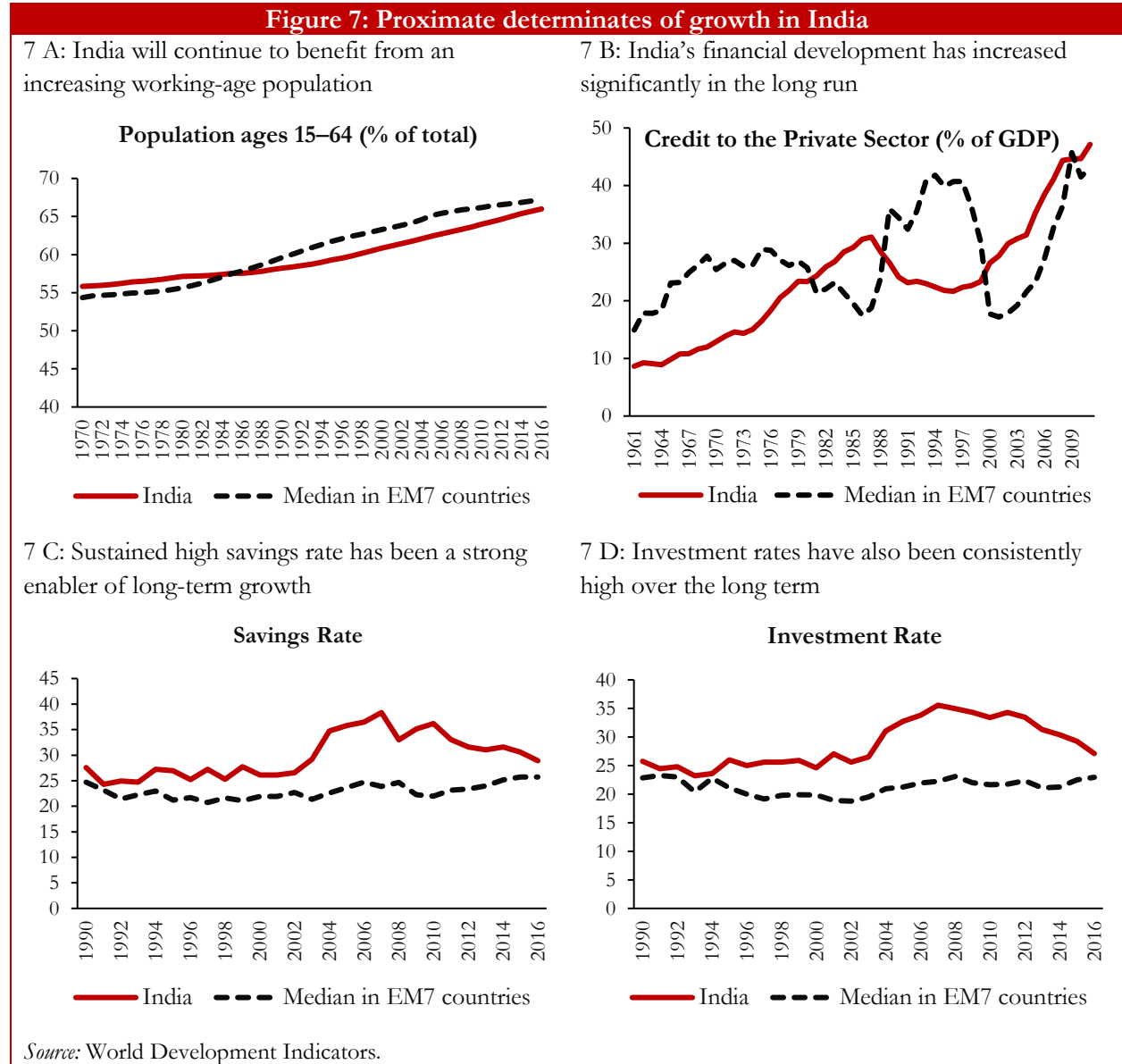
²⁴ In the working paper accompanying this report, we also show that India did not only increase its capital stock, it also improved the quality of its capital by upgrading to machines with a higher productivity in the early 2000s.

²⁵ We provide a detailed literature review of the proximate drivers of growth identified by the literature in the working paper accompanying this development update.

²⁶ See, for example, Frankel and Romer (1999) and Wacziarg and Welch (2008) for a discussion of the link between trade and growth.

²⁷ See Levine (2005) for an overview.

Third, India has remarkably strong and reliable institutions and a comparatively effective bureaucracy. Building on the institutional view of economic development, India’s growth is likely to be critically determined by its institutional base.²⁸



The discussion above indicates that the long-term narrative of India’s growth trends has been broadly unwavering. Below we look at India’s growth record since the early 1990s more granularly, with the aim to reconcile the long-term growth story with growth deceleration in recent years.

²⁸ See, for example, Acemoglu, Johnson and Robinson (2001) and Rodrik et. al. (2004) for the institutional view of development. According to some data sources, India has also experienced low income inequality, which the academic literature links to higher growth (e.g. Easterly (2007)). However, there has been a long-standing debate on the reliability of inequality data for India, with different data sources leading to different results.

I.3 Three phases in India's Growth Trajectory since the early 1990s

Economic growth in India since the early 1990s has been defined by the pace of structural reforms, the global economic environment, and the stance of macroeconomic policies. We divide the record of the Indian economy in the last two-and-a-half decades, that is since the early 1990s, into three phases.

We identify a first phase of growth from 1991 to 2003, when GDP grew at an average rate of 5.4 percent a year, marking a growth acceleration of 1 percentage point a year over the previous two decades (Figure 8). The period was characterized by watershed reforms that were undertaken starting in the early 1990s after the balance-of-payments crisis in 1991. The economic structure and the regulatory framework of the economy changed in a profound way during this period.²⁹ Reforms in the 1990s included devaluation of the rupee; industrial deregulation; opening of the economy to foreign direct investment and eventually also to other forms of capital flows; trade liberalization; tax reforms that included reduction in tax rates and rationalization of the taxation structure through the 1990s; reduction in financial repression through deregulation of interest rates and reducing the statutory preemption of bank credit; and continued evolution and modernization of monetary policy, including reducing fiscal dominance.³⁰

A short second phase of unusually high growth followed during 2004–08, when growth was aided by rapid global growth and excess global liquidity, and by the impact of important reforms that were undertaken in prior years. GDP grew at an average annual rate of 8.8 percent during these five years. Indications of high growth were visible in all major sectors of the economy, and in the sources of financing: manufacturing growth was robust, the investment rate peaked at 36 percent, export volume increased rapidly, and India increased its share of the world exports markets for both goods and services to levels higher than ever before. Even though an impressive feat of growth, the period was characterized by unusually high credit growth, and, as was the case for other emerging markets during this period, India too received an unprecedentedly large volume of capital flows. This phase ended when global growth slowed around the global financial crisis.

A third phase of a growth slowdown then ensued, aligning with the slowdown in global growth rates and the onset of the global financial crisis in 2008–09.³¹ During this period, global growth turned negative, global trade volume declined and remained suppressed for years thereafter, and global liquidity froze temporarily. Indian growth adjusted to a lower level, as well: the growth rate has averaged about 7 percent since then, and some of the same drivers of growth that seemed to have played a prominent role in the pre-crisis boom are the ones that seem to have now contributed to the slowdown.

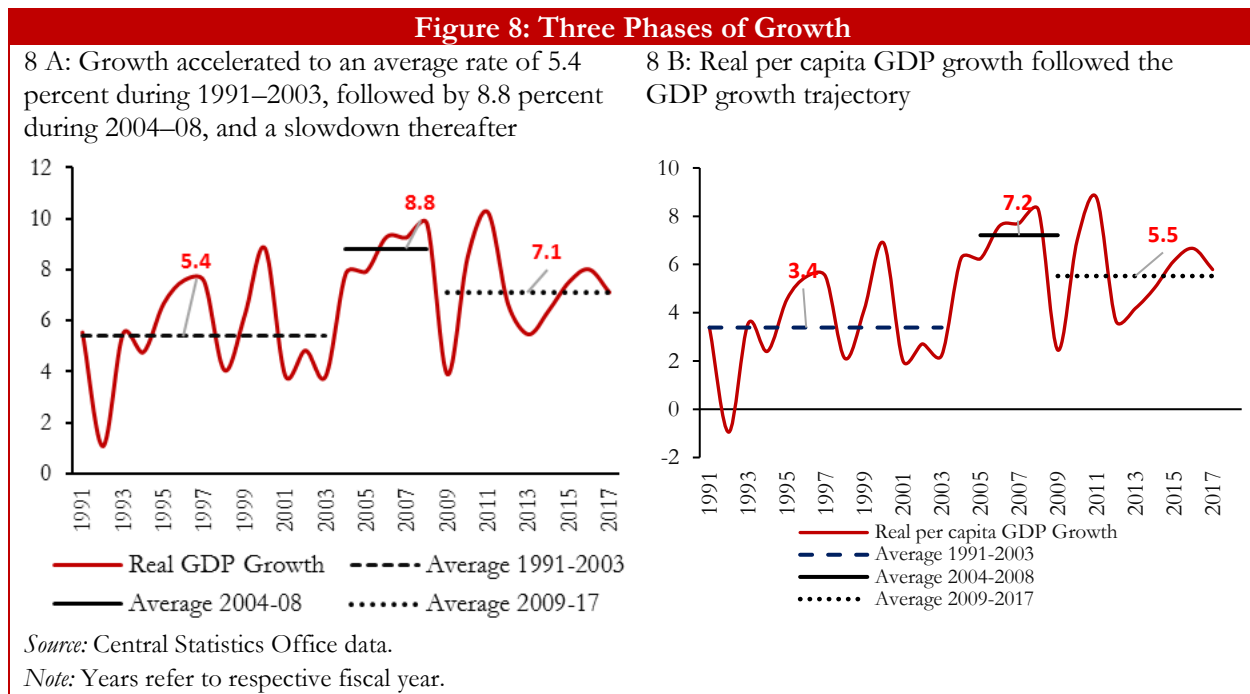
After the global financial crisis, India's growth drifted down to about 7 percent. The slowdown was most pronounced in investments and exports, both of which more than halved their contribution to

²⁹ For a growth narrative of the decades prior to 1991, see Panagariya (2004) and Mohan (2011).

³⁰ The reform process is discussed in detail in Mohan and Kapur (2015).

³¹ Mundle, Rao, and Bhanumurthy (2011) and Mohan and Kapur (2015) point out that the pace of economic growth in India had started drifting lower even before the GFC manifested itself fully with the collapse of the Lehman in September 2008.

growth. With regards to sectors, the slowdown was most visible in construction, manufacturing, and agriculture.



I.4 Pre-crisis Growth Acceleration and the Post-Crisis Correction

In what follows, we analyze the period of the economic boom and the succeeding period of deceleration in India. We situate it in global developments, compare it with the experience of other large emerging markets where appropriate, and track its constituents. We note that (a) the period of the rapid economic growth of 8.8 percent depended heavily on supportive global growth and liquidity conditions. As highlighted by the literature, the exceptionally high credit growth experienced by India during this period bore risks of a reversal. (b) While the initial slowdown in India since 2008–09 was in sync with global developments and comparable to the impact on other emerging markets, the recovery from the impact of the GFC-induced deceleration has been slower in parts of the Indian economy. The pace of growth remains subpar in all the sectors where the initial impact was seen to be large—namely in the manufacturing sector, exports, and investment. Particularly striking is the continuing anemic pace of credit growth.³² (c) One reason for a tepid recovery may be due to the policy response to the economic slowdown around the GFC. Particularly, a generous fiscal stimulus, and the regulatory forbearance on bank credit resulted in deteriorating macroeconomic stability and a slow-paced recovery.

³² While establishing causality across these variables, despite their strong co-movement, is beyond the scope of this paper, it may be a worthwhile exercise for future work.

A. Cross-Country Comparison

Comparing growth acceleration in 2004-2008 with that of other emerging countries, we note that the spurt in growth rate that India experienced in the early 2000s was sharper than in many other emerging countries (Figure 9). Starting from a modest level, the credit-to-GDP ratio increased rapidly, surpassing the levels in EM7 countries. The rate of investment in India also outpaced the rate in EM7 countries, and India's share in world export markets increased at a faster pace than in other emerging markets. The growth exuberance and the "credit bubble" were partly financed by large capital inflows during this period.³³

In econometric analysis, we find that investment growth had a sharper correction in India, and picked up in the years when government expenditure grew, which is indicative of a boost through public rather than private investment. While credit to the private sector as a percent of GDP remained resilient to the GFC in the initial years after the crisis, it has since been declining, and growth rates of private sector credit are consistently weaker than in the comparator countries. Interestingly, as credit growth slowed in other countries in 2008 itself, in India it remained high until much later. As we also discuss in a Selected Issue Note, export growth slowed in India, on the back of not only a global slowdown in trade, but also a decreasing share in world exports.³⁴

B. Spatial Analysis of Economic Dynamics during and after the GFC

To identify the characteristics of the slowdown after the global financial crisis, we now analyze how the states' economic growth was impacted by the GFC.³⁵ Perhaps unsurprisingly, we see exactly the kind of economic cycle in the states around the GFC in economic growth, credit growth, investment, and the manufacturing sector that is evident at the national level.³⁶ The average (mean as well as median) growth rates of all of these variables increased prior to the crisis, during 2004–08, followed by a correction that started with the global slowdown (in 2007–08); and precipitated when the GFC took hold, starting with the collapse of Lehman Brothers in September 2008. While Gross State Domestic Product (GSDP)

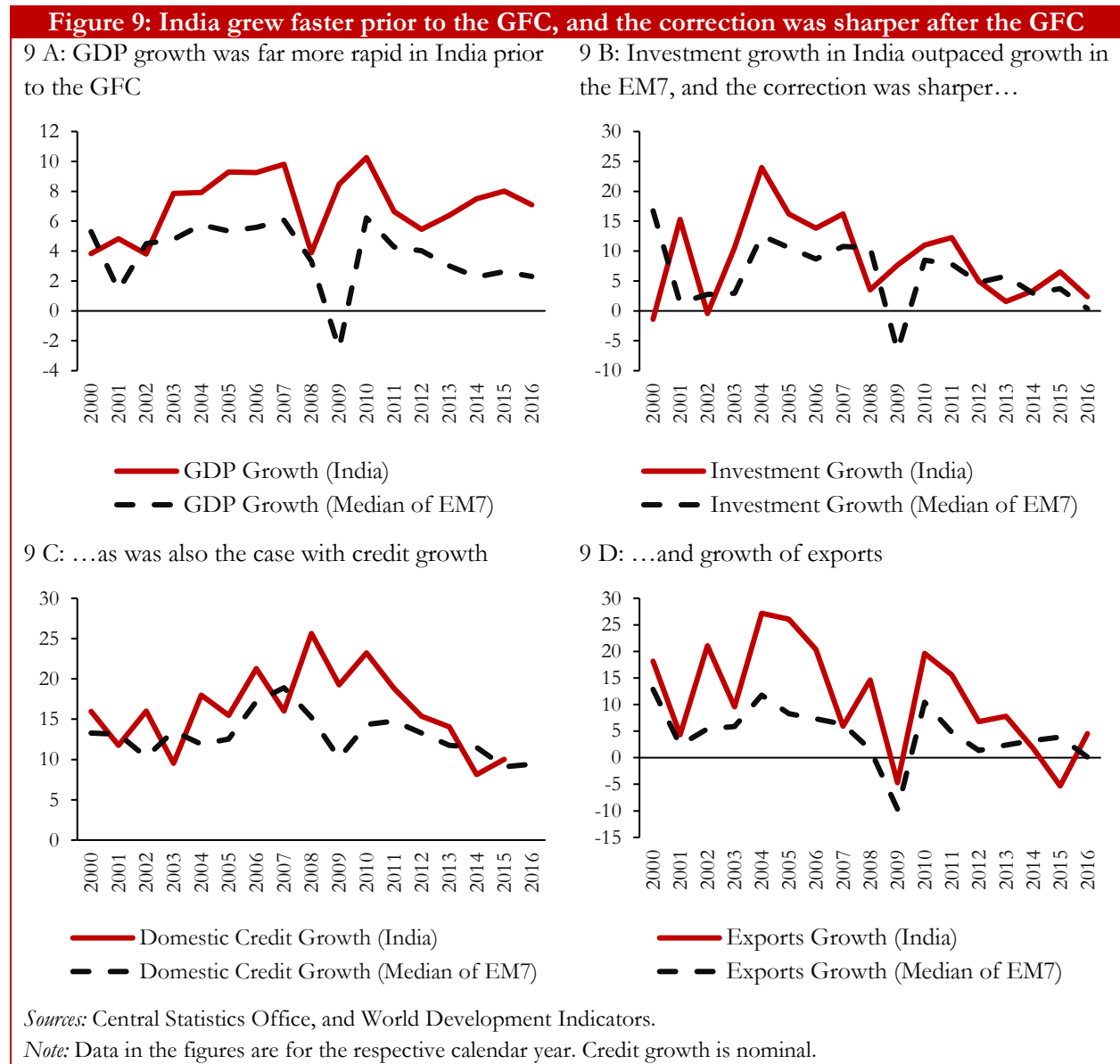
³³ Gupta (2016) notes a rapid pick up in capital inflows to India starting in the early 2000s. The surge in capital inflows during 2003–04 to 2007–08, was prominently evident in all components of capital inflows—portfolio flows, FDI flows and other flows. Capital inflows accelerated to an average \$44 billion a year in the five years between 2004 and 2008, compared to \$10 billion a year in three prior years, and at its peak in 2007–08, exceeded \$100 billion in one year. The phase of capital inflows mirrored global trends to a large extent, and were thus vulnerable to a reversal. There was a sudden stop of capital flows in 2008–2009, when capital flows declined precipitously to \$7 billion.

³⁴ Some features of the economy during this period look similar to those pointed out in the literature as being associated with credit booms, with surges in capital flows and an adjustment to investment levels, credit levels and growth after the period of boom was over. A significant percentage of these episodes result in growth slowdown (for example, Dell'Ariccia et al. 2011).

³⁵ Data on Gross State Domestic Product (GSDP) are from the CMIE's states of India database. While India has a total of 36 states and union territories, we restrict our analysis to the 20 large states, including Andhra Pradesh, Assam, Bihar, Chhattisgarh, Gujarat, Haryana, Himachal Pradesh, Jammu and Kashmir, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odisha, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, Uttarakhand, and West Bengal. Our sample covers the years 1990 to 2015 for all states except the younger states Jharkhand, Chhattisgarh, and Uttarakhand, for which credit data is only available from 2001 onward.

³⁶ Due to the unavailability of data for exports for each state, we cannot confirm the patterns in exports.

growth recovered in the post-crisis years, credit growth, investment, and manufacturing growth remained subdued, again as seen in the national data.

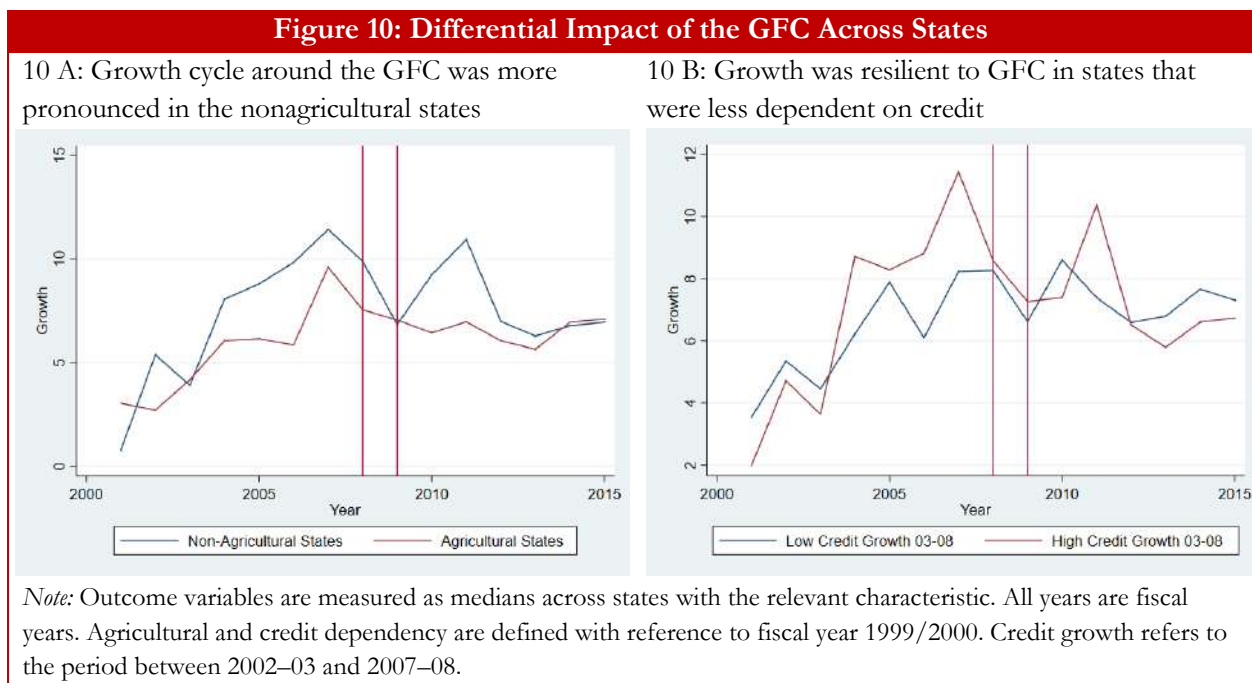


We ask whether there were any specific state-level characteristics that determined the impact of the GFC on the states. With reference to the base year 2000, we define the states' dependence on agriculture, the relative importance of manufacturing in economic activity, and the credit-to-GSDP ratio as an indicator of the states' dependence on credit. In addition, we use the rate of credit growth prior to the GFC (between 2004 and 2008) as an indicator to measure the prevalence of a credit boom in states in years prior to the GFC.

We look at the differential impact of the GFC in states whose share of agriculture in GSDP exceeded the median among all Indian states in 2000, or alternatively is among the top one-third of the

states by their share in agriculture. A comparison of aggregate growth rate around GFC across states with a larger share of agriculture shows that the growth cycle around the GFC was more pronounced in nonagricultural states.³⁷ Similarly, comparing states with a large share in manufacturing with others indicates that the states with a larger manufacturing sector had a sharper growth slowdown (the figure is not shown for brevity).

Differentiating the states by their reliance on credit, we define a state as being less credit dependent when its credit-to-GSDP ratio was below the median in 2000, or a state with a below-median pace of credit growth during 2004–08. The cyclical dynamics of growth and investment seem heavily correlated with the states’ credit dependence, or the pace of credit growth in their economies prior to the crisis. Growth and investment were impacted less adversely during the GFC in states less dependent on credit (Figure 10).



To investigate these relationships more systematically, we test whether the GFC caused differential disruptions in growth across different types of states. In the spirit of a difference-in-difference approach, we estimate the following regression model:

$$\begin{aligned}
 \text{GDP Growth (or Investment ratio)}_{it} &= \beta_0 + \beta_1 \text{State Type}_i \times \text{Post GFC}_t + \gamma_t + \mu_i + \varepsilon_{it} \quad (\text{equation 1})
 \end{aligned}$$

γ_t and μ_i denote year and state-level fixed effects, respectively.³⁸ The coefficient of interest, β_1 , captures the differential effect of the global financial crisis for states with a certain characteristic. More specifically,

³⁷ See also Kumar and Subramanian (2011).

³⁸ We include state level fixed effects in the regressions to account for other time invariant state characteristics. We estimate the regression using data from 1999–2000 onward for the sample of the large Indian states. All specifications allow for heteroskedasticity robust standard errors.

β_1 measures the difference in GDP growth (or the investment ratio) before and after the GFC in states with a given characteristic, minus the difference before and after the GFC in states without the characteristic.

Based on the discussion above, and consistent with Kumar and Subramanian (2011), we identify states with a larger dependence on agriculture, those with a high credit-to-GDP ratio in 2000, and those that experienced a rapid pace of credit growth between 2004 and 2008. While our main specification relies on comparing states above and below median for these characteristics, in robustness tests we also define the states that are in top one-third or bottom one-third of the respective state characteristics, or include the continuous measure of the characteristics.³⁹

Table 2 presents the results. Column 1 shows that states with credit growth above the median prior to the GFC had on average a 1.45-percentage-point larger decline in GDP growth per year after the financial crisis, compared to states with below median credit growth. The differential impact is more pronounced for the states that experienced a higher level of credit growth prior to the crisis. Column 3 shows that GDP growth in states in the top tercile of the credit growth distribution was 2.39 percentage points lower than growth in the bottom tercile after the GFC. The estimates are statistically significant at the 10 and 5 percent level, respectively.

To provide further evidence of the robustness of this result, we also investigate heterogeneous effects of the GFC around a continuous measure of credit growth. We again estimate equation 1 using the continuous variable measuring credit growth between 2003–04 and 2007–08 as the state-level characteristic. Using this measure, our estimates imply that GDP growth is reduced by 0.45 percentage points after the GFC for every additional percentage point increase in credit growth (column 5). The effect of the GFC on GDP growth in high credit growth states is comparatively homogeneously distributed for the years after the GFC, suggesting long-term disruptions caused by the interaction of the financial crisis with the credit growth variable (column 6). Finally, we also show that not just credit growth, but also the level of credit dependence of a state's economy, negatively interacted with the effect of the GFC on growth: column 7 shows that states that had an above median credit-to-GDP ratio in 2000 experienced on average a 0.05-percentage-point slower GDP growth after the GFC than states with a below median credit-to-GDP ratio.

³⁹ States with above median credit growth include: Andhra Pradesh, Assam, Chhattisgarh, Haryana, Himachal Pradesh, Karnataka, Maharashtra, Odisha, Rajasthan and Tamil Nadu; and the states with below median credit growth are: Bihar, Gujarat, Jammu and Kashmir, Jharkhand, Kerala, Madhya Pradesh, Punjab, Uttarakhand, Uttar Pradesh and West Bengal. States in top one third of credit growth pace are: Andhra Pradesh, Assam, Chhattisgarh, Haryana, Himachal Pradesh, Karnataka, Maharashtra and Rajasthan; and those in the bottom one third are: Bihar, Jharkhand, Kerala, Madhya Pradesh, Punjab and Uttar Pradesh. Regressions relying on this measure discard observations on states in the middle tercile.

Table 2: Differential effect of the financial crisis on states' GDP growth

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	GDP	GDP	GDP	GDP	GDP	GDP	GDP
	Growth	Growth	Growth	Growth	Growth	Growth	Growth
High Credit Growth x Post-GFC (Median)	-1.449*						
	(1.854)						
High Credit to GDP x Post-GFC (Median)		-1.263					
		(1.485)					
High Credit Growth x Post-GFC (Tercile)			-2.39**				
			(2.268)				
High Credit to GDP x Post-GFC (Tercile)				-0.620			
				(0.710)			
Credit Growth 2003- 08 x Post-GFC (Continuous)					-0.448**		
					(2.584)		
Credit Growth 2003- 08 x 2009 (Continuous)						-0.406	
						(0.992)	
Credit Growth 2003- 08 x 2010 (Continuous)						-0.495	
						(1.479)	
Credit Growth 2003- 08 x 2010 (Continuous)						-0.45**	
						(2.349)	
Credit to GDP x Post-GFC (Continuous)							-0.053*
							(2.026)
Observations	320	320	208	224	320	320	272
R-squared	0.312	0.311	0.281	0.379	0.318	0.318	0.289

Note: The period of observation covers 1999–00 to 2014–15. Columns 1 to 5 and 7 present estimates of equation 1, above. Column 6 allows the coefficient of interest to vary by year after the financial crisis. Robust t-statistics in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

C. The policy response to the GFC, macroeconomic stability, and the impact of the “tapering talk”

While the initial impact of the GFC on the Indian economy depended on the pace of GDP growth and credit and investment growth in the years prior to the crisis, recovery from the crisis also depended on the policy response to the crisis, particularly the large fiscal stimulus, and the regulatory forbearance to banks (or what some have referred to as the “evergreening of loans”). Mohan and Kapur (2015) and Mundle et. al. (2011) have persuasively argued that the fiscal stimulus in fact started prior to the GFC, in the run-up to the 2009 general election. The policy response and the subsequent macroeconomic management of the economy worsened macroeconomic stability and possibly prolonged the slowdown. The slow and delayed recognition and resolution of stressed balance sheets in banks added to the protracted recovery. This is consistent with the fact that the growth and investment slowdown was larger in the states that experienced rapid credit growth in prior years.

Two additional points are noteworthy. First, macroeconomic stability worsened in India starting in 2008–09, arguably due to the policy response to the crisis but also to the elections in 2009. Second, the worsened stability brought India to the brink of a financial crisis, when it was one of the most impacted emerging markets during the “tapering talk” episode in May 2013, following the announcement by the U.S. Federal Reserve that it would reduce the pace of its security purchases.

Macroeconomic stability is widely recognized as a necessary condition for sustained economic growth, and for external stability.⁴⁰ While it is possible for a country to experience temporary spurts of economic growth based on a policy shock, such as fiscal stimulus or monetary expansion, such phases of growth generally turn out to be transitory, whereas growth accompanied by macroeconomic stability sustains for a longer period of time. We construct an index of macroeconomic stability as an average of the standardized indexes of inflation (CPI inflation), current account deficit (percent of GDP), and fiscal deficit (percent of GDP).⁴¹

$$MacroStability_{it} = -\frac{1}{3} \left(\frac{inflation_{it} - \overline{inflation}_t}{\sigma_i Inflation} + \frac{CAD_{it} - \overline{CAD}_t}{\sigma_i CAD} + \frac{FD_{it} - \overline{FD}_t}{\sigma_i FD} \right) \quad (2)$$

Inflation, fiscal deficit, and current account deficit series are standardized around mean zero and unit variance, and the index is the negative of the simple average of the standardized series. An increase in its value indicates higher macroeconomic stability (that is, lower inflation, lower current account deficit, or lower fiscal deficit), and vice versa.⁴²

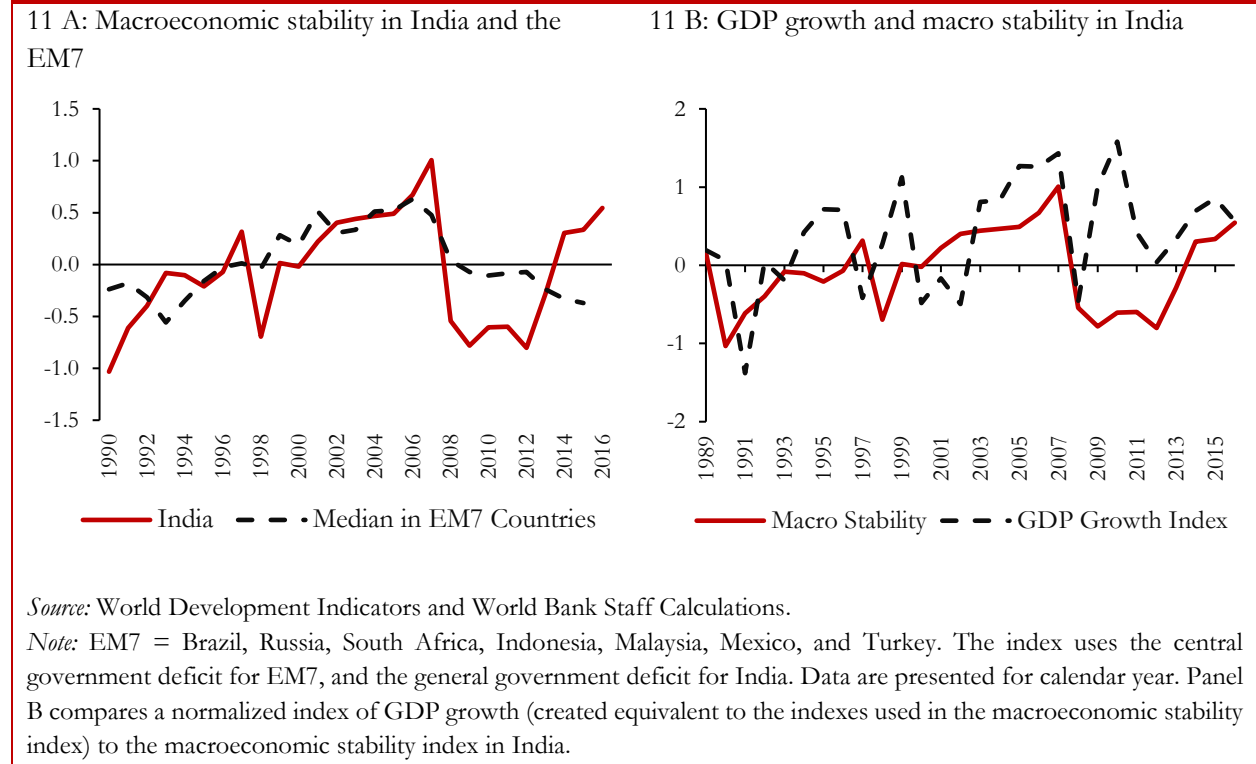
⁴⁰ Eichengreen and Gupta (2014) relate the impact of the tapering talk to elements of macroeconomic stability, as well as the size and liquidity of financial markets.

⁴¹ See the accompanying box for a justification of the choice of these variables. While data on fiscal deficit is not directly available through the WDI, we calculate it by subtracting government expenditure from revenue, both as percent of GDP.

⁴² Other candidates to include in macro stability are stable asset prices, sustainable pace of credit growth, and real exchange rate that is close to its equilibrium level. An unstable macroeconomic situation is often characterized by one or more of the following conditions: high inflation, large fiscal deficit, a large current account deficit, that is financed by short term capital flows; rapidly rising equity prices or credit growth or real exchange rate appreciation.

While India’s macroeconomic stability was similar to the EM7 until the late 1990s and between 2003 and 2007, India experienced significantly lower and deteriorating levels of macroeconomic stability between 2008 and 2012 (Figure 11). While growth revived momentarily after the GFC, this was at the expense of high budget and current account deficits and high inflation, putting the sustainability of India’s post-crisis growth experience into question.

Figure 11: Comparison of the Macro Stability Index with the median value of EM7 countries



India’s worsening macroeconomic stability after the global financial crisis can be traced to various policy developments. First, through an expansion of the National Rural Employment Guarantee Act, India had started its expansionary fiscal policy before the global financial crisis from 200 to 600 districts, waiver (“evergreening”) of farm loans, increased spending on food and fertilizer subsidies, and implementation of the Sixth Pay Commission recommendations for central government employees.⁴³ While this mediated the impact of the crisis and led to a quick revival, it also more than doubled the central government fiscal deficit between 2007–08 and 2008–09. Second, it has been noted that India’s stimulus could have overshoot its target, and its withdrawal has been protracted, leading to higher inflation and current account deficits and a crowding out of private investment in the years following the crisis. Especially linked to rising inflation is the fact that the stimulus focused on tax cuts and increased revenue expenditure (particularly subsidies).⁴⁴

⁴³ This development was documented by Mundle et al. (2011), who especially point out, using quarterly data, that the fiscal expansion started before the collapse of Lehman Brothers.

⁴⁴ See Mohan and Kapur (2015) for a discussion of this. They also note that “the growth recovery in 2008–12 was on steroids [and] is reflected in the very large unprecedented growth in the rate of government consumption.”

Third, the emergence of policy bottlenecks, including delays in regulatory clearances, added to the growth slowdown and further reduced the investment sentiment. In addition, the Reserve Bank of India (RBI) relaxed credit norms (or regulatory forbearance) in the aftermath of the GFC. With structural factors and the sharp fall in commodity prices having altered the outlook of several sectors, lowering credit norms potentially further added to already compromised lending standards developed during the boom years, leading to even laxer credit standards.⁴⁵

A fallout of the macroeconomic management of the economy during the period after the GFC was that some of the macroeconomic indicators had reached crisis proportions by 2013: the general government deficit was nearly 10 percent of GDP; inflation was at double-digit levels; the current account deficit was 5 percent of GDP; and the quality of public expenditure was questionable, with the share of capital expenditure low. Hence, it is unsurprising that as the market sentiment turned against emerging markets in the summer of 2013, during the “tapering talk,” India was one of the most affected countries.⁴⁶

The tapering talk episode started on May 22, 2013, when Federal Reserve Chairman Ben Bernanke first spoke of the possibility of the U.S. central bank reducing the pace of its security purchases. Even though this announcement had a sharp negative impact on many emerging markets, market commentary focused on five countries, Brazil, Indonesia, India, Turkey, and South Africa, christened as “Fragile Five.” Within this group, India had the second-largest exchange rate depreciation and the second-largest decline in reserves (table 3). With the rupee depreciating by 18 percent at one point, bond spreads increasing, and equity prices falling, many were concerned that the country was heading toward a financial crisis.⁴⁷

In a systematic analysis of the period, Basu, Eichengreen, and Gupta (2015) show that India was adversely impacted because it had received large capital flows in prior years and had large and liquid financial markets that were a convenient target for investors seeking to rebalance away from emerging markets; and because its macroeconomic conditions had weakened in prior years, which rendered the economy vulnerable to capital outflows and limited the policy room for maneuver.⁴⁸

⁴⁵ They suggest that besides government’s thrust on infrastructure investment through public-private-partnerships (PPP) led to new debt being contracted by highly leveraged Indian corporate entities investing in infrastructure. The banks may have facilitated government’s emphasis on PPP by deviating from the norms for credit appraisal and due diligence. And that governance issues with the management of select public sector banks, and possibly the cases of political interference, may have led to the compromise on the standard credit evaluation process and due diligence. Mohan and Kapur point out that small industries as well as agricultural loans do not seem to have contributed the lion’s share of this formation of NPAs, as they used to in the past. It is the industrial sector—primarily the infrastructure and steel sectors that have experienced greater deterioration in asset quality. RBI’s Financial Stability Report (2017) notes that the nonperforming assets are larger in industry, and amongst larger borrowers, and specifically in sectors such as steel, metal, infrastructure. Incidentally the ratios of NPLs have not yet bottomed out.

⁴⁶ The period of the tapering talk is generally referred to that between May 22, 2013, and September 18, 2013.

⁴⁷ See Mohan and Kapur (2015). In addition, the literature points out that the lending standards are often compromised during credit booms. See e.g. “India in crisis mode as rupee hits another record low,” <http://money.cnn.com/2013/08/28/investing/india-rupee/>; “India’s Financial Crisis, Through the Keyhole,” <http://www.economist.com/blogs/banyan/2013/08/india-s-financial-crisis>.

Table 3: Effect of tapering talk on “Fragile Five” countries (April–August 2013)

	Exchange rate depreciation	% Change in stock prices	% Change in reserves
Brazil	17.01	-5.28	-3.07
Indonesia	8.33	-14.21	-13.30
India	15.70	-3.32*	-5.89
Turkey	9.21	-15.38	-4.56
South Africa	10.60	6.81	-5.05

Source: Basu, Eichengreen, and Gupta 2015.

Note: *Decline in stock prices in India was about 10 percent if calculated using daily data between May 22 and August 31, 2013.

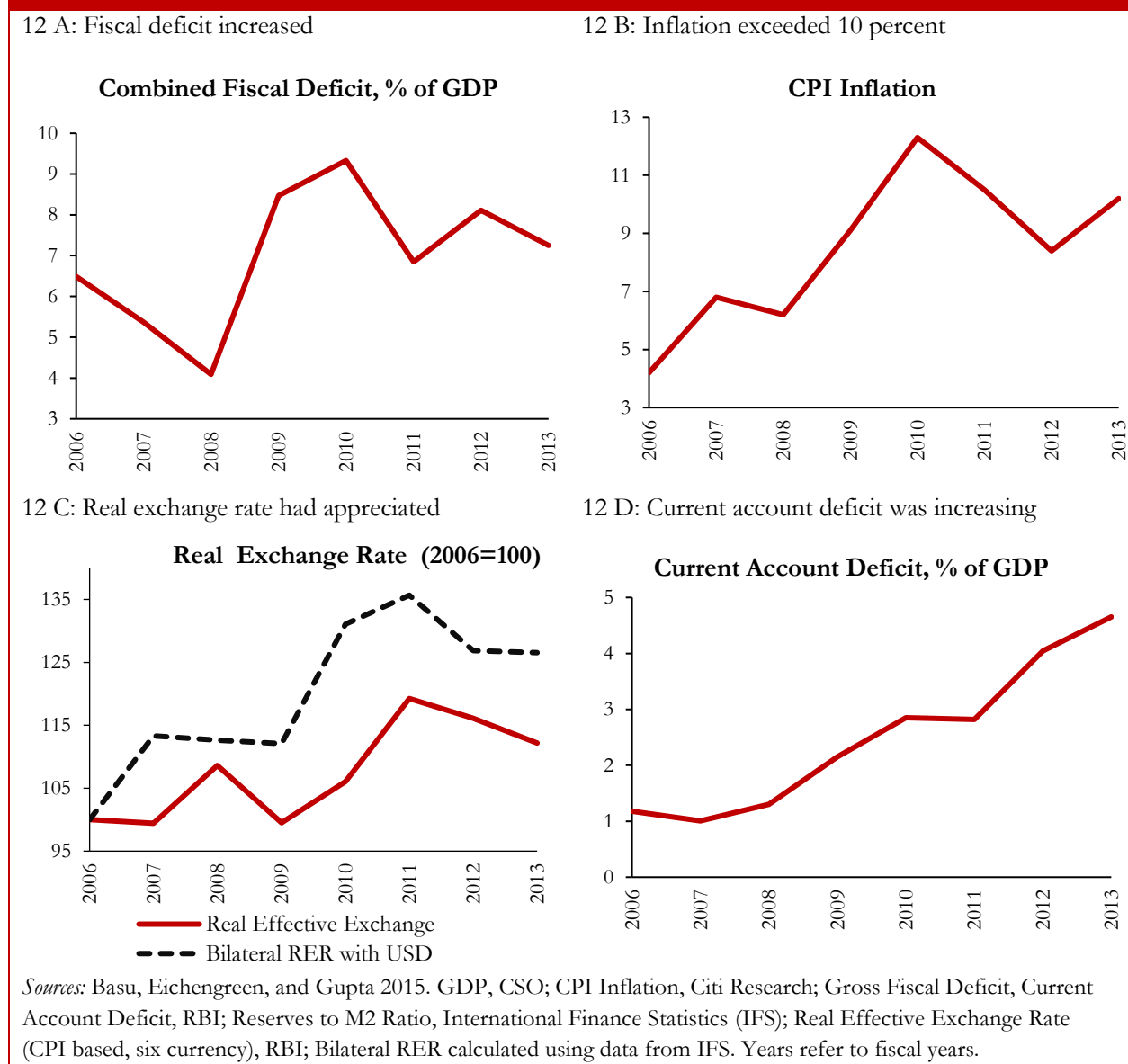
India’s negative response to the “tapering talk” episode is consistent with cross-country evidence. Eichengreen and Gupta (2014) show that the emerging markets that allowed their real exchange rate to appreciate and the current account deficit to widen during the period of quantitative easing saw a larger impact of the tapering event. India’s current account deficit increased from about 1 percent of GDP in 2006 to nearly 5 percent in 2013, and its real exchange rate appreciated markedly. Furthermore, the fiscal deficit increased, and inflation at about 10 percent was stubbornly high. The policy interest rate was already high, the RBI having raised it from 3.25 percent in December 2009 to 8.50 percent in December 2012. Thus, India’s weakening macroeconomic conditions rendered the economy vulnerable to capital outflows and limited the policy room for maneuver.⁴⁹ In addition, India was adversely impacted because it had received large capital flows in prior years and had large and liquid financial markets that were a convenient target for investors seeking to rebalance away from emerging markets. Taken together, India’s macroeconomic response to the GFC critically dictated its vulnerability to the “tapering talk” episode.

The underlying drivers of India’s reduced macroeconomic stability, specifically the factors contributing to the high fiscal or current account deficit, also contributed to increased economic and financial vulnerabilities directly. The increase in fiscal deficit was due to an increase in current expenditure, rather than to a pickup in public investment. The increase in expenditure was due to increased subsidies (on energy, food, and fertilizer) that added up to 2.3 percent of GDP in 2008–09, (an increase of nearly 1 percentage point of GDP over the previous year); as well as debt waivers, pay commission awards, and expansion of the National Rural Employment Guarantee Act from 200 districts to 600 districts. The increase in the current account deficit, largely a mirror image of the increased current expenditure, was also due to the diversion of private savings into the import of gold. This reflected a dearth of attractive

⁴⁹ Gupta (2014, presentation at Neemrana Conference) argues that if the increase in fiscal deficit was in response to the GFC, India seemingly overreacted. Its deficit increased by much more than by many other large emerging markets; a corollary of which is that inflation also increased by more than in other countries.

domestic outlets for personal savings in a high-inflation environment, where real returns on many domestic financial investments had turned negative.

Figure 12: Macroeconomic imbalances were apparent in India at the outset of tapering talk



These results highlight that once a country is affected by an external shock leading to a rebalancing of global portfolios, there are no easy choices. Therefore, it is better for countries to put in place a medium-term policy framework that limits vulnerabilities, and maximizes policy space for responding to such shocks. Maintaining a sound fiscal balance, a sustainable current account deficit, and an environment conducive to investment are, for obvious reasons, integral to such a framework. Other elements include managing capital flows so as to encourage relatively stable longer-term flows while discouraging volatile short-term flows, avoiding excessive appreciation of the exchange rate, holding a large stock of reserves, and preparing banks and corporates to handle greater exchange rate volatility, and avoiding measures that

could damage confidence, such as restricting outflows in the midst of a crisis-like situation. Finally, those who implement a medium-term framework and emergency crisis-management measures need to adopt a clear communication strategy so as to interact smoothly and transparently with market participants.

I.5 Current Cyclical Dynamics

We now turn to the cyclical dynamics of the Indian economy in the last few quarters and put them in context with the long-term experience discussed above. Most recent commentaries on the Indian economy have focused on an ominously declining growth rate over a five-quarter period, from 9.1 percent in Q4, 2015–2016, to 5.7 percent in Q1, 2017–18. Below we analyze the growth rate of quarterly GDP and its decomposition, for the data starting in Q1, 2013–14, through Q3, 2017–18 (Figure 13 and Figure 14).

Two points are noteworthy. First, growth in the two quarters of Q1, 2016–17, and Q2, 2016–17 averaged 7.7 percent, higher than the average growth rate in recent quarters, or even in recent years. It would be erroneous to treat these as a part of the deceleration phase. Hence, the discussion around a five-quarter phase of deceleration should center only around the following three quarters, Q3, 2016–17 through Q1, 2017–18, when growth seems to have deviated significantly from the trend, at 6.9, 6.1, and 5.7 percent, respectively. Incidentally, these quarters coincide with the twin policy shocks—demonetization and the implementation of the GST. Second, on the positive side, it is widely felt that the impacts of these shocks are transient.⁵⁰

While indicators such as the Purchasing Manager Index (PMI) or the Index of Industrial Production (IIP), showed a sharp slowdown in the months surrounding GST introduction, they have recovered recently: Manufacturing PMI fell to a 101-month low in July 2017 and subsequently registered consistent expansion between August 2017 and January 2018. Similarly, the IIP faced a sharp slowdown in momentum in June–July, followed by a recovery in subsequent months. Finally, an acceleration of the growth rate to 7.2 percent in Q3 2017–18, from 5.7 and 6.5 percent in the two previous quarters, is indicative of an economy on the road to recovery from the impact of the policy shocks.⁵¹

In the last few quarters, consumption, private as well as public, has been the main driver of growth. Sectors such as manufacturing and construction were reportedly most affected by the implementation of the GST and demonetization, and decelerated during Q3, 2016–17 through Q1, 2017–18; an investment slowdown and increase in imports also impacted growth during the three-quarter deceleration period.

Recovering from the deceleration phase, GDP growth accelerated first to 6.5 percent in the second quarter of the current fiscal year, July–September 2017, and then to 7.2 percent in Q3 2017–18, recovering from 5.7 percent in quarter preceding the acceleration. Manufacturing and investment grew faster than before

⁵⁰ In our analysis, we see the transient impact of demonetization on financial, real estate and professional services, and on construction, but not so much on other sectors of the economy. On the uses side, the impact was most visible in deceleration in an already slowing rate of investment; and in an escalated level of import of gold (possibly due to capital flight).

⁵¹ This view is consistent with academic opinions on India's future growth. For example, Arvind Panagariya highlighted his expectation of an imminent recovery in a recent interview (<http://www.businesstoday.in/current/economy-politics/economy-may-grow-by-over-6.5percent-in-fy18-says-panagariya/story/265206.html>).

and played an important role in the recovery. Agricultural growth decelerated during the Kharif (summer) cropping season in Q2 2017-18 both because of uneven rainfall distribution and a high base effect from 2016-17; even as the winter crop outturn accelerated during Q3 2017-18.

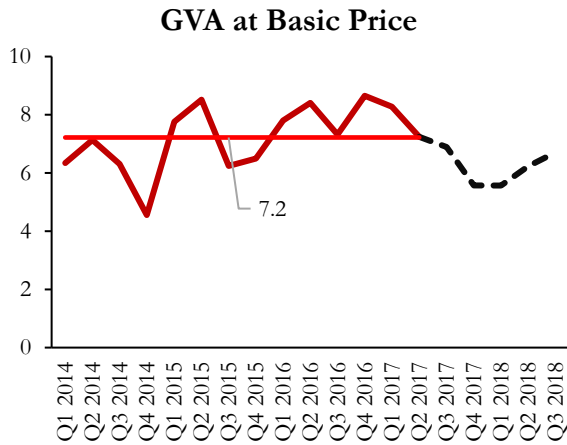
While consumption and services continued to be the main drivers of growth, the contribution of the public sector to GDP growth declined. Sectors such as manufacturing and construction were reportedly most affected by implementation of the GST and demonetization, and both these sectors showed signs of improvement and registered their highest growth rates in the last three quarters.

Investments, which were impacted during demonetization and due to uncertainties surrounding the GST, picked up.⁵² However, investment rates still pale in comparison to historical levels, as investments remain burdened by stressed balance sheets of banks and corporates (twin balance sheet issues). Exports remained weak and possibly continued to be affected by ongoing issues slowing exports in the last few years, but also by GST implementation issues.

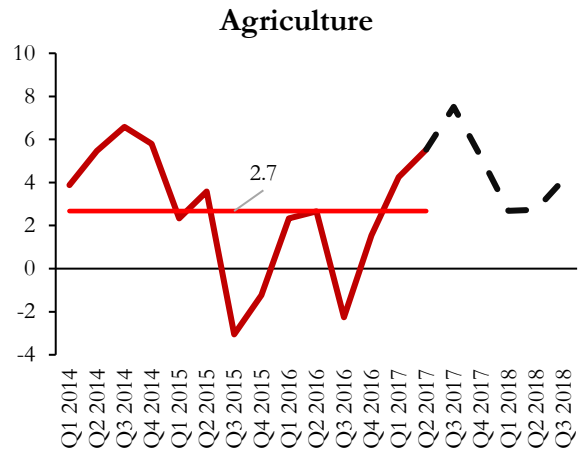
⁵² Due to GST-related uncertainties, producers preferred to destock existing inventories; exports were affected; and gold imports nearly doubled, as buyers front-loaded their purchases. Since August 2017, once the initial uncertainties abated, economic activity has started to recover—new orders including in manufacturing have picked up.

Figure 13: Growth recovered in Q2 and Q3 2017–18, after a temporary aberration

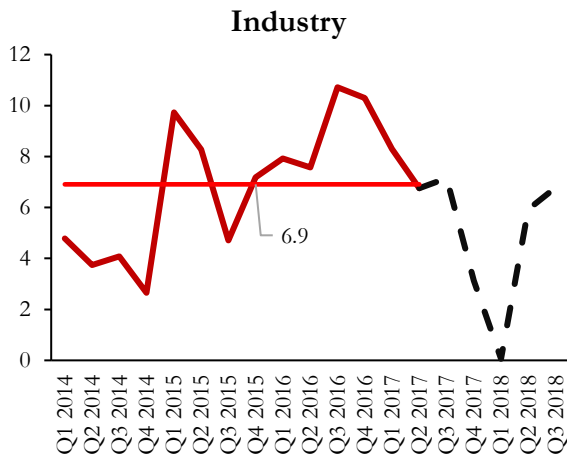
13 A: Growth slowdown has likely bottomed out



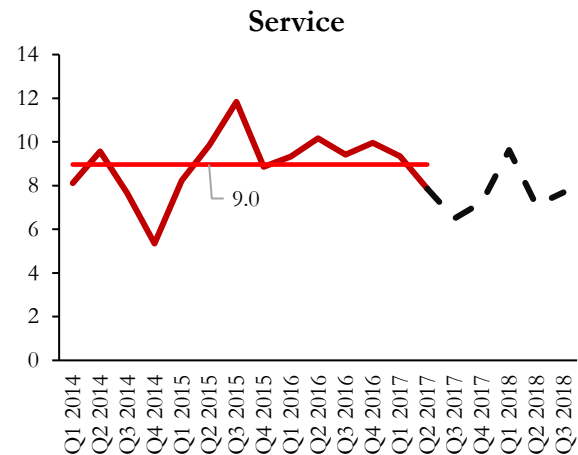
13 B: Agricultural growth picked up



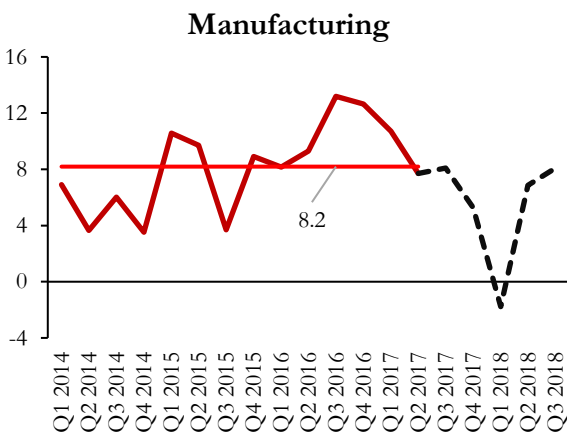
13 C: Industrial growth revived...



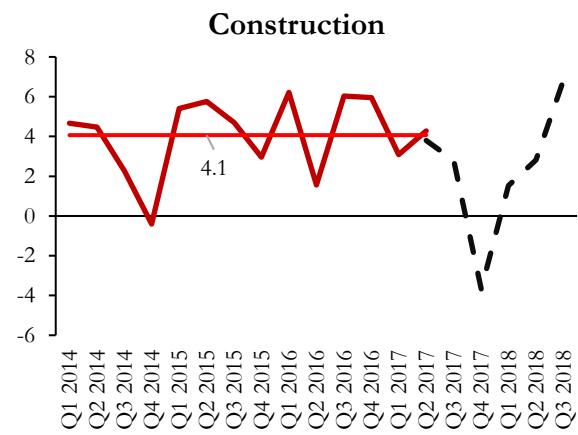
13 D: ...and services continued to do well



13 E: Manufacturing picked up



13 F: Construction sector activity also revived



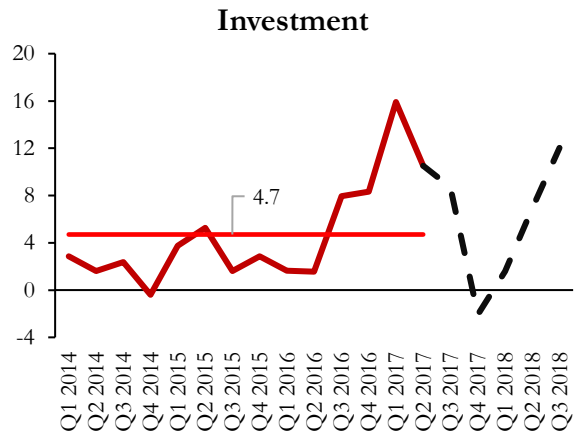
Source: Central Statistics Office data for respective fiscal year; averages indicated are for Q1, 2014–Q2, 2017.

Figure 14: GDP growth bottomed out in Q1, 2017–18

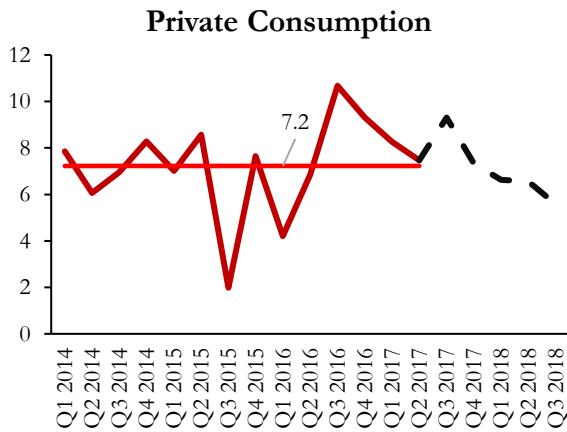
14 A: GDP growth recovered



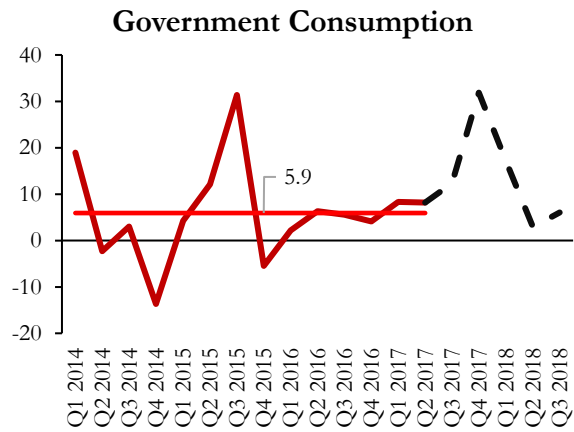
14 B: Investment registered a sharp uptick



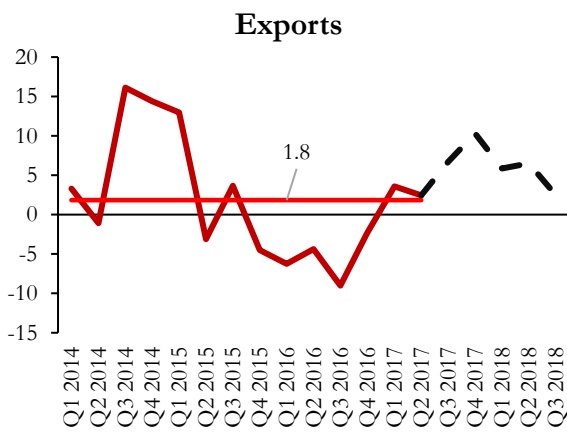
14 C: Consumption growth slowed compared to high growth in past quarters



14 D: Government consumption moderated



14 E: Exports continue to underperform



14 F: Import growth shows some moderation



Source: Central Statistics Office data for respective fiscal year; averages are for Q1, 2014–Q2, 2017.

Even as the economy seems to have turned a corner, the question remains as to where it will settle in the coming years. In our view (see Part II, below), it will revert to 7.5 percent growth in the coming years. Below we discuss other contemporary issues including what rate of growth India can attain, what role broader structural reforms or countercyclical policies can play in it, and how the external environment is poised to support a higher growth rate.

I.6 An 8 Percent Growth Rate, the Reform Narrative, and the External Environment

In this last section on India's growth story we ask the following questions: Is an 8 percent-plus growth rate attainable in India? How does the reform momentum need to build for a higher growth trajectory? Is there room or rationale for countercyclical policies to support growth? And how is the external environment poised to support a higher growth rate in India?

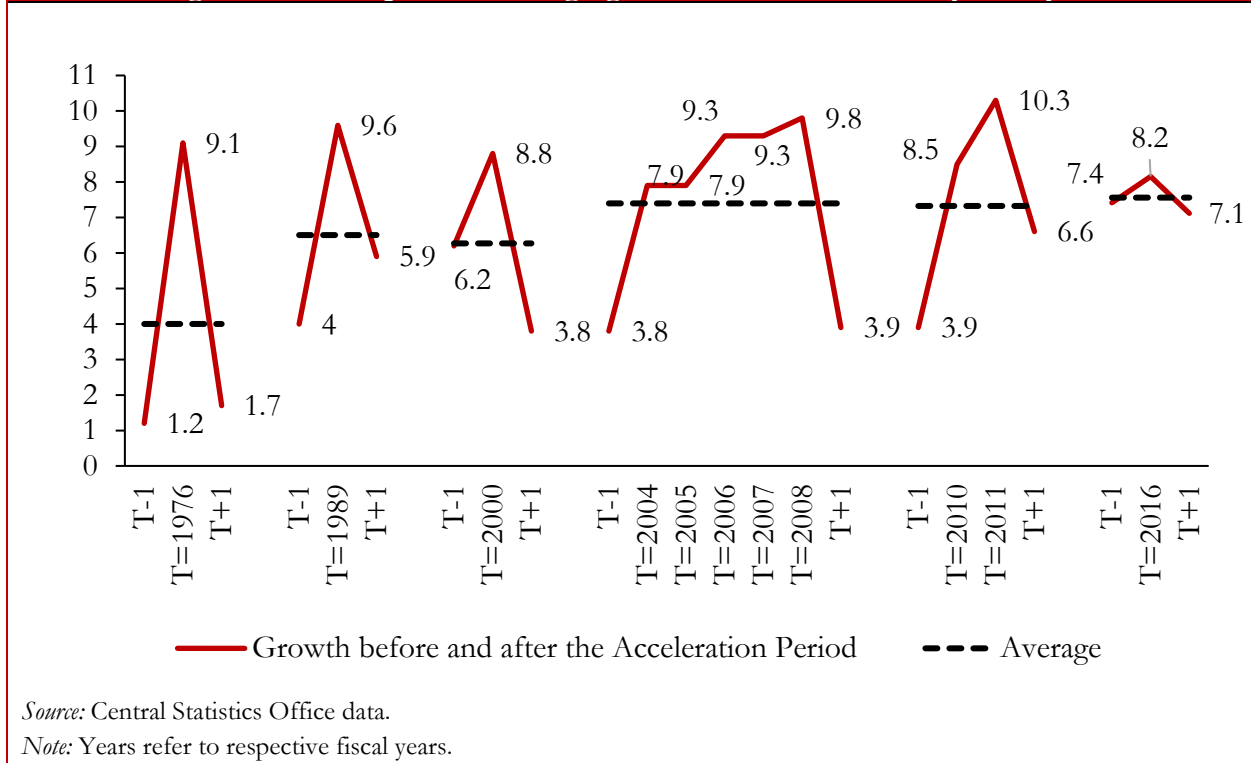
A. Chasing an 8 percent-plus growth rate

To learn whether a growth trajectory of an 8 percent-plus growth rate is feasible, we analyze the past episodes when India attained such high growth rates. A review of the data since 1971 reveals that there haven't been many episodes when growth exceeded an 8 percent level. The growth rate exceeded 8 percent in only six episodes over the last five decades, for a total of eleven years (including two years when growth rate was 7.9 percent). With the exception of a five-year period, 2003–04 through 2007–08, most episodes of high growth did not sustain for more than a year (Table 4).⁵³

Table 4: Episodes of “high growth”		
No. of episodes	Time period*	
6; total number of		
≥ 8 years: 9	1976, 1989, 2000, 2006–08, 2010–2011, 2016	
* Year reported as fiscal year.		

⁵³ This is not unusual: experiences from around the world show that a large percentage of high-growth episodes unravel within years (see Berg et al. (2008); and Pritchett and Summers (2014)).

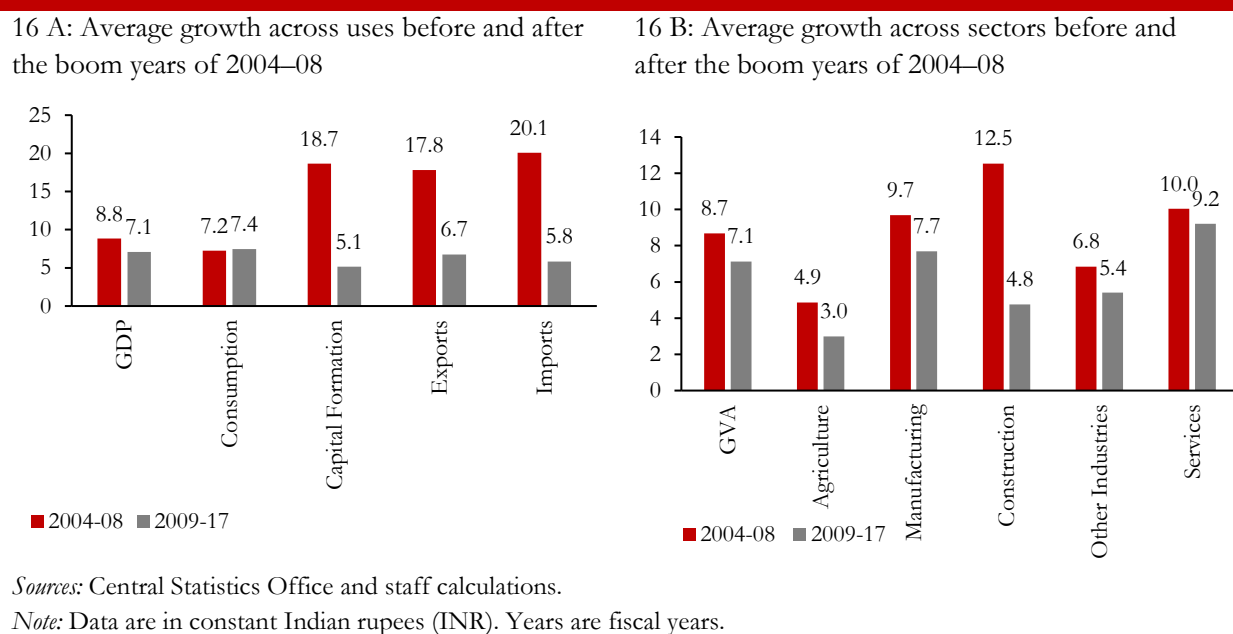
Figure 15: Most episodes of “high growth” did not sustain beyond a year



In most cases when India experienced growth exceeding 8 percent, growth acceleration lasted for only one year, and growth corrected sharply in the year after (Figure 15). In some of these episodes, high growth was due to a low base impact of slow growth in the previous year followed by an unusually good agricultural output (1976, 1989); in others, it was an outcome of unsustainable fiscal or other macroeconomic policy (such as 2010–11). As discussed, the only durable episode, which lasted from 2004 to 2008, was dependent on a comprehensive reform agenda, an unusual buoyancy in the global economy and easy global liquidity.⁵⁴

The 2004–08 period being the most credible episode of high growth, we look at the contribution of various sectors to growth during this period (Figure 16). Analyzing the growth rates of various sectors (and their contributions) during 2004–08, we note that the growth acceleration built on robust growth rates in all domestic sectors as well as support from the global economy. In comparison, several sectors have lagged in the last decade. This most visibly includes investment (see Box 2), manufacturing, construction, and international trade (see Selected Issues Note).

⁵⁴ See Panagariya (2018) for a discussion of how the reform agenda undertaken in the 1990s and early 2000s mapped into subsequent growth.

Figure 16: Growth during 2004–08 built on robust growth across domestic and external sectors

Sustaining a growth rate higher than that indicated by the trend growth rate of 7.5 percent, and reaching a growth rate of 8 percent or higher, will require contributions from all domestic sectors and support from the global economy. Also, at a time, when the economy is fairly open, it will be difficult to sustain such levels of growth only on the back of domestic factors.

B. The reform narrative and the continued slow growth in the lagging sectors

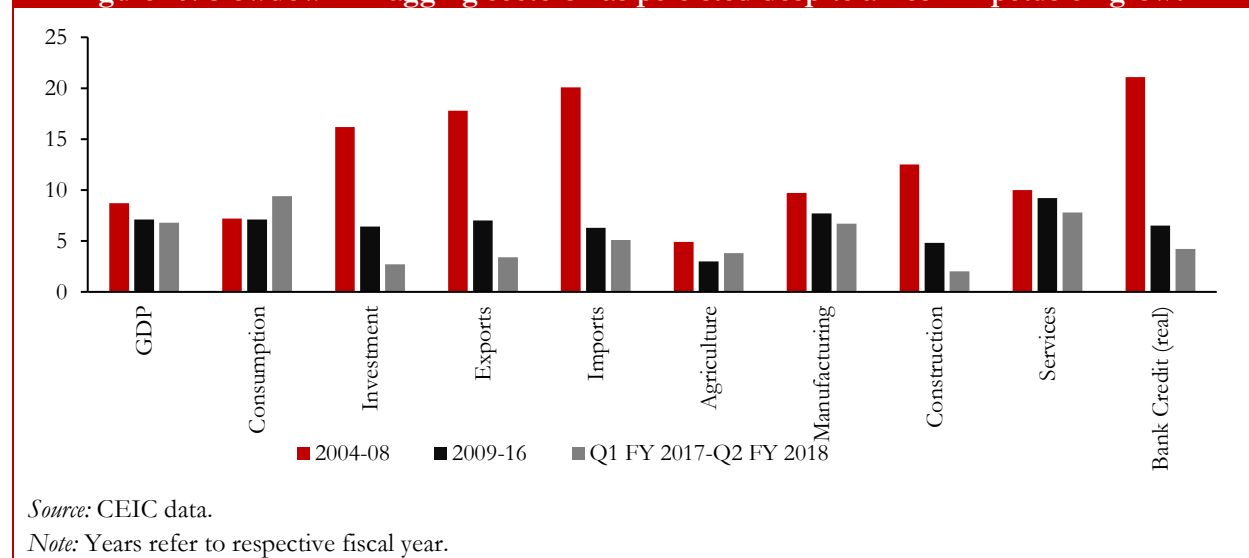
Coming from a period of unsustainable boom, reform slowdown, and the buildup of macroeconomic unsustainability, there is a renewed reform impetus in India. Reforms have been designed and successfully implemented in a number of areas: a new inflation targeting framework has been implemented, energy subsidy reforms have decisively reduced the level of subsidies, the level of fiscal deficit has been contained, fiscal deficit frameworks have been reinstated, fiscal federalism has been strengthened, and the quality of fiscal expenditure has improved. The impact of some of these reforms is evident in a significant improvement in macroeconomic stability.⁵⁵

In addition, the states and the center are playing an important collective role in the implementation of the reform agenda. There have been continuous efforts to improve the business environment (see Selected Issues Note), to ease inflows of FDI, and to improve the functioning of the credit market through the introduction and strengthening of an insolvency and bankruptcy framework. These reforms have been complemented by a new set of measures, including widening the access to financial services; promotion of digital payment systems; and implementation of the historic Goods and Services Tax (GST) code, which has harmonized the tax rates across states and goods and services, and has the potential to boost interstate trade, formalize the economy, and improve the tax base.

⁵⁵ A sharp decline in oil prices, starting in mid-2014, globally low inflation, and continued easy liquidity conditions globally provided the conditions to help implement some of these reforms.

A question that puzzles many is why these reforms have not yet succeeded in reversing the slowdown in investment, exports, and certain other aspects of the economy. If anything, the slowdown has continued to deepen (Figure 17).

Figure 17: Slowdown in lagging sectors has persisted despite a fresh impetus on growth



Reversing the slowdown in specific sectors decisively will require careful analysis of its causes, and implementation of policy actions that are timely, wide-scoped, and innovative. Widening the scope of reforms and maintaining a reform momentum to revive growth in private investments and exports is particularly crucial to reinstate growth exceeding 7.5 percent. Economic growth has been increasingly driven by consumption (private and public) since 2009, while two important engines of growth, private investment and exports, have consistently underperformed. This trend is particularly concerning as investments and exports are not just important direct sources of growth and productivity, they also determine the technological capability, as well as the competitiveness of a country's production structure.

Below we offer some perspectives on the challenges that may have been holding the economy down and the related policy issues.

- (i) **Continuing subdued rate of investment is worrisome.** The investment rate has declined and remains low despite the fact that macroeconomic stability is much higher, public investment has picked up and its quality has improved; the business environment has improved; global liquidity has continued to remain benign; the Indian equity markets have done well, offering good valuations to the companies looking to raise money; and as per some indicators, economic uncertainty has not worsened. All these factors should have helped spur private investment, yet private investment has been enigmatically subdued.⁵⁶

⁵⁶ Deleveraging could be one reason behind the slow pace of investment growth--Indian businesses over invested and over leveraged during the boom years. Yet due to the slow pace of resolution, businesses cannot deleverage quickly and

Private investment in India is constrained by several factors. There are issues related to past leverages as well as subdued market demand. Going forward, de-risking the private sector may be important, as it may be to ensure an environment of policy certainty. Understanding and relieving the generic, spatial, or sector-specific constraints to investment growth is important. Adopting a “Maximizing Finance for Development” approach that necessitates seeking an efficient mix of public and private resources to finance India’s long-term investment needs would be useful in the long run.⁵⁷

- (ii) **Reviving bank credit to support growth.** The banking sector has been in a situation of high balance sheet stress. A central concern is the large share of nonperforming loans. As discussed, the genesis of the prevailing issue can be traced to the period of exuberance in bank credit growth during 2004–08, as well as the response to the crisis, which entailed evergreening of loans. Decisive reforms will be needed to enable the Indian banking sector to help finance India’s growth aspirations.⁵⁸ The allocative and operational efficiency of the public-sector-dominated Indian banking sector is considered to be low, thereby holding back potential investments and growth. Implementation of the new Insolvency and Bankruptcy Code is an important step toward changing the credit culture. However, the policy will take time to be effective in cleaning the balance sheets and ultimately changing the credit discipline in the country, and is unlikely to improve capital adequacy of banks on its own.

There are several avenues that could be considered to improve the functioning of the sector. Besides recapitalization, consolidation of public sector banks, revising their incentive structure to align it more closely with their commercial performance, ensuring a level playing field for private banks, and opening the space for greater competition would all be important measures to durably enhance the stability and efficiency of the sector.⁵⁹ To generate room in public sector bank balance sheets to scale-up lending to support growth, bank recapitalization should be accompanied by wider reforms. A dynamic measurement of public sector banks’ governance and financial performance metrics following the recapitalization could be deployed to systematically address

start investing afresh. There may also be sectoral constraints to investments in sectors such as construction; leather; infrastructure; telecom; and energy sector. If the investment slowdown is particularly concentrated in export oriented firms, it may be indicative of specific constraints related to the size of the external markets, and issues related to competitiveness. It will be useful to see if the suppressed investment growth is particularly evident in the SME sector that observers believe has been disproportionately impacted by demonetization and the impact of GST, and accordingly design remedies.

⁵⁷ A “Maximizing Finance for Development (MFD)” approach aims at leveraging public instruments (such as investments or guarantees) to crowd-in private financing or address binding constraints to private sector participation. The goal of the approach is to maximize the leverage of countries’ development resources and reserve scarce public financing for areas where private sector engagement is not optimal or available. At its core, an MFD approach is a decision framework that allows to critically evaluate the necessity for public financing.

⁵⁸ These have been discussed in the Nayak Committee report, and in Indradhanush plan, as well as in the recently concluded joint IMF-World Bank FSAP.

⁵⁹ The recently concluded Financial Sector Assessment Program (FSAP, a joint product of the International Monetary Fund and the World Bank) has recommended rapid recapitalization of banks, including by attracting fresh private capital and reducing the share of the state (and state-owned entities) in public sector banks.

moral hazard concerns. This will help enhance market confidence, supporting further market capitalization and stabilization of credit outlooks.

- (iii) **Making exports competitive again.** While private investment is likely held back primarily by domestic factors, exports growth is constrained by both domestic and external reasons. Despite a recent acceleration in export growth, India has barely managed to keep pace with the growth in world exports since the global financial crisis, reflected in its stagnant or even declining share of world exports. Significant improvement in the competitiveness of Indian firms is key to developing its role as a global exporter. Among the many preconditions for India to improve its competitiveness are an infrastructural boost to bring it on par with the current manufacturing hubs of the world. In addition, reforms to land, labor and financial markets are needed to assure the continued competitive supply and use of key production inputs, such as labor, land, finance, and skills. Finally, building on recent improvements to its doing business ranking, India can benefit from further strengthening the competitive business environment.
- (iv) **Leveraging external conditions.** External conditions seem to be turning more supportive of growth. The global environment for exports is likely to improve in the years ahead as the global economy is poised to grow faster and global trade volumes are slated to pick up. Global financing conditions seem alright for now. The U.S. Federal Reserve Board raised its policy rate twice in 2017, and is projected to further raise it three or four times in 2018. Even if not disruptive in the short run, higher interest rates would likely tighten financing conditions for India. Hence, enhancing competitiveness in domestic financing conditions will be even more important.
- (v) **Limited room or rationale for countercyclical measures in the presence of structural constraints to growth.** There is only limited room to ease fiscal, monetary, or exchange rate policies to boost growth in the midst of complex and persistent structural constraints. Even if used, these can provide only a temporary reprieve. By their very nature, countercyclical policies ought to be used temporarily and should be reversed within a reasonable period of time. Given the structural nature of weak exports and investments, the effectiveness of transitory countercyclical policies is likely to be limited. As per our analysis, at current levels, general government public debt is sustainable, despite some rise in real borrowing rates in recent years, largely because of fast economic growth and continued fiscal consolidation by the central government. If still considered by the government, it will have to be creative about generating the fiscal space. It may want to generate resources domestically by considering a careful divestment of assets as per the recommendations of the National Institution for Transforming India (NITI); if, instead, the government feels inclined to borrow to finance enhanced infrastructure spending, it should do so cautiously to minimize potential vulnerabilities.

C. Achieving Middle-Class Status

The preceding analysis offers perspectives on potential pathways to return to growth rates exceeding 8 percent. The World Bank's Systematic Country Diagnostic (SCD) for India complements these perspectives by highlighting priority areas for reform to achieve a long-run ambition: raising the

income of at least 50 percent of Indians to a level that is comparable to the global middle class.⁶⁰ As emphasized by the SCD, to achieve this goal the economy not only needs to return to growth rates exceeding 8 percent, but rather must maintain such growth for the next three decades. Evidence from across the world highlights that this is no easy task, with most countries experiencing growth decelerations after a few years of high growth. Thus, while the analysis presented in this report emphasizes that returning to growth rates above 8 percent requires a decisive structural reform momentum that succeeds in stimulating export growth and investment rates while maintaining macroeconomic stability, insights from the SCD further highlight long-term challenges that must be anticipated and addressed to sustain the high growth rates. The SCD highlights three priority areas for reform.

First, a fundamental constraint to India's long-run growth is the scarcity of natural resources. Thus, sustained high growth is only possible on a resource efficient growth path which uses resources more efficiently within each sector, and allocates them more efficiently across sectors. The SCD highlights that reforms should focus on (i) cities, making them more efficient by improving connectivity and transport infrastructure and enhancing urban service delivery, (ii) agriculture, helping farmers avoid constraints from depleting resource bases, enhancing productivity by transitioning to a modern food system and building resilience against climate change and (iii) protecting water resources and focusing reforms on removing distortions in the electricity sector.

Second, sustaining long run growth will require a focus on inclusive, productivity led growth that generates salaried jobs for India's growing population. Achieving this requires reforms in two areas. On the one hand, building an investment environment that is conducive for the development of high productivity firms requires easing bottleneck on firms (e.g. by reducing land market distortions and labor regulations), fostering trade between firms domestically and internationally, and assuring firms have access to affordable financing. On the other hand, reforms should focus on developing a qualified workforce that meets the skill demands of a globally competitive industry. This requires upgrading India's human capital base, overhauling the public education system and encouraging female labor force participation.

Third, addressing challenges to public sector effectiveness is key to ensure that reforms are effectively implemented and to meet the demands of the growing middle class. Improving governance in India involves reforms rather than simply increased investments. Current public spending is much less effective that it could be suggesting an emphasis on outcomes and efficiency is warranted rather than simply spending more money on problems that require better performance by public sector service providers. In addition to enhancing the efficiency, effectiveness and accountability of the Indian public sector, reforms should also focus on adequately resourcing public service providers and improving the coordination between different layers of government.

D. Conclusion

In summary, the Indian economy has started to recover from the impact of demonetization and the GST. Aided by recent reforms, growth should soon revert to a level consistent with its proximate factors—that is, to about 7.5 percent a year. Sustaining growth rates exceeding 8 percent will require continued reforms, and a widening of reform scope aimed at resolving issues related to credit and investment, and enhancing the competitiveness of India's exporting sector. Maintaining the hard-won

⁶⁰ The global middle class is typically defined as having consumption expenditure levels above \$10 (PPP) per day.

macroeconomic stability, a definite and durable solution to the banking sector issues, realization of the expected growth and fiscal dividend from the GST, and regaining the momentum on an unfinished structural reform agenda are key components of this. Accelerating the growth rate will also require continued integration into the global economy. As highlighted by India's Systematic Country Diagnostic, sustaining these growth rates over multiple decades to achieve middle class status by 2047 further requires a reform focus on moving to a more resource efficient growth path, making growth more inclusive and enhancing the effectiveness of the Indian public sector.

Box 1: Macroeconomic Stability and Growth

Macroeconomists consider inflation, fiscal deficit and current account deficit to assess the health of an economy. Inflation is typically thought to harm growth through a deterring effect on investments and productivity growth (Fisher 1993). Barro (2013) uses an instrumental variable framework to estimate the effect of inflation on long-run growth, and finds that a 10-percentage-point increase in inflation is associated with decreases in GDP per capita and investment to GDP levels of 0.3 and 0.4 percentage points, respectively. Bruno and Easterly (1998) scrutinize this relationship and suggest that periods of extreme inflation are particularly harmful for growth.

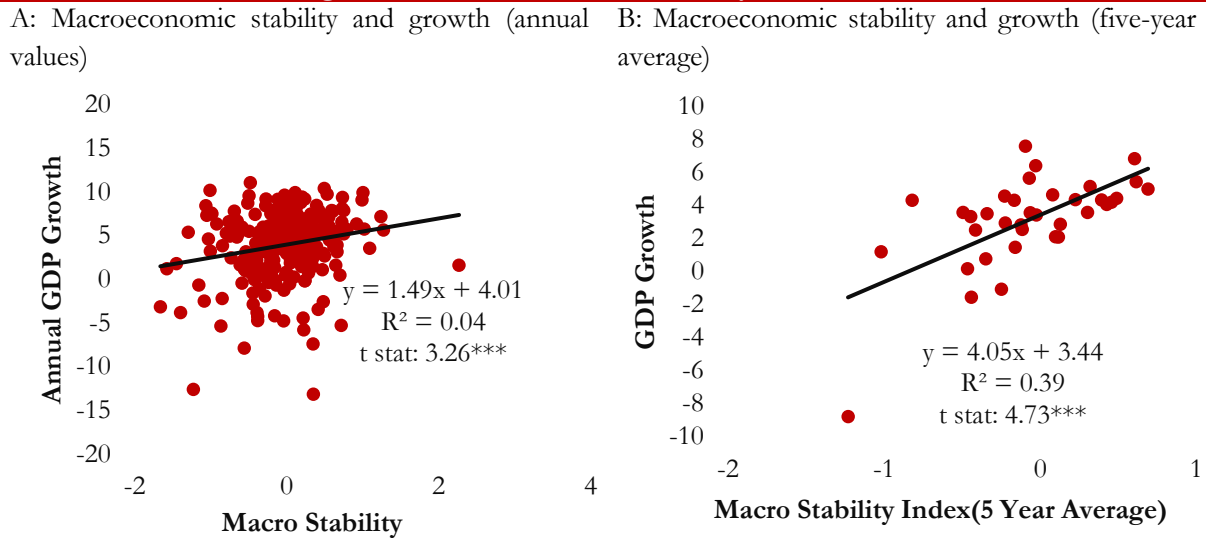
Empirical evidence linking public debt and deficits to growth is weaker. This is perhaps unsurprising, given that rational forward-looking consumer response to fiscal spending is independent of whether it is financed through higher taxes now, leading to a low fiscal deficit, or in the future, leading to a higher fiscal deficit. This result is widely known as Ricardian equivalence. In contrast, high deficits and public debt levels can harm growth in general equilibrium, for example, by increasing interest rates and thus impacting investments, or by generating the need for distortionary taxation (see, for example, Barro (1979), Fischer (1993), Braeuninger (2005)).

Empirical evidence points to a negative correlation between deficit and growth. In a paper that has come under methodological scrutiny since its publication, Reinhart and Rogoff (2010) argue that there exists a significant negative correlation between public debt and growth for debt levels exceeding 90 percent of GDP. Panizza and Presbitero (2014) use an instrumental variable related to evaluation effects of debt and find that while there exists a negative correlation between debt and growth, the relationship is not necessarily causal.

Finally, a large current account deficit may be indicative of underlying vulnerabilities in an economy based on how they are financed, and whether they are associated with enhanced consumption or investment. If current account deficits are incurred due to increased consumption, are financed by volatile capital flows, or are accompanied by real exchange rate appreciation, often these culminate in a disruptive correction, especially when a country experiences an abrupt and painful reversal of financing.

Our empirical assessment confirms that macroeconomic stability correlates with higher growth. Countries that experience high macroeconomic stability in a given year also experience higher economic growth, and the relationship is stronger when taking five-year averages. In particular, a one standard deviation increase in the macroeconomic stability index is associated with increased growth rates of 2 to 2.3 percentage points (Table 5).

Figure 18: Macroeconomic Stability and Growth



Note: Countries included are India, Brazil, Russia, South Africa, Indonesia, Malaysia, Mexico, and Turkey. To assure comparability across indexes, this index uses central government deficit. Level of Significance: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 5: Macroeconomic Stability and GDP Growth

	(1)	(2)	(3)
	GDP Growth (5-yr avg.)		
Macro Stability (5-yr avg.)	2.32*** (2.99)	2.01*** (3.10)	2.19** (2.52)
Constant	3.83*** (11.33)		
Country FE	No	Yes	Yes
Year FE	No	No	Yes
Observations	61	61	61
R-squared	0.132	0.499	0.599

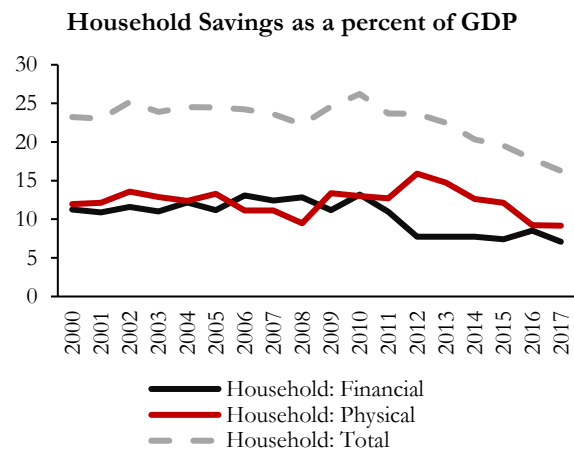
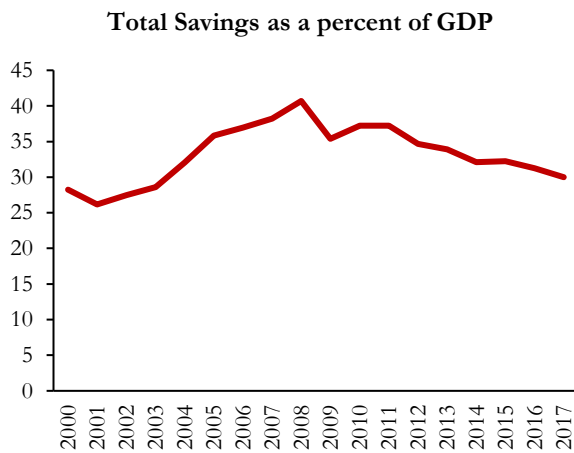
Note: This table presents regression estimates of the association between macroeconomic stability and GDP growth. Column 1 regresses five-year averages of GDP growth on five-year averages of the macroeconomic stability index. Columns 2 and 3 repeat the same analysis but also include country and country and year fixed effects (FE), respectively. Robust t-statistics are presented in parentheses. The countries included are India, Brazil, Russia, South Africa, Indonesia, Malaysia, Mexico, and Turkey. To assure comparability across indexes, this index uses central government deficit, whereas the within-India comparisons consider general government deficit. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Box 2: Savings and Investment Rate⁶¹

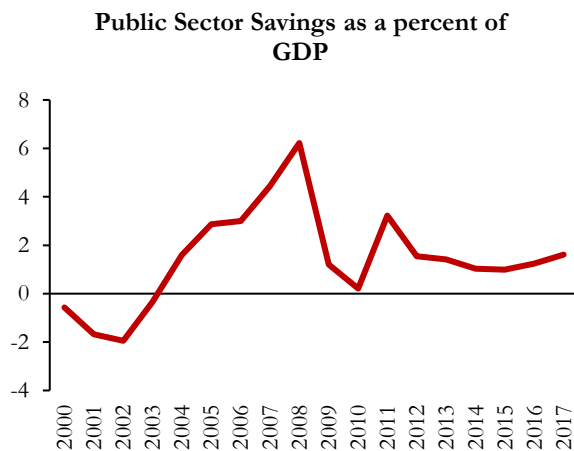
After increasing slowly but steadily over the last several decades, and rapidly during the period of high growth, 2004–08, savings rate, investment rate, and credit growth have been declining since 2009. Below we present some details on the slowdown based on the data available from the RBI and from the national accounts. The following stylized facts emerge from the analysis of savings and investment. Savings rate have declined since the GFC, after registering a large increase in prior years. The decline in savings rate is evident in household physical savings, household financial savings, and in government savings. Interestingly corporate savings increased during the same period.

Figure 19: Trends in Savings Rate

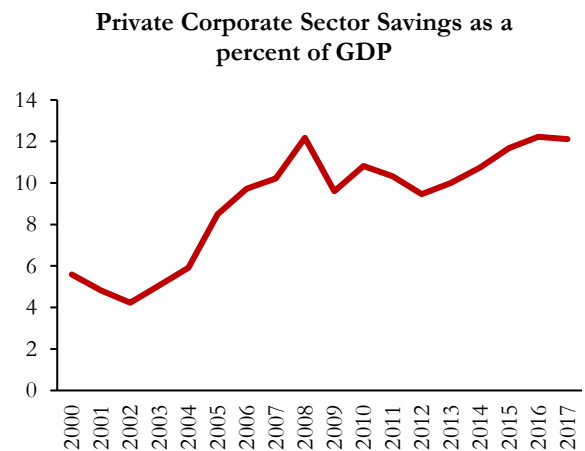
19 A: Savings rates have declined since the GFC... 19 B: ...a large part of which is due to decline in household savings



19 C: Government savings have decreased...



19 D: corporate savings have increased



Source: CEIC.

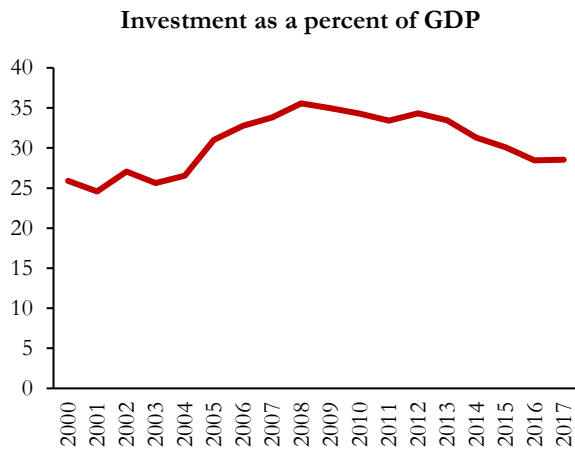
Note: Data are presented for fiscal years.

⁶¹ While there have been revisions in newly released data, we rely on pre-revision figures in this box, as data availability has been insufficient to reconcile the revised figures with quarterly data.

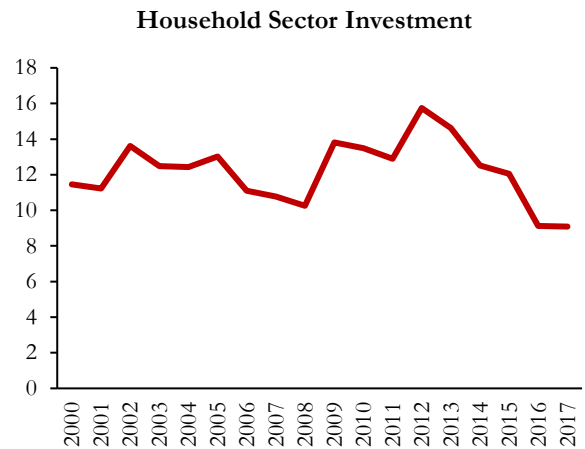
The investment rate has declined as well since the GFC, after registering a rapid rate of growth in the few years prior to that. Investment decline is visible in corporate investment and in household physical investment. There is a divergence in corporate savings and investment rate: while the corporate savings rate has increased, its investment rate has declined.

Figure 20: Trends in Investment Rate

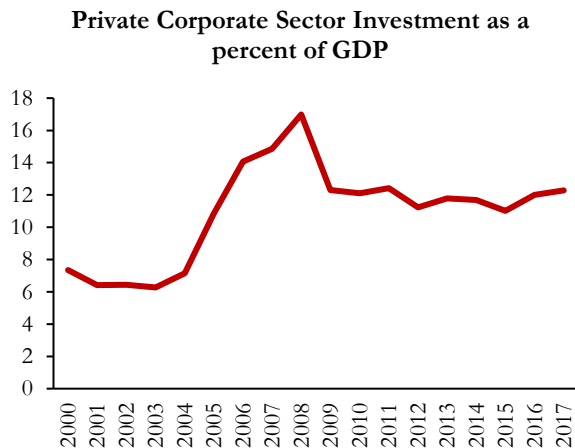
20 A: The investment rates have declined since the GFC...



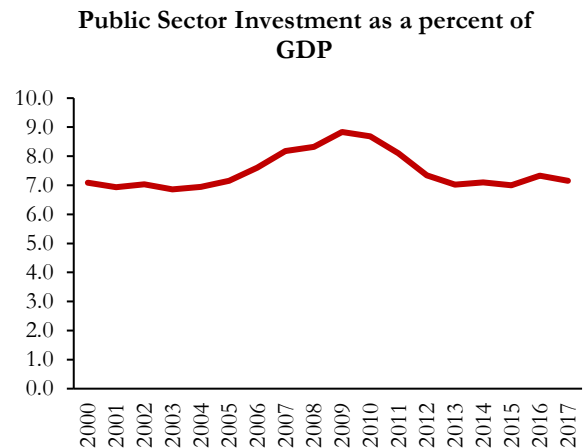
20 B: ...the decline is evident for household investments...



20 C: ...and private corporate sector



20 D: While public investment fell after GFC, it has increased modestly in recent years



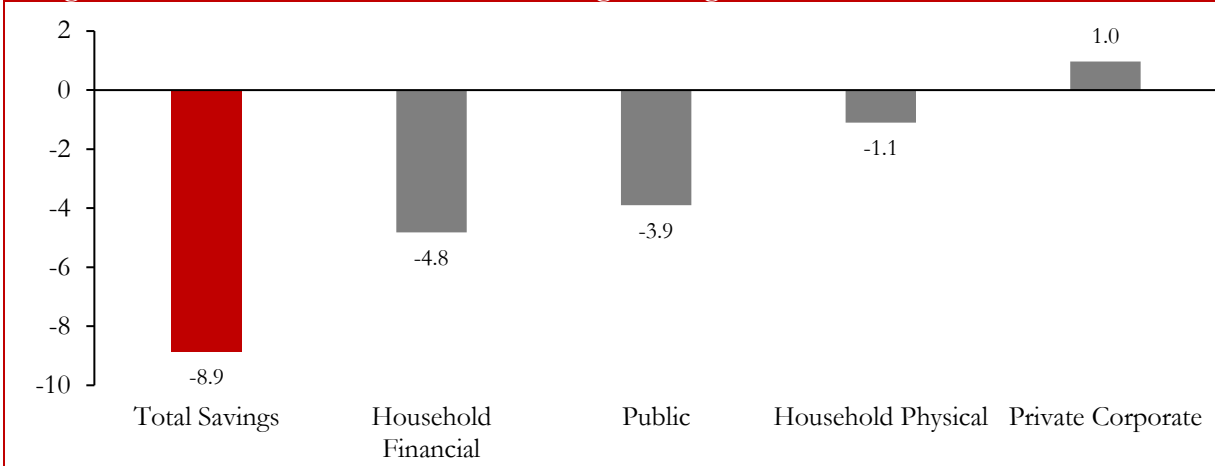
Source: CEIC.

Note: Data presented are in fiscal year. Investment rate is defined as gross fixed capital formation (percent of GDP).

While investment slowdown is pervasive across most sectors of the economy, it is most prominent in manufacturing and construction. We decompose the change in investment share in GDP between 2007–08 and 2015–16 by sector (Figure 22). The results show that overall the investment share in GDP declined by approximately 4.9 percentage points. This was predominately driven by manufacturing, whose investment share declined by 3.7 percentage points over the same period. Another sector in which investment declined

is construction. Investment growth rates after the GFC are below their pre-crisis levels for all but one sector, trade, hotels, and restaurants.

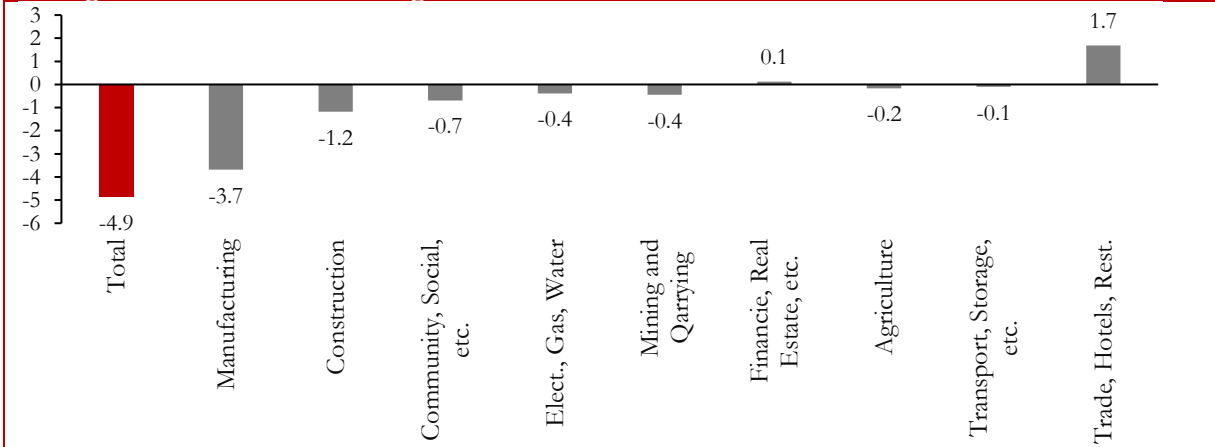
Figure 21: Contribution to Decline in Average Savings Rate between 2007–08 and 2016–17



Source: CEIC.

Note: Figures show the difference between the average rate in 2016 and 2017 and 2007 and 2008.

Figure 22: Decline in Average Investment Share of GDP between 2007–08 and 2015–16



Source: CEIC data.

Note: Figures show the difference between the average rate in 2015 and 2016 and 2007 and 2008.

Appendix A: National Accounts Data Splicing

The national accounts data used in this report, both quarterly and annual, was obtained from India's Central Statistics Office. A challenge when working with CSO's GDP data is that in January 2015 the base year, which determines structural parameters of the economy used to calculate national accounts, was revised from 2004–05 to 2011–12. This revision makes comparing GDP data before and after 2011–12 (the first year for which the revised series is available) challenging, as the series, unless corrected, might show discontinuous jumps driven by the changed calculation method and unrelated to real economic activity.

To avoid this pitfall, we splice the new annual and quarterly GDP series backward, using a simple back casting methodology as explained below:

Consider a variable X_t that needs to be spliced. We denote X_t in the new series as X^* and X in the old series. Suppose data in the new series begins from period t . To obtain the value of X_{t-1}^* we simply apply the following formula,

$$X_{t-1}^* = \frac{X_{t-1}}{X_t} X_t^*$$

Intuitively, this series maintains a growth rate in the new series (captured by $\frac{X_{t-1}}{X_t}$) that is consistent with the old series. The resulting series thus resembles a level shift to the old series with equivalent growth rates. We used this procedure to maintain the growth rates of GDP at market prices, Gross Value Added (GVA) at basic prices and their main subcomponents.⁶²

A challenge that arises when matching growth rates of subcomponents (whose shares add to 1) is that residuals appear, driven by the fact that changes to the base year affect the estimated contribution of various sectors to the economy. This is particularly relevant for this exercise, as the CSO typically divides the Indian economy into three sectors: agriculture, industry and services. Agriculture includes crop, livestock, forestry and fisheries. The industrial sector is again split into four sub-sectors: mining and quarrying, manufacturing, electricity, gas, water and other utility supply, and constructions. The services sector is split into three subsectors: trade, hotels, transport, communication and services related to broadcasting, financial, real estate and professional services, and public administration, defense and other services.

To preserve additivity, we generate a residual series for GDP at market prices. For GVA, we employ the service sector (in annual data), and the Public Administration and Defense Services sector (in

⁶² This includes Final Consumption Expenditure, Gross Capital Formation, Exports of Goods and Services and Imports of Goods and Services for annual GDP; Private Final Consumption Expenditure, Government Final Consumption Expenditure, Gross Fixed Capital Formation, Change in Stocks, Valuables, Exports of Goods and Services and Imports of Goods and Services for quarterly GDP; as well as GVA for Agriculture and Industry (annually), and among this Mining, Manufacturing, Construction and Electricity, Gas, Water Supply and other utilities for GVA at basic prices (in quarterly data).

quarterly data), as the residual. We present robustness checks throughout to verify that our observed growth rates in the services sector are not driven by its selection as a residual.

Appendix B: Decomposition of productivity growth into within industry gains and gains due to reallocation of labor

To understand the decomposition of productivity growth into within industry gains and gains due to reallocation of labor, denote by Y_t , Y_{it} , L_t , L_{it} total output in year t , output of sector i in year t , total labor in t and labor in sector i at time t , respectively. Total Productivity in year t is then

$$\frac{Y_t}{L_t} = \sum \frac{Y_{it}}{L_t}$$

Multiplying and dividing by L_{it}

$$\frac{Y_t}{L_t} = \sum \frac{Y_{it}}{L_t} * \frac{L_{it}}{L_{it}}$$

Rewriting share of sector i in total employment in year t as α_{it}

$$\frac{Y_t}{L_t} = \sum \frac{Y_{it}}{L_{it}} * \frac{L_{it}}{L_t} = \sum \alpha_{it} \frac{Y_{it}}{L_{it}}$$

Total productivity in year t is a weighted average of productivity across different sectors in year t with shares in employment being the weights. Productivity differences between years t and $t-1$ are thus:

$$\frac{Y_t}{L_t} - \frac{Y_{t-1}}{L_{t-1}} = \sum \frac{Y_{it}}{L_{it}} * \frac{L_{it}}{L_t} - \sum \frac{Y_{it-1}}{L_{it-1}} * \frac{L_{it-1}}{L_{t-1}} = \sum \alpha_{it} \frac{Y_{it}}{L_{it}} - \sum \alpha_{it-1} \frac{Y_{it-1}}{L_{it-1}}$$

Adding and subtracting $\sum \alpha_{it-1} \frac{Y_{it}}{L_{it}}$ on the right-hand side we get:

$$\frac{Y_t}{L_t} - \frac{Y_{t-1}}{L_{t-1}} = \sum \frac{Y_{it}}{L_{it}} * \frac{L_{it}}{L_t} - \sum \frac{Y_{it-1}}{L_{it-1}} * \frac{L_{it-1}}{L_{t-1}} = \sum \alpha_{it} \frac{Y_{it}}{L_{it}} + \sum \alpha_{it-1} \frac{Y_{it}}{L_{it}} - \sum \alpha_{it-1} \frac{Y_{it}}{L_{it}} - \sum \alpha_{it-1} \frac{Y_{it-1}}{L_{it-1}}$$

Rearranging terms:

$$\frac{Y_t}{L_t} - \frac{Y_{t-1}}{L_{t-1}} = \sum (\alpha_{it} - \alpha_{it-1}) \frac{Y_{it}}{L_{it}} + \sum \alpha_{it-1} \left(\frac{Y_{it}}{L_{it}} - \frac{Y_{it-1}}{L_{it-1}} \right)$$

One can divide throughout by overall productivity in t-1 to take percentage changes.

$$\left(\frac{Y_t}{L_t} - \frac{Y_{t-1}}{L_{t-1}} \right) / \frac{Y_{t-1}}{L_{t-1}} = \sum (\alpha_{it} - \alpha_{it-1}) \frac{Y_{it}}{L_{it}} / \frac{Y_{t-1}}{L_{t-1}} + \sum \alpha_{it-1} \left(\frac{Y_{it}}{L_{it}} - \frac{Y_{it-1}}{L_{it-1}} \right) / \frac{Y_{t-1}}{L_{t-1}}$$

The first term on the RHS is gain due to reallocation of labor to a more productive industry; and the second is within industry gain in productivity at initial sectoral share.

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Part II

Recent Economic Developments

II Recent Economic Developments

Real Sector Activity

Recent economic slowdown has bottomed out. Growth decelerated in India for five successive quarters, from Q4 2015-16 to Q1 2017-18, and declined to 5.7 percent during Q1 2017-18. Two policy events contributed to this decline: First, temporary disruptions were caused by demonetization during the last two quarters of 2016-17. Second, due to uncertainties surrounding the GST, producers destocked existing inventories which led to a slowdown in growth during the months before the implementation of GST, through a few months post-implementation in July 2017. Activity has begun to stabilize since August 2017. Growth recovered to 6.5 percent in Q2 2017-18 and further to 7.2 percent in Q3 2017-18 (Figure 23). The recent recovery is also evident in high frequency indicators (Figure 25 C and D). While consumption and services continue to be the main drivers of the recovery, manufacturing and investment grew faster than in preceding quarters. Public expenditure made a smaller contribution to GDP growth than before, and exports continued to underperform.

Agricultural growth improved. Agricultural production grew by 4.9 percent in 2016-17 after stagnating for the two preceding years due to deficient rainfall. Food grain production recorded an all-time high of 138 million ton during 2016-17. India has received close to normal rainfall in 2017-18 thus far, but it has been unevenly distributed. Agricultural production in India remains dependent on rainfall, less than half of cultivated land in India is irrigated.⁶³ Agricultural growth decelerated during the summer cropping season in Q2 2017-18 both because of uneven rainfall distribution and a high base effect from 2016-17 (Figure 24). However, during Q3 2017-18, the winter crop outturn accelerated and grew at 4.1 percent y-o-y. Overall, agricultural output for 2017-18 is likely to be below initial expectations.

Industrial activity and services show signs of recovery. Index of Industrial Production accelerated post July and registered average 5.4 percent y-o-y growth during Aug-Dec 2017 (Figure 25 D). The expansion was broad-based and all industries showed signs of revival. Survey based indicators, such as the Purchasing Managers' Index for private manufacturing, registered consistent expansion in August-January 2017, after a sharp contraction in July 2017 to a 101-month low (Figure 25 C). Services remained the main driver of economic activity; and improved throughout 2017-18 thus far, as reflected in the Purchasing Managers' Index for services.

Consumption expenditure remains the main driver of growth. While private consumption has been the largest and the most resilient driver of economic growth in India, public consumption also played an important role until Q1 2017-18 (Figure 23). National and state governments revised salaries of public sector employees, following recommendations of the 7th pay commission.⁶⁴ Public consumption grew at an average rate of 21 percent during the five quarters since the start of 2016-17. However, the contribution of public expenditure started to fade as the implementation of the 7th pay commission recommendations

⁶³ Economic Survey 2017-18, Chapter 6

⁶⁴ Pay commission is set-up every 10 years by the government of India to make recommendations on the salary structure of public sector employees.

neared completion. In addition to the direct contribution to growth, salary revisions also had a spillover impact on other sectors including private consumption. Private consumption remained robust due to the revival in rural consumption, underpinned by improved agricultural activity in 2016-17 and 2017-18; improved urban demand due to pay revisions; and as low inflation improved households' purchasing power.

Despite some recovery, investment and export growth remains weak. Investments, which were impacted during demonetization and due to uncertainties surrounding GST, accelerated for two consecutive quarters and grew at 12 percent y-o-y during Q3 2017-18. High growth in investments is also reflected in a pick-up in capital goods production and their imports. However, in the past few years quarterly episodes of double digit growth in investments have not sustained (Figure 25). Average growth during 2017-18 thus far, pales in comparison to the past high growth rates in investments (see Box 2 for details on investments growth). Export growth has picked up since the start of 2016-17, but remains weak compared to the rate of growth attained in the early 2000s.

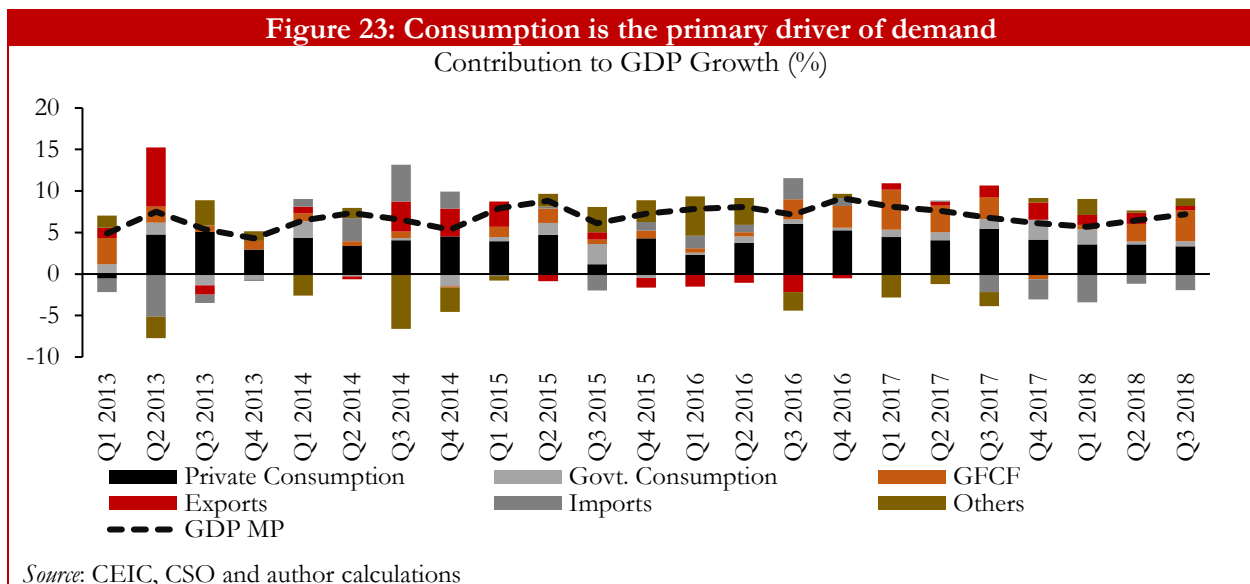


Figure 24: Services are the main driver of production

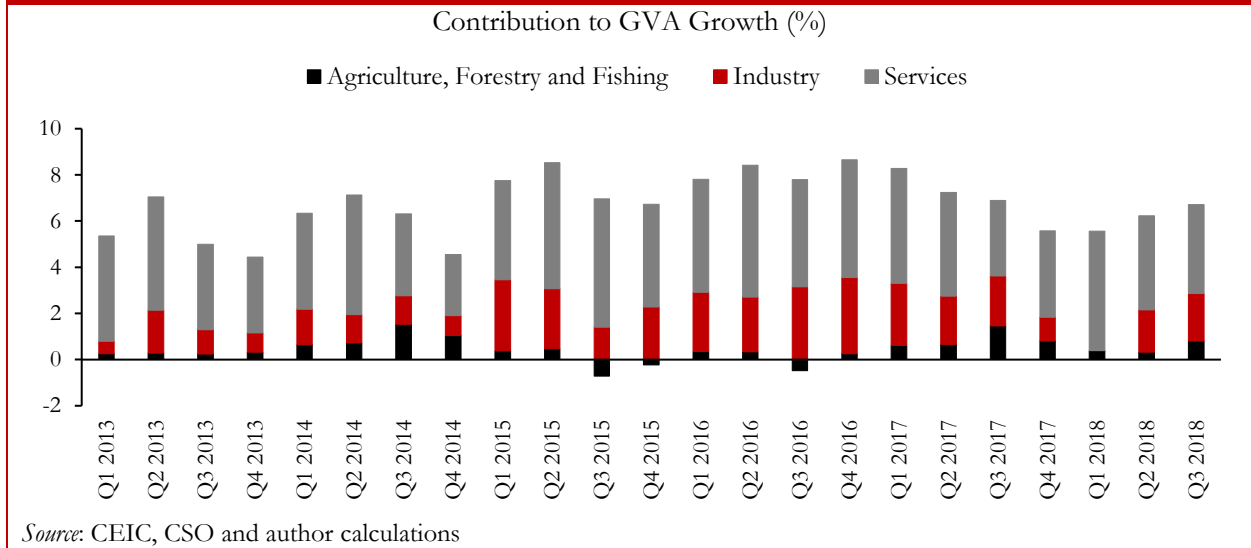
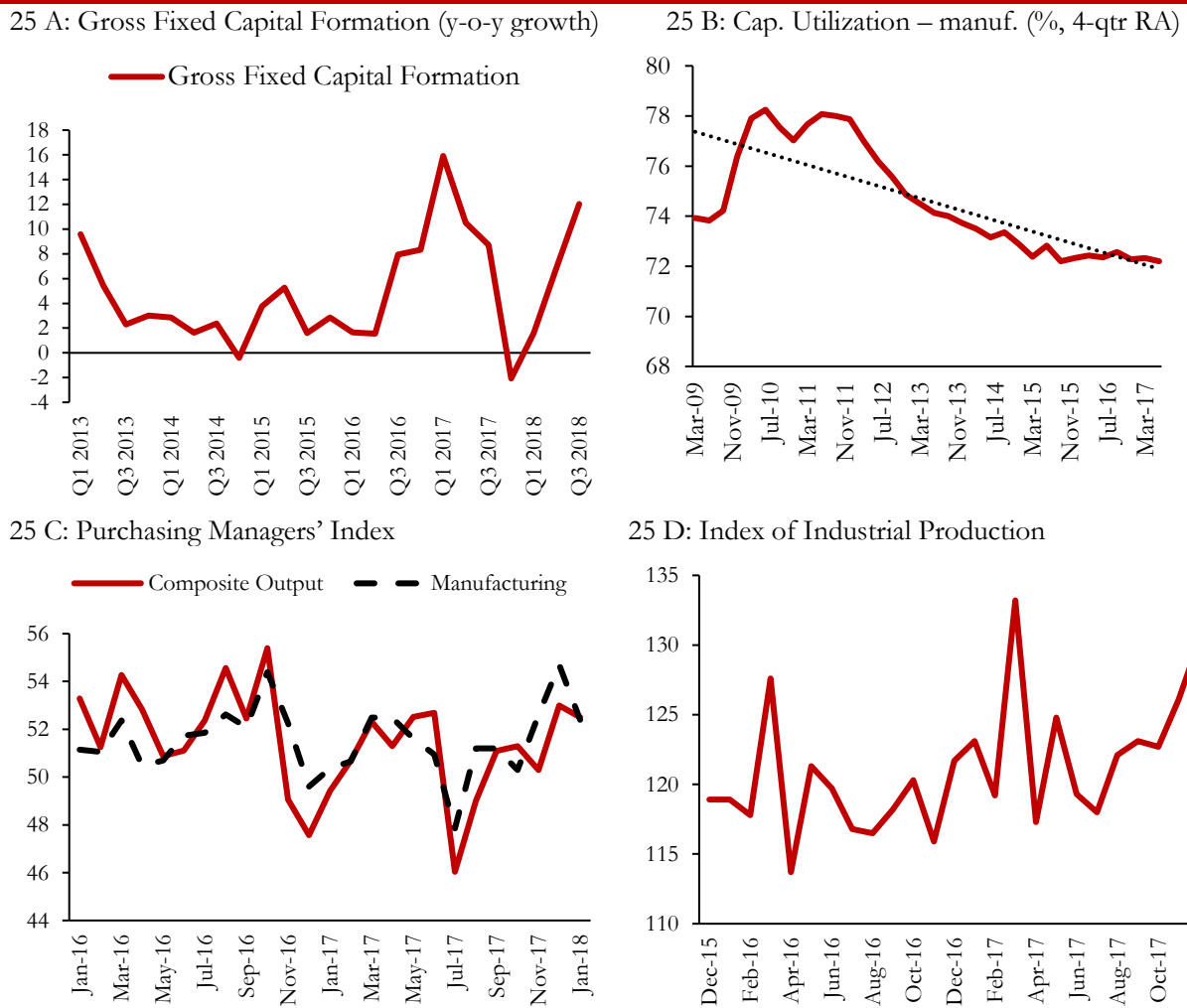


Figure 25: Investments remained weak despite some improvement



Source: CEIC, CSO, Haver Analytics and author calculations

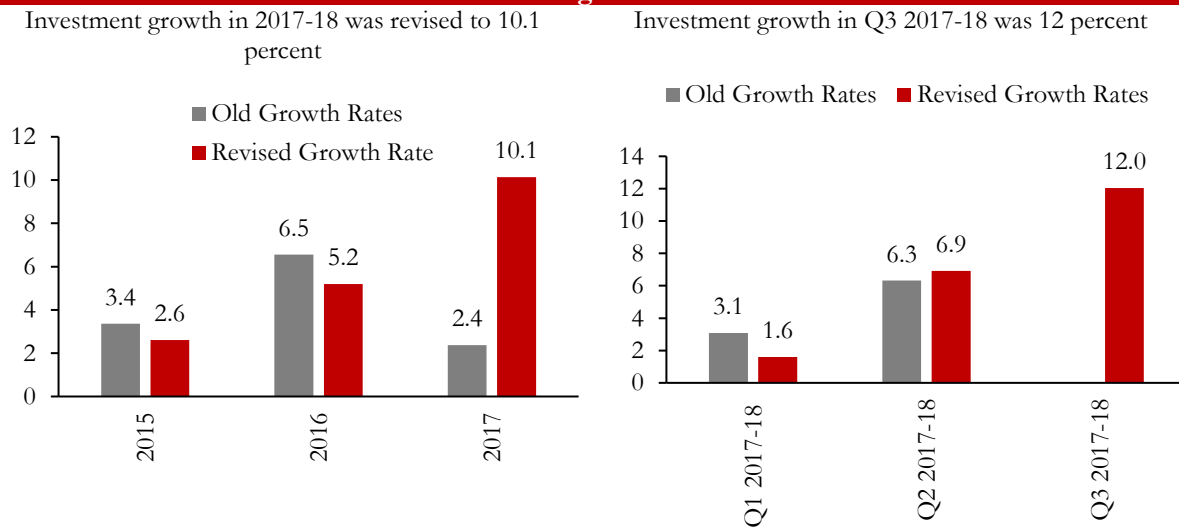
Box 3: Data Revisions in Investments

Recently revised data by the Central Statistics Office suggests that growth in investments has picked up in recent quarters. Though it remains to be seen whether the pickup will sustain and accelerate further.

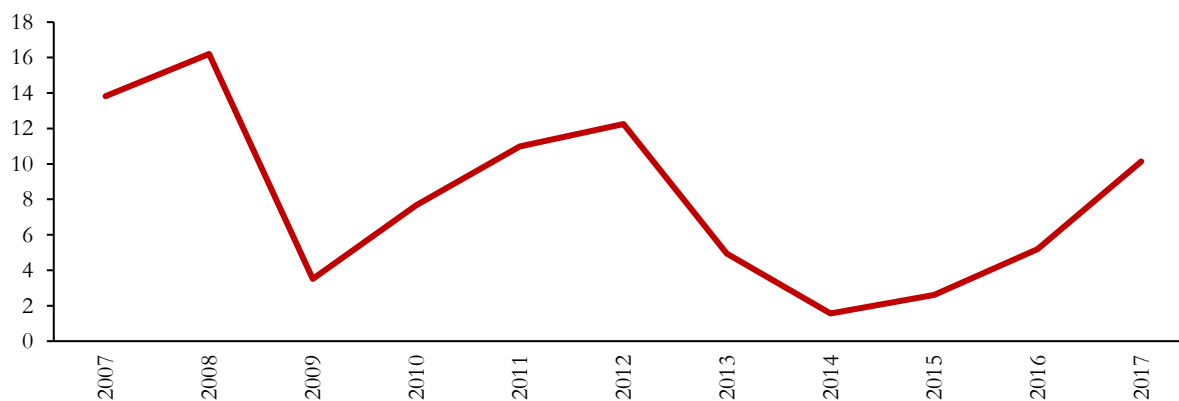
The first revised estimates of capital formation for 2016-17 were released by the Central Statistics Office on the 31st of January 2018. Estimates for Gross Fixed Capital Formation (or investment) were revised marginally for 2014-15 and 2015-16. However, for 2016-17 investment growth was revised from 2.4 percent to 10.1 percent – higher than the average of last four years.

Subsequently, quarterly national accounts data were released on the 28th of February. These included new estimates for Q3 2017-18, revised estimates for Q1-Q2 2017-18, as well as for Q1-Q3 2015-16 and 2016-17. The revisions for Q1-Q2 of 2017-18 were modest. However, investment growth in Q3 was estimated at 12 percent y-o-y.

Revisions in annual growth rates of GFCF



GFCF (Investments) y-o-y growth (in %)



Source: CEIC and author calculations

Inflation

Inflation remained range bound in 2017-18. Notwithstanding a recent pickup, inflation remained within the inflation targeting range of 4 (+/-) 2 percent for most of the recent period.⁶⁵ CPI (Consumer Price Index) inflation, averaged at 3.4 percent y-o-y between April 2017 and January 2018, compared to an annual average of 4.5 percent in 2016-17, and higher levels in previous years (4.9 percent in 2015-16 and 5.9 percent in 2014-15). Core inflation declined steadily from 5.7 percent in 2014-15 to 4.5 percent in 2017-18 thus far (Figure 26). WPI inflation (Wholesale Price Index) averaged 2.9 percent y-o-y between April 2017 and January 2018, after a pickup in 2016-17⁶⁶

Both rural and urban inflation have remained low and the gap between the two has narrowed in recent months. Rural inflation based on CPI (rural) decreased to 3.4 percent during the first ten months of 2017-18 compared to 5.0 percent in 2016-17 and higher levels in the previous two years. Urban inflation based on CPI (urban) also declined to 3.4 percent during the first ten months of 2017-18 compared to an average of 4.0 percent in 2016-17. Urban inflation is generally lower and less volatile than rural inflation. The difference between the two series is largely due to the different weights of items in the rural and urban consumption baskets. The rural basket of CPI assigns significantly larger weight to food items. Convergence between the two series is primarily driven by a decline in food price inflation.

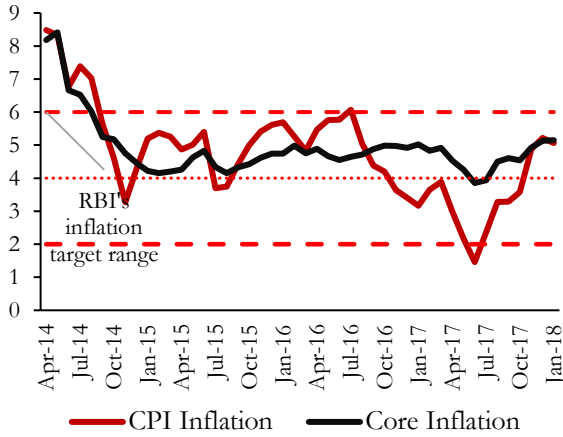
Decline in inflation has been broad based. There has been a broad-based decline in inflation for all commodity groups, but food prices contributed most significantly to the decline in inflation during 2017-18 thus far. A decomposition of inflation trends in recent years shows that food prices accounted for almost 60 percent of the decline in headline inflation since 2012-13, while fuel prices accounted for about 10 percent. Minimum support prices (administered prices for agricultural products such as cereals, cotton, etc.) are a strong positive correlate of headline and food inflation. Since 2014, the government has limited the revisions to minimum support price of food grains to an average of 4.4 percent compared to average 14.1 in the preceding five years. This is believed to have contributed to lower food and headline inflation.

⁶⁵ The Government of India and the RBI signed an inflation targeting framework as the new guiding framework for monetary policy on February 20, 2015. With the adoption of the “flexible inflation target framework” in 2016, the central bank is required to maintain an inflation target of 4 per cent with a (+/-) 2 per cent band.

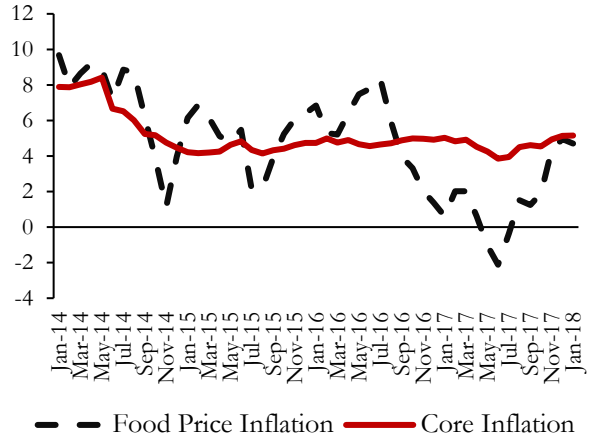
⁶⁶ Consumer Price Index Inflation is referred to as the headline inflation. Core inflation refers to inflation in goods other than food and fuel and light.

Figure 26: CPI Inflation remained low in 2017-18 on the back of softening food inflation

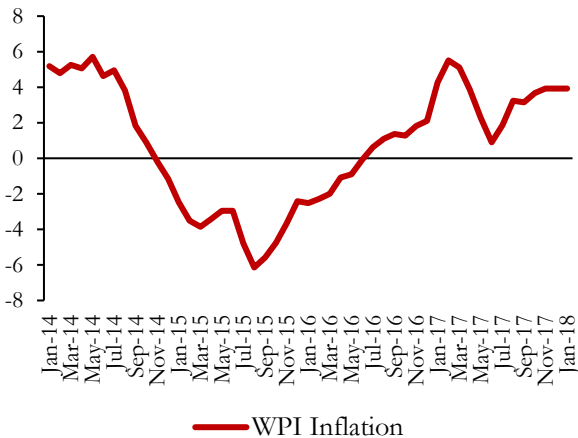
26 A: Inflation remained low in 2017-18 compared to past years; despite some pick-up in inflation in recent months



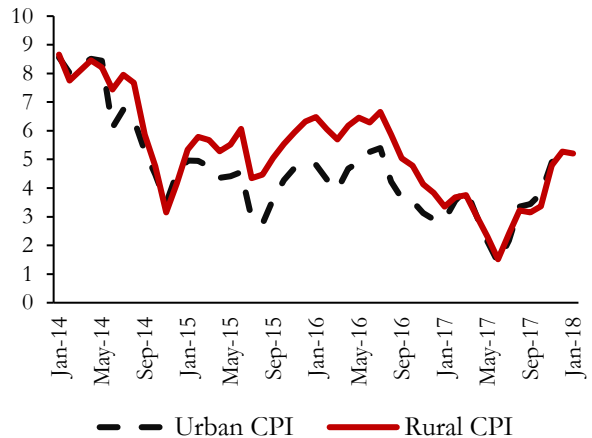
26 B: The recent pick-up in inflation is reflected in fuel prices as well as in food prices



26 C: Wholesale Price Index inflation too has picked up in recent months



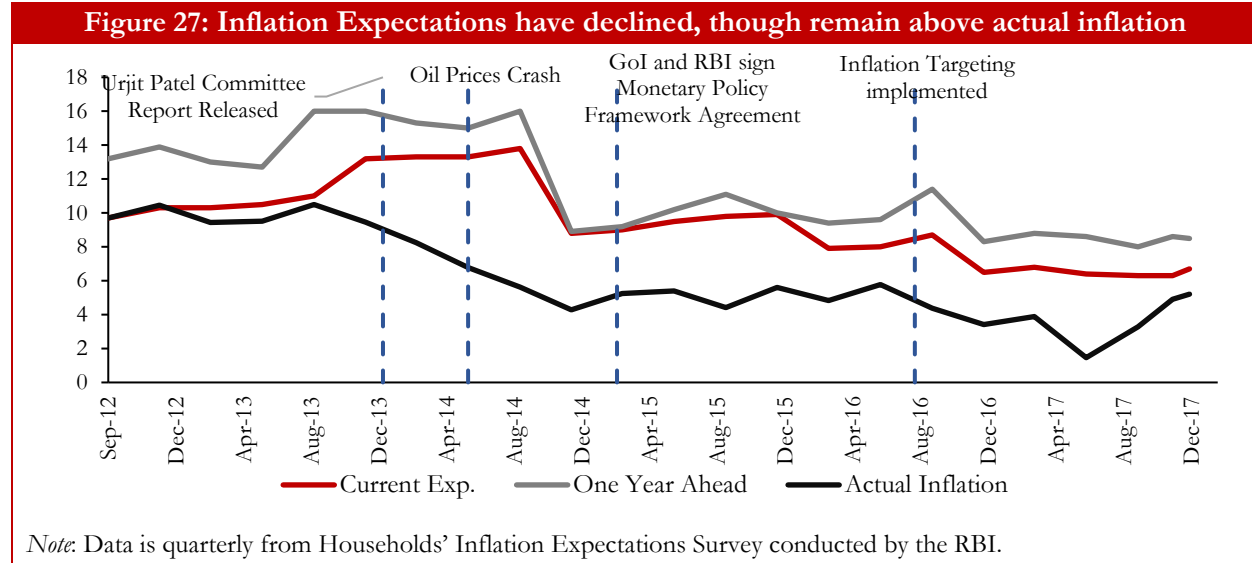
26 D: Gap between Rural and Urban inflation has narrowed



Source: CEIC and author calculation

Despite the broad trend toward declining inflation, inflation has picked up in the past few months, starting in July 2017. Various factors are believed to have contributed to the recent increase in inflation including: rise in the global crude prices to an almost two-and-a-half year high; weaker than expected growth in agricultural output; and the implementation of a higher HRA (House Rent Allowance) under the 7th Pay Commission. Food prices have increased in recent months, contributing to the slight pick-up in inflation. Even as the prices of vegetables, fruits and pulses declined on the back of favorable monsoon, supply of kharif crops remains lower than expected. This has caused a rise in food prices in the last few months. Inflation moderated marginally to 5.1 percent y-o-y in January, down from 5.2 percent in the previous month, but remained above the 3.3 percent average inflation observed in 2017 and above the RBI’s median target of 4 percent (with a +/- 2 percent range).

Inflationary expectations have declined too, but consistently remain above actual inflation. Commensurate with the decline in inflation, inflationary expectations have declined too (Figure 27). Yet despite a decline in actual inflation to less than 4 percent during the first 7 months of 2017-18, current inflation expectations have remained above 6 percent, and those for a year ahead above 8 percent.



RBI estimates that the GST will not have a significant impact on inflation since nearly 50 percent of the CPI basket is comprised of food items, which are taxed at 0 percent under the GST. Further, petrol and diesel are excluded from the GST. Hence the impact of GST on CPI inflation will depend on changes in tax rates of the remaining components of the CPI basket. According to an estimate from the RBI, most of the increase in prices post-GST could occur in prepared meals, clothing and footwear, and recreation, etc. However, the increase in prices of these items could be offset by declines in post-GST prices of personal care items, and some household goods. Overall, CPI prices could increase by approximately 10 basis points post-GST, assuming that increases in tax rates are passed on completely to consumers.⁶⁷

Monetary Policy

The Reserve Bank of India lowered its policy rate in August 2017, but kept it unchanged in other meetings during 2017-18. The RBI lowered the key policy rate, the repo rate, by 25 basis points in the meeting held on August 2, 2017, but kept it unchanged in other monetary policy meetings during the fiscal year. The rate was kept unchanged at 6 percent in its latest bi-monthly monetary policy meeting on February 6, 2018. Members of the Monetary Policy Committee (MPC) attributed the decision to keep the rate on hold to address inflationary pressure emanating from crude oil; production outlook of kharif food grains due to erratic rainfall; the possibility of fiscal slippages due to farm loan waivers by states and the increase in allowances and salaries because of 7th pay commission award.⁶⁸ The repo rate, marginal standing

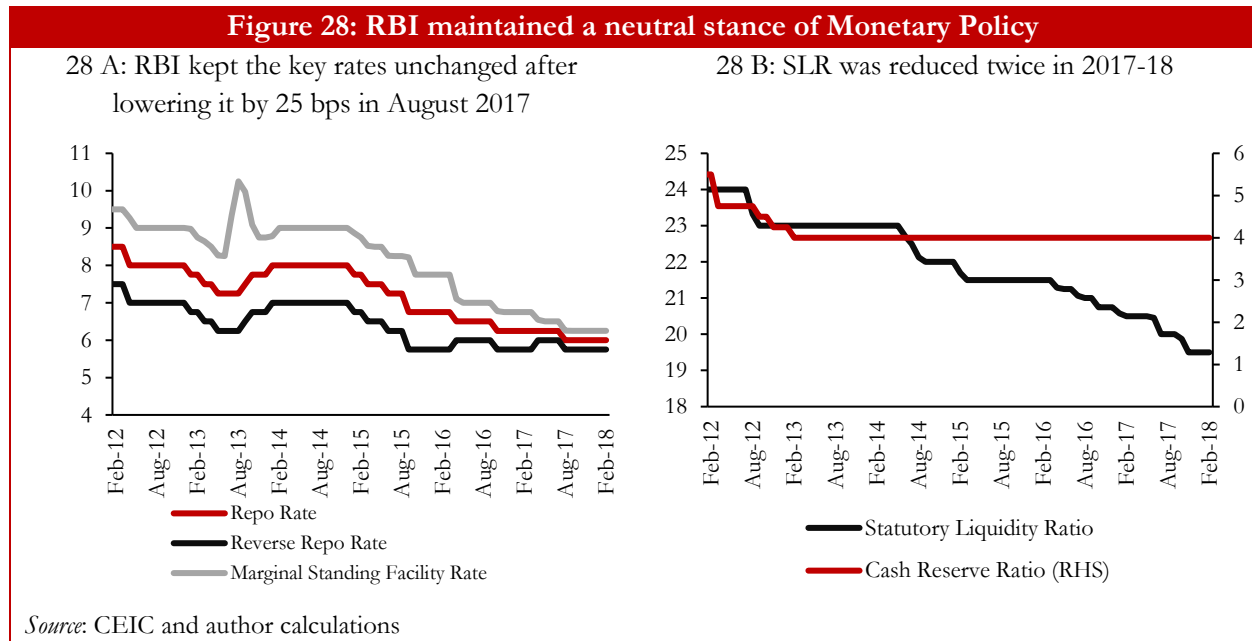
⁶⁷ Monetary Policy Report, Reserve Bank of India. (October 2017) For details, see <https://rbi.org.in/Scripts/PublicationsView.aspx?id=18027#BX21>.

⁶⁸ See Monetary Policy Committee minutes, December 5-6, 2017:

<https://rbidocs.rbi.org.in/rdocs/PressRelease/PDFs/PR16916A79D2EEB1CA49F2BC1605B48DE765FA.PDF>

facility rate, and the statutory liquidity ratio were unchanged at 6.0 percent, 6.25 percent, and 19.5 percent respectively.

While maintaining a neutral stance of policy, the RBI did announce certain other accommodative measures. The Statutory Liquidity Ratio (SLR) was lowered twice, on June 7, 2017 and October 4, 2017, by 0.5 percent each time. This is in continuation of the ongoing decline in the SLR from 23 percent in 2014 to the current level of 19.5 percent. Some observers have expressed concerns over high real interest rates in India compared to other emerging markets. As per Dr. Ravindra Dholakia, member of the Monetary Policy Committee, high real rate of interest is deterring long term investment and leading to a substitution in investment from physical assets to financial assets.⁶⁹



Despite some improvement, slow transmission of monetary policy has remained a challenge. The efficacy of monetary policy depends on the speed with which policy rate changes are transmitted through the economy. In a bank dominated system like India, the transmission to banks’ lending rates is a key to the successful implementation of monetary policy. However, the transmission from policy rate to lending rates has remained incomplete.⁷⁰ The transmission has been considered to be weaker for policy rates cuts as compared to rate hikes. Another reason for weak transmission is a large informal financial sector, where the effective interest rates are several times the interest rates in the formal financial sector.⁷¹ Former do not respond to changes in policy rates at the margin.

⁶⁹ See statement by Dr. Ravindra H. Dholakia made during the 5th bi-monthly MPC meeting held on December 5-6, 2017. https://rbi.org.in/Scripts/BS_PressReleaseDisplay.aspx?prid=42619

⁷⁰ Viral Acharya. (Nov 2017). Speech on “Monetary Transmission in India: Why is it important and why hasn’t it worked well?” See https://rbi.org.in/scripts/BS_SpeechesView.aspx?Id=1049

⁷¹ Additionally, in India public sector banks are believed to propagate the monetary policy less efficiently than private banks as shown in Gupta, Kochhar and Panth (2015), Bank Ownership and the Effects of Financial Liberalization: Evidence from India, Indian Growth and Development Review.

Recently, a few Public-Sector Banks lowered their lending rates in response to the policy rate cut in August 2017. For example, the State Bank of India lowered its base rate by 0.30 percent (or 30 basis points) in early January 2018. The RBI set up an internal study group in July 2017 to study the marginal cost of funds based lending rate system (MCLR) from the perspective of improving the monetary transmission. The MCLR system was adopted in April 2016, to calculate the lending rate which would be linked to the marginal cost of funds. The RBI observed that while the transmission to interest rates for fresh loans has been significant, it has been muted for outstanding loans. The study revealed that the transmission was impeded because of the following factors: First, a sizable legacy loan portfolio of banks is still linked to the old base rate system, under which the lending rates are relatively stickier than loans linked to MCLR. Second, the banks deviated in an ad-hoc manner to arrive at the MCLR rate to prevent the rates from falling in line with the cost of funds, possibly to preserve profitability in the short-term. Third, rigidity on the liability side due to fixed interest rates on deposits prevents average lending rate from declining even if marginal cost declines. Finally, the study points to the overall deterioration in health of the banking sector as a reason for poor transmission. Based on these factors the group recommended a switchover to an external benchmark in a time-bound manner.

Banking Sector⁷²

The year 2017-18, has remained another challenging year for Indian banks, with subdued pace of credit growth and continued stress on asset quality. Credit growth of Scheduled Commercial Banks (SCB) increased modestly from 4.4 percent to 8.8 percent (y-o-y basis) between March 2017 and January 2018. Credit growth for public sector banks (PSBs) increased from 0.7 percent to 2.2 percent y-o-y during March-September 2017, reversing the declining trend during last two years. While deposit growth of SCBs picked up in 2016-17, it slowed down in the first two quarters of 2017-18. Deposit growth of SCBs declined from 11.1 percent to 4.5 percent between March 2017 and January 2018 (y-o-y basis). The decline in deposit growth is evident across all bank groups (using data up to September). Credit and deposit growth has been negative for foreign banks; whereas among domestic banks, public sector banks have grown more slowly than the private banks.

Table 6: Credit growth shows signs of recovery; deposit growth remains subdued

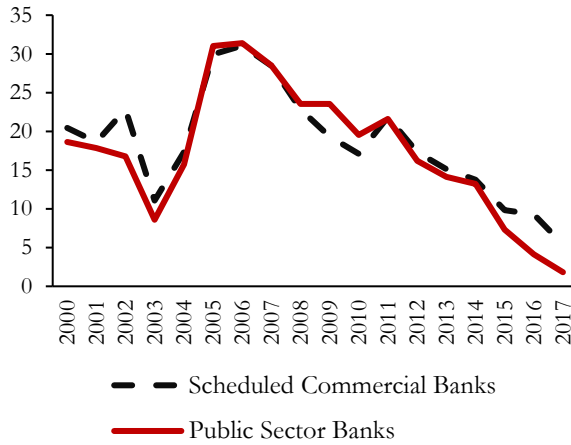
	Credit growth (percent)	Deposit growth (percent)
All Scheduled Commercial Banks	6.2	7.8
Public Sector Banks	2.2	6.6
Private Banks	18.9	14.8
Foreign Banks	-4	-6.9

Growth between March-September 2017 (y-o-y)
Source: Financial stability report, RBI, December 2017.

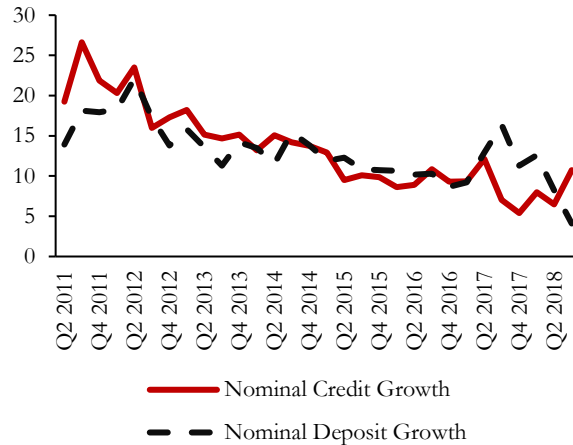
Figure 29: Credit growth has declined in the last few years

⁷² The section draws on the RBI's Financial Stability Report (December 2017)

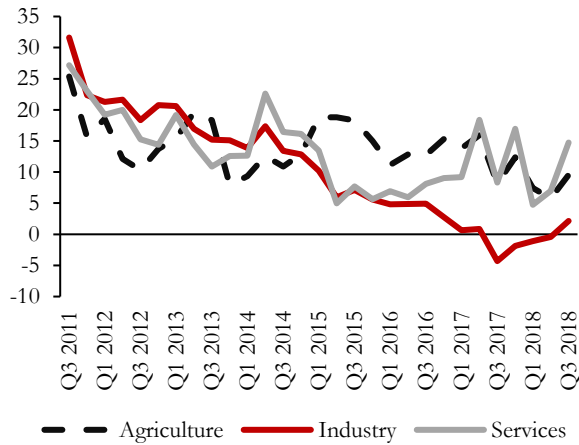
29 A: Bank credit growth has been declining, decline is larger for public sector banks



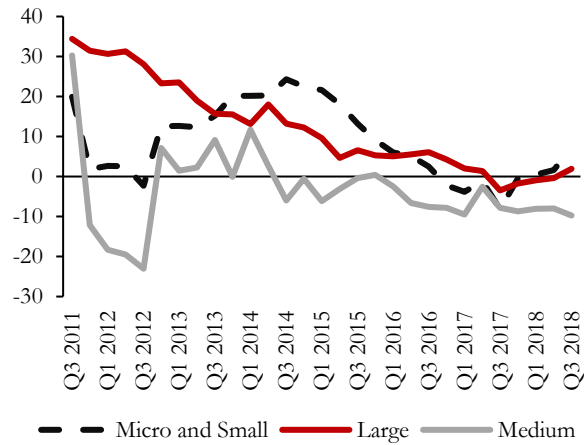
29 B: Credit and deposit growth of Scheduled Commercial Banks has been declining, but has experienced an uptick more recently



29 C: Credit by Sectors



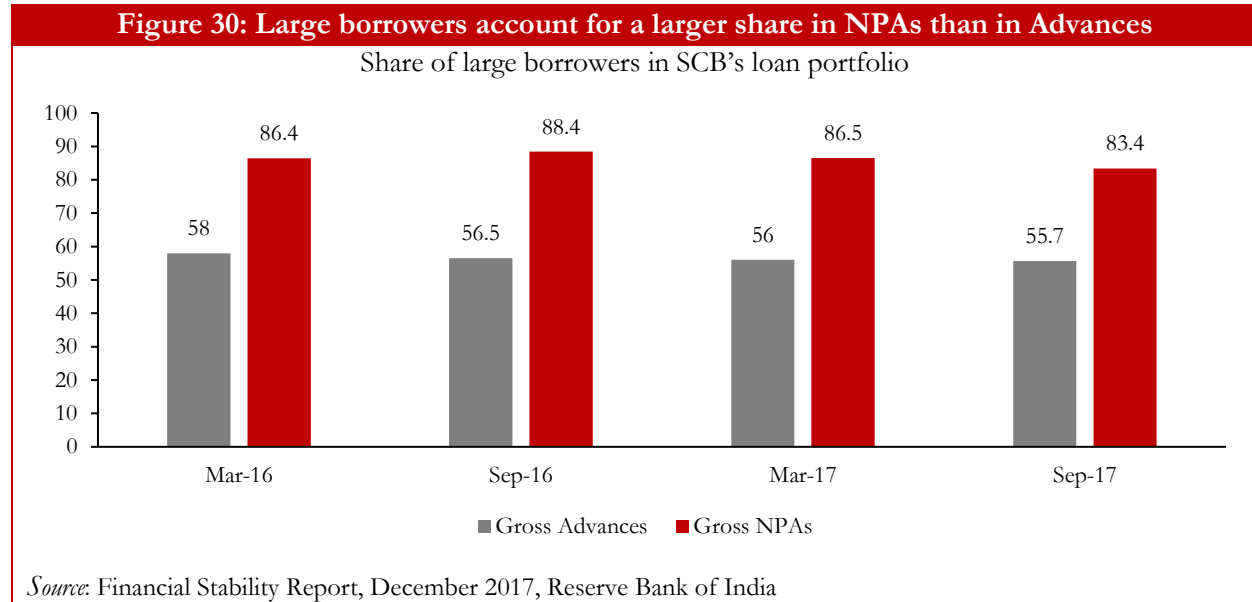
29 D: Credit to Industry by firm size



Source: CEIC

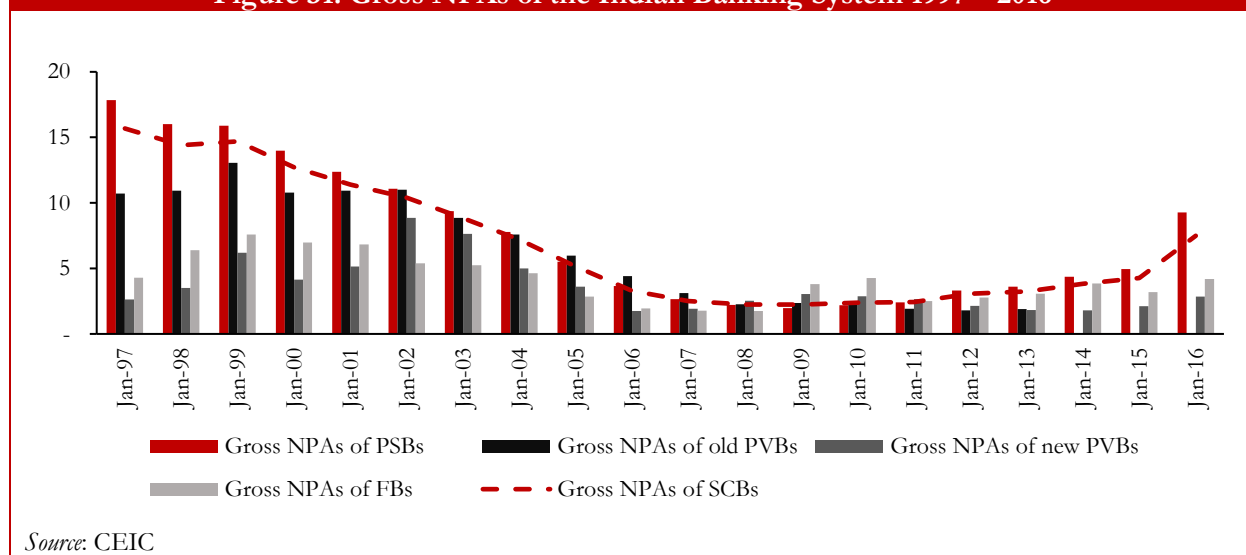
Credit slowdown is pervasive across sectors. Credit growth to industry continued to decline in the first ten months of 2017-18, while growth in agriculture and services remained modest. Within industry, credit to large and medium enterprises remained particularly depressed (Figure 29). RBI's latest Financial Stability Report, from December 2017, pointed that although there is a fall in stressed advances ratio in services and retail sectors, the stressed advances ratio in agriculture and industry has risen. Return on assets (ROA) of Scheduled Commercial Banks remained unchanged at 0.4 percent between March and September 2017 while their return on equity (ROE) declined from 4.3 percent to 4.2 percent. Public sector banks have continued to record negative profitability ratios since March 2016. There is a stark contrast between the profitability of PSBs and private banks-- return on assets of public sector banks was -0.1 percent on September 2017, and the return on equity was -2.0, compared to 1.4 percent and 11.9 percent respectively for private banks.

There is a concentration of non-performing assets among large borrowers. The gross non-performing assets ratio (GNPA) ratio of large borrowers increased from 14.6 percent to 15.5 percent between March and September 2017. Large borrowers accounted for about 56 percent of advances, but 83 percent of GNPA. The top 100 large borrowers (in terms of outstanding funded amounts) accounted for 15.5 percent of credit and 25.0 percent of GNPA of SCBs.



Large non-performing assets in India remain an unfinished agenda. After major efforts to recognize non-performing assets (NPA) during 2015-2016, NPAs continued to surface, albeit at a slower pace. The gross non-performing advances (GNPA) ratio of SCBs increased from 9.6 percent to 10.2 percent; while GNPA ratio of PSBs increased from 12.5 percent to 13.5 percent between March and September 2017. The asset quality of SCBs deteriorated across sectors with the largest deterioration in the industrial sector. Within industry, asset quality deteriorated in mining and quarrying, food processing, engineering, construction and infrastructure sectors. Figure 31 shows a history of evolution of NPAs in Indian banks during the past 2 decades. There has been a long downward trend in the high NPA level since the late 1990s. At that time too, it was the PSBs that had the highest non-performing asset ratios. As PSBs gradually reduced their NPAs, the NPAs continued to grow at private sector banks till early 2000s. Following the onset of the global financial crisis in 2008, foreign banks led the pack in NPA recognition; and the public-sector banks followed later.

Figure 31: Gross NPAs of the Indian Banking System 1997 – 2016



The early NPA workout solutions did not yield meaningful success. In 2017, the new Insolvency and Bankruptcy Code and encouragement for banks to refer NPAs to the NCLT's gave a new boost to the workout efforts. The first two groups of major defaulted loans are undergoing a restructuring process, with more concrete results expected in 2018. Sales of NPAs by banks to the Asset Reconstruction Companies have been sporadic, with deals not going forward largely due to fair value issues. At the current pace, the clean-up of the balance sheets of the banks, particularly PSBs, appears to be a medium to long-term effort.

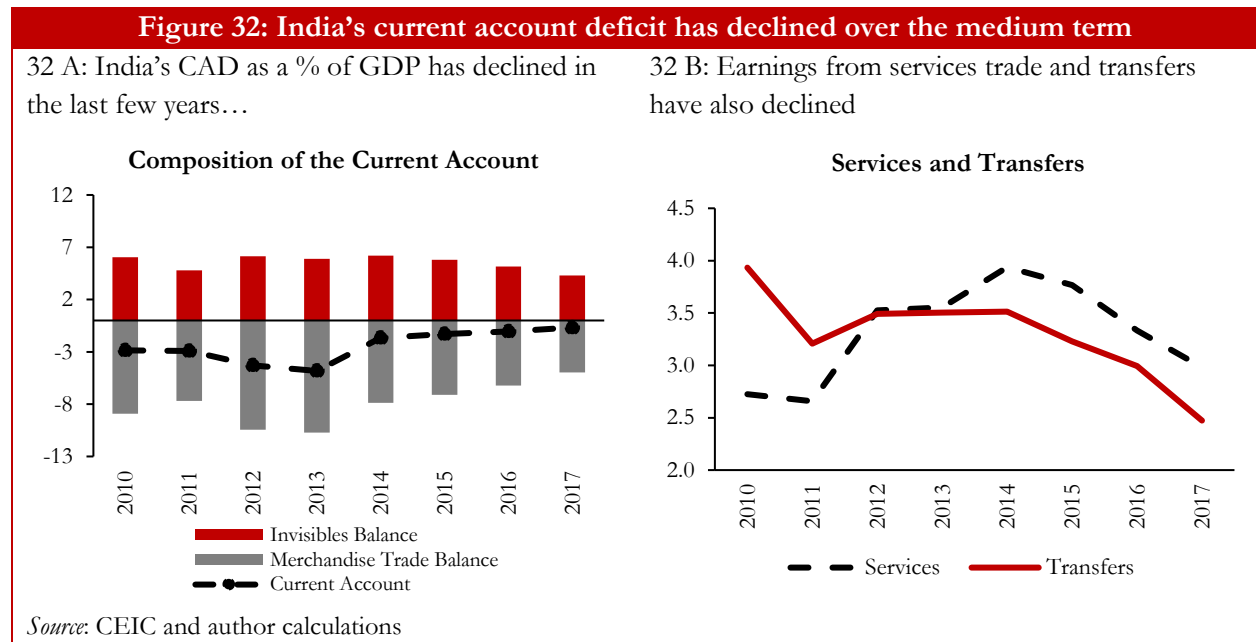
Government efforts towards recapitalization could reinvigorate bank credit, but need to be followed by wider reforms. The government announced an unprecedented recapitalization of public sector banks on October 24th, 2017. The proposed measures include recapitalization of approximately INR 2.11 trillion (around \$32 billion) over the next two years. The government plans to fund it through a mix of instruments: (i) budgetary provisions amount to approximately INR 180 billion, (ii) recapitalization bonds to the tune of INR 1.35 trillion, and (iii) capital raising efforts by banks from the market by diluting government share (an estimated INR 580 billion).

The recapitalization package carries a promise to strengthen the PSBs and position them for a new round of lending growth in the coming years. First, it will strengthen the weakened capital base of the PSBs. Second, it will allow for further NPA recognition and loan loss provisions, increasing transparency of the PSB's balance sheets. Third, it will allow the banks to pursue NPA resolution more forcefully, as banks will be less constrained in finding faster workout solutions by agreeing e.g., to steeper haircuts on the defaulted loans. Finally, the additional capital may provide some scope for new lending growth.

To generate room in public sector bank balance sheets to scale up lending to support growth, bank recapitalization should be accompanied by wider reforms. A dynamic measurement of public sector banks' governance and financial performance metrics following the recapitalization could be deployed to systematically address moral hazard concerns. It will help enhance market confidence supporting further market capitalization and stabilization of credit outlooks. Additional measures to durably enhance the stability and efficiency of the financial sector include consolidation of public-sector banks; revising their incentive structure to align more closely with their commercial performance; ensuring a level playing field for private banks; and opening the space for greater competition

Balance of Payments

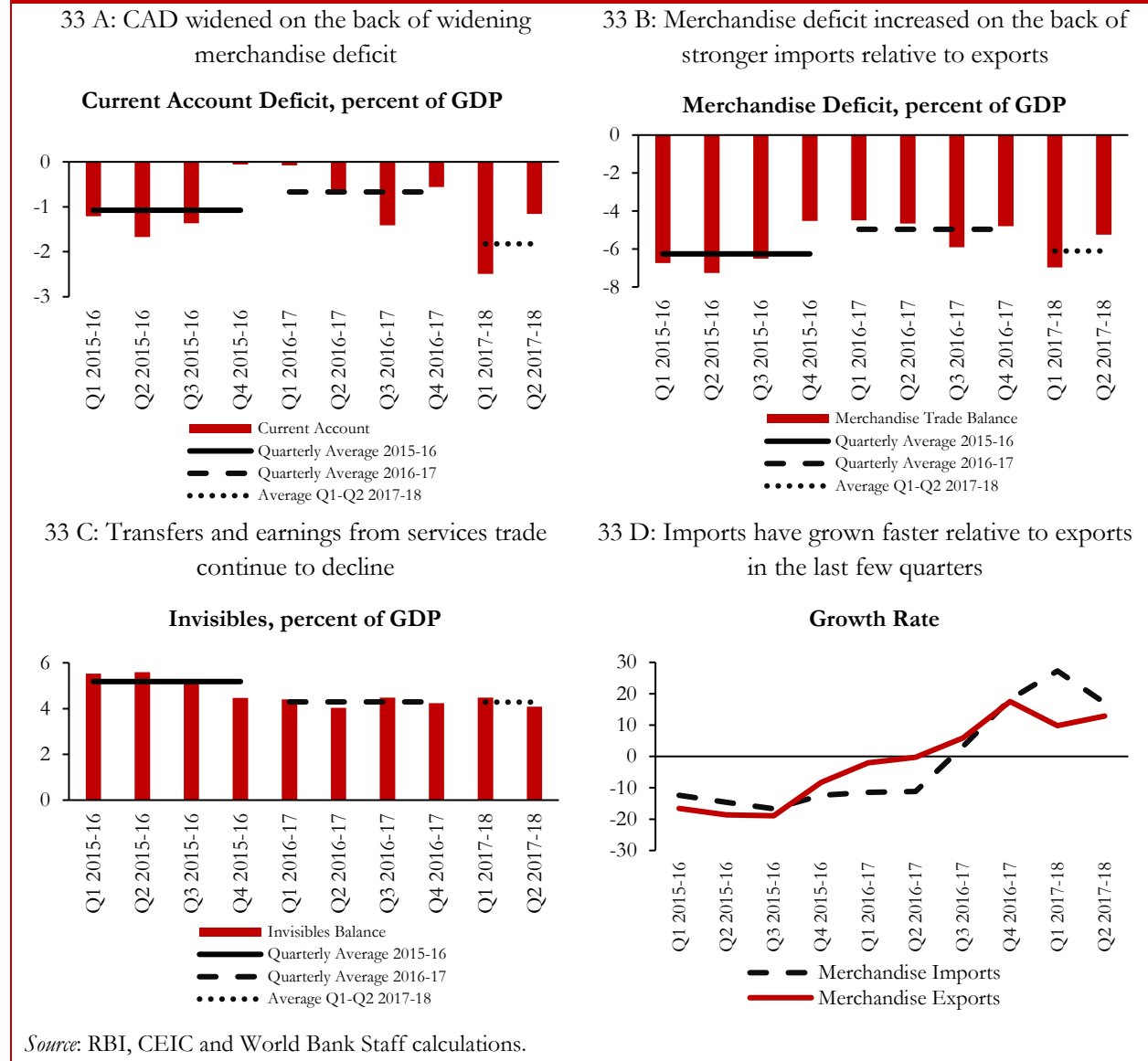
India has consistently run a current account deficit (CAD), driven by a deficit on merchandise trade. In contrast, India maintains a surplus on service trade, and positive net transfers from abroad (collectively called invisible earnings). In the past five years, current account deficit has averaged about 1.9 percent of GDP a year, while merchandise trade deficit has averaged 7.4 percent of GDP a year. Both current account deficit and merchandise deficit have steadily declined over the past five years. Meanwhile invisible earnings have averaged 5.5 percent a year, but have declined too in the past few years, due to weaker earnings from services exports and private transfers from abroad.



Despite a decline over the medium run, current account deficit and merchandise trade deficit increased over the past quarters, due to stronger imports. The merchandise trade deficit increased to 6.1 percent of GDP in the first half of 2017-18, compared to 5 percent of GDP in 2016-17. With invisible earnings, as a percent of GDP, broadly stable during Q1-Q2 2017-18, increase in merchandise trade deficits accounted for the observed increase in current account deficit to 1.8 percent of GDP between Q1-Q2 2017-18, compared to 0.7 percent during 2016-17. Merchandise exports grew at an average of 11.35 percent in Q1-Q2, 2017-18, maintaining their momentum from Q3-Q4 2016-17 despite reported

disruptions caused by exporters adjusting to the new GST regime. Exports of petroleum, steel and iron, machinery and equipment were the main drivers of aggregate export growth. Merchandise imports grew at a faster pace of 22.15 percent over the same time period, driven by an increase in international commodity prices, and reflected in the faster imports of oil, gems and jewelry, and gold.

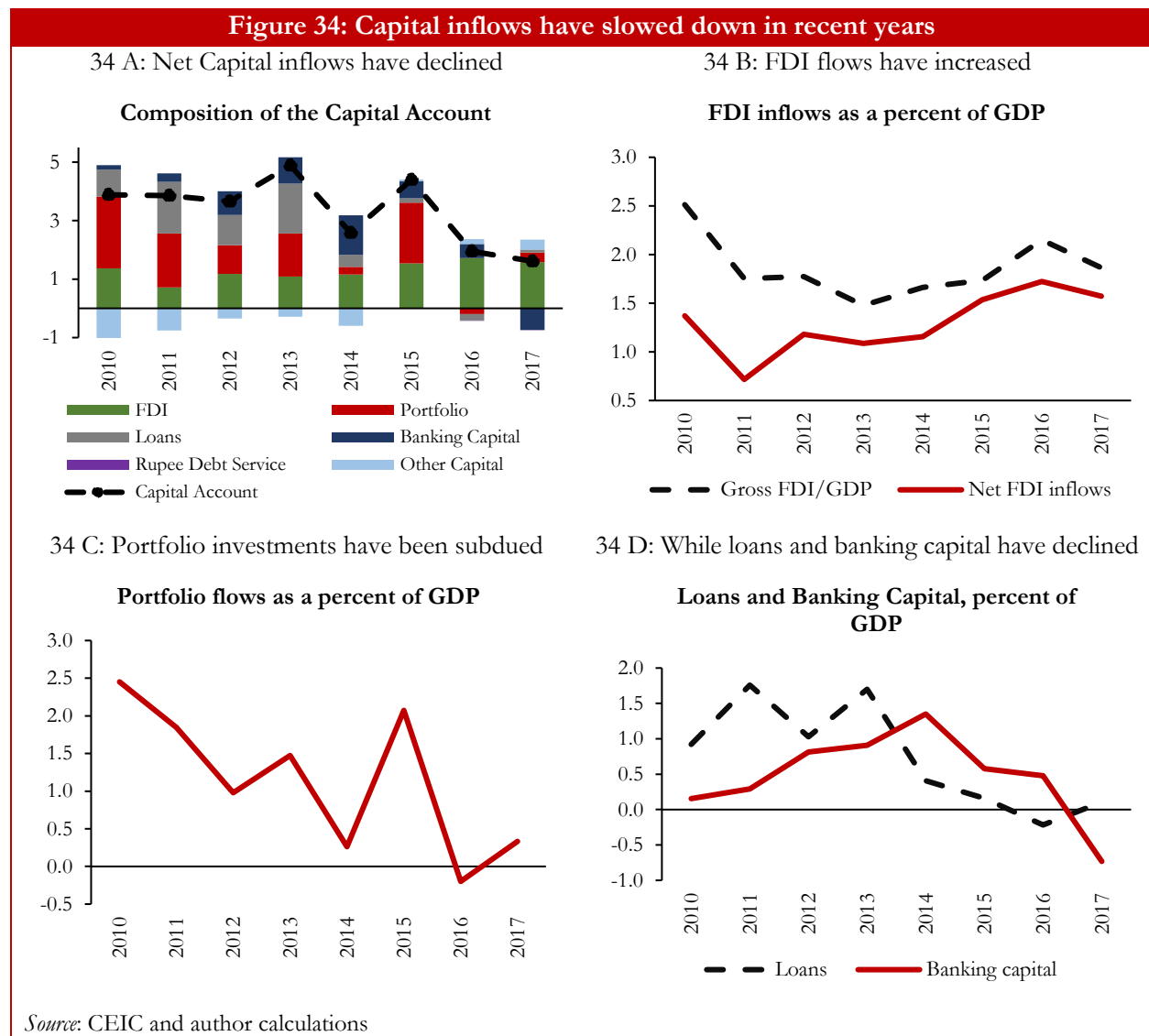
Figure 33: Current Account Deficit has widened in recent quarters



Recent Trade Policy Developments. The Government of India announced a new export support policy and a hike in import duty for electronics in December 2017, as well as wide-spread custom rate increases as part of the budget announced in February 2018. As part of the export support policy, the government announced an annual package to the tune of INR 84.5 bn. to provide export incentives for the labor-intensive manufacturing sectors. The government also announced an increase in import duties for electronics, raising duties from 10 to 15 percent on items such as mobile phones and video recording

devices, and by 10 percentage points on household electronics such as lamps and microwaves.⁷³ It also relaxed FDI norms in retail, airlines and construction sector.⁷⁴ Finally, the budget presented for the year 2018-19 proposed increases on customs duties on a range of products.

While India is a net importer of capital, capital inflows have been declining over the last few years. This is primarily driven by a decline in external borrowing and deposits by non-resident Indians. While loans and banking capital amounted to an average 1.05 and 1.02 percent of GDP between 2012-13 and 2014-15, net inflows from these sources declined to 0.02 and 0.11 percent of GDP a year in the last three fiscal years (Figure 34).

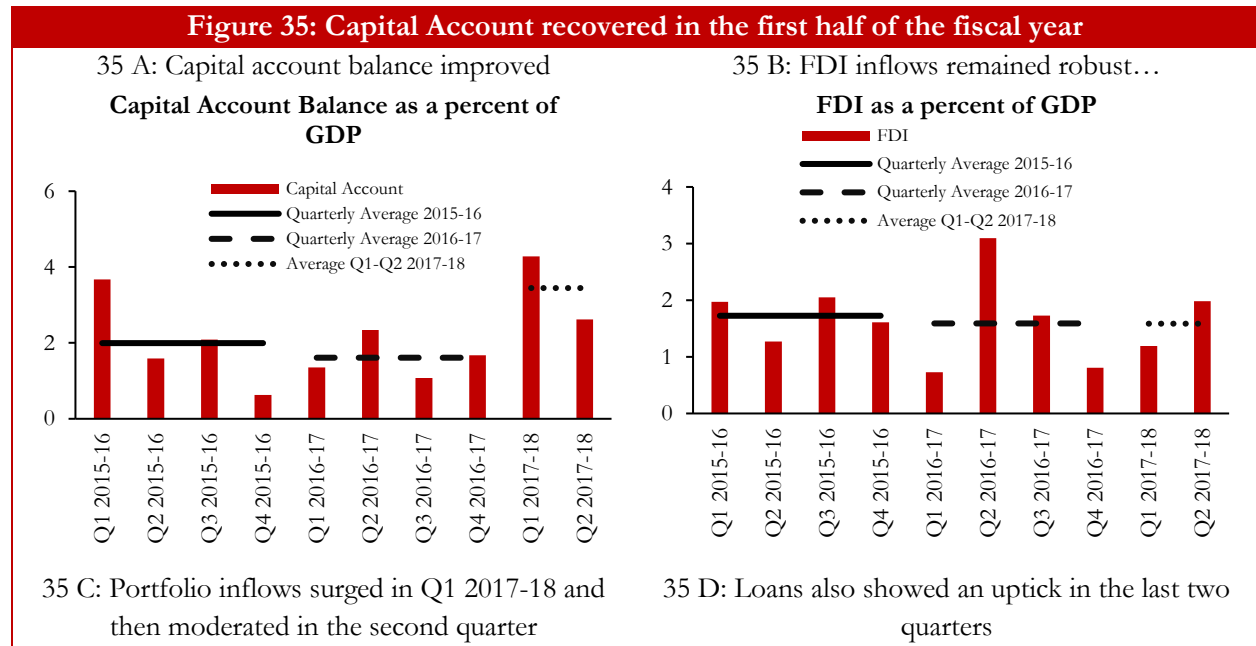


⁷³ <http://www.livemint.com/Industry/iwVNPMKTr4o6VpuNxqX9eN/Customs-duty-raised-on-electronic-goods.html>

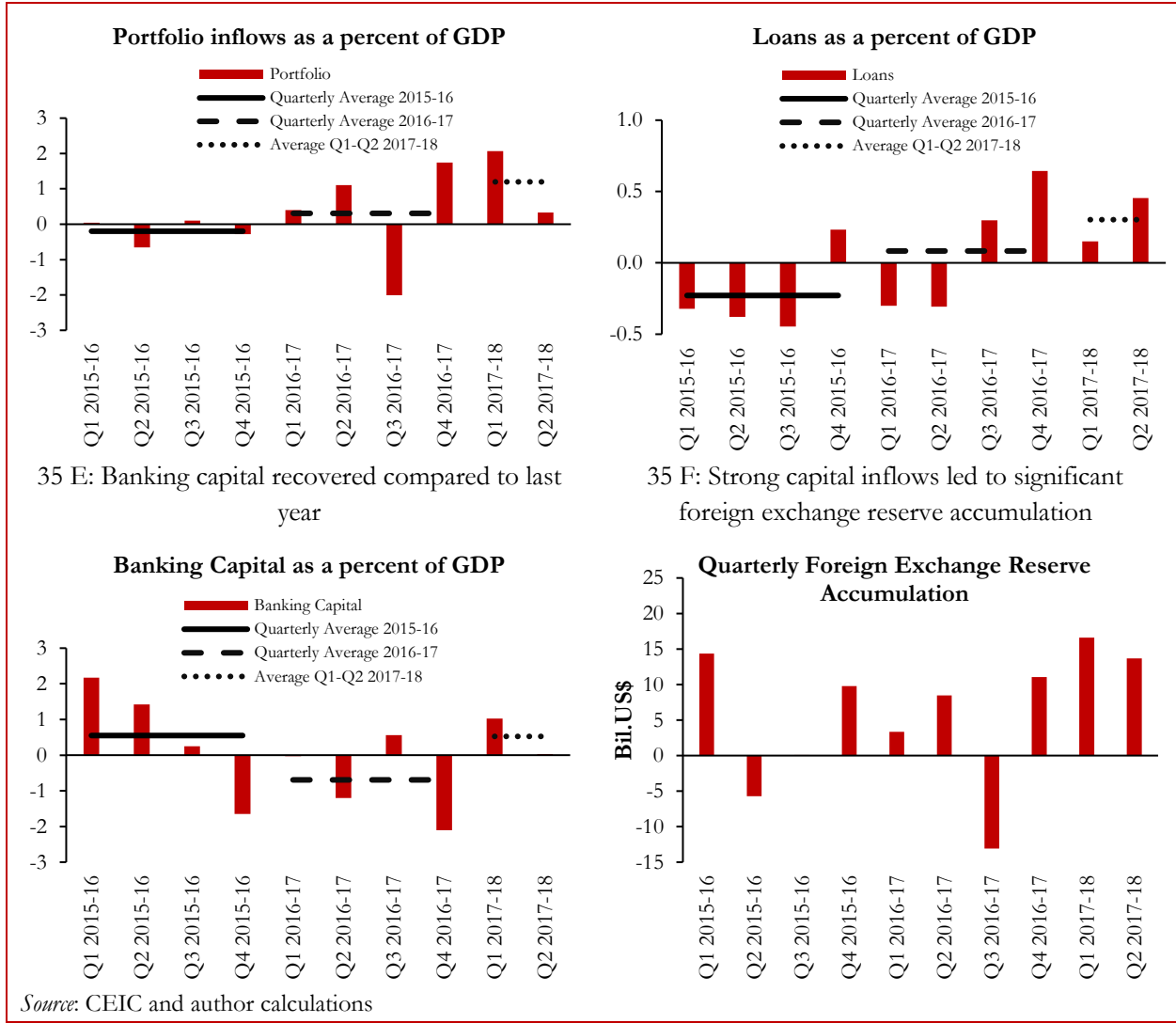
⁷⁴ <http://www.thehindubusinessline.com/economy/policy/cabinet-approves-100-fdi-in-single-brand-retail-via-automatic-route/article10023519.ece>

In addition, portfolio investments, traditionally a volatile contributor to capital inflows, have been subdued in the last two years. In contrast, foreign direct investment has increased and acted as a buffer against the decline in other forms of capital inflows. With both capital inflows and the current account deficit declining in recent years, India’s balance of payment has remained relatively stable.⁷⁵

Capital inflows, as percent of GDP, increased in the first half of 2017-18. Portfolio inflows and loans increased to an average of 1.2 and 0.3 percent of GDP in the first half of 2017-18, up from 0.3 and 0.08 percent in 2016-17, respectively (Figure 35). The share of FDI in GDP was comparable between 2016-17 and the first half of 2017-18, at approximately 1.6 percent of GDP. Banking capital recovered from previous year and averaged 0.5 percent of GDP in the first half of 2017-18.



⁷⁵ Capital flows include: net FDI inflows, net portfolio inflows, loans, banking capital, rupee debt service and other capital. Net FDI inflows are gross FDI inflows minus direct investments abroad. Banking capital includes a) foreign assets of commercial banks, b) foreign liabilities of commercial banks, of which NRI deposits are a major part, and c) others- which includes movement in balances of foreign central banks and international institutions like IBRD, IDA, ADB, IFC, IFAD, etc. Loans include a) external assistance, b) commercial borrowings- which cover medium to long term loans, and c) short term loans to India. Other capital comprises mainly the leads and lags in export receipts; besides this, other items included are funds held abroad, India’s subscription to international institutions, quota payments to IMF. For more details see <https://rbi.org.in/scripts/PublicationsView.aspx?id=9479>



35 E: Banking capital recovered compared to last year

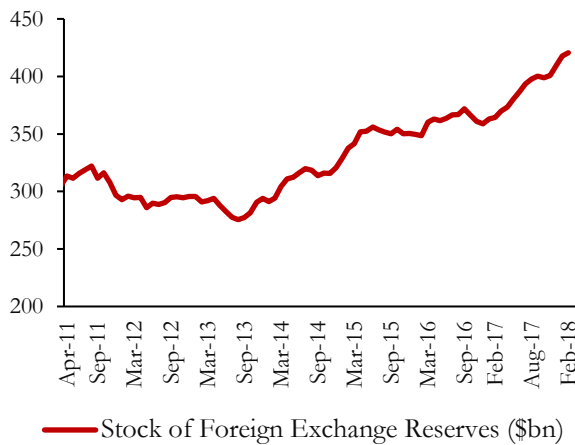
35 F: Strong capital inflows led to significant foreign exchange reserve accumulation

Source: CEIC and author calculations

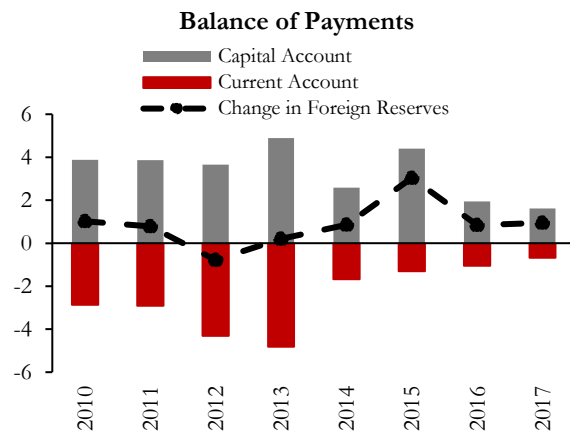
India has accumulated foreign reserves. India has added roughly \$100 billion of foreign reserves between 2012-13 through February 2018. The stock of reserves was at an all-time high of \$421 billion in January 2018.

Figure 36: India has accumulated foreign exchange reserves

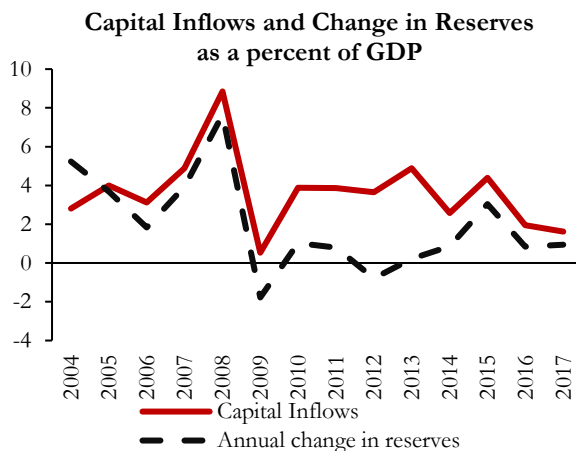
36 A: India's foreign exchange reserves have increased steadily and reached \$421 billion



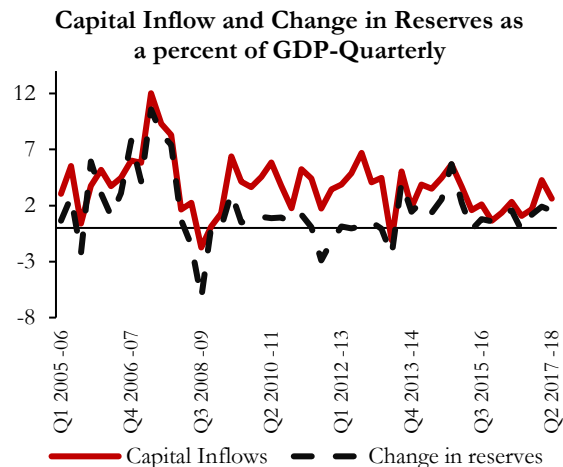
36 B: Capital inflows have helped finance the current account and build reserves



36 C: Pace of reserve accretion has been closely aligned with the pace of capital inflows in the last three years....



36 D: ... as well as in the past few quarters



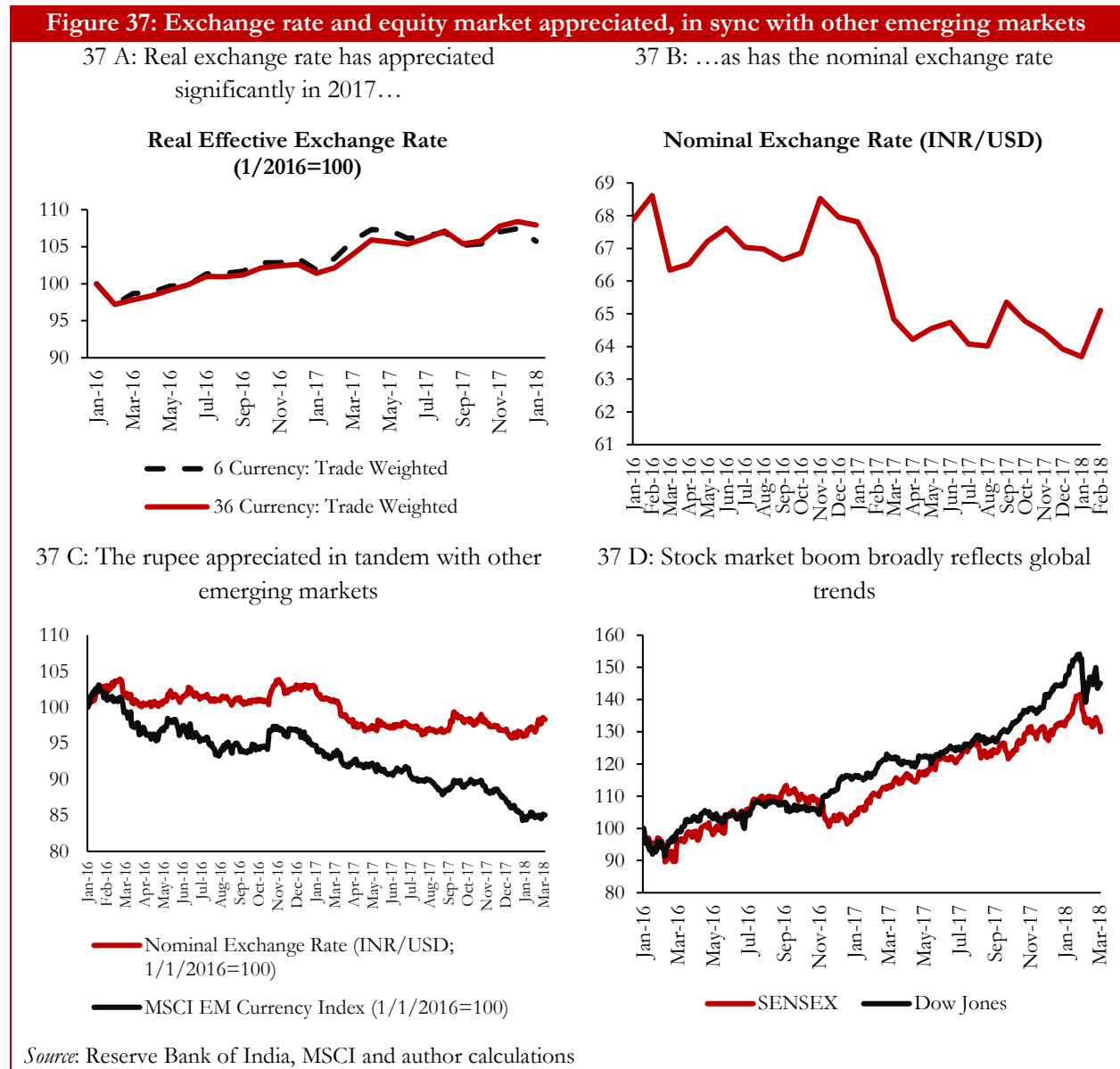
Source: Reserve Bank of India, CEIC and author calculations

Note: Data is for respective fiscal years.

India's nominal exchange rate appreciated by 4.0 percent between January 2017 and February 2018. The real exchange rate appreciated by 8.0 percent between January 2016 and January 2018.⁷⁶ Competitive exchange rates are widely considered vital for exports growth, and in this context the RBI's policy towards the exchange rate has been a subject of much debate recently. While there have been calls for a more active exchange rate policy to support export competitiveness, India's exchange rate appreciation is in sync with global movements and has occurred despite the increase in reserves that has closely matched the pace of capital inflows. This highlights the difficulty in "leaning against the wind", as

⁷⁶ Vijay Joshi. (December 2017). Speech on "India's Economic Reforms: Reflections on the Unfinished Agenda". See https://www.rbi.org.in/scripts/BS_PressReleaseDisplay.aspx?prid=42524

well as the need to consider and debate on broader measures to guard against excessive exchange rate volatility.⁷⁷



India was temporarily affected by the decline observed in global stock markets. India's stock prices depreciated, timed closely with the global correction. The decline brought the markets to levels similar to those seen in early January 2018. The BSE Sensex declined during February from over 36,000 points at the end of January to a little less than 34,000. The decline was observed in coordination with the Dow Jones Index which fell by more than 1000 points twice in the same period. Prior to this recent volatility,

⁷⁷ To the extent that exchange rate is important to determine exporting success, there is perhaps a need for a discussion around broader measures as indicated in Acharya (2017), <https://rbidocs.rbi.org.in/rdocs/Speeches/PDFs/GSNSSENYU240C656D860B464E9F41B7C4E53D707B.PDF>.

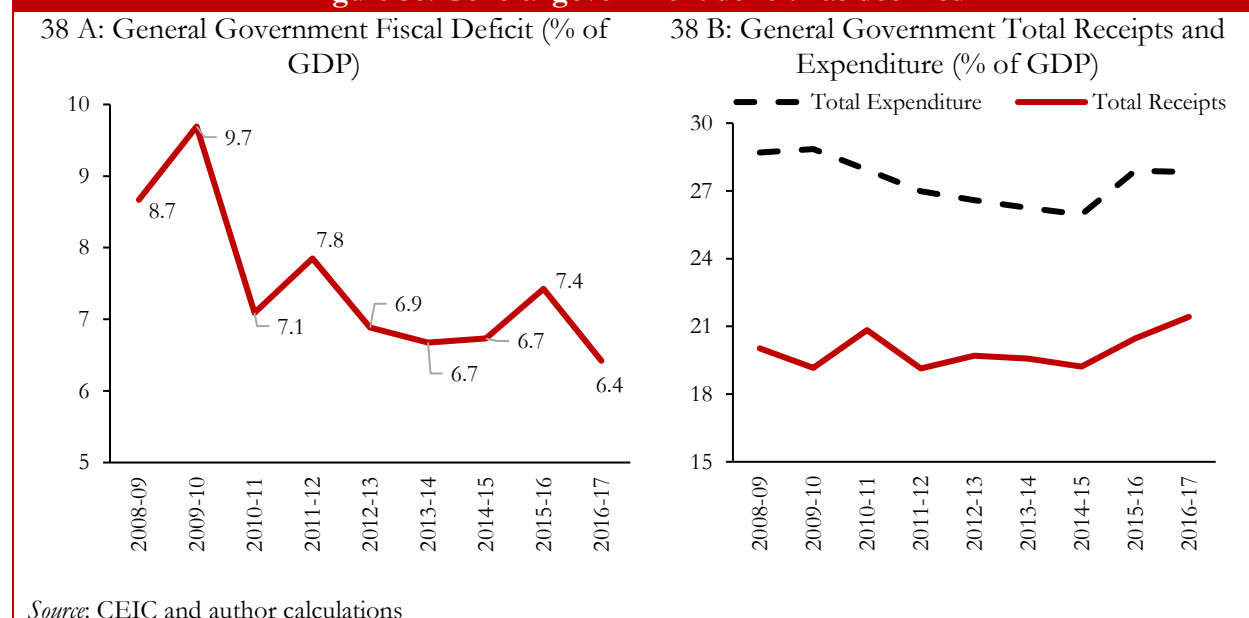
Sensex had crossed the highest ever level of over 36,000 in January 2018. While some commentators have interpreted it as a sign of underlying economic strength of the Indian economy, others have indicated that this may be more a reflection of similar movements in global equity prices.⁷⁸ Some analysts have expressed worries about the potential buildup of froth in the global financial markets, wherein prices seem arbitrarily high and volatility too low. They have raised the possibility that a global financial risk may materialize at some point. Such risks may not materialize for long periods of time; but when they do materialize, the corrections are likely to be sharp. Indian markets are indeed closely aligned with global indices as seen in Figure 37 D. Incidentally, taming the exchange rate and asset prices against global trends is not an easy task, as policy makers across the emerging world have realized time and again.

Public Finance

This section presents recent developments in fiscal deficit, sources of revenues, composition of expenditure, and public debt. It notes that the fiscal rectitude has largely prevailed in the last few years. The general government deficit, as percent of GDP, has declined; share of revenue expenditure in total expenditure, including that of subsidies, has declined; and the share of capital expenditure, though small as percent of GDP, has been maintained. Fiscal federalism has been strengthened, as the states' share in tax revenue has increased, a larger percentage of which they receive in the form of “untied transfers” from the Center. General government debt has declined, largely due to high economic growth and some fiscal consolidation by the central government, and is generally considered sustainable.

General government fiscal deficit has declined. The general government fiscal deficit has steadily declined since 2011-12 (except in 2015-16). Within the consolidated deficit of the Center and the States, Center's fiscal deficit has declined consistently since 2011-12 and held stable in 2017-18, while there has been a modest increase in the States fiscal deficit over the same period.

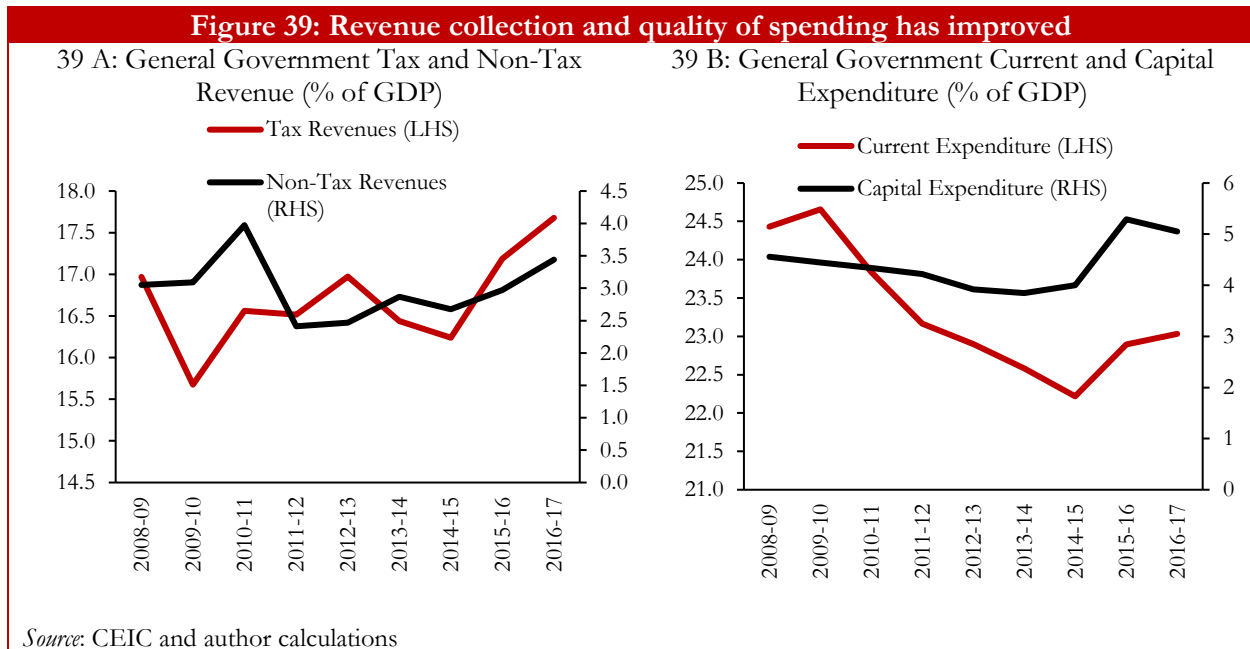
Figure 38: General government deficit has declined



⁷⁸ <https://blogs.timesofindia.indiatimes.com/Swaminomics/watch-out-for-trouble-beyond-sensex-bubble/>

Quality of expenditure has improved. Much of the observed consolidation for the general government is attributed to decline in current expenditures between 2011-12 and 2015-16; and to an increase in revenue in the last two years. In particular, subsidies by the central government have declined, while the level of capital expenditure, as percent of GDP has increased in the last two years. Due to the implementation of UDAY in several states, and higher interest payments on absorbed contingent liabilities, current expenditures have increased since 2015-16.⁷⁹ Similarly, capital expenditures increased due to increase in loans to electricity distribution companies.

Revenue collections have increased. The increase in revenue is because of higher indirect tax revenue and non-tax revenue, including receipts from disinvestments. Direct tax collection remained low at the center and state levels. At the subnational level, property tax is the most significant avenue for collecting direct taxes, however it remains underexploited at less than 1 percent of GDP due to narrow coverage, low collection efficiency, and lack of indexation of property values.⁸⁰



Central government finances

Central government’s fiscal deficit has declined since 2011-12 and stabilized in 2017-18. Center’s fiscal deficit declined steadily from an average of 5.7 percent of GDP during 2008-09 to 2012-13 to 3.8 percent in 2015-16; and further to 3.5 percent in 2016-17 due to the rationalization of subsidies and increase in indirect tax collections. The pace of consolidation moderated in 2017-18 as the central government incurred additional expenses on compensation to the states for GST revenue shortfall.

⁷⁹Under UDAY, states took over up to 75 percent of outstanding liabilities of loss-making electricity distribution companies during 2015-16 and 2016-17.

⁸⁰ Economic Survey 2016-17.

Center’s gross tax collection increased to 11.6 percent of GDP during 2017-18 - a 2 percentage point of GDP increase since 2015-16.⁸¹ Indirect tax revenues have increased over the last decade.

Figure 40: Central government’s fiscal deficits has declined consistently

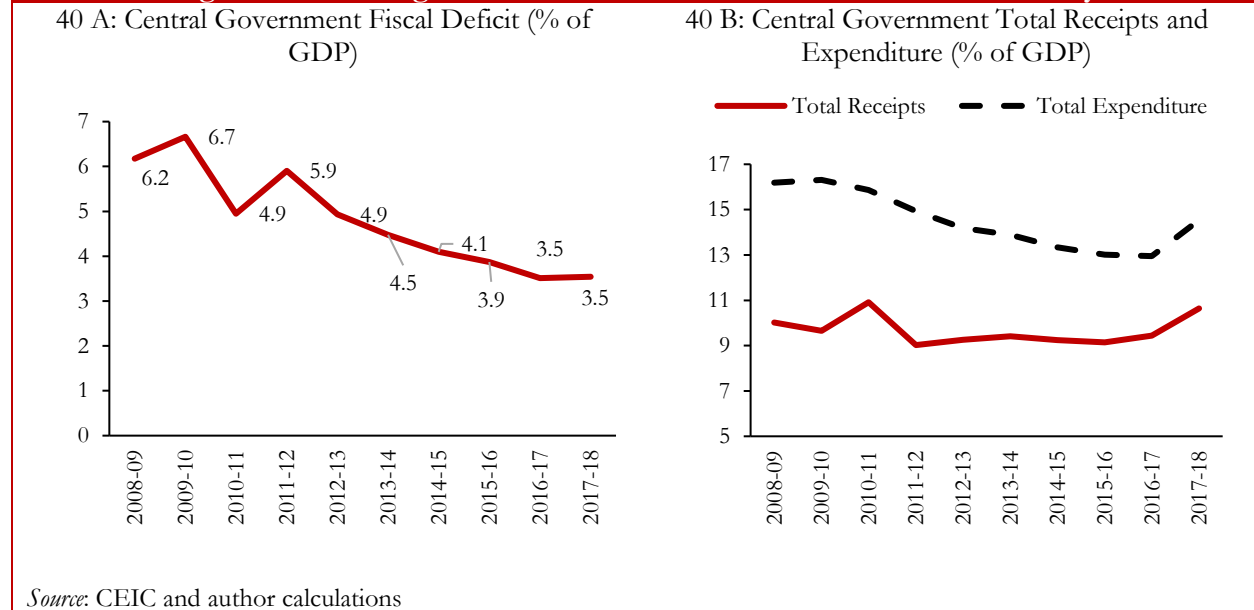
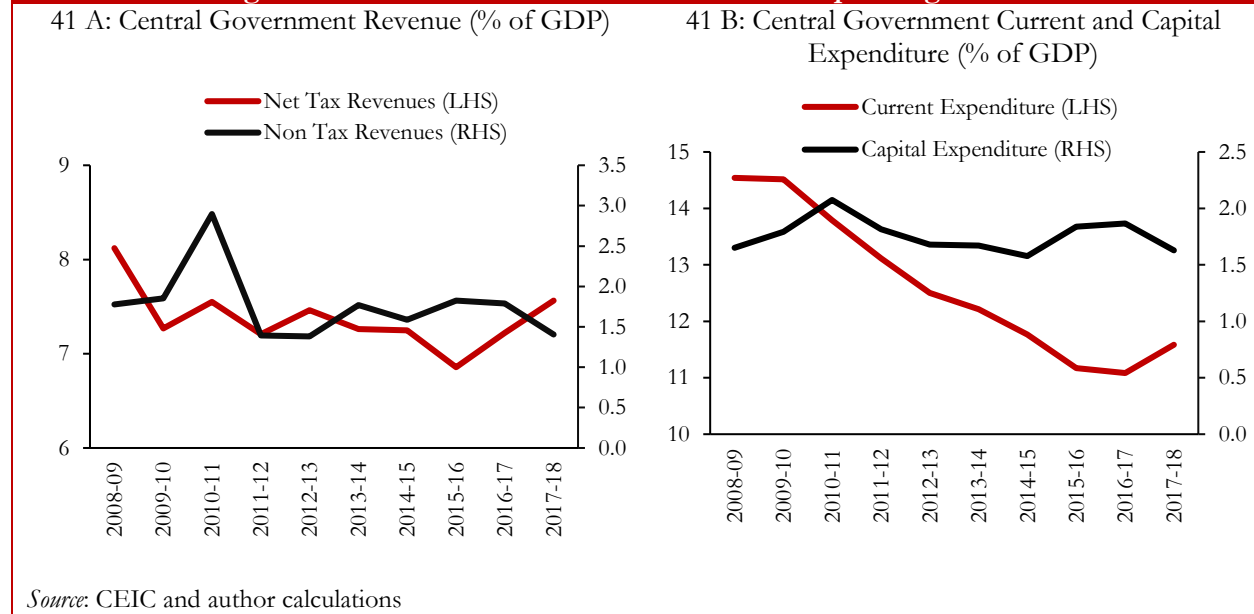


Figure 41: Tax revenues increased and current spending reduced

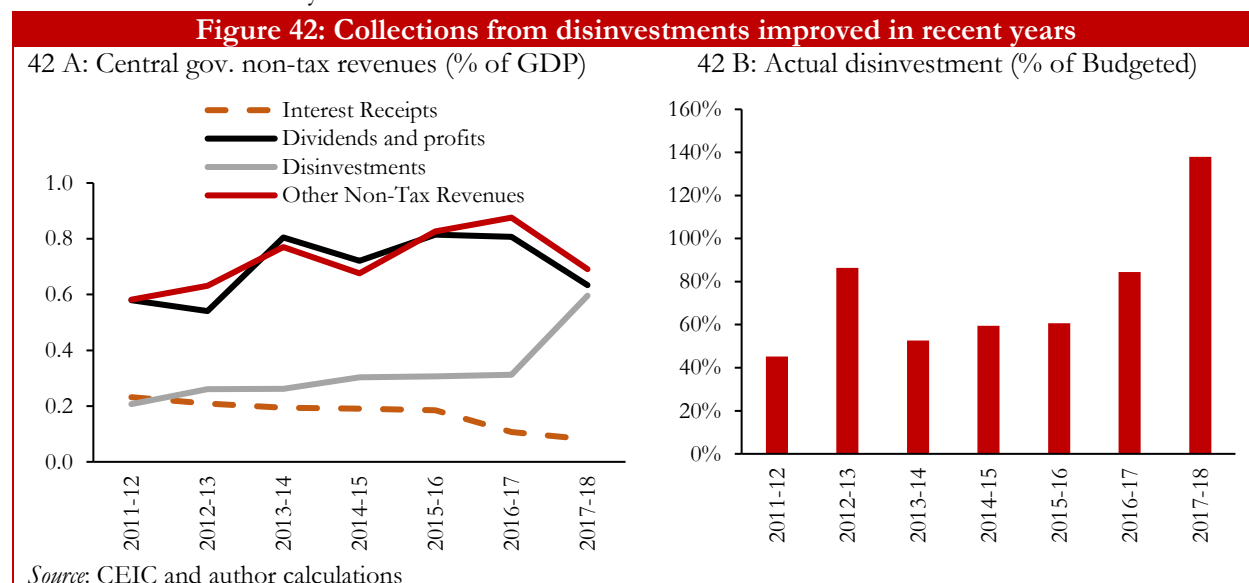


During the last decade, several policies have affected the prevailing tax system. Direct tax system was streamlined by reducing the prevailing corporate tax rates which when compared to other countries

⁸¹ Gross collections differ from net tax collections due to transfer to states.

were amongst the highest in India.⁸² Excise duties on fuel were increased in past years when global crude prices declined. Consequently, excise collections have increased by more than 1 percent of GDP since 2015-16. The scope of taxable services has been gradually widened since 2012-13 by including more services in the tax net.⁸³ Since 2012-13, service tax revenues have risen by 0.5 percentage of GDP. Finally, the government implemented a uniform Goods and Services Tax code in July 2017. The effect of the GST and subsequent input credits on net tax collections is yet to stabilize. Even as the indirect tax collections have improved, direct tax collections in India remain low compared to other emerging economies, with the potential to increase them further in line with the tax ratios of other countries.⁸⁴ Evidence suggests that economic development tends to lead to a relative shift in the composition of revenue from indirect taxes (such as consumption or import taxes) to direct taxes (such as income tax)⁸⁵.

Non-tax revenues have increased over the past two years.⁸⁶ Non-tax revenues, including interest receipts, dividends, user fees, spectrum auctions, etc., and capital receipts from disinvestments, increased from 1.6 percent of GDP in 2014-15 to 2.2 percent of GDP in 2016-17. Non-tax current revenues have increased over the years, with specific spurts in 2015-16 and 2016-17 due to auctions of cellular spectrums with an average collection of 0.5 percent of GDP in each year. Divestment of public sector enterprises has contributed nearly an average of 0.3 percent of GDP a year to non-tax revenue in the last five years. However, disinvestment receipts have remained below the budgeted amount, and averaged at about 60 percent of the budgeted amount. In 2017-18, disinvestment receipts exceeded budget estimates for the first time in recent history.



⁸² In 2015, the budget announced a 5 percent cut in corporate tax from 30 percent to 25 percent over the next 4 years. In the 2018-19 budget, this relief was further extended to firms with turnover between INR 500 million and INR 2.5 billion.

⁸³ Services were moved from a positive list to a negative list, wherein only a few identified services were not taxed.

⁸⁴ Rao, 2017 “Public Finance in India in the Context of India’s Development”, NIPFP. Talks about reforms required in tax administration to improve direct tax collections

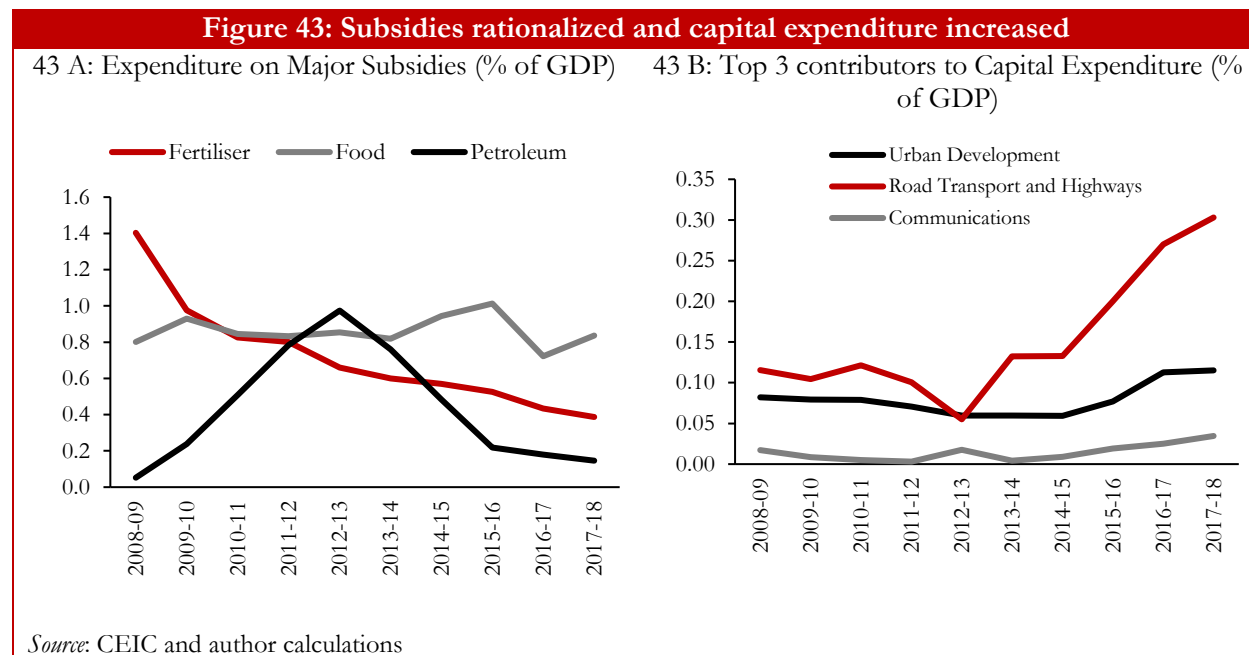
⁸⁵ Tanzi, V., and Zee, H. (2001), Tax policy for developing countries, IMF

⁸⁶ Though government received a lower dividend from the central bank which brought down non-tax revenues to 37 percent of budgeted during April-November 2017 (compared to 54 percent during the same period last year).

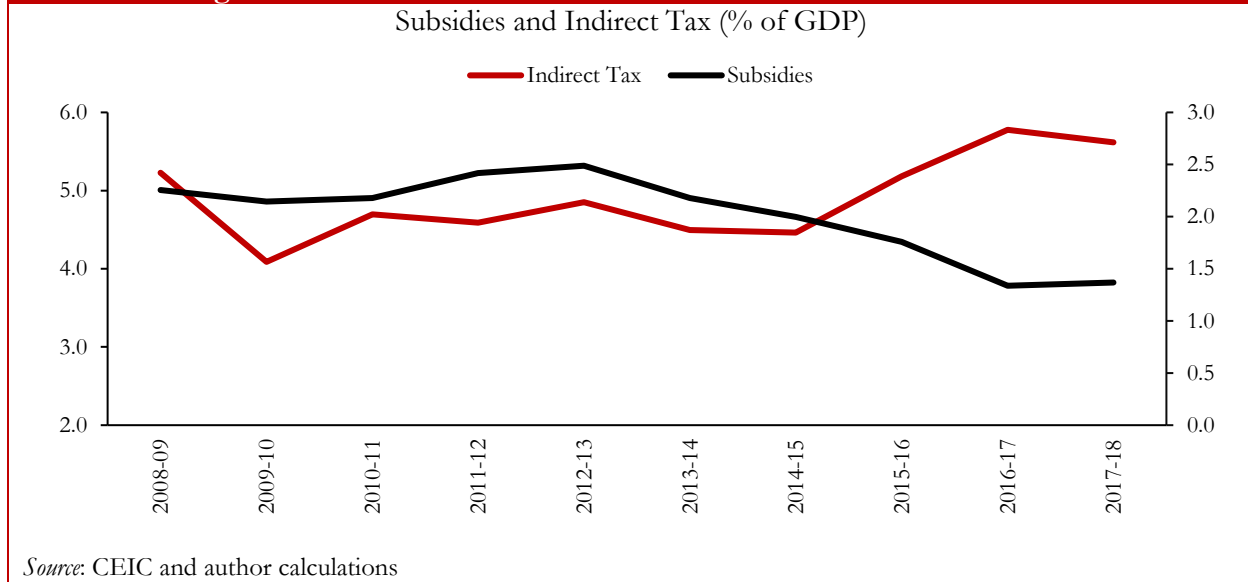
Expenditure on subsidies has been rationalized. Fuel subsidies have declined from their peak of 1 percent of GDP in 2012-13 to approximately 0.1 percent of GDP by 2016-17. Decline in fuel subsidies can be attributed to a decline in global oil prices and the government using the opportunity to deregulate retail fuel prices in India. Fertilizer subsidies have also declined, by approximately 0.5 percentage of GDP over the last decade, due to a decline in fuel prices; and a gradual reform in the subsidy regime by reducing rates for some and replacing price subsidies with direct cash transfers in some parts of the country. Food subsidies have remained stable at about 0.8 percent of GDP.⁸⁷

As compared to revenue expenditure, capital expenditure is rather small, at less than 2 percent of GDP. The government largely maintained the level of capital expenditure in recent years. Following an increase of 0.2 percent of GDP in 2016-17, capital expenditures, including grants in aid for capital formation by states, reverted to 2.8 percent in 2017-18. Capital outlay has increased in particular in infrastructure sectors, such as roads and bridges.

Figure 43: Subsidies rationalized and capital expenditure increased



⁸⁷ In 2018-19 Budget, government guaranteed a minimum support price (MSP) of at least 1.5 times the crop’s production costs. This is budgeted to increase the food subsidy budget by 0.1 percent of GDP.

Figure 44: Subsidies decreased and Indirect Tax increased in 2016-17

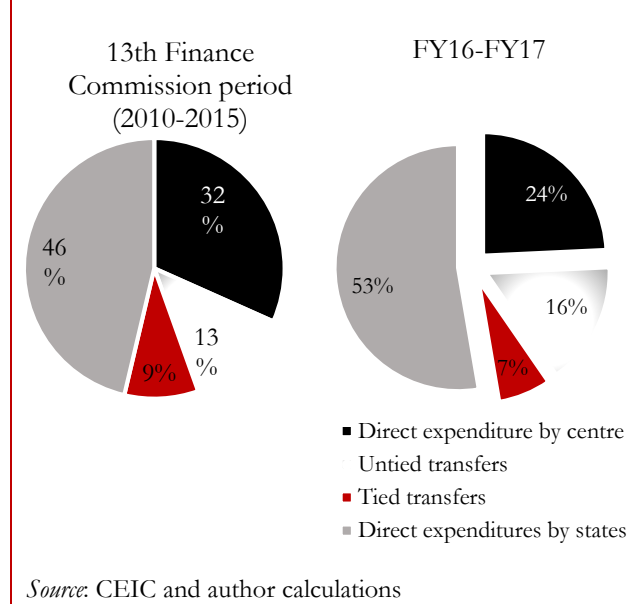
Central government’s realized fiscal deficit is estimated to be 3.5 percent of GDP during 2017-18, higher than the budgeted target of 3.2 percent. This marks a deviation from the government’s previously announced glide path of fiscal consolidation. The higher than expected deficit in 2017-18 was realized due to compensation to the states for GST revenue shortfalls: with the implementation of GST, states were compensated for lost revenues from the abolishment of state-level indirect taxes, which resulted in an increase in the central government’s current expenditures by 0.4 percent of GDP compared to the budgeted target.⁸⁸ On revenues, a shortfall in non-tax collections was offset by robust tax and disinvestment receipts: while non-tax revenues fell short of the budgeted target (by 0.3 percent of GDP) due to lower dividends from the central bank, tax revenue collections exceeded expectations (by 0.3 percent of GDP) and disinvestments were higher than budgeted estimates for the first time in recent several years (by 0.2 percent of GDP). The Finance Minister proposed to accept some of the recommendations of the recent Fiscal Reform and Budget Management Committee and adopt a debt rule to reduce the debt to GDP ratio to 40 percent over a six-year period. The government’s debt to GDP ratio is currently estimated at 50.1 percent.

State government finances

Public finances have been realigned in India in recent years with increasing revenue and expenditure responsibilities being shifted to the states. Following the recommendations of the 14th finance commission, since 2015-16 states have received a larger share of taxes collected by the national government (42 percent share in national tax revenues up from 32 percent); and a larger share in the form of unconditional transfers. Along with greater autonomy on spending, the burden of fiscal deficits has thus shifted from the Center to the states.

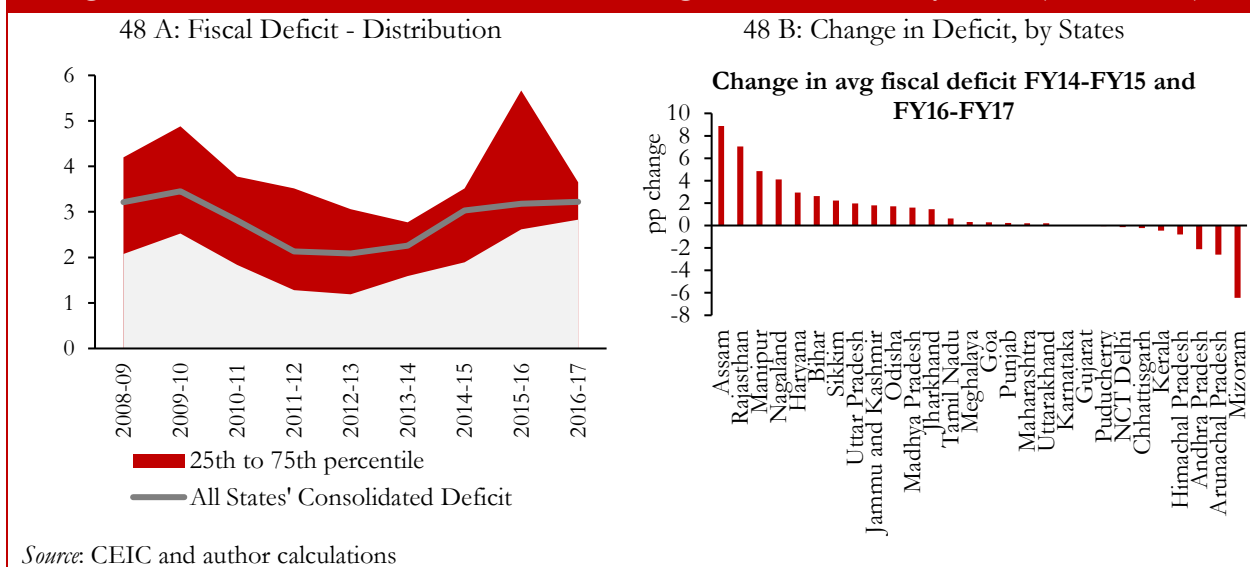
⁸⁸ Government also incurred an additional expense for recapitalization of public sector banks financed by issuing special bonds (0.5 percent of GDP). However, this expenditure was excluded from the calculation of the fiscal deficit, even though it increased the debt-GDP ratio.

Figure 45: Changes in states' share in total exp



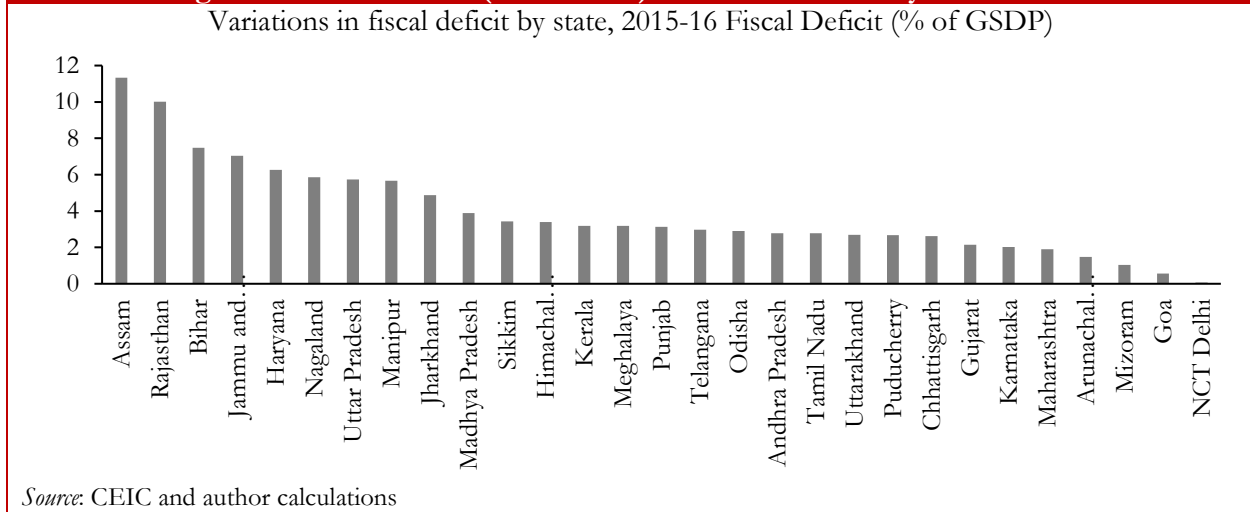
State government deficit has risen in recent years. State government deficit has increased in recent years despite the increase in their own revenue and transfers from the Center. The main reason for wider deficit is a one-time expense upon realization of contingent liabilities. States took over outstanding liabilities of loss-making electricity distribution companies during 2015-16 and 2016-2017 (under UDAY).⁸⁹ The increase in deficit is concentrated in a few states (Figure 46 B). Some of the larger states in which fiscal deficit increased include Rajasthan, Uttar Pradesh, Bihar, Tamil Nadu, and Madhya Pradesh.

Figure 46: Distribution of fiscal deficit and change in fiscal deficit by states (% of GSDP)



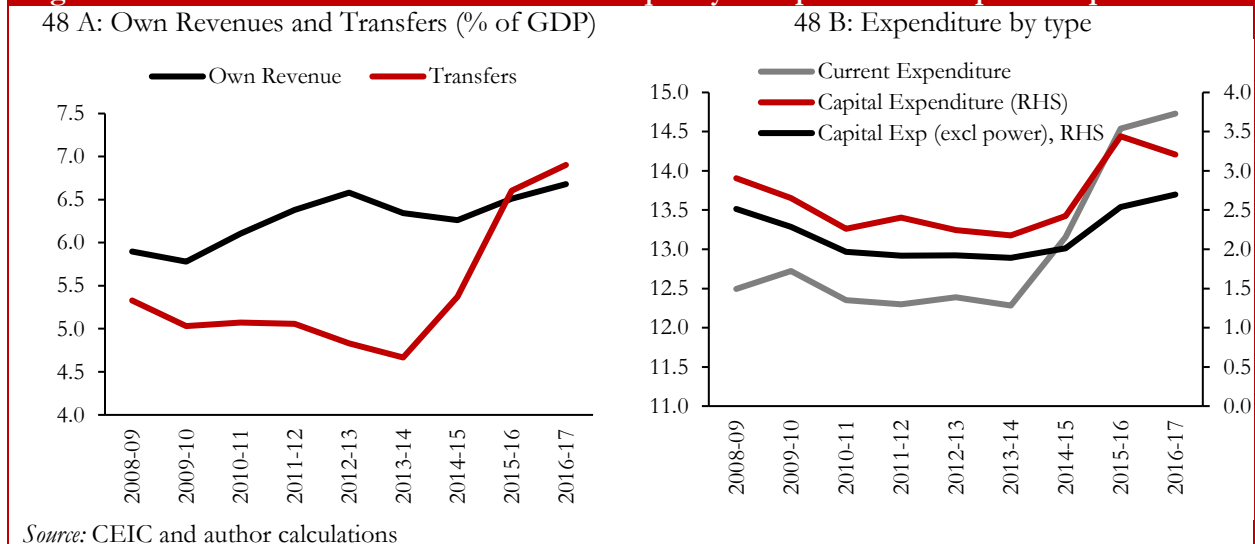
⁸⁹ Assuming all increase in loans and advances to power projects was on account of UDAY, then this event increased expenditures by 0.4 percent of GDP

Figure 47: Fiscal deficit (% of GSDP) levels in 2015-16 vary across states



Excluding expenditures on power that could be associated with UDAY, capital expenditures have increased since 2014-15. In particular, expenditures on roads and highways have increased. Current expenditures have also increased, including on education and health.⁹⁰ Part of the increase in current expenditures could reflect higher state contribution to existing social sector schemes since 2014-15.

Figure 48: Transfers from center increased and quality of expenditures improved up to 2014-15



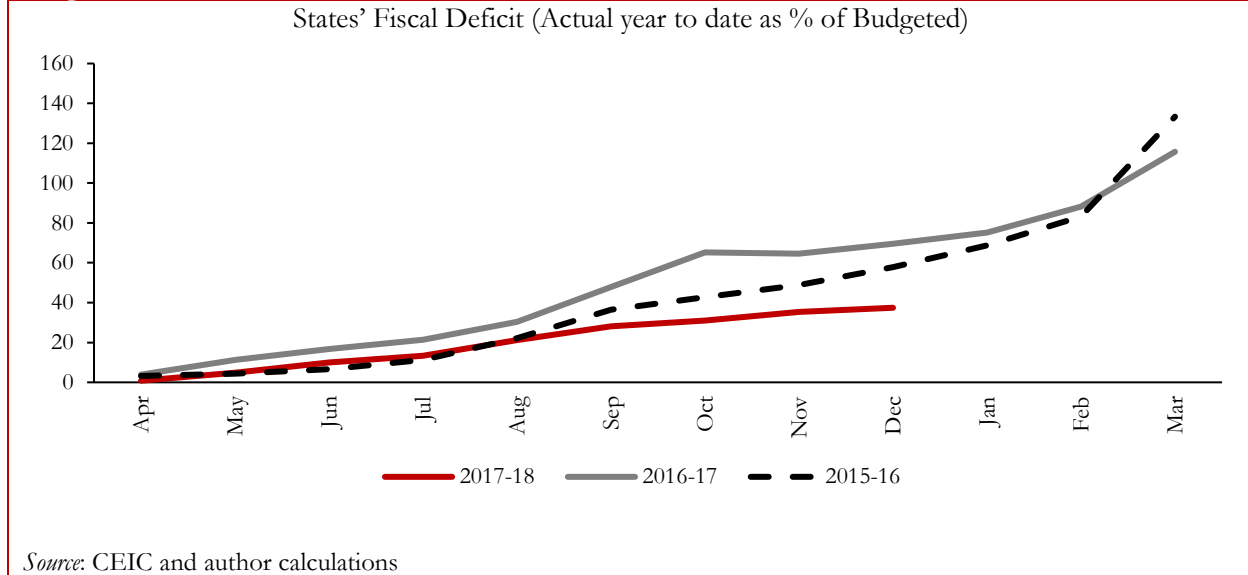
An analysis of the fiscal performance of 19 states during the first seven months of 2017-18, shows that fiscal outcomes are on track.⁹¹ As Figure 49 shows, these states only incurred 37 percent of this year's budgeted deficit between April and December 2017, lower than the deficit incurred during previous

⁹⁰ WB working study finds that health spending increased after the introduction of 14th finance commission https://macrofinance.nipfp.org.in/PDF/04-HealthFFC_sl_Sander_Impact_of_FFC_on_health.pdf

⁹¹ The choice of states is limited by availability of monthly data. These 25 states accounted for approximately 99 percent of the total states deficit during 2016-17.

years, lower than the deficit incurred during previous years. However, the pace of deficit varies across states. While some states have reached, or exceeded their budgeted deficit levels for the year, others are much below the budgeted level.⁹²

Figure 49: Fiscal deficit of 25 states increased at a lower rate in FY 18 vis-à-vis FYs 16 and 17

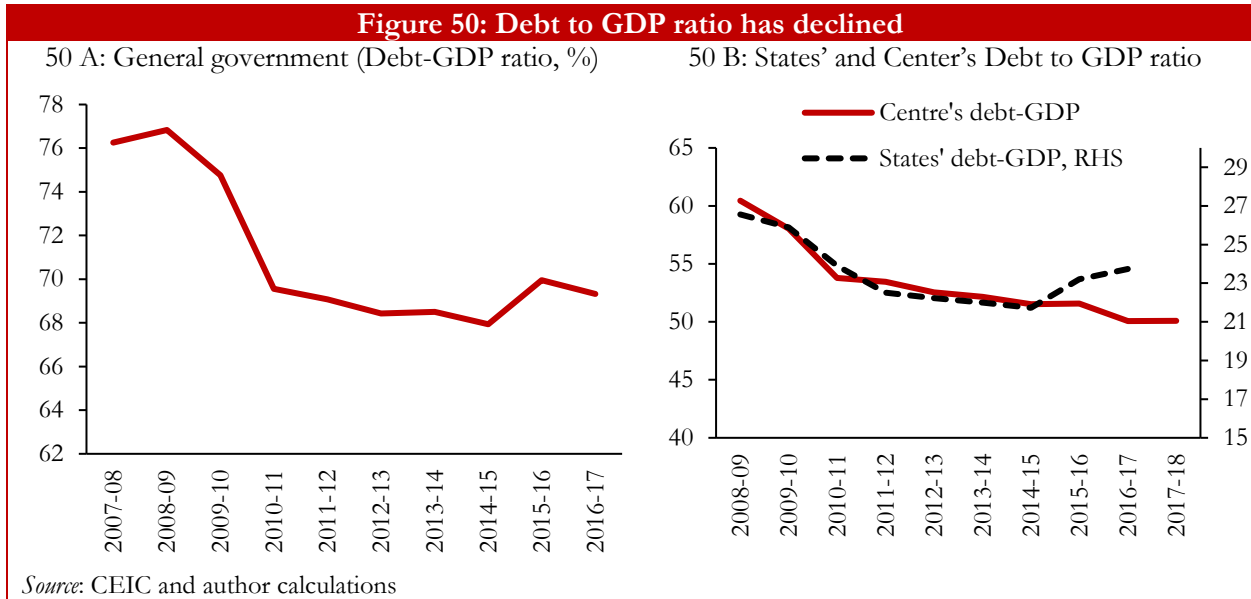


Debt

General government debt has been on a declining trajectory for nearly a decade, though it rose temporarily in 2015-16. High real growth and some decline in primary deficit were the main drivers of a decline in debt to GDP ratio over the last decade. Center's debt level has declined over the last decade and stabilized in 2017-18.⁹³ State debt levels have declined gradually too over the last decade, except in the last 2 years. State debt levels have risen since 2015-16, as several state governments took over debt previously held by loss-making electricity distribution companies. State governments realized up to 75 percent of outstanding contingent liabilities owed to loss-making electricity distribution companies, which increased their debt by 2 percent of GDP to 23.7 percent in 2016-17. Because of a rise in the debt burden, states may face higher interest expenditure in coming years.

⁹² Several states have announced farm loan waivers programs in the last few months. The magnitude and coverage of loan waivers varies across states, but the total fiscal cost of the announced bailouts is expected to be about 0.8 percent of national GDP, to be spread over the next 2-3 years. Mishra (2017) suggests that the fiscal impact on states will be over several years, partly due to delays in execution; and that the fiscal impact in the current fiscal year will be about 0.20 percent of GDP.

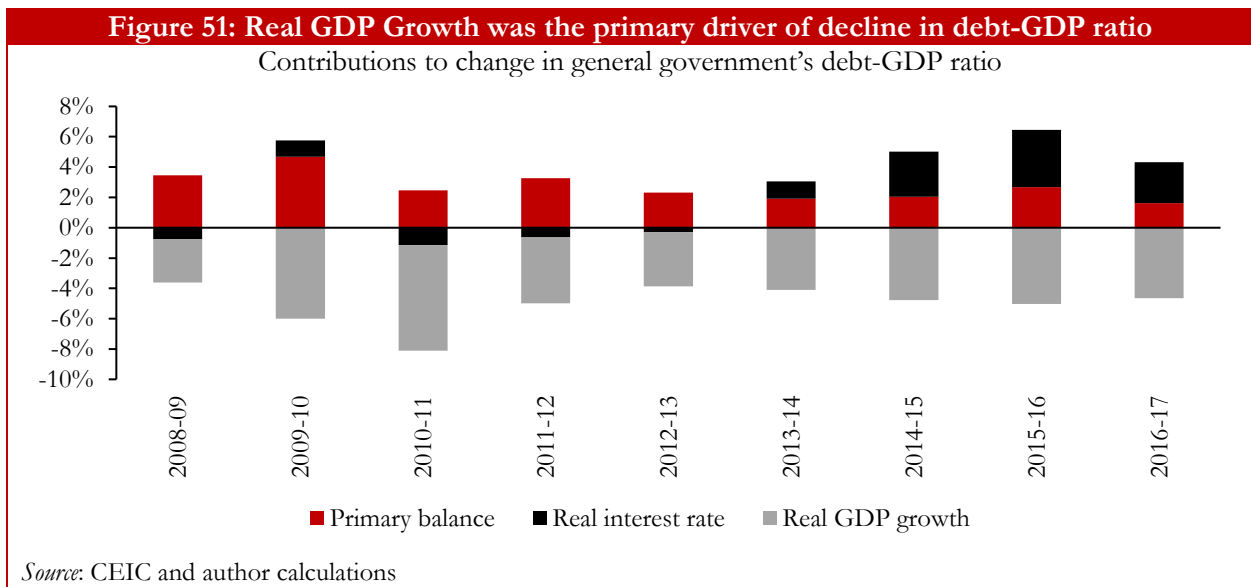
⁹³ Estimates of the center's outstanding liabilities are from the RBI up to 2016-17 and from the Union Budget 2018-19 for the next year. In the budget documents, it is mentioned that the definition of outstanding liabilities has been revised for 2017-18 and is not strictly comparable to the previous years. Details on these changes are awaited.

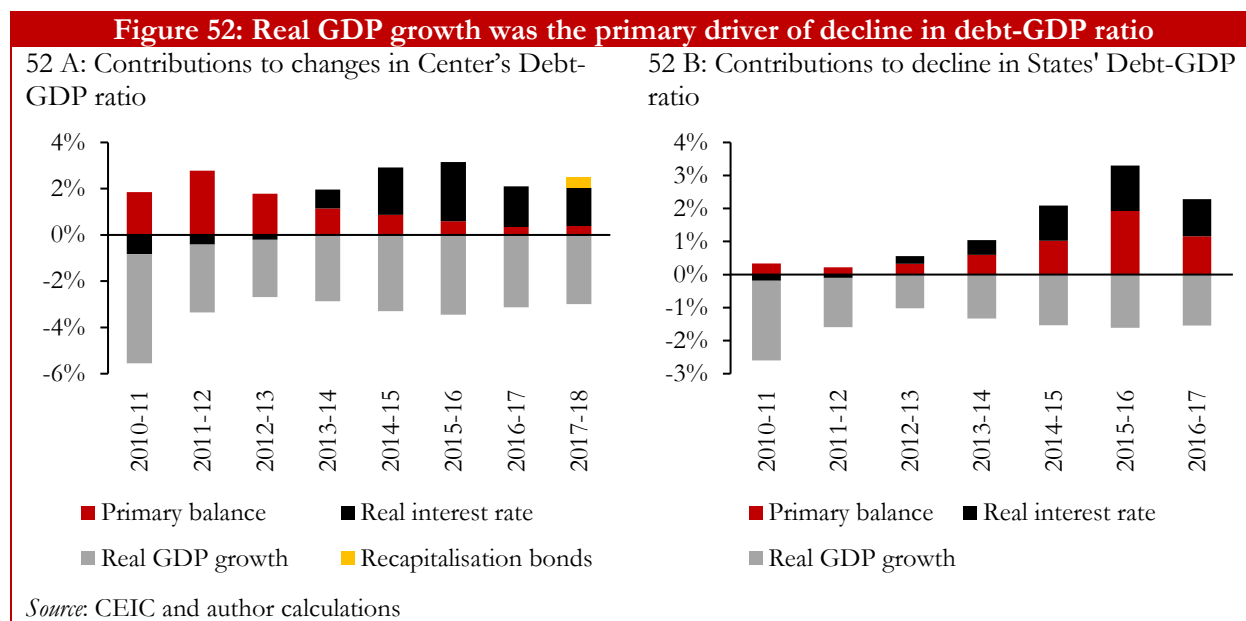


Changes in debt to GDP have been decomposed using the following equation:

$$\Delta d_t = \frac{r_t - g_t}{1 + g_t} \cdot d_{t-1} - b_t$$

where d is the debt to GDP ratio, r is the real interest rate, g is growth in real GDP, and b is the primary balance to GDP ratio.





Global economic developments and their implications for India⁹⁴

India has been integrating with the rest of the world. This is borne out in its increasing trade to GDP ratio, increased financial integration, continued reliance on imported energy, net export of labor and skills to the rest of the world, and in the size of its diaspora and the remittances they send. India's GDP and export growth correlate strongly with global GDP and trade growth respectively. India being a large emerging market, and in the same asset class as the other large emerging markets, its capital inflows, exchange rate, and asset prices co-move strongly with other emerging markets; and are impacted by economic developments and monetary policy of advanced economies and by global liquidity conditions.⁹⁵

This global integration presents both opportunities and challenges for India. Since the global economy and trade are poised to grow at healthy rates in the current year and in future, India can leverage the increasing global prosperity to grow faster. Given the current outlook on oil prices, further hikes are not considered a major risk for India's current account deficit and inflation; and a further normalization of monetary policy by the US and other advanced economies, may have implications for its financial markets.

Global growth is poised to accelerate. Global growth has recovered in 2017, against the backdrop of benign financing conditions and improving confidence. Growth is estimated to have reached 3.0 percent in 2017 from 2.4 percent last year (Figure 53 A); and is forecast to continue to grow at an average rate of 3.0 percent between 2018-20. Growth is estimated to have picked up in more than half of the world's

⁹⁴ This section draws on staff's own research as well as on the World Bank's Global Economic Prospect (January 2018 and previous issues).

⁹⁵ Eichengreen and Gupta (2014).

economies, resulting in a broad-based global upturn and providing supportive external conditions for India.

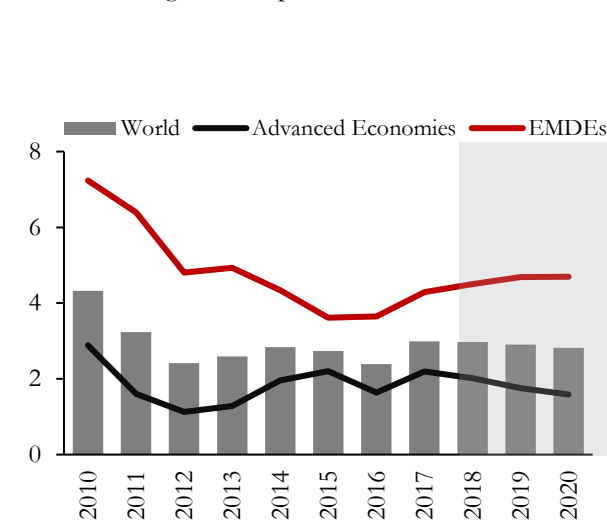
Advanced economies gained momentum in 2017, with growth estimated to have rebounded to 2.3 percent in 2017. Among large advanced economies, US growth accelerated to an estimated 2.3 percent in 2017, mainly reflecting strong investment and robust external demand. In Euro Area, economic activity gained momentum with strengthening global demand and continuing expansionary stance of the European Central Bank. Growth is estimated to have reached 2.4 percent in 2017. Growth picked up to 1.7 percent in Japan with a gradual recovery in private consumption and investment, as well as the support from a fiscal stimulus package. Bank of Japan kept policy rates unchanged and continued the bond purchases to keep long-term yields around zero.

Growth among emerging market and developing economies (EMDEs) accelerated in 2017. The recovery is broad based in commodity exporters as well as in commodity importing countries. Confidence and investment improved in commodity exporters amid recovery in commodity prices, reduction in financing costs and rise in capital inflows. Activity in commodity importers remained solid with strengthening investment, benign global financing conditions, and low inflation. In China, growth edged up to an estimated 6.8 percent in 2017. Economic activity benefitted from fiscal support as well as strong exports amid rising global demand. Its stock of corporate debt remained elevated, at about 260 percent of GDP, despite monetary and regulatory tightening in 2017; current account surplus continued to shrink; and foreign exchange reserves picked up with easing of net capital outflows. EMDE growth is projected to strengthen to 4.5 percent in 2018 and to an average of 4.7 percent in 2019-20, reflecting improved global manufacturing activity, robust global trade, broadly favorable financing conditions, and firming commodity prices.

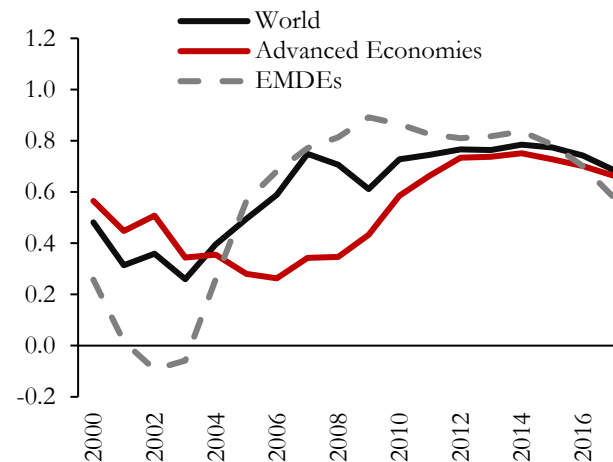
The steady integration of the Indian economy with the global economy is reflected in the high and increasing correlation between Indian GDP growth and the world GDP growth (Figure 53 B). In view of this high correlation, the positive outlook for the global economy bodes well for India's own growth prospects in coming years.

Figure 53: Global growth outlook has improved

53 A. Global growth is poised to accelerate



53 B. India's growth rate correlates strongly with advanced economies and emerging economies (10 year rolling correlations)



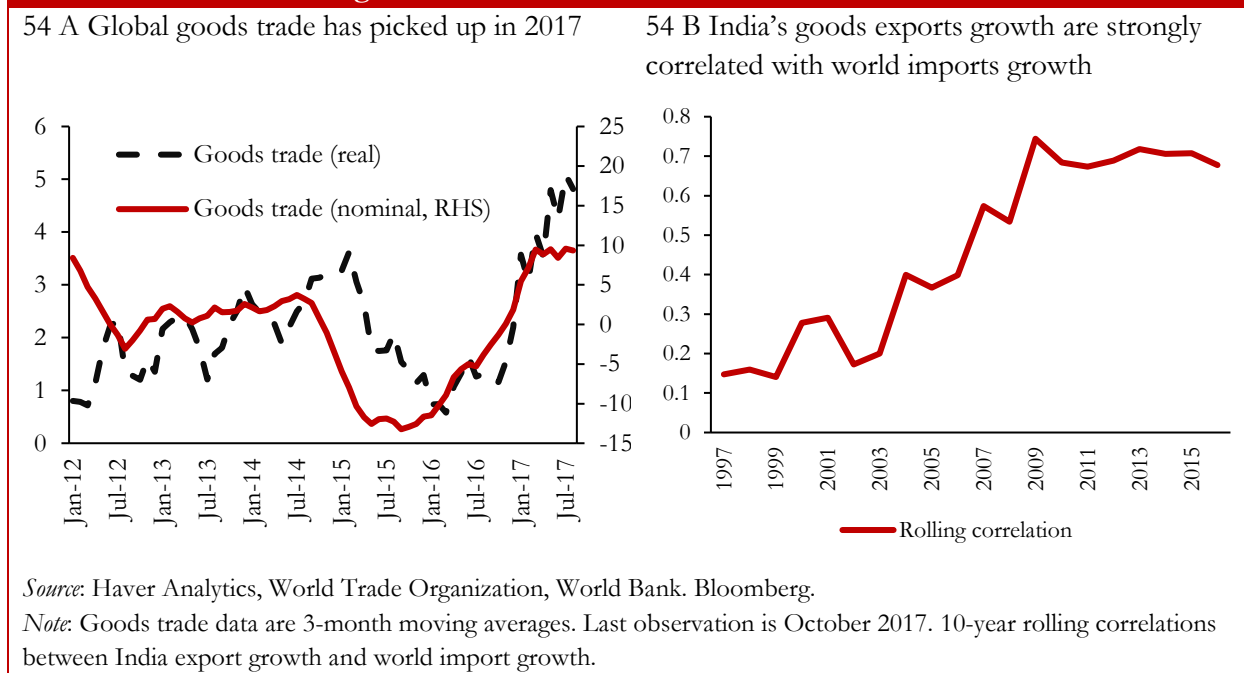
Source: World Bank, Haver Analytics.

Note: 53A. Shaded areas indicate forecasts. The world, EMDE, and advanced economies growth rates are calculated as weighted averages of the corresponding set of countries in each group. The weights are calculated as GDP shares which are measured in 2010 US dollars. In 53B we have 10 year rolling correlations in growth rates.

Global trade is projected to pick up too. After witnessing a protracted slowdown following the global financial crisis, global trade regained substantial momentum in 2017 amid an upturn in global manufacturing (Figure 54 A). Services trade has been recovering in 2017, however at a slower pace than goods trade, as the former is generally less affected by short-term inventory and production cycles (OECD 2017). Global trade growth will reach an estimated 4.2 percent in 2017 reflecting a broad-based global recovery in import demand.⁹⁶ This posits an opportunity for India as India's export growth and world import growth correlate strongly and the correlation between the two has increased over the years (Figure 54 B).

⁹⁶ While the stock of protectionist measures has been increasing globally, the number of newly introduced policies are declining (World Bank 2018-GEP). Almost three quarters of G20 exports are affected by some type of trade distortion in destination markets, and exporters of iron and steel, electrical energy and metal products are the most affected ones by these restrictions (Evenett and Fritz 2017).

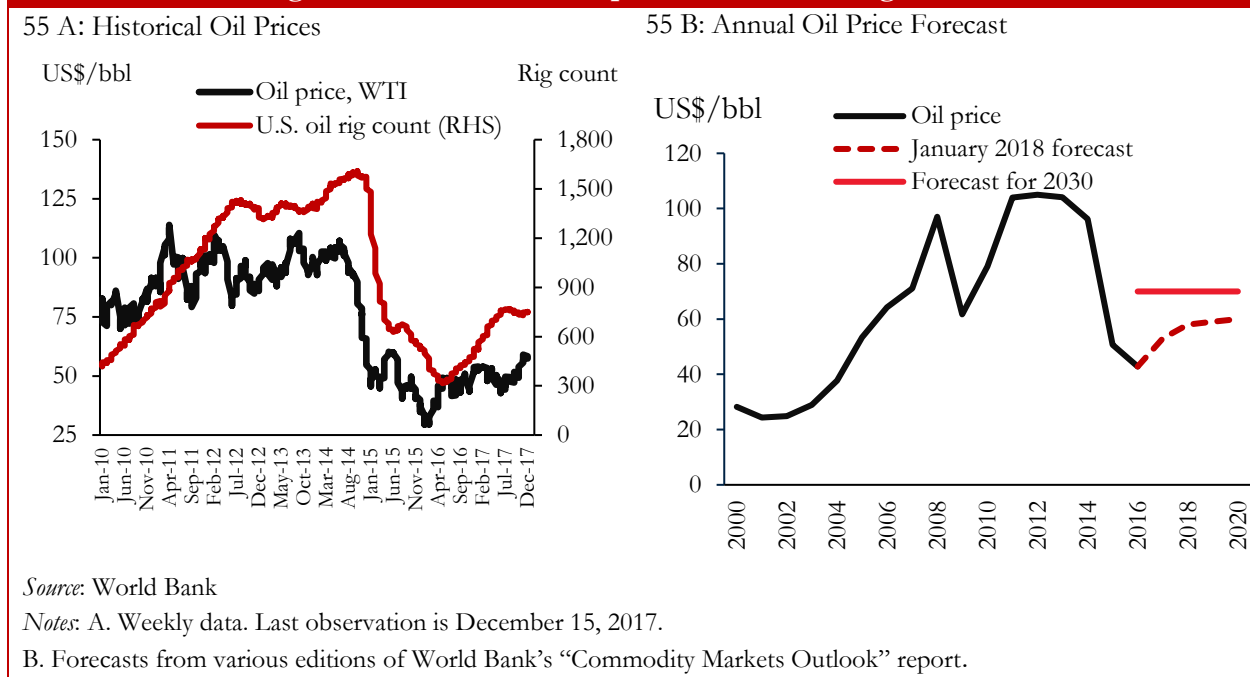
Figure 54: Global trade momentum has rebounded



Oil prices have increased in recent months, but are projected to remain range bound. Oil prices declined sharply between mid-2014 and early-2016 largely due to a combination of supply factors-- the rise in U.S. shale oil production, improved geopolitical environment around some major producers, and a shift in OPEC policies; as well as weakening global demand (World Bank 2018). Prices bottomed out in early 2016 and rose an unexpected 24 percent during 2017, reaching \$60 per bbl towards the end of 2017, and further to levels above \$60 in January 2018. The increase reflected strengthening demand, falling stocks, expectations of an extension in production cuts until the end of 2019, and market reactions to domestic developments in Saudi Arabia (World Bank 2017).

World Bank has projected oil prices to remain range bound and average \$58 in 2018. They are projected to reach \$70/bbl only in the long run (2030). This forecast is underpinned by expectations of an increase in U.S. production due to continued efficiency gains in the shale oil industry, moderate non-OECD demand growth, and limited OECD demand growth. While downside risks to this outlook are mainly from the resilience of the US shale industry and from weak compliance to the agreed production cuts, upside risks include the possibility of supply disruptions among politically stressed oil producers and stronger than expected demand growth.

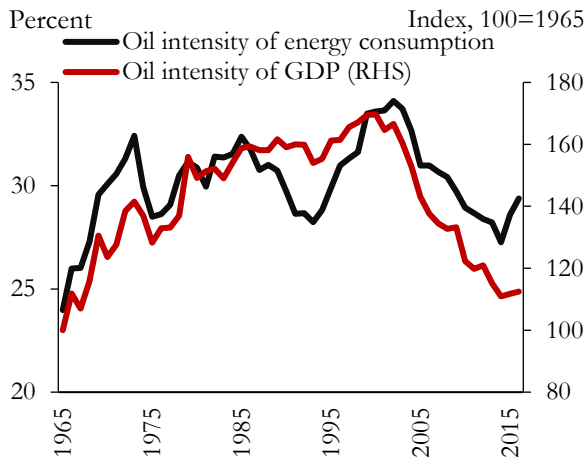
Figure 55: Oil Prices are expected to remain range bound



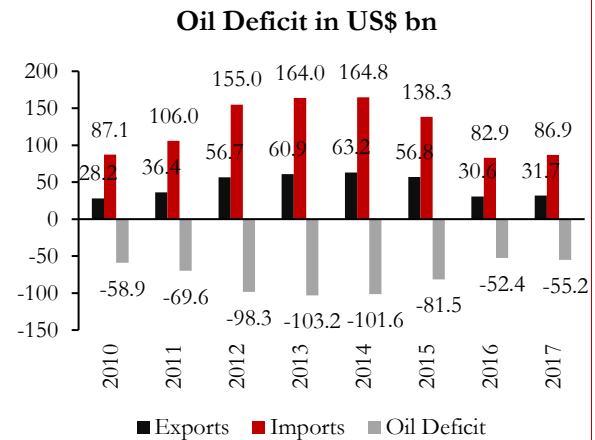
India's reliance on imported oil exposes its current account to variations in global oil prices. This is despite the fact that there has been a steady decline in the reliance of the economy on oil. Figure 56 suggests that in the past, a \$10 increase in price of global oil prices has led to an \$8 bn increase in trade deficit on oil. Increase in oil prices may also have implications for central government finance. The fuel subsidy bill of the government has declined over the years on account of subsidy rationalization and better targeting. After deregulating petrol prices in 2010 and diesel prices in 2014, the government has been phasing out kerosene and LPG subsidy. This should lower the impact of oil prices increase on fiscal deficit.

Figure 56: Impact of oil prices on the Indian economy

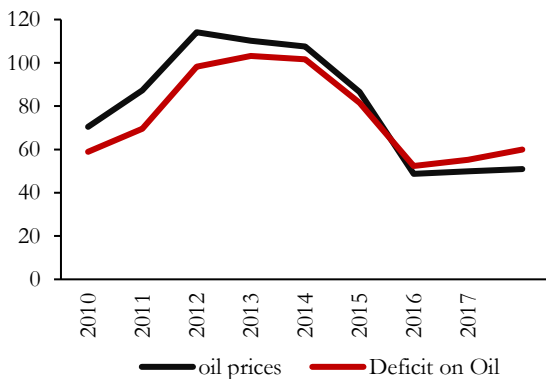
56 A: Oil Consumption Intensity in India has declined over the years



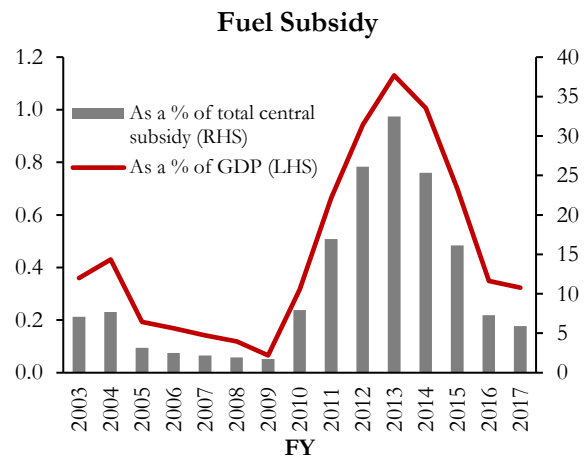
56 B: ...as has the oil trade deficit due to a decline in oil prices



56 C: There is a strong correlation between oil prices and oil trade deficit



56 D: Expenditure on petroleum subsidy has declined over the years

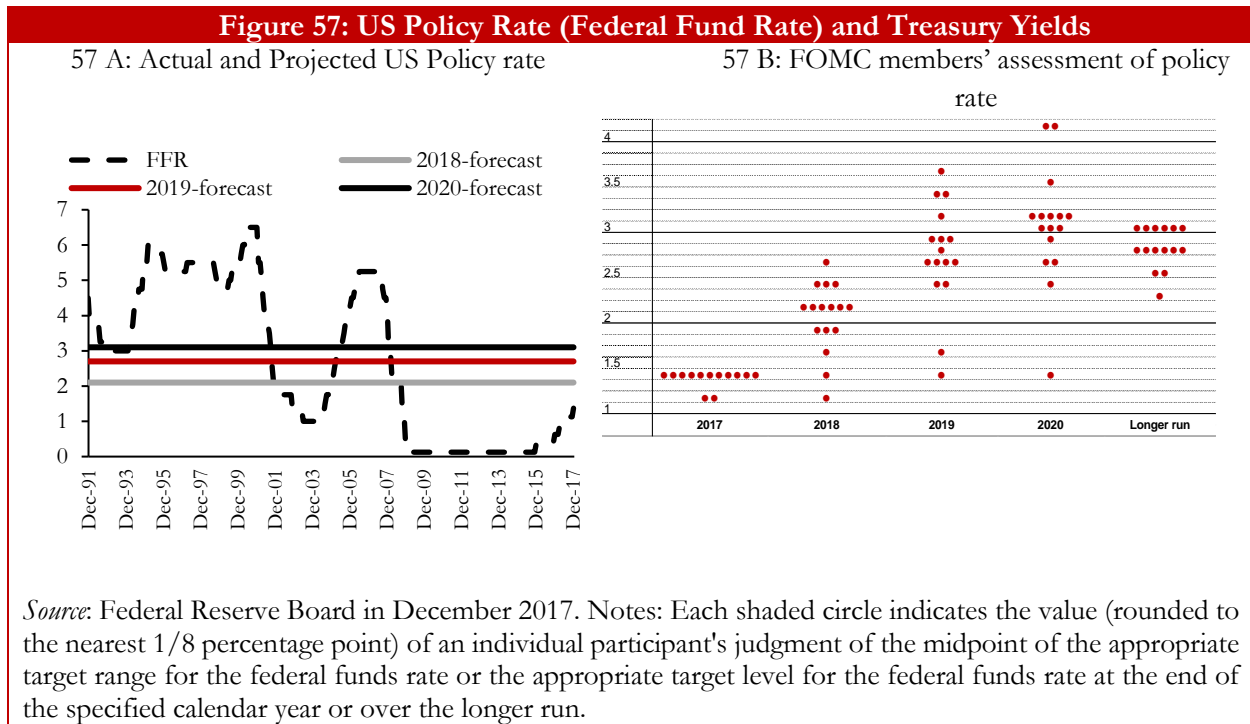


Source: World Bank, Haver Analytics, Bloomberg, BP Statistical Review of World Energy.

Note: Oil intensity of real GDP measures as oil consumption relative to real GDP, index at 100 in 1965. Oil intensity of energy consumption measured as oil consumption in percent of total primary energy consumption. Oil intensity index is calculated by dividing oil consumption (measured in million tonnes) by real GDP (measured in constant US dollars). Last observation is 2016.

Financial conditions outlook. Global financing conditions have been benign in the last few years, but are likely to tighten going forward amid prospects of further normalization of monetary policy in major advanced economies. The U.S. Federal Reserve continued to raise its policy rate, with one rate hike in 2016, and three additional rate hikes in 2017. The ECB continued to cut the size of its asset purchase program with an announcement of further reduction starting in January 2018.

Figure 57: US Policy Rate (Federal Fund Rate) and Treasury Yields



The US federal fund rate is expected to reach 2.1 percent in 2018, 2.7 in 2019, 3.1 in 2020. The impact of the increase in the US policy rate on emerging markets or India, would depend on a multitude of factors. The past episodes of tightening cycles of the US Federal Reserve, especially if unexpected, were followed by currency depreciation, increase in bond yields, and decline in equity prices in EMDEs. The spillover effects of other major central banks such as ECB, BOJ, and BOE are found to be usually much smaller than that of the U.S. Federal Reserve (Gupta et al. 2017). To the extent that the advanced economies central bank, and particularly the US Federal Reserve have been deftly communicating and preparing the markets ahead of its policy announcements, implies that the short-term reaction from the markets may not be very disruptive. The impact would also depend on the macroeconomic situation in the respective emerging country. More appreciable than the short run financial volatility would be the impact of the planned interest rate increases by the Federal Reserve on emerging markets debt financing costs, since bond yields in emerging markets track US bond yields closely.

In summary, the Indian economy is exposed to global developments by virtue of being a large emerging market. Improving global growth and trade outlook presents an opportunity that India should brace itself to leverage. Increasing oil prices could impact the current account deficit and inflation but the price is projected to stay range bound by the World Bank. Changing financial conditions currently presents the biggest external challenge. Financial integration impacts emerging markets on both sides of the cycle. When financial conditions are benign, easy flows of short term capital results in exchange rate appreciation and asset price inflation that the policy makers find difficult to cope with. When financial conditions

tighten, it causes financial volatility and disruption.⁹⁷ While international financial integration is considered a mixed blessing, these issues warrant a renewed debate in India, and possibly in other emerging market countries, on the optimal level of integration.

Outlook

Economic growth is projected to resume gradual acceleration and converge to potential growth rate in coming years. GDP growth was disrupted in the last two quarters of 2016-17 and the first quarter of 2017-18 due to demonetization and adjustment to the implementation of GST. The activity has begun to stabilize and the economy is poised to resume gradual acceleration toward the trend growth rate in the years ahead. GDP growth is projected to be 6.7 percent in 2017-18 and accelerate to 7.3 percent and 7.5 percent respectively in 2018-19 and 2019-20. As highlighted in Part 1 of the report, acceleration to rates higher than this on a sustained basis will depend on recovery in two important and lagging engines of growth – private investments and exports; on recovery in credit growth; and will likely require continued support from the global economy as well as decisive progress on the unfinished reform agenda.

Economy will converge to potential in the medium term. Recent disruptions to growth resulted in a large negative deviation from potential GDP. While data constraints make it difficult to calculate India's potential GDP with precision, we estimate potential GDP growth to converge to about 7.2 percent in the medium-term assuming a meaningful and sustainable pickup in investments as in the baseline scenario. TFP remains the largest contributor to potential growth, but rising investment levels are expected to drive the modest acceleration in the medium term. Achieving a higher potential would require productivity enhancements, a larger pickup in investment, and an increase in women's participation in the labor force as India's labor force is short of its potential given the large gender gap in economic participation.

The baseline projects private consumption to remain a primary driver of growth; investment to pick up moderately; and exports growth to revive. Under the baseline scenario, private consumption is expected to average at about 7.9 percent growth during 2017-18 to 2019-20. According to the consumer confidence survey conducted by the Reserve Bank of India, the future expectations for increased spending rose by 12 percent between November 2016 and November 2017, reflecting greater optimism of households and willingness to spend over the coming year. The growth projections are based on the assumption that investment growth will accelerate gradually to 6.7 percent in 2019-20. Pick-up in private investments going forward will depend on relieving the structural constraints such as stresses on the financial sector and, continued implementation of reforms to improve the investment climate.

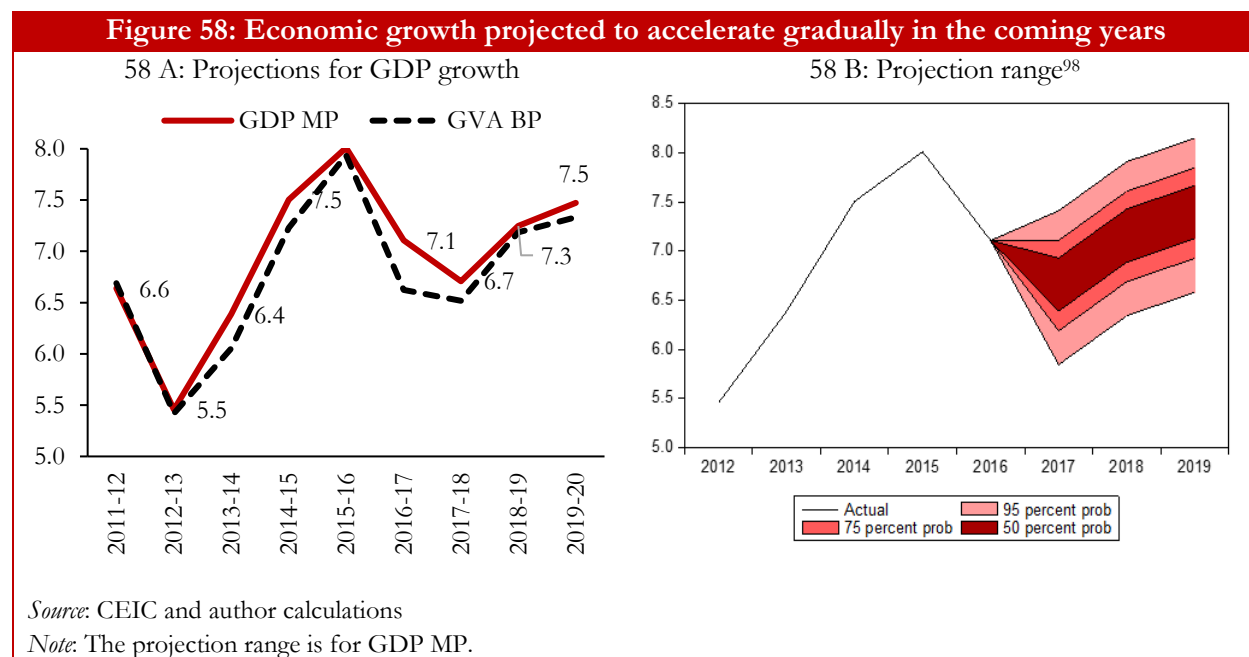
Services will likely remain the primary driver of production growth, with increasing contributions from industry. Barring some continuing temporary disruptions surrounding GST implementation and some negative impact on demand for services with higher tax rates, services activity remains robust and will be the main driver of growth. Industrial activity is poised to grow faster as manufacturing outturn

⁹⁷ Kaminsky, Reinhart and Vegh (2004) talk about the procyclicality of capital flows. Gupta and Eichengreen (2014) show that sudden stops are no longer driven by country specific factors, but are caused by global factors; they now correlate globally rather than regionally; and that the policy makers find it difficult to avoid them.

accelerates with effective implementation of GST, and increasing demand for consumer goods early on and for capital goods in the future. Further, some recovery in commodity prices may support recovery in mining activity which accounts for approximately 3 percent of GDP. Agricultural output during 2017-18 is projected to remain strong, and likely to revert to its long-term average growth of 2.8 percent. Inflation is projected to remain range-bound.

Current account deficit is projected to widen moderately. Export growth is projected to accelerate to 6.8 percent in line with global trade by 2019-20, but remain well below the levels registered during the boom years during 2004-2008. Exports slowed in recent years due to subdued global trade and stagnation in India’s share in global export market. As global trade volumes continue to recover, exports from India could gain. The initial increase in imports is expected on account of higher global commodity prices; higher private consumption (consumer goods account for nearly 1/2 of all merchandise imports); and a modest recovery in exports which will raise demand for intermediate goods. The current account deficit is projected to widen gradually to 1.9 percent of GDP by 2019-20.

Fiscal outlook is likely to be sustainable. The general government fiscal deficit is projected to decline in the medium term – coupled with faster GDP growth – resulting in sustainable debt levels. General government’s fiscal deficit is expected to decline gradually to 5.6 percent of GDP and debt to GDP to 65.4 percent by 2019-20. Most of the fiscal prudence is projected from the central government which has demonstrated remarkable fiscal constraint in recent years. In the medium term, states deficits are projected to remain broadly stable with only modest consolidation.



Source: CEIC and author calculations
 Note: The projection range is for GDP MP.

⁹⁸ The fan chart is produced using the methodology adopted from the Bank of England. This uses the inherent properties of the series – variance, skewness and mean to estimate the probability distribution for the projection

There are several assumptions that the projections are sensitive to. On the domestic front, there may be shocks related to weather, or policy implementation requiring a revision in the underlying assumptions. For example, the effect of a poor monsoon (defined as rainfall below normal) season can lead to increases in food price inflation and slowdown in agricultural output growth. This in turn can affect rural consumption demand and overall growth. On the external front, volatility in capital flows stemming from tighter monetary policy across advanced economies, an increase in oil prices, or changes in global growth or trade outlook may require revisions in the projections.

Table 7: Key Indicators Table

		2014-15	2015-16	2016-17	H1 2017-18	BASELINE			
						H2 2017-18	2017-18	2018-19	2019-20
GDP, market prices	y/y percent	7.4	8.2	7.1	6.1	7.3	6.7	7.3	7.5
Private Consumption	y/y percent	6.4	7.4	7.3	6.6	7.2	8.0	7.9	7.7
Government Consumption	y/y percent	7.6	6.8	12.2	9.5	9.2	11.0	10.2	9.9
Gross Fixed Investment	y/y percent	2.6	5.2	10.1	4.2	7.1	4.0	5.5	6.7
Exports, GNFS	y/y percent	1.8	-5.6	5.0	6.2	0.1	4.0	5.7	6.8
Imports, GNFS	y/y percent	0.9	-5.9	4.0	10.6	-0.8	6.0	5.4	6.5
GDP, factor cost	y/y percent	7.2	8.1	7.1	5.9	7.3	6.5	7.2	7.3
Agriculture	y/y percent	-0.2	0.6	6.3	2.7	4.2	3.2	2.7	2.7
Industry	y/y percent	7.0	9.8	6.8	2.9	8.2	4.9	6.8	7.0
Services	y/y percent	9.8	9.6	7.5	8.3	7.9	8.4	8.6	8.7
Current account balance	percent of GDP	-1.3	-1.0	-0.7	..	..	-1.2	-1.5	-1.9
Total Revenues	percent of GDP	19.2	20.3	21.0	..	..	21.4	21.4	21.4
Total Expenditures	percent of GDP	25.9	27.8	27.4	..	..	27.2	27.1	27.0
Fiscal Balance	percent of GDP	-6.7	-7.5	-6.4	..	..	-6.2	-5.8	-5.6
General government debt	percent of GDP	67.8	69.5	69.0	..	..	68.8	67.3	65.4

Box 4: A Brief Description of the Model

The projections presented above are based on a macrostructural model-assisted judgment forecasting system.⁹⁹ India's model consists of 190 equations which includes a mix of estimated behavior equations and key identities.¹⁰⁰ The core of the country model is the supply side, based on a simple Cobb-Douglas production function. Output is driven by the combination of labor and capital in the economy. The production function establishes a steady-state growth path for the economy based on capital stock and labor supply, and applying an economy-wide estimate of total factor productivity from the historical relationship between capital, labor and output. Although various shocks may temporarily move the economy away from this equilibrium potential output level, the economy will over the long run return to the underlying steady state level (growth rate) of potential output. Only changes to long run employment, capital stock or total factor productivity will have a permanent impact on the long run potential output level.

Behavioral variables are modeled through application of a new Keynesian theoretical approach and equations are for the most part estimated using single equation co-integration techniques, that ensure theoretically derived long-term properties in the model, but allow for a more empirically based modeling of short-term behavior. Parameters are estimated using historical data from 1990 to 2016. The demand side is built upon the supply-side framework (i.e. any shocks that move the economy away from potential, will be reversed in the long-run through demand side interactions. Any long-term changes in output will only happen if there any sustainable changes to the factors of production).

Consistent with the permanent income hypothesis, household consumption responds to changes in income, which is driven by the level of output. Price effects are incorporated into the model, with changes in nominal prices influencing each relevant expenditure component. Changes in gross fixed investment are modeled as a simple function of changes in output with a constant trend, a relative price term and an error-correction term. Exports depend on three factors: trend growth coefficient to reflect increasing/decreasing market share; changes in export market demand; and changes in the real effective exchange rate. Changes in import volumes are a function of changes in current period output and the real effective exchange rate. For the most part the sectoral breakdown of the economy is derivative of the outcomes from the demand side, driven by empirically determined sectoral elasticities to different components on the demand side (i.e. consumer and government demand, investment and exports).¹⁰¹

⁹⁹ By their very nature, projections may deviate from the actual values as new information becomes available or as various shocks play themselves out. Yet an analysis of the projection error shows that the average projection error of the World Bank projections is small, at 0.20 percentage points. It is comparable to the projection error of the IMF and below that of the RBI. The projection error is smaller at smaller projection horizon and increases as the horizon increases.

¹⁰⁰ The model is similar in structure and design to global models used by other international and national organizations, such as the OECD's Interlink model, IMF's MULTIMOD model, the UN's Project Link model.

¹⁰¹ Developing a more structural model for production accounts would require higher frequency and sectoral data on factors of production such as land, labor, and capital.

The model also includes basic fiscal accounts, reflecting linkages between macroeconomic and fiscal variables. Interest rate on government debt and the overall and primary balance are explicitly modeled. Because government consumption expenditure and investment is included in national income accounts, simple interactions between fiscal policy and macroeconomic developments can be captured. Linkages to the demand side flow from government expenditure on goods and services, the influence of indirect taxes on the price level, and the influence of direct taxes on real disposable income.

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Part III
Selected Issue Notes

III Selected Issues

A. Doing Business Index in India

On October 31, 2017, the World Bank launched the Doing Business 2018 report, which takes stock of business regulations and reforms implemented in the period June 2, 2016 to June 1, 2017, in 190 countries. The report presents various indicators that measure, among others, the ease of starting a business, registering a property, obtaining construction permits, getting credit, paying taxes, enforcing contracts and resolving insolvency. Data on these indicators is obtained by asking regulatory experts (such as accountants and lawyers) to assess internationally comparable business cases across countries. Doing Business results are tracked by policy makers, and typically interpreted as a ready measure of a country's business environment.

India's rank improved from 130 in Doing Business 2017 to 100 in Doing Business 2018. This remarkable improvement, among the highest year-on-year improvement ever experienced by any country, comes on the back of the government's reform agenda aimed at increasing manufacturing investment through reforms that reduce businesses' regulatory compliance burden. This note takes a closer look at the sources of India's improvement and situates the Doing Business results in the context of wider regulatory improvements to the business environment.

Background on Doing Business

The World Bank has been publishing the Doing Business report since 2004. As part of the Doing Business study, project teams compile two measures for 10 indicators thought to influence the ease of doing business in a country. The first indicator is the Distance to Frontier Score, measured on a scale from 0 to 100, which quantifies the distance of the country's business environment to the best environment observed since 2005 ('the global best practice', which is given a score of 100). Second, using the distance to frontier scores, it calculates a ranking of scores among all participating countries. While an improvement in the Distance to Frontier score suggests that the measured business environment has moved closer to global best practices, and is thus unambiguously positive; a move in the rankings is a relative measure that captures the comparative ease of doing business in comparison to all other countries.

India's Improvement in Doing Business 2018

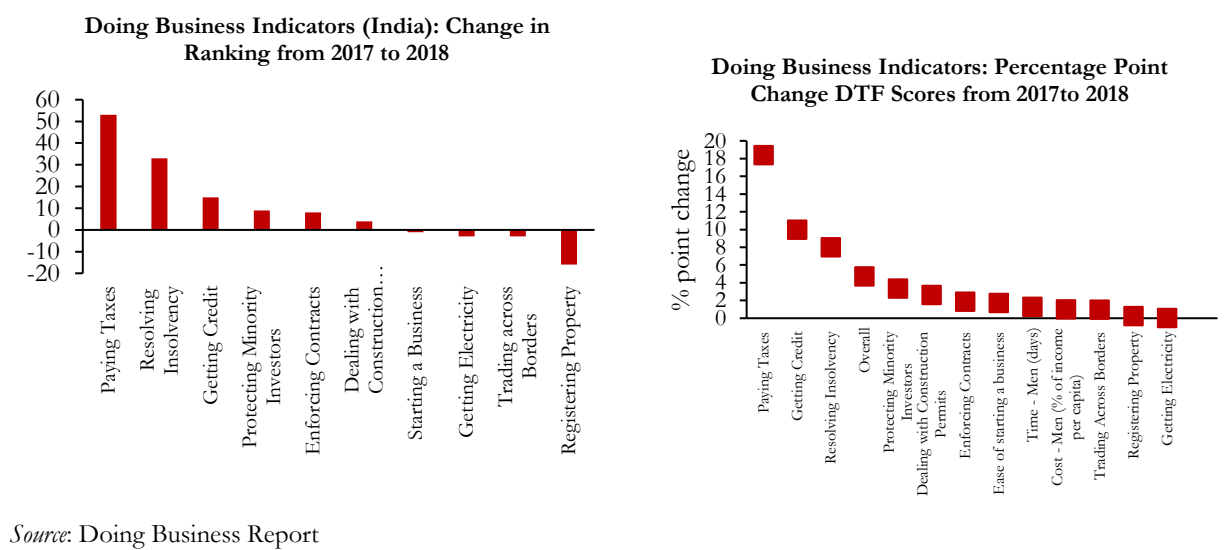
Doing Business 2018 recognized India for being one of the top 10 improvers amongst the 190 countries that are studied annually. India is the only South Asian and BRICS country to be included in the list of top improvers. On aggregate, India achieved a Distance to Frontier score of 60.76 (out of 100) against 56.05 last year, placing it on the 100th place in the ranking, an improvement from 130 in Doing Business 2017. India's Distance to Frontier score improved in all 10 areas, demonstrating that its movement towards global best practices is across the board, and not just confined to a single area. India improved its Doing Business ranking in 6 out of 10 indicators.

Three areas of improvement stand out particularly for India. First, India’s Distance to Frontier score improved significantly with regards to the ease of paying taxes, leading it to move up 53 places in the ranking in comparison to Doing Business 2017. The improvements were driven by the introduction of an online mandatory payment mechanism for employers to pay contributions for the Employee Social Insurance Corporation (ESIC) as well as the Employee Pension Fund Organization (EPFO). Additionally, in 2016, the Government introduced a set of administrative measures easing compliance with corporate income tax, further contributing to the improved ranking. Second, India improved its Distance to Frontier on Resolving Insolvency, due to the enactment of the Insolvency and Bankruptcy Code, leading it to improve by 33 places in the rankings compared to the previous year's report. The code introduced a reorganization procedure for corporate debtors and facilitated continuation of the debtor’s business during insolvency proceedings. Third, India improved both its Distance and Frontier Score and its ranking in the Getting Credit indicator.¹⁰² The improvement was driven by a reform that amended the rules on the prioritization of secured creditors outside reorganization proceedings, and adopted a new law on insolvency that provides a time limit and clear grounds for relief to the automatic stay for secured creditors during reorganization proceedings.

Figure 59: Change in Ranking from Doing Business 2017 to Doing Business 2018, by area

59 A: India’s ranking improved in 6 key indicators out of 10 in 2018...

59 B: ...with improvement in the DTF scores in various areas.



Cross Country Comparison

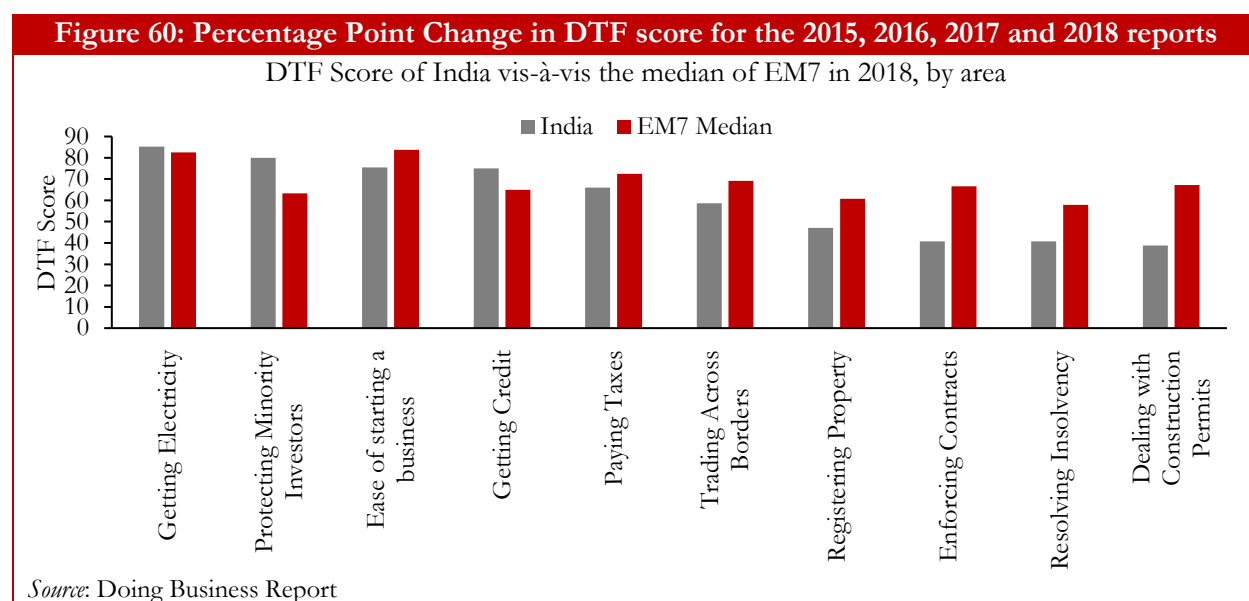
Compared to 2017, India’s ranking in Doing Business has improved significantly. While this is indicative of an improving business environment, the ranking does not give an absolute overview of the ease of doing business in India compared to other emerging economies. To address this, we compare India to a group of emerging market economies, the EM7 countries.¹⁰³

¹⁰² Doing Business indicators measure the legal and not the economic ease of obtaining credit.

¹⁰³ The EM7 countries include Brazil, Russia, South Africa, Indonesia, Mexico, Malaysia and Turkey.

India outperforms the median EM7 country in three areas of Doing Business. First, India does significantly better with regards to the Protecting Minority Investors. With a Distance to Frontier score of 80, India is ranked 4th among all participating countries in the ranking, and, together with Malaysia, ranks first among EM7 countries. Recent improvements with regards to the protection of minority investors were driven by a reform that increased the remedies available in cases of prejudicial transactions between interested parties.

Second, India’s ranking in the “Getting Credit” indicator stands out as particularly remarkable. With only two countries among the EM7 ranking better than India, the country is ranked 29th globally. Third, India ranks highly in the Getting Electricity indicator. With a score of 85.21, India ranks third among the EM7 and 29th globally. This is driven by utility reforms in Delhi and Mumbai. Between 2015 and 2016, the process for getting an electricity connection was made simpler and faster.



While India’s overall ranking in Doing Business increased, scope for improvement remains. India ranks last among the EM7 with regards to Dealing with Construction Permits, Registering Property, and in Enforcing Contracts. In addition, India’s Distance to Frontier on the Trading Across Borders indicator has not improved since the previous Doing Business report.

Improvements to Doing Business Followed India’s Reform Agenda

With slowing investment holding back growth, the Indian government announced the Ease of Doing Business program as a major pillar of the ambitious Make In India campaign aimed at attracting investors.

Doing Business indicators can affect corporate investment in a country, not only because they provide an overview of the country’s business environment, but also because of their role in providing

guidance and encouraging reforms that further facilitate business activity. India's improvement in the Doing Business indicators is based on a comprehensive reform process initiated in 2014.

The Ease of Doing Business program is a broad umbrella program that seeks to promote business reforms in India, through streamlining regulations, policies, procedures and practices, with the objective of drastically reducing the burden on business of complying with regulation. Because of the unique federal nature of India, business regulation is designed and implemented at various levels, including at the central, state and municipal levels. Therefore, India's Ease of Doing Business program consists of two broad pillars:

- Pillar 1: Reforms to improve India's performance in the Business report, covering reforms on 10 indicators covering regulatory functions of the central government, the Government of the National Capital Territory of Delhi, and the Government of Maharashtra; and
- Pillar 2: Wider reforms of over 50 state-level licenses, permits, procedures, inspections and policies, across all states of India.

The focus on wider reforms at the state level that exceed the scope of the Doing Business indicators recognizes the fact that simply improving the Doing Business indicators may be insufficient to attract investment; and that reforms needed to be implemented across the country. Indeed, the areas in which India's performance in Doing Business is weakest are those with significant state influence on implementation, such as Dealing with Construction Permits.

Thus, reforms are guided by a Business Reform Action Plan, with states being monitored and ranked based on their implementation progress. The competition between states has provided strong incentives to improve the business environment and has resulted in increased numbers of actions from the Reform Action Plan being implemented. In addition, the government has prioritized user feedback on all indicators covered by the Doing Business report, with stakeholder consultations and feedback surveys providing opportunities for the private sector to alert the government of existing constraints. Similarly, a survey is being undertaken on Pillar 2 state reforms as well, and user feedback will be incorporated into the ranking of states from 2017 onwards.

Policy Outlook and Scope for Further Improvement

Going forward, as implementation of the recently introduced indirect Goods and Services Tax and the bankruptcy law progress, India has the potential to improve its ranking further. The government has also taken steps towards emphasizing the quality over the quantity of reforms implemented in states' Reform Action Plans. In addition, India has placed a strong focus on promoting knowledge sharing between states and on helping lagging states improve on their reform implementation.

By building on existing reforms, India can improve its investment climate further. While the overall policy and legal environment for business in India are improving rapidly, there is scope for improvement in how such policies and laws are implemented on the ground. For example, in Dealing with Construction Permits, India ranks 181st out of 190 countries. This figure hides significant heterogeneity in its

composition: India ranks 185th in terms of number of procedures, and 181st in terms of the cost. However, it also ranks 95th in terms of the time it takes to obtain a building permit, and 65th in terms of the quality of building regulations. Similarly, in terms of Enforcing Contracts, in which India ranks 164th overall, the country ranks 185th in terms of the time taken to resolve the dispute and 116th in terms of the associated cost. However, it ranks 51st in the world in terms of the quality of judicial processes. Thus, India appears to be doing well with regards to the quality of regulations, but not equally well in areas that capture the implementation of laws. This discrepancy highlights the importance of emphasizing effective implementation of reforms in addition to improving the legal framework.

B. Implementation of India's Goods and Services Tax: Design and International Comparison

Introduction

The Goods and Services Tax (GST) was introduced in India on 1st July, 2017, after more than a decade of efforts. It replaced an existing system of fragmented and complex indirect taxes, consisting of multiple central and state taxes.¹⁰⁴ Under the earlier tax system, states unilaterally levied 'entry taxes' on all goods that entered its territory, resulting in inefficiencies and huge costs to the economy. The new GST was designed to bring about a common policy and administrative framework for taxation of the supply of goods and services across the entire country while causing minimum tax based restrictions on trade, besides harmonizing the rates on goods and services. This note provides a brief description of the GST and benchmarks it against other countries.

GST Structure and Administration

Any tax on value added in a federal system of government with overlapping taxing powers is challenging, as taxing powers must be clearly defined and tax rates should be as uniform as possible across the country. The Indian GST applies to supply of most goods and services occurring throughout the territory of India with taxing powers assigned as follows:

- All sales within a state are taxed both by the center as well as the states over a common base and at the same rate, which together add up to the full GST rate. The taxes levied are called the State GST (SGST) and the Central GST (CGST), respectively.
- All sales from one state to another are taxed by the center at the full GST rate applicable. The relevant tax levied is called the Inter-State GST (IGST).
- For sales across state lines, any input taxes on purchases can be deducted (i.e. an input tax credit is available) from taxes collected on sales regardless of the source of the purchases.

The GST has different tax rates - 0, 5, 12, 18, and 28 percent.¹⁰⁵ Further, there are several exempted sales and exports are zero rated, which allows exporters to claim refund for taxes paid on inputs. The GST excludes small firms with turnover below INR 2 million, and only taxpayers with turnover of INR 15 million (~US\$230,770) or more charge GST on sales at the prescribed rates and can deduct GST paid on their purchases. Taxpayers who have turnover from INR 2 million to INR 15 million have the option of participating in a 'composition scheme' whereby they pay a tax on turnover instead on value added.

¹⁰⁴ The GST replaced the following centrally levied taxes: Central Value Added Tax, Service Tax, Central Sales Tax, Countervailing Duties, Special Additional Duty of Customs. At the state level, the GST replaced the following taxes: Value Added Tax, Sales Tax, Entry Tax, Luxury Tax, Entertainment Tax.

¹⁰⁵ Some goods receive special treatment under the GST: there is a special cess on luxury and "sin" goods. Gold is taxed at 3 percent rate, precious stones at 0.25 percent, while alcohol, petroleum products, stamp duties on real estate and electricity duties are excluded from the GST and they continue to be taxed by the state governments at state specific rates.

The administration of GST has been harmonized between the center and the states using a common IT system and common rules with the powers to audit being shared.¹⁰⁶ To support the administration of the taxpayers, a common nation-wide IT backbone called the GST Network (GSTN) has been put in place, through which all tax returns are required to be filed. This portal captures all tax returns and allows for verifying input tax credits claimed by businesses. The system can also aid in the selection of taxpayers for audit through a risk based selection mechanism. On the policy side, coordination between the Center and the States and, between States is made possible through a GST council comprising of the finance ministers of all the State governments and the Central government. The GST council is an innovative and integrative body that formulates a common policy and administrative framework for the GST that applies to the entire country.

Policy Parameters and Trade-Offs

The introduction of the GST to replace state level value added taxes was motivated by an attempt to harmonize indirect taxation across India, therefore eliminating state level barriers to trade and broadening the tax base. The challenge with designing any tax system is that most forms of taxation may reduce the private sector's incentives to save or to invest. In addition to the direct burden of taxation, taxpayers are also affected by the cost of complying with tax obligations, for example through effort required to file tax returns.¹⁰⁷ Taking these considerations into account, the design of the Indian GST system was guided by the objective to raise revenue while minimizing the burden of taxation on consumers and producers and limiting the cost of compliance to businesses.¹⁰⁸ In practice, the fitment committee, tasked with selecting GST rates, approximated rates for a certain good or service to the most prevailing total rate including excise and state VAT and other levies. This procedure meant that the feature of traditional indirect taxes in India, which protected the consumption basket of the poor, has been maintained in the GST.¹⁰⁹

GST design has two policy instruments to achieve these objectives: the tax rate and the tax base. The GST tax rate is the central parameter that determines the collection of tax revenue, with higher tax rates typically leading to higher tax collection rates, holding constant the tax base.¹¹⁰ However, increasing

¹⁰⁶ Audit and administration duties are shared as follows: For taxpayers with turnover not exceeding INR 15 million, state tax administrations administer 90 percent of taxpayers the central tax administration the remaining 10 percent. For taxpayers with turnover over 15 million 50 percent are administered by the central tax administration and 50 percent by the states.

¹⁰⁷ See Rao (2017) for a discussion of tax system design in India.

¹⁰⁸ Arvind Subramanian, the CEA, stated in April 2017 with regards to GST design: “[...] the guiding principle must be: what will make for a good GST, a GST that will: facilitate compliance, minimize inflationary pressures, be a buoyant source of revenue, and command support from the public at large.”

¹⁰⁹ Some commentators also imply that GST rates were chosen directly to protect the consumption basket of the poor: <http://www.livemint.com/Opinion/yYtp9VpGJBMXpcsOKTfLEN/GSTs-last-and-critical-lap--Arvind-Subramanian.html>

¹¹⁰ Higher tax rates only yield higher revenue as long as they don't exceed the revenue-maximizing level, typically known as the peak of the so-called “Laffer curve”.

tax rates also increases the tax burden on firms and consumers, can discourage production and consumption and incentivize tax evasion.

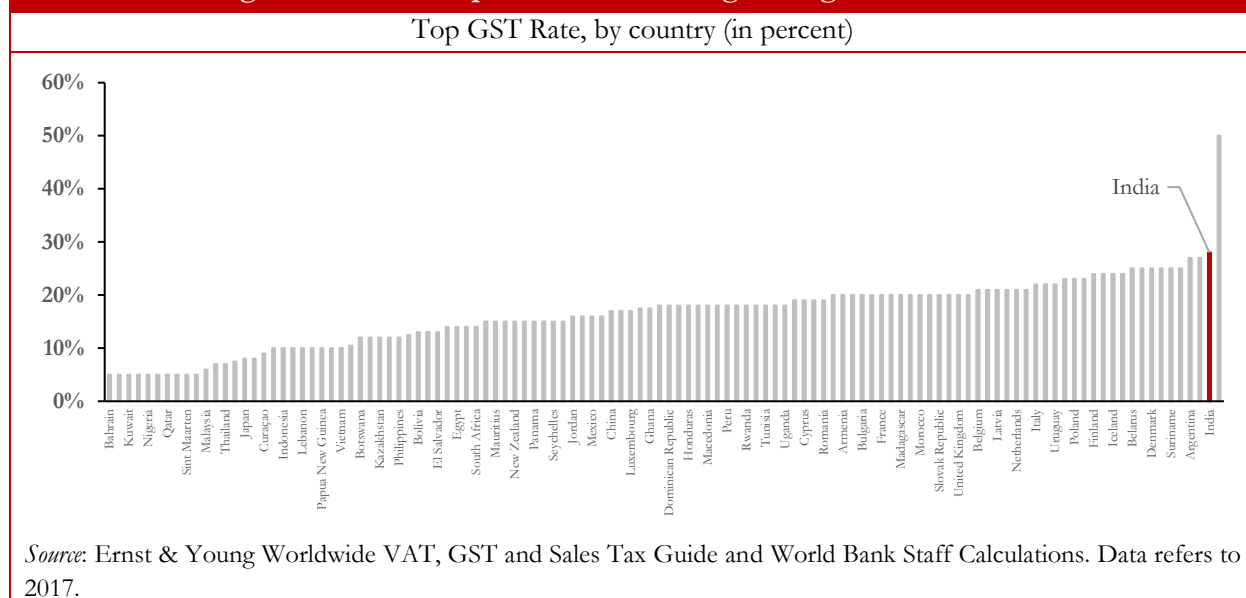
The coverage of the GST is determined by two factors. First, the number of different tax rates (including the introduction of tax exemptions) determines the extent to which different *products* are covered. This design parameter is typically used to protect the consumption baskets of the poor and achieve other social objectives. The number of different tax rates also determines the complexity of the GST, with multiple rates imposing additional costs on compliance for businesses as well as the tax administration and encouraging evasion.

Second, the registration threshold determines which *taxpayers* are covered by the system. This is thus an instrument that governments can use to relieve smaller firms from the burden of complying with a GST. As is the case in India, it is also possible to introduce a simplified system in lieu of exemptions for smaller firms which is administratively easier. The disadvantage of introducing registration thresholds and having a simplified and presumptive tax regime is that it inevitably fragments the tax system, which may reduce the tax base and provide an incentive for larger firms to mask their size and benefit from the reduced compliance burden. In addition, tax schemes that levy taxes on sales rather than value added provide incentives for sellers to reduce their taxable sales, and potentially promoting economic inefficiencies by dis-incentivizing business growth, integration and expansion.

Taken together, this discussion suggests that the design of a GST systems faces trade-offs between revenue collection, protecting the poor and reducing the taxation and compliance burden on firms and consumers. The way that the design parameters are set is ultimately a policy decision that depends on the objectives of the government. The next section compares the design of the Indian system with international practices, keeping in mind that the introduction of a new tax system is the start of a process of reforms rather than the end and will require strong accompanying measures with continuous adjustments and improvements during implementation.

Tax Design: An international comparison

Comparing the design of India's GST system with those prevailing internationally, we note that the tax rates in the Indian GST system are among the highest in the world. The highest GST rate in India, while only applying to a subset of goods and services traded, is 28 percent, which is the second highest among a sample of 115 countries which have a GST (VAT) system and for which data is available (Figure 61). Table 8 compares the highest and lowest standard tax rate (i.e. the tax rate that applies to the majority of transactions) across regions around the globe and shows that India has the highest standard GST rate in Asia. The table also highlights that the ASEAN region has the lowest rates as compared to the other regions.

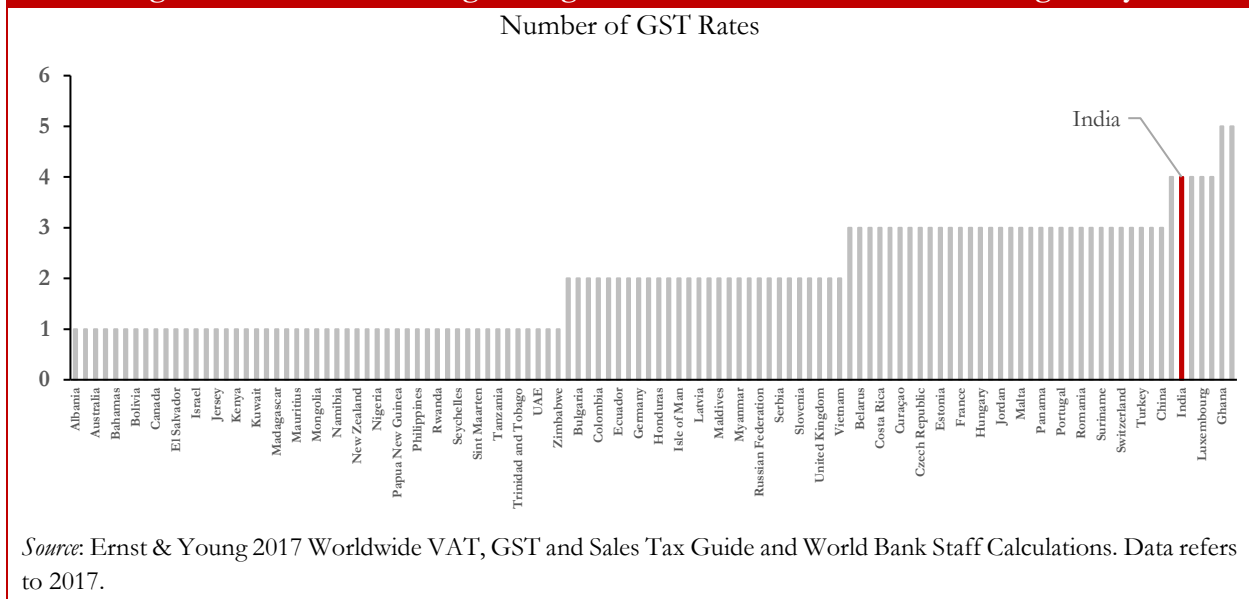
Figure 61: India's top GST rate is among the highest in the world

Table 8: Standard GST/VAT rates (highest and lowest)

Region	Highest tax rate	Lowest tax rate
Europe	Hungary (27%)	Jersey, Channel Islands (5%)
North & Central America, Caribbean	Dominican Republic (18%)	Canada (5%)
Middle East and Africa	Madagascar/Morocco (20%)	Nigeria (5%)
Latin America	Uruguay (22%)	Paraguay (10%)
Oceania	New Zealand/Fiji/Samoa/Tonga (15%)	Niue (5%)
Asia (excl. ASEAN)	India (28%)	Taiwan-China (5%)
ASEAN	Philippines (12%)	Malaysia (6%)

Source: Ernst & Young Worldwide VAT, GST and Sales Tax Guide and World Bank Staff Calculations. Data refers to 2017.

Next, we assess how the number of different GST rates prevalent in the Indian system, and thus its complexity, compares internationally. The Indian GST system currently has 4 non-zero GST rates (5, 12, 18, and 28 percent). Figure 62 shows the number of countries and the number of GST rates (not including the zero rate) among the sample of 115 countries described previously. Most countries around the World have a single rate of GST: 49 countries use a single rate, 28 use two rates, and only 5 countries including India use four rates. The countries that use four or more rates of GST include Italy, Luxembourg, Pakistan and Ghana. Thus, India has among the highest number of different GST rates in the world.

Figure 62: India has among the highest number of different GST rates globally



In addition to the number of rates, the extent of exemptions and sales at a zero rate is a critical design parameter for a GST. While exemptions allow to ease the tax burden on items with a high social value, such as healthcare, they also reduce the tax base and compromise the logic of the GST as they can: reintroduce cascading where an exempted good or service is an input into another taxable good or service; create incentives for vertical integration to keep the exempt status; and raise compliance costs by making it necessary to allocate input taxes between exempt and non-exempt output when manufactured or traded together.

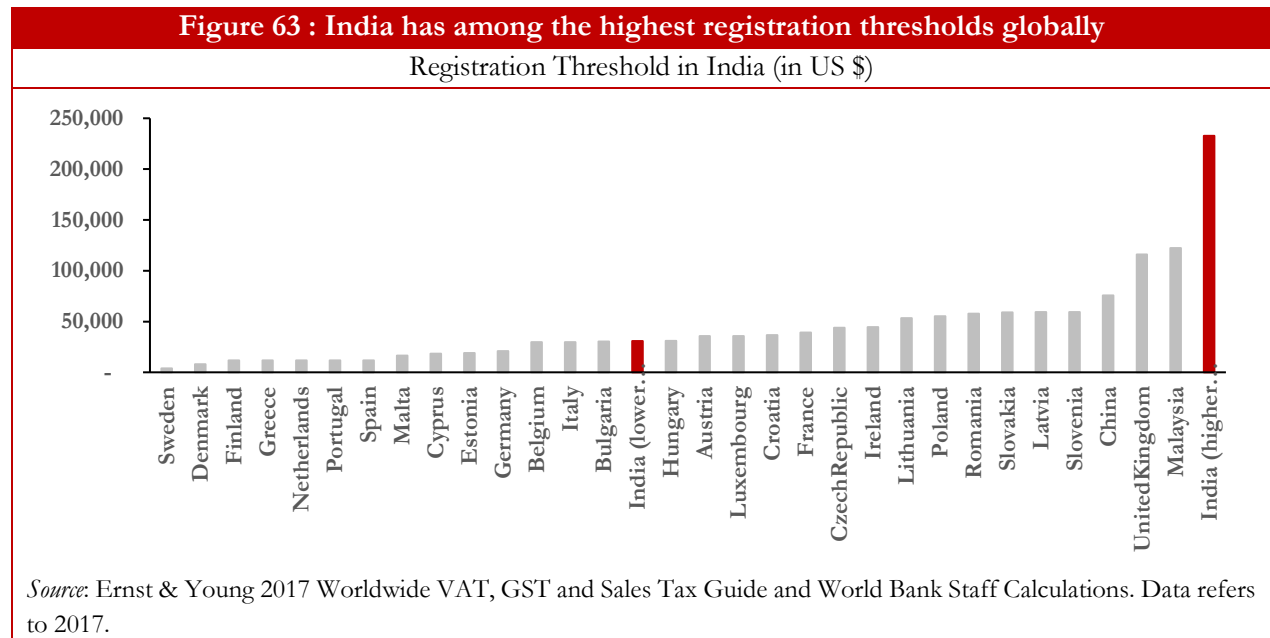
In contrast to other GST design parameters, comparing the prevalence of exemptions across countries is challenging. This is because the impact of declaring various goods as zero-rated does not only depend on the number of products exempt, but also on the revenue generated from each product. The latter figure is difficult to assess in the absence of tax revenue figures. Hence an assessment of the role of exemptions in the Indian GST system cannot be made before revenue figures have stabilized.¹¹¹

The threshold to register for the GST is another important policy parameter. In India, businesses having annual sales above the threshold of INR 15 million fall under the full GST, and are thus liable to

¹¹¹ Despite these limitations, back of the envelope calculations suggest that the impact of exemptions on revenue collection for the GST is comparable with the international median. A way to measure the extent to which exemptions in the GST system is prevalent is by computing tax efficiency, defined as tax revenue as a share of the tax rate multiplied with GDP, with GDP measuring aggregate value added. In the absence of exemptions and full compliance, tax efficiency would equal 100 percent. India collected about 7 percent of GDP in taxes on goods and services prior to the introduction of the GST. Assuming the new GST would collect the same amount of tax (a revenue neutral policy was an important goal of the reform) and the GST rate is 15 percent (average of the 12 and 18 percent rate), this implies a GST-efficiency of approximately 47 percent. This leaves India in the 42nd rank among 106 countries being compared.

remit GST and eligible to deduct input tax credit. Those with annual sales above the lower threshold of INR 2 million and below 15 million are required to register for the GST and pay a ‘flat’ 1 percent tax on sales, but are neither allowed to charge GST on sales nor deduct any taxes on inputs.

Comparing India internationally, Figure 63 shows the upper GST threshold for a sample of 31 countries compiled by the European Commission, which includes all the EU countries and China and Malaysia. India started with a higher threshold of \$116,000 (7.5 million rupees) but in the span of a few months doubled it to \$232,000 (15 million rupees) mainly to ease the cost of compliance for SMEs. India’s new threshold is the highest among all the 31 comparator countries.



The lower threshold of INR 2 million (\$30,770) is in line with most countries in the EU. In contrast to the EU, however, the registration threshold in the EU applies to the full GST, unlike in the case of India where the lower threshold implies participation in the “composition scheme”. Such schemes for SMEs under the GST also exist in other countries, where businesses below a certain threshold pay a (lower) ‘flat’ turnover tax and are not allowed to collect tax as well as claim input tax credits. China and Poland use a similar ‘flat’ rate scheme. In other simplified schemes, businesses collect taxes on sales just like other registered GST business but can pay the tax as a ‘flat’ percentage of sales but the input credit is ‘deemed’ as a fixed percentage of sales. Such countries include the UK, Canada, Austria and Belgium.

Policy Considerations

The introduction of GST has been accompanied by state administrations experiencing disruptions in the initial days after GST introduction. This included a lack of clarity on discontinuation of local taxes (e.g. in Tamil Nadu where the state government devolved an entertainment tax to local governments in order to impose it over and above a 28 percent GST); demands for exemptions or lower tax rate (e.g. by the textile sector in Gujarat); and on account of coping mechanisms to preserve revenue collections

(Maharashtra increased motor vehicles tax to compensate for losses due to GST). There also have been reports of an increased administrative tax compliance burden on firms and a locking-up of working capital due to slow tax refund processing. High compliance costs are also arising because the prevalence of multiple tax rates implies a need to classify inputs and outputs based on the applicable tax rate. Along with the need to apply the correct rate, firms are required to match invoices between their outputs and inputs to be eligible for full input tax credit, which increases compliance costs further.

To address these challenges, the GST council has begun a process of lowering and consolidating tax rates. In August 2017, the council lowered the tax rate for job work along the textile sector value chain to 5 percent from 18 percent. In September 2017, the GST rate on about 30 commonly used products was lowered, and this process was extended to another 27 goods in October 2017. On the administrative side, the GST council recommended faster processing and payments of refund claims. To ease the compliance burden for small and medium businesses the council changed the filing frequency from monthly to quarterly for firms with annual aggregate turnover up to INR 15 million. The council also increased the turnover limit for the “composition scheme” from INR 7.5 million to INR 15 million.

In addition to procedural amendments, the council is also considering technological improvements to facilitate GST administration. As such, the GST council announced the introduction of an "e-wallet" scheme by April 1st, 2018. Under this scheme, advance refund payments will be credited to a virtual account, which can be used to make GST related payments. In addition, early 2018 is expected to see the wider introduction of the “e-way bill system”, which facilitates a technology-driven tracking of movement of goods worth more than INR 50,000 and for sale beyond 10 km in distance.

Despite the initial hiccups, the introduction of the GST is having a far-reaching impact on reducing tax related barriers to trade barriers which was one of the primary goals of the introduction. Logistics companies are reporting that trucks now cover an additional 100-150 km per day after GST an increase of up to 30 percent.¹¹² Logistics companies are also consolidating their existing fragmented set of small warehouses in each state, now that the GST has removed state imposed barriers thereby increasing their efficiency¹¹³. However, the introduction of the “e-way bill” may result in some fresh barriers to the free movement of goods in the form of road inspections to verify the goods being transported.

Conclusion

The introduction of GST in India is a historic reform. Comparing the design of India’s GST system to similar taxes on value added across other countries, the note highlights that India’s GST system is relatively more complex, with its high tax rates and a larger number of tax rates, than in comparable systems in other countries. However, while teething problems on the administrative and design side persist, the introduction of the GST should be considered as the start of a process, not the end. With the economy adapting to the new system, the GST council has been evaluating and evolving the tax structure and its implementation. While international experience suggests that the adjustment process can affect economic

¹¹² Average distance covered by trucks up by 100-150 km/day post GST (2017, Dec 31), *Times of India*. retrieved from timesofindia.indiatimes.com

¹¹³ Mundy, Simon. (2018, January 7). India’s tax overhaul unleashes logistics revolution. *Financial Times*.

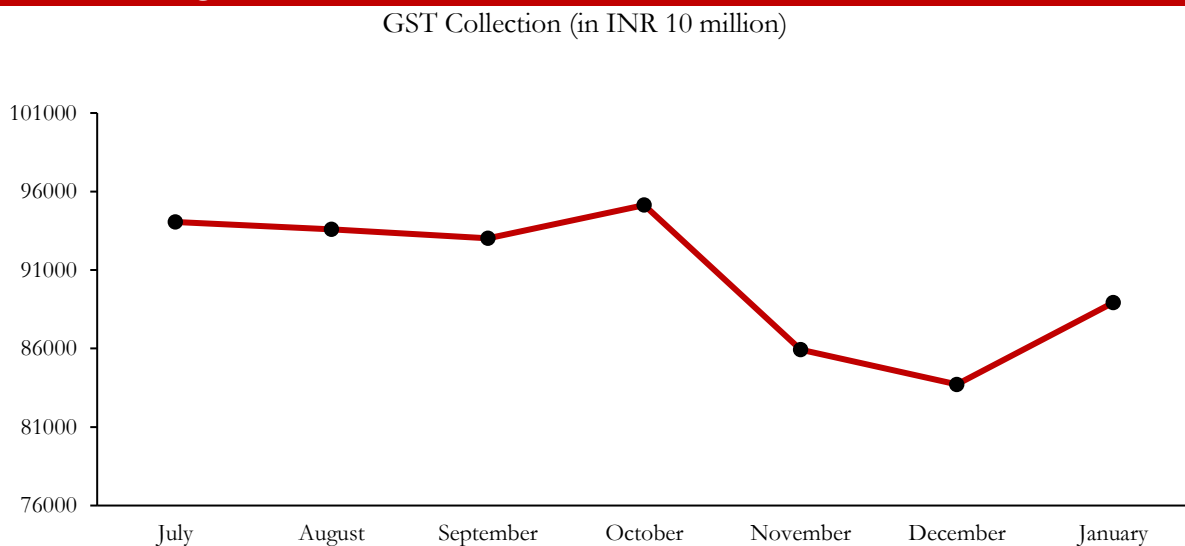
activity for multiple months, the benefits of the GST are likely to outweigh its costs in the long run. Key to success is a policy design that minimizes compliance burden, for example by minimizing the number of different rates and limiting exemptions, with simple laws and procedures, an appropriately structured and resourced administration, compliance strategies based on a balanced mix of education and assistance programs and risk-based audit programs. A nuanced communications campaign is crucial to convey the various aspects of the new system of GST amongst businesses, consumers and key intermediaries, such as tax practitioners, as well as amongst the tax administration itself and the political class.

Box 5: Preliminary Figures on Revenue Collection under GST

Due to its recent introduction, only preliminary figures on GST revenue are available. As the estimates cannot accurately account for the application of input credit and payments by taxpayers under the “composition scheme”, who only file returns every quarter, figures are subject to revision and should be treated as such.

Based on preliminary figures, collection from GST exceeded expectations initially, but has declined more recently. In the first month of taxes filed, July 2017, revenue was initially estimated at INR 922.8 billion and has since been revised upwards to INR 940 billion. Collection stems primarily from IGST, with SGST and CGST following. Since July, estimates of revenue collection have weakened slightly, with a dip to INR 837 billion in December 2017. In January, GST collections rose again to INR 888.9 billion. Possible reasons for the decline in November and December include an application of tax credit, consolidation of tax rates and the introduction of self-declaration. Since the introduction of GST in July 2017, government estimates suggest that the tax base has widened and a total of 10.3 million tax payers have registered on the new system as of February 15th, 2018. Data on 10 states suggests that there was no uniform pattern in change in sales tax revenues at the state level. Year-on-year growth of sales tax in July increased in 4 states (including Telangana and Himachal Pradesh), while it decreased in 6 states (including Punjab and Chhattisgarh).

Figure 64: GST Collection declined in November and December



Source: Press Information Bureau, Government of India.

C. India's Slowing Export Growth

Introduction

India's export to GDP ratio has been declining since 2013-14. While export growth was an important driver of GDP growth prior to the global financial crisis, and specifically during the pre-crisis boom years, and still contributed positively in 2010-11 and in 2011-12, its role in growth has diminished since (Figure 65 A). Meanwhile imports growth has decelerated too and temporarily turned negative in 2015-16. Thus, while India's openness to trade has increased significantly in the long-run, there have been signs of a trade slowdown in the medium-term. In this note we decompose the slowdown in India's merchandise exports into a price and volume effect; and further decompose the latter into a slowdown in global trade volume, and India's share in it.

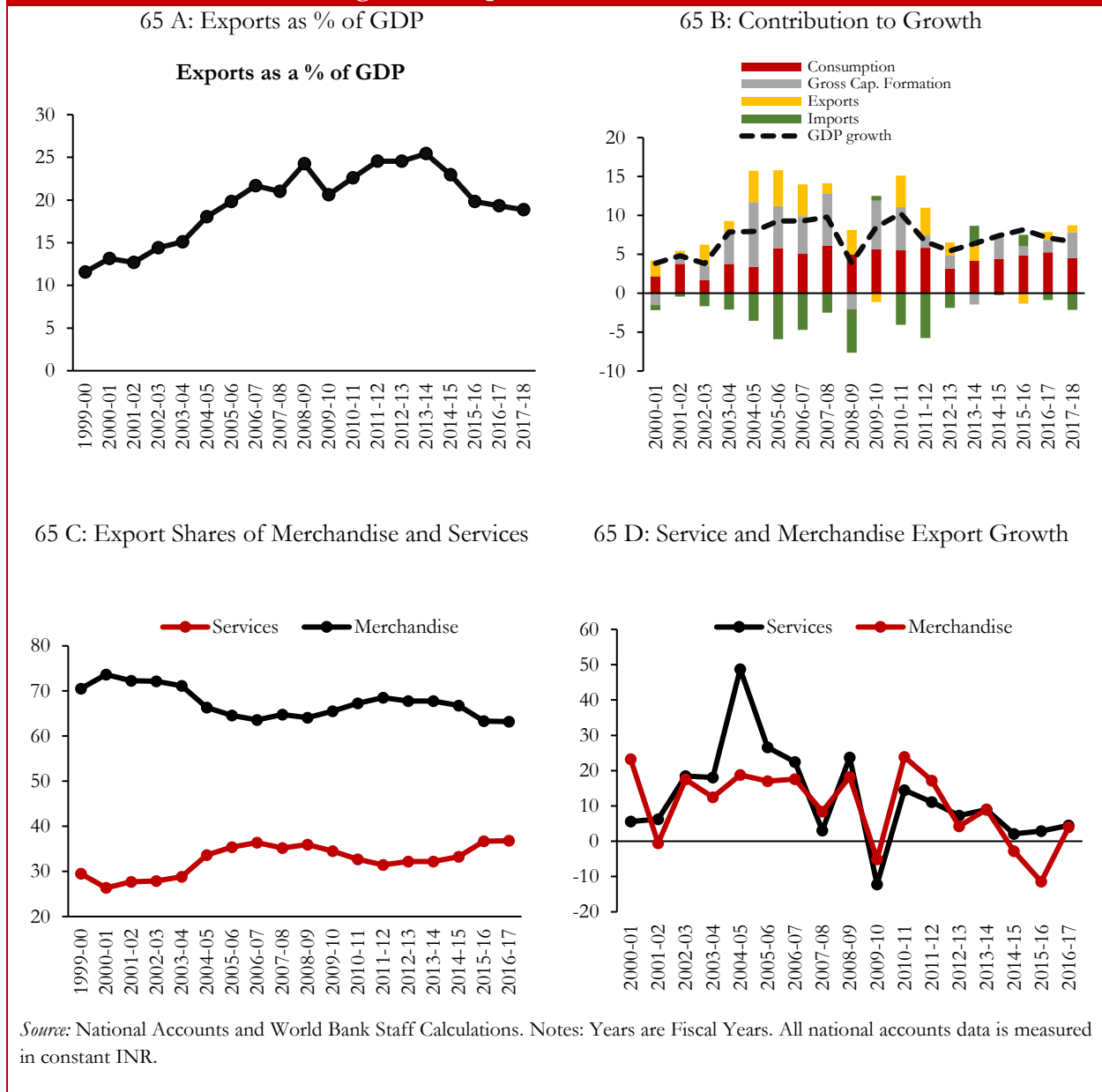
Export Slowdown in Goods and Services Exports

After growing impressively during 2003-2008, when growth in export values averaged 18 percent a year (in constant INR), Indian goods and services exports slowed down in the years after. Export growth has experienced two phases of deceleration since the global financial crisis (Figure 65): the first of the decelerations culminated in negative export growth rates in 2009-10, while the second one resulted in negative export growth in 2015-16.¹¹⁴

India's export basket is broad based. The share of service exports in 2016 was approximately 36 percent of total exports; core merchandise exports (i.e. non-oil non-gold exports) accounted for about half of all exports; oil exports accounted for 10 percent and gold exports accounted for 4 percent. India's export destinations are diversified too. The largest share of exports is shipped to the Middle East (approximately 20 percent in 2016), and among that the largest share to the United Arab Emirates. The United States is the second largest destination, accounting for 16 percent of India's exports; followed by China (including Hong Kong), Sub-Saharan Africa and Europe.

¹¹⁴ Unless noted otherwise, years refer to calendar years. This note uses data from the WDI indicators on export values and data from UNCTAD on export volumes. GDP decomposition is from the Indian national accounts.

Figure 65: Export Contribution to GDP

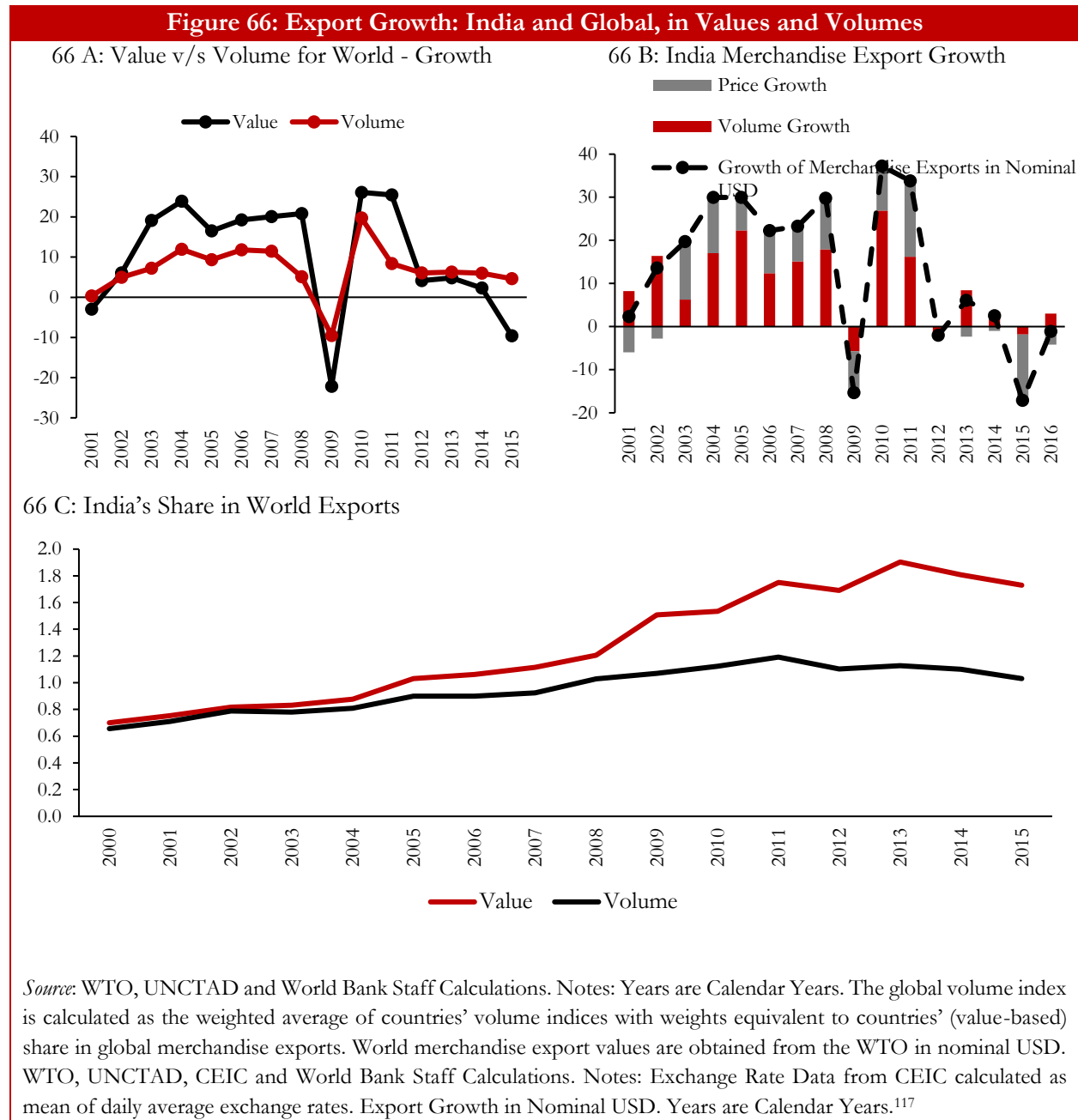


The Role of Value versus Volume in Exports Slowdown

It is well documented that starting mid-2014, the global prices of oil, metal, and agriculture prices declined sharply, dropping by nearly 73, 37 and 23 percent, respectively, until January 2016.¹¹⁵ Decline in the value of merchandise exports thus likely reflects a combination of decline in prices and decline in the

¹¹⁵ Based on monthly data from the World Bank Global Economic Monitor. Oil prices refer to average spot prices of crude oil in \$ per barrel. Metal and agricultural price declines are based on the GEM's metals and minerals as well as the agricultural indices with base year 2000, respectively. The figures given present the decline from peak prices in June, March and July 2014 for oil, agriculture and metals, respectively, to the trough in January 2016.

volume of exports. We decompose value of merchandise export growth into volume and price effects and find that Indian merchandise export growth has decelerated both in value and volume.¹¹⁶



¹¹⁶ We use trade data measured in current USD, we focus on merchandise trade for data availability reasons. With globally heterogeneous export baskets, using national deflators (either from the US or India) is unlikely to yield credible estimates of constant export values. Instead, we rely on volume indices to decompose trade into volumes and prices.

¹¹⁷ This chart decomposes nominal export growth in USD as $X_t = Volume_t \cdot Price_t^{USD}$. $Volume_t$ is measured using the UNCTAD volume index for merchandise exports with base year 2000 equal to 100. $Price_t^{USD}$ denotes the price of aggregate merchandise export volumes in USD, calculated by dividing nominal USD merchandise exports by the volume index. Decomposing those two factors is complicated by the fact that price and volume contribute to total export growth

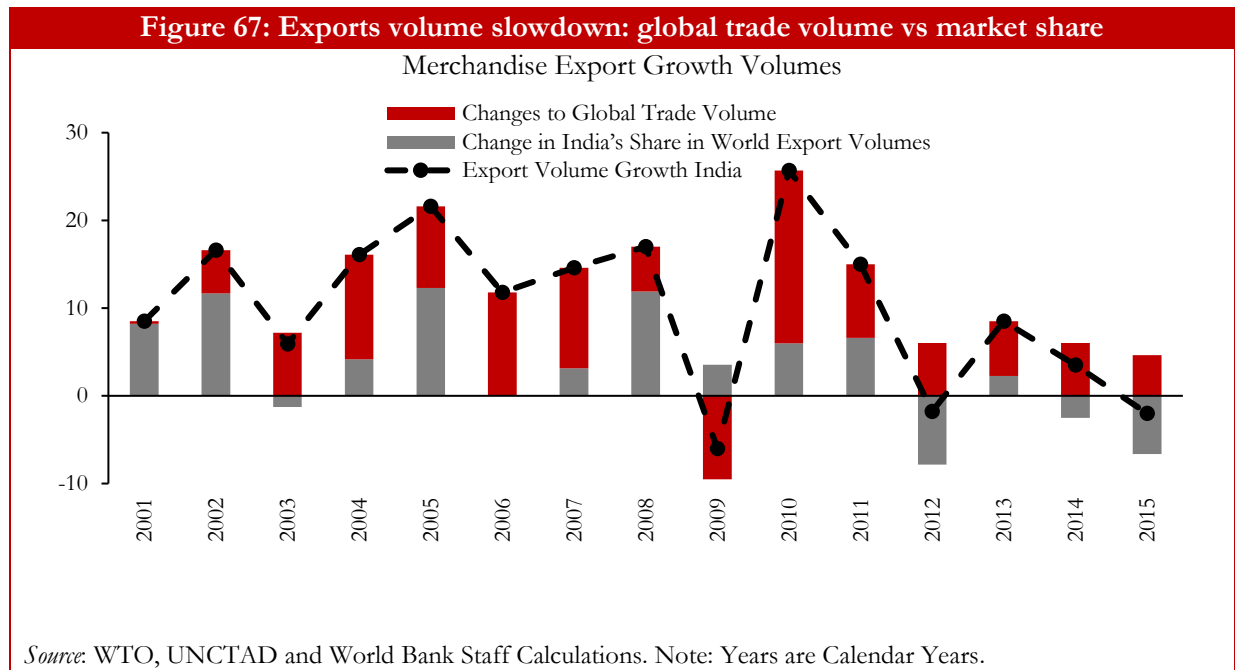
Even though reductions in global commodity prices reduced the growth of Indian export values significantly more than the growth of the volume of exports, volume growth also turned negative in 2009, as well as in 2015. Indian export volume decelerated in parallel with global volume growth during the global financial crisis, but its slowdown in volume growth has been much larger than the global volume growth since 2014 (Figure 66 A). While an expansion in volume was a key driver of export growth before the financial crisis, contributing on average 15 percent to growth between 2003 and 2008, it has only contributed 5 percent on average since 2011. Both price decreases and significant decreases in volume growth have contributed to the export slowdown since 2014.

Further, the deceleration in India's export volumes reflects reduced market shares.¹¹⁸ Figure 67 shows that the volume of exports decelerated around the global financial crisis on the back of reduced global trade volumes.¹¹⁹ In contrast, global trade growth has had constant contributions to export growth since, but India's share in global export volumes has been declining.

in a multiplicative fashion, meaning that simply adding growth rates will yield residuals that are not directly attributable to either of the factors. To address this, we employ a Shapley-Siegel Index Decomposition (see Shapley (1953)), which decomposes total growth into terms directly attributable to the individual factors and attributes joint terms equally to the individual components.

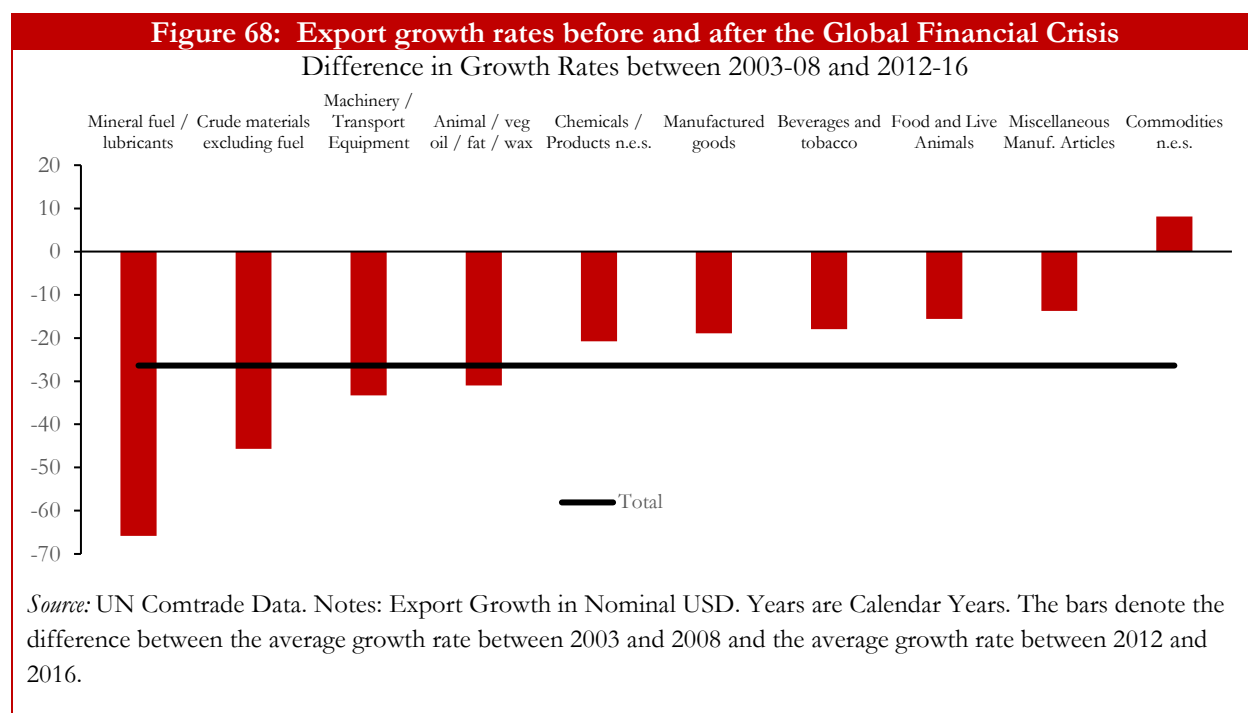
¹¹⁸ Calculating India's market share of export volumes in global export volumes requires two constructions. First, the export volume index constructed by UNCTAD and used in this analysis is not available for the aggregate world volumes. To construct an index of global export volumes, we calculate a weighted average of global country indices, with weights equal to the country's global (value) export share in a given year. Second, to turn the index into shares, we employ export values in 2000s as the base year and apply volume growth rates to the base year. This yields a real export value figure, which we use to calculate India's share in global exports.

¹¹⁹ The decomposition proceeds as follows: Denoting by α_t the share of India in World Export volumes, as Y_t global export volumes and as X_t India's export volumes, the difference in exports between two points in time can be written as: $X_t - X_{t-1} = \frac{X_t}{Y_t} Y_t - \frac{X_{t-1}}{Y_{t-1}} Y_{t-1} = (\alpha_t - \alpha_{t-1}) Y_t + \alpha_{t-1} (Y_t - Y_{t-1})$. Transforming this into growth rates yields: $\frac{E_t - E_{t-1}}{E_{t-1}} = \frac{\alpha_t - \alpha_{t-1}}{\alpha_{t-1}} \frac{Y_t}{Y_{t-1}} + \frac{Y_t - Y_{t-1}}{Y_{t-1}}$. The first term captures changes in market shares, the second term captures changes to global growth for a constant market share.



Comparing the average growth of exports in the boom period preceding the global economic crisis (2003 to 2008) to product-specific growth after the financial crisis (2012 to 2016) we note that the export growth reduction was most pronounced for commodity exports, reflecting the effect of declining commodity prices after 2014. However, the reduction in growth rates also extends to other product groups, thus going beyond the effect of declining commodity prices. Total export growth rates declined by 26 percentage points, with export growth rates declining across all product categories.¹²⁰

¹²⁰ Growth rates are for export values in current USD.



Conclusion

This note highlights that the export slowdown from India around the time of the global financial crisis was due to the decline in global trade; with growth in exports recovering swiftly but temporarily. The slowdown after 2014 was both due to a decline in the prices of oil and commodities; as well as due to a decline in India's trade volumes. The decline in India's trade volume is larger in comparison to the global decline in trade volume since 2014, reflected in India's reduced share in global exports. This development is indicative of India-specific factors determining the export slowdown, possibly through a loss of competitiveness or deteriorating external conditions for India's export basket. More recently, India has experienced positive export growth, but it remains to be seen whether it is indicative of a definite reversal of this pattern. Besides, validating this empirically requires the release of further global trade data.

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