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India International Centre

The Malcolm S. Adiseshiah Mid-Year Review of the Indian Economy 2015–16

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National Council of Applied Economic Research

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Shekhar Shah
Director-General

Preface

The National Council of Applied Economic Research (NCAER) is privileged to present the 2015–16 *Malcolm S. Adiseshiah Mid-Year Review of the Indian Economy* for the fifth year running in a long-standing partnership with the India International Centre (IIC), New Delhi. NCAER and IIC not only share a common founder in C. D. Deshmukh, but both were also established at roughly the same time in the 1950s. Through the *Mid-Year Review* (MYR), NCAER is proud to commemorate Dr Malcolm Adiseshiah, one of India's leading post-Independence economists, who was the founder and creative force behind the Mid-Year Review. NCAER and IIC acknowledge the continued support of the Malcolm and Elizabeth Adiseshiah Trust in co-sponsoring the Mid-Year Review.

The first half of FY 2015–16 presented a rather desultory picture. Developments such as the logjam in Parliament, the early prediction by the Indian Meteorological Department of a sub-par South-West monsoon, fears that the US Federal Reserve would commence normalising its monetary policy, and the impasse over Greece combined to suggest that India faced harsh prospects.

However, just when the economic recovery seemed to be barely limping along, India got lucky. The troubles in Greece blew over, the Federal Reserve opted to maintain the status quo in June 2015, and global commodity prices collapsed, unexpectedly placing India in a sweet spot. Even the outcome of the sub-par monsoon seemed less daunting because more effective food management helped keep food prices in check. Some of the lost dynamism of mid–2014 seemed to be returning in the closing months of the first half of FY 2015–16.

The Gross Domestic Product (GDP) estimates for the first quarter released by the Central Statistical Organisation (CSO) in late August 2015 added to the cheer. Although growth slowed down to 7 per cent in the April–June quarter of 2015, down from 7.5 per cent during the previous quarter, performance as measured by the new metric of gross value added or GVA at basic prices was much higher at 7.1 per cent as compared to 6.1 per cent for the previous quarter.

The good news on GDP growth was somewhat dimmed by the controversy over the new CSO estimates. The size of the growth rate increase took most observers by surprise, particularly since the new GDP numbers showed the economy to be in better shape than did other high-frequency data. The general consensus was that the economy was showing signs of recovery, with disagreement on the pace of the recovery.

Many argued that the recovery was not so much a result of good policy as the dramatic fall in commodity prices. As a net commodity importer, any decline in oil prices is unqualified good news for India on a number of fronts. And when prices fall almost by half in the course of a year, this is dramatically good news. Lower oil prices meant lower inflationary pressure, lower subsidy bills and hence lower fiscal deficits, and a lower current account deficit. The better showing on growth was

accompanied by a marked improvement in both retail as well as wholesale inflation. Whatever the differences in interpretation, the consensus was that the Indian economy was not out of the woods. And this was not a time to squander the opportunities provided by good fortune.

The 2015 MYR featured two special papers, also included here. Mr Ashok K. Jain and Dr Devendra B. Gupta in their paper "Leveraging Urbanisation for Inclusion, Integration and Transformation" argue that rapid urbanisation in India needs a more pro-active rather than reactive policy approach. Four critical areas—community empowerment, partnerships, governance reforms, and communications—are vital for leveraging urbanisation for inclusion, integration and transformation. Addressing these requires legal and institutional reforms, local planning, economic and social inclusion, transparency, accounting reforms, and mobilisation of investments. Capacity building must play an important role.

Ms Vineeta Dixit in her paper "A Critical Perspective on the Trinity: Jan-Dhan Yojana, Aadhaar and Mobile Telephone (JAM)" shows how Information and Communications Technology (ICT), the Internet, and mobile phones are coming together to deliver government-to-citizen services and financial inclusion. Digital identity in the form of Aadhar is the keystone facilitating the delivery of such services while plugging leakages and improving targeting. The Indian Government has labelled this as JAM, the trinity of Jan-Dhan (J), Aadhaar (A) and Mobile (M). Dixit examines the JAM policy challenges for the delivery of public services and notes that the successful adoption of Jan-Dhan and mobiles by citizens demonstrates that when people have access to agency, they feel empowered to take necessary action. At the core are challenges linked to connectivity, identity and enabling legislation. The paper argues that policy makers need to think out-of-the-box to address these challenges of the new digital economy.

I am grateful to Air Marshal Naresh Verma (Retd.), Director, IIC, and his team, particularly Ms Premola Ghose, IIC's Head of Programming, for partnering with NCAER on this activity. I am also grateful to Dr Pronab Sen, Country Director for the India Programme of the International Growth Centre, who chaired the Review and the subsequent lively discussion. Dr Rathin Roy, Director, National Institute of Public Finance and Policy, and Dr Manoj Panda, Director Institute of Economic Growth, enriched the Q&A that followed with their sharp and insightful comments.

The 2015–16 NCAER team was co-led by Dr Bornali Bhandari and Ms Mythili Bhusnurmath. Dr Shesadri Banerjee, Dr Rajesh Chadha, Dr Pallavi Choudhuri, Ms Ishita Gambhir, Dr Poonam Munjal, Mr Devender Pratap and Dr Anil Sharma authored the sector chapters. Mr Ajaya Kumar Sahu, Mr Praveen Sachdeva, Ms Geetu Makhija, Ms Sangita Chaudhary, Ms Shashi Singh, Ms Sudesh Bala, Mr Vipin Kumar, and Ms Shilpi Tripathi supported their work. I am grateful to each of them for their dedication to this task.

The considerable work at NCAER that goes into The Mid-Year Review continues to be supported by the global Think Tank Initiative (TTI, www.thinktankinitiative.org), a multi-donor consortium comprising the Hewlett Foundation, the Bill and Melinda Gates Foundation, UK DFID, the Canadian IDRC, the Norwegian Agency for Development Corporation, and the Netherlands Directorate-General for International Cooperation. Such unrestricted funding remains vital for think tanks across the globe, but, sadly, remains rare among donors. The TTI Consortium and its leadership, with Hewlett in the front, deserve much praise for their foresight and vision in supporting independent, evidence-based policymaking in ways that allow think tanks to set their own research and outreach agenda in the pursuit of excellence.

New Delhi
November 2016

Dr. Shekhar Shah
Director-General

INDIA INTERNATIONAL CENTRE

Air Marshal Naresh Verma
AVSM, VSM (Retd)
Director

FOREWORD

The Mid-Year Review of the Indian Economy was initiated at the India International Centre in the year 1983 by the late Professor Malcolm Adisehsiah, Life Trustee and Convenor of the Economic Affairs Group of the Centre. Dr Malcolm Adisehsiah, who passed away in 1994, had mandated that a portion of his financial assets be used to create a trust to be named Malcolm and Elizabeth Adisehsiah Trust. The idea behind the Trust was to support teaching and research, both fundamental and applied, in economics and development studies. Since 2001, the Malcolm and Elizabeth Adisehsiah Trust has supported the mid-year review project at the Centre, which comprises the annual seminar. Different institutions and think tanks have been preparing the Review over the years. Since 2011, the National Council of Applied Economic Research has been our partner in presenting the Mid-Year Review of the Indian Economy.The proceedings are subsequently published as the NCAER–IIC Mid-Year Review of the Economy. This is an invaluable resource on the trends in the Indian economy. Among the issues covered are expected growth, inflation, balance of payments, fiscal balances, savings and investment trends. Italso explores the state of important sectors of the economy, both financial and corporate sectors, and the policy responses.

We are grateful to Dr. Shekhar Shah, Director General NCAER, and his team for their collaboration.

Air Marshal Naresh Verma (Retd.)

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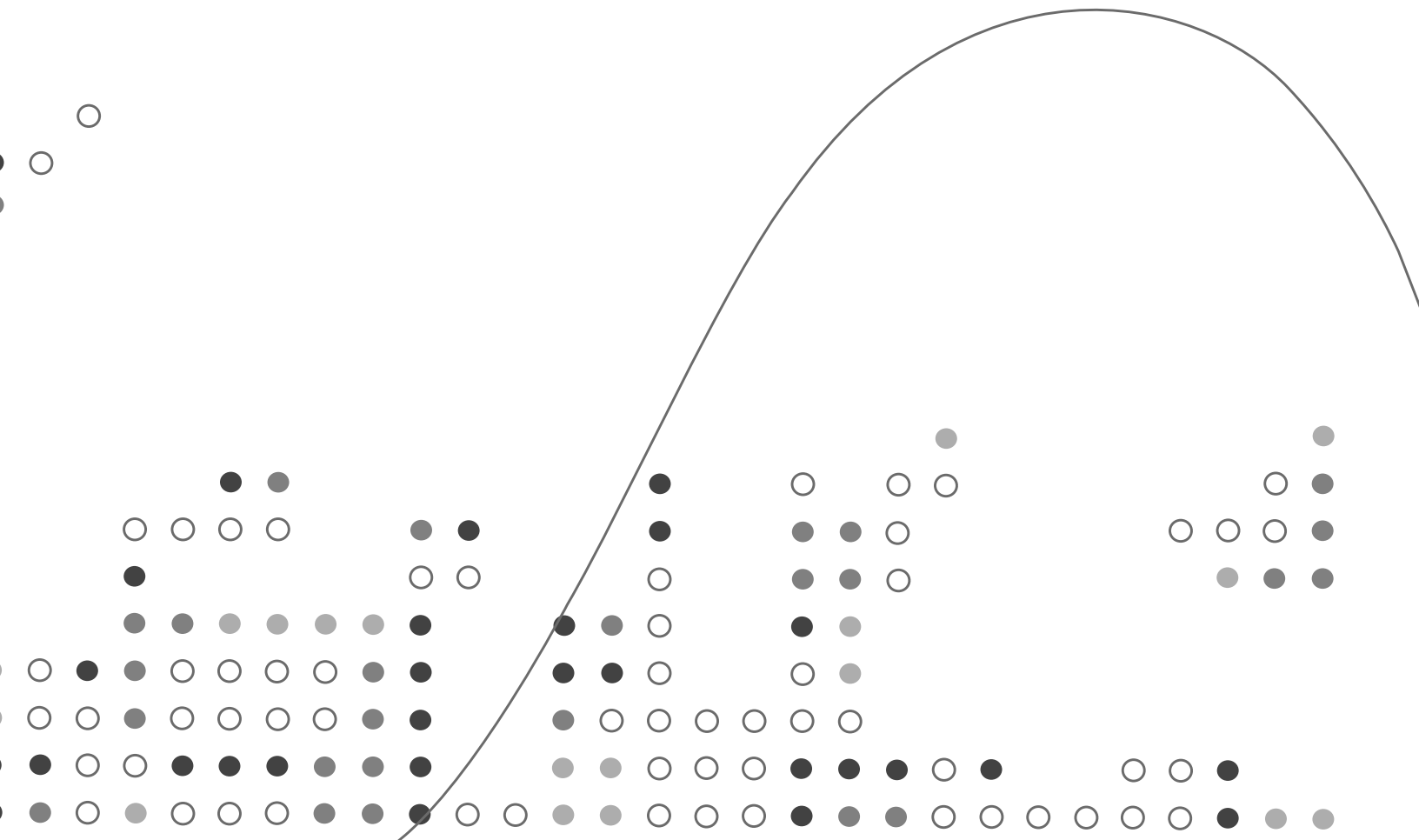
Mid-Year Review of the Indian Economy 2015–16

PART I: Overview



Overview

Mythili Bhusnurmath

Part I

The first half of fiscal year 2015–2016 (FY 16) is best summed up in the opening lines of Charles Dickens' A Tale of Two Cities: 'It was the best of times, it was the worst of times.' It was the worst of times for many countries, notably for many of the BRICS (Brazil, Russia, India, China and South Africa). For India, in contrast, the period April–September 2015, if not the best of times, proved far better than we dared to hope for in April 2015.

The opening months of H1 FY16 saw much of the euphoria following the unexpected victory of the BJP in the Lok Sabha elections of May 2014 disappear. While despondency of the kind witnessed on the eve of the 2014 general elections was noticeably absent, there was a general sense that the hoped-for economic turnaround would take much longer than envisaged in the first flush of the election results.

The logjam in Parliament, the early prediction by the Indian Metrological Department (IMD) of a sub-par south-west monsoon, fears that the US Federal Reserve would commence the long process of normalising its monetary policy in June 2015 and the impasse over Greece combined to suggest that, once again, India had flattered to deceive.

However, just when it seemed economic recovery would at best limp along, India got lucky. The troubles in Greece blew over, the Federal Reserve (Fed) opted to maintain the status quo in June 2015 (and again in its latest meeting in October 2015), and global commodity prices collapsed dramatically, putting India in an unexpected (undeserved?) sweet spot. Even the outcome of the sub-par monsoon seemed less dire because better food management kept food prices in check. As a result, the closing months of H1 FY16 saw some of the lost mojo of mid–2014 return.

The Gross Domestic Product (GDP) estimates for the first quarter of the current fiscal released by the Central Statistical Organisation (CSO) in late August 2015 added to the cheer. Though growth slowed to 7 per cent in the April–June 2015 quarter, down from 7.5 per cent in the previous quarter, performance as measured by the new metric of gross value added or GVA at basic prices was much higher at 7.1 per cent compared with 6.1 per cent for the previous quarter.

Admittedly, the good news on the GDP front was somewhat dimmed by the controversy over the new CSO estimates. Many, including the Chief Economic Advisor, Arvind Subramanian, continue to question the new GDP estimates. Nominal GDP was expected to get a boost from the revision in the base year (from 2004–05 to 2011–12) and the change in methodology to take into account under-represented sectors and the growing informal sector. Nonetheless, the scale of the increase took most observers by surprise, particularly since the numbers showed the economy in better shape than more high-frequency data.

For now, we will have to accept the new numbers even as we wait for more data on the back series for the controversy over the integrity of the numbers and the underlying methodology to be finally set to rest. The general consensus is that the economy is showing signs of recovery, with disagreement more on the pace, rather than the fact, of recovery.

One could argue that the recovery is not so much the consequence of good policy as of a dramatic fall in commodity prices. Unlike most developing countries that tend to be commodity exporters, India is a net commodity importer. So, even as countries like Brazil, Mexico, and Russia struggle to deal with the sharp fall in the prices of a range of commodities, India is uniquely advantaged. A decline in oil prices, almost a halving of prices in the course of a year, is unqualified good news and on a number of fronts: the price front, the fiscal front and the balance of payments.

On the price front, lower oil prices mean lower inflationary pressure; on the fiscal front, it means lower subsidy bills and hence lower fiscal deficits; and on the balance of payments front, it means a lower current account deficit (CAD). With subsidies accounting for ₹2.7 lakh crore in FY15, 95 per cent of which was on food, fertiliser and oil, a fall in the Indian crude oil basket to a little over $50 per barrel, down from $70 per barrel at the time of the budget, translates into a substantial saving in subsidy.

Every $1 decrease in oil prices pulls the import bill down by ₹6,500 crore and the subsidy burden by ₹900 crore. For the year as a whole, the saving on oil subsidies alone is expected to be in the region of ₹9,000 crore. On the current account front, the impact is just as dramatic; to give just one instance, the crude import bill dropped 42.6 per cent in August to $7.3 billion! Thanks to the lower import bill, the CAD for the year as a whole is seen at just 1.2 per cent of GDP, down from 1.3 per cent of GDP in FY15 (though up from 0.2 per cent in Q4, FY15) despite the poor showing on the export front.

The good news doesn't end there. Along with the better showing on the growth front, inflation, both retail as well as wholesale, has shown marked improvement. With the exception of June 2015 when the consumer price inflation (CPI) edged up marginally, the CPI has been on a secular decline since February 2015, dipping to a 9–month low of 3.66 per cent in August before increasing to 4.41 per cent in September 2015. Meanwhile, the WPI fell to a record–4.95 per cent, the tenth consecutive month of a decline in wholesale price inflation and the eighth month in negative territory, before inching up to–4.54 per cent in September 2015.

This is not to say the Indian economy is out of the woods. On the contrary, the recovery is still at a very nascent stage. But if we don't make a hash of the opportunities provided by an almost providential confluence of factors, the second half of the year should be better than the first.

Of course, the concerns of the first half have not disappeared entirely. The overall situation, particularly the global situation, remains highly uncertain. If the first half was dominated by three concerns—the possible fallout of a normalisation of US interest rates by the US Federal Reserve Bank, the IMD's prediction of a sub-normal monsoon and the possibility of a Grexit (Greece's exit from the Euro zone)—the second half is likely to be dominated by two new concerns and one old one!

Concerns over Greece have been replaced by concerns over slowing growth in China and worries about the monsoon, and by the slow pace of global recovery especially of global trade. The only constant is anxiety about the timing and pace of the Fed interest rate normalisation. The latest reports suggest the Fed is on-course to raise rates at the FOMC (Fed Open Markets' Committee) meeting on 15–16 December 2015, in which case the world and India must brace itself for a period (hopefully brief!) of extreme volatility.

O.1: Global Economy

Growth in the advanced economies is virtually stagnant. Japan's GDP growth contracted in the second quarter, shrinking an annualised 1.2 per cent in April–June. Factory output fell for the second straight month in August, fuelling worries that a prolonged slump could quash an unsteady economic recovery and raising expectations of fresh stimulus from the Bank of Japan to spur growth. Continental Europe is slated to report only marginally higher growth at 1.5 per cent during 2015. The recovery in North America, including in the USA, is modest and the UK is likely to witness a modest 2.4 per cent growth during 2015.

Unlike in the years immediately after the global financial crisis, this time around emerging and developing economies (EMDEs) are also witnessing significant slowdown in growth. Apart from China where the growth rate is likely to fall to 6.8 per cent from 7.4 per cent, Russia is expected to contract sharply (–3.4 per cent from 0.6 per cent) as is Brazil (–1.5 per cent from 0.1 per cent). Brazil has suffered the additional ignominy of a rating downgrade. Of the other BRICS nations, South Africa is estimated to grow higher, at 2.1 per cent up from 1.5 per cent.

Against this backdrop of negative to modest positive growth rates for the large economic powerhouses and major EMDEs, India's economy is poised to grow at 7 per cent plus according to most estimates and at 7.4 per cent according to the RBI (down from the 7.6 per cent projected earlier). The government continues to go by its earlier projection of 8.1–8.5 per cent, though more recently senior government officials have been quoted as saying the economy will grow upwards of 7.5 per cent.

In September, the Asian Development Bank (ADB) cut China's economic growth forecast to 6.8 per cent in 2015 and to 6.7 per cent in 2016, down from 7.0 per cent and 6.8 per cent, respectively. But unlike earlier when India's GDP growth estimates were held unchanged by multilaterals even as growth estimates of virtually every other country were lowered, this time around India's growth estimates were also cut—to 7.4 per cent from 7.8 per cent earlier, citing weak external demand, the poor monsoon and the government's inability to push reforms through Parliament. Growth is expected to pick up to 7.8 per cent next year but this too is lower than the 8.2 per cent projected earlier.

For a country long obsessed with how we do *vis-à-vis China*, the consolation is that while growth in India is expected to pick up to 7.8 per cent next year, it is expected to slow down to 6.7 per cent in China. Thus, for those to whom such things matter (never mind that China is a far more prosperous economy than India by any yardstick), there is one more reason to cheer: not only is India expected to grow faster than China, but the gap between the two is also expected to widen!

In line with the slow economic recovery, world trade is expected to grow only 2.8 per cent, down from 3.3 per cent originally projected by the World Trade Organization in April 2015, thanks to uncertainty about the US Fed rate hike, the slowdown in China, and the refugee crisis in Europe. This would make it the fourth consecutive year that trade has grown at less than half the annual average during the period 1990–2008 (i.e., the global financial crisis). However, it is an improvement over the 2.4 per cent recorded in 2014. The good news is that 2016 is expected to be a better year with global trade projected to grow 3.9 per cent.

Even as growth and trade remain subdued, inflation or rather the absence of inflation remains a puzzle. Far from showing traction in response to unprecedented monetary easing, inflation remains low. Indeed, the collapse of commodity prices has aggravated deflationary pressures. In the euro area, inflation turned unexpectedly negative in September for the first time in six months, adding to pressure on the European Central Bank to provide additional stimulus. Consumer prices in the 19–nation currency bloc fell 0.1 per cent from a year earlier according to a report published by the EU statistical office in late September.

O.2 Agriculture

In the Indian context, no discussion of the performance of the agriculture sector can ever be divorced from a discussion on the performance of the monsoon, especially the south-west monsoon which has a major impact on the rain-dependent kharif output. Hence, the fact of India's worst monsoon in six years, which ended with a 14 per cent rain deficit, cannot be ignored. In June 2015, the IMD predicted a 12 per cent deficit, citing a strengthening El Niño, the weather phenomenon that results in drier-than-normal weather conditions in India, dampening hopes of a speedy revival in growth.

With more than half the country's farmland being rainwater-fed, the second consecutive year of sub-par rains is not a happy augury for a country that has more than half its population living in rural areas. The uneven spatial distribution of the monsoon means some states are worse affected than others. Among those with a large deficit are Maharashtra, Gujarat, north Karnataka, and Telangana. Cotton, pulses, and oilseeds are likely to be adversely affected. At the end of the season, 39 per cent of the total area had received deficient rainfall, 55 per cent had received normal rainfall, and 6 percent excess rainfall.

Rainfall deficiency peaked to 16 per cent in mid–September before improving slightly in the last two weeks, ending the season with 14 per cent deficiency compared to the IMD's original projection of 12 per cent. This is bad news for kharif crops for which rains in July and August are crucial. Though late rains, which occurred over most of the country even as the monsoon withdrew, are likely to increase precipitation and hence increase soil moisture, which is critical for the sowing of the winter or rabi crop, FY 16 is bound to be marked by greater rural distress.

According to the government's first advance production estimate released on 15 September, *kharif* production is expected to fall short by 2 per cent (124.05 million tonnes compared to 126.31 million tonnes last year). However, since the reservoir position is quite satisfactory, the rabi output is expected to make up for the deficit. The silver lining is that first advance estimates for FY16 are higher than the fourth advance estimate for the previous fiscal in three vital crops—urad, castor seed, and soyabean— suggesting that the new focus on pulses is delivering.

More critically, from the perspective of the impact on human lives, the government's latest Social and Economic Census (SECC) 2011 shows that the dependence of the rural population on agriculture is coming down. According to SECC data, only about 30 per cent of rural income is sourced from agriculture with non-farm income becoming increasingly more important. The second consolation is that thanks to proactive steps taken by the government, the adverse impact on the *kharif* output is expected to be muted. Inevitably, the government has set a higher target for food grain production from the rabi harvest (132.8 million tonnes) to make up for the loss in the *kharif* crop.

For now, the impact of the sub-par monsoon is not reflected in growth numbers. According to the numbers released by the CSO in late May, agriculture grew at 1.9 per cent in Q1 FY 2016. While the production of rice, wheat, pulses, and coarse cereals contracted, the decline here was more than offset by higher growth in the livestock, fisheries, and forestry segment.

O.3 Industry

On the industrial front, H1 FY16 augurs well; especially in comparison to H1 FY15. Industrial production grew 6.4 per cent in August 2015, the latest month for which we have numbers (at the time of going to print), a near three-year high. The improvement was broad-based with all three sectors—manufacturing, mining, and electricity—showing improved performance, both sequentially as well as on a year-on-year basis. The previous high was in October 2012, when industrial growth touched 8.4 per cent. While part of the better showing might be a statistical mirage—industrial growth was just 0.4 per cent in August 2014—the entire increase cannot be explained as being driven by 'base' effects, especially since it ties in with better indirect tax collections.

With this, industrial growth in the first five months of FY16 stands at 4.1 per cent as against 3 per cent in the comparable period of the last fiscal. Within industry, the performance of the manufacturing sector, which has a 75 per cent share of the index of industrial production, is particularly heartening. Barring the brief dip in May 2015, when manufacturing growth fell to 2.5 per cent, the sector has shown some unexpected resilience with growth climbing to 6.9 per cent in August 2015, up from just 1.1 per cent a year ago.

Likewise, capital goods have put in a strong showing, growing upwards of 10 per cent for the second successive month in August 2016. Consumer durables, which had a dismal year through most of FY15, also performed better in H1 FY16. There is, of course, a small caveat here. The base effect was most pronounced in the case of capital goods and consumer durables; hence, the recovery in these two sub-segments might appear a bit over-stated. Electricity, alone among the three broad sub-sectors, has grown at a slower rate: 5.6 per cent compared with 12.9 per cent in the period a year ago.

O.4 Services

The services sector, long the mainstay of India's growth story, is showing signs of flagging. Though the sector grew 6.8 per cent in Q 1 FY15, in line with the growth recorded in FY14, it is well below the close to double-digit growth recorded during the boom years of 2005–06 to 2007–08. Within the services sector, there is wide variance in growth across sub-sectors with sectors like trade, hotels and restaurants and

construction showing slower growth compared to community and personal services (9.1 per cent) and the finance and insurance sectors (10.4 per cent).

Not surprisingly, the slowdown in the global economy is taking its toll on travel and tourism. Tourist arrivals grew by a moderate 4.5 per cent during the January –August 2015 period compared to the same period in the previous year. As per the latest numbers released by the Ministry of Tourism, foreign tourist arrivals during August 2015 were marginally higher than in the comparable month in the previous year. In a sign that travel within SAARC countries is growing even as trade between the countries remains moribund, Bangladesh has overtaken the US and the UK to become the largest contributor in terms of number of overseas tourists. Foreign exchange earnings from tourism during this period were marginally higher in the period January –August 2015 compared to the same period in the previous year.

In a bid to counter the impact of a slowing world economy on services exports from India, the new Foreign Trade Policy 2015–2020 announced by the Commerce Minister, Nirmala Sitharaman, on 1 April 2015 has introduced a new scheme, 'Services Exports from India Scheme' (SEIS). The scheme is aimed at increasing exports of notified services by rewarding all exporters of these services with incentives under the SEIS.

The good news is that unlike the manufacturing PMI (Purchase Managers' Index) which hit a 22-month low in October 2015, the services PMI has been looking up. Though the index fell marginally in September to 51.3, down from August's 51.8, September was the third straight month that the index stood above 50, the level that separates growth from contraction, and in October 2015 the services PMI hit an eight-month high of 53.2 driven by a sharp rise in new business orders.

O.5 Money & Financial Markets

Liquidity conditions were generally comfortable during H1 FY16. As government spending resumed after the compression in government spending in Q4 FY15 (to meet the fiscal deficit target), money market rates softened to below the repo rate in the first half of April 2015. Though liquidity conditions tightened somewhat in May 2015, by June the combined effect of increased government spending on investment and faster growth in bank deposits relative to advances again caused rates to soften.

Credit offtake remained muted, reflecting the slow pace of economic recovery. Though credit offtake at the end of September 2015 was 9.5 per cent higher on a year-on-year basis, growth in H1 was virtually flat. Indeed, non-food credit declined 0.48 per cent over the period, even as deposits grew 11.25 per cent. The hope is that offtake will pick up pace in H2 FY16 after the RBI's decision to cut rates by an aggressive 50 basis points in its September policy statement. With this, the RBI has cut repo rates by 125 basis points since the beginning of the calendar year. Of course, given the less-than-perfect monetary policy transmission mechanism in the country, banks have cut their base rates by only about 70 basis points.

Some of the slack in credit demand was also, perhaps, on account of higher recourse to borrowing through corporate bonds and external commercial borrowing. Primary issuances in the corporate bond market rose sharply during the first half, though most of this was through private placements. Spreads

over G-secs also declined, indicating easier financing conditions. Foreign investor also showed interest in Indian corporate bonds—Foreign Portfolio Investment (FPI) in such bonds stood at ₹180,000 crore as on 24 September (76 per cent of the permissible limit). However, the outlook for H2 is less optimistic thanks to the massive default by Amtek Auto, which resulted in a sharp fall in the net asset value of a number of debt mutual funds, notably in the debt funds of JP Morgan.

On the monetary policy front, H1 2015 saw the Finance Ministry and the RBI cross swords over the composition of the Monetary Policy Committee (MPC). The composition assumes critical importance given the shift from the erstwhile system where the governor was the final authority on monetary policy (aided by a Technical Advisory Committee) to a system where monetary policy is determined by majority opinion of an MPC. While publicly both maintained they were close to arriving at an understanding, it is no secret that differences remain, with the government wanting to appoint a majority of the members and the RBI (understandably) unwilling to cede ground on this.

The RBI's position is not without merit. The Monetary Policy Framework Agreement signed between the government and the central bank makes the latter squarely responsible for achieving the inflation target. In such a scenario, it is only appropriate that the RBI should have the final say in formulating monetary policy once the inflation target has been mutually agreed upon. According to the latest (unconfirmed) reports, the government is likely to settle for a compromise solution where three members will be appointed by the government and three by the RBI, with the governor being given a casting vote in case of a tie.

In the equity market, a great deal of the rally witnessed during H2 FY15 wore off in Q1 FY15, with Indian markets trailing other emerging market peers. The prospect of a sub-par monsoon, the slower pace of reforms, and the logjam in Parliament combined to pull down both the Sensex and the Nifty. The second quarter proved better, with the Sensex recovering much of the ground lost during Q1. By late August, however, turmoil on the Shanghai stock market saw a massive sell-off from Indian markets too, dragging the Sensex down to well below the high of 29,682 on 29 January 2015. H1, FY16 finally ended with the Sensex just about re-claiming the 26,000 mark to close at 26,044.

Resource mobilisation through the primary market looked up during H1 FY16 with as many as 15 companies approaching the market with Initial Public Offers (IPOs). This is a five-fold increase compared with H1 FY15. According to Prime Database, H1 saw a mobilisation of ₹4,950 crore through IPOs with another ₹12,916 crore raised through the Offer-for-Sale route. With some big IPOs—Coffee Day Enterprises, which runs the country's largest coffee chain, Café Coffee Day and InterGlobe Aviation, the operator of IndiGo Airlines—lined up for H2, hopefully the IPO drought of the past two years is history.

O.6 External Sector

On the external front, the position, as reflected by the CAD, remained prima facie satisfactory though the numbers hide deeper anxieties. According to the figures released by the RBI in early September, the CAD narrowed to US$ 6.2 billion (1.2 per cent of GDP) in Q1 FY16 as against $7.8 billion (1.6 per cent of GDP) in the comparable period last year. The improvement was mainly on account of a contraction in the merchandise trade deficit.

The position was largely unchanged in Q2 as well. Merchandise exports continued to do poorly, falling for the ninth month in a row, but imports also declined, thanks to the dramatic fall in commodity prices. The combination of lower exports and even lower imports resulted in a three-month low trade deficit of $10.47 billion in September 2015. Between April and September, exports contracted 17.6 per cent to $132.9 billion while imports fell 14.1 per cent to $200.9 billion. The trade deficit for H1 FY16 stood at $67.9 billion, down $4.7 billion from a year ago. Consequently, despite service exports also moderating, the current account deficit for HI FY16, and indeed for the year as a whole, is likely to remain within manageable limits.

Though the rupee weakened during the second quarter, primarily on account of a strengthening of the dollar, it strengthened vis-à-vis its emerging market peers, thanks to strong inflows for most of the first half year. Through most of the first six months of FY15, the rupee traded in the range of ₹62–68 to the dollar, below the low of ₹68.8 reached in August 2013. With the decline in domestic inflation in the past few months, the inflation differential between India and the US has come down. Nonetheless, it would appear the rupee is still over-valued at these levels. According to the RBI's annual report for 2014–15, at these levels the rupee is over-valued in terms of both the six-country as well as 36- country REER (real, effective exchange rate). The RBI has so far limited its intervention to a few occasions and seems content to go along with the prevailing (early November) range of ₹65–66 to the US dollar.

Meanwhile the country's forex reserves crossed the $350 billion mark (forex reserves stood at $350 billion on 25 September 2015), an increase of $10.4 billion in the first half of FY15. As on 23 October 2015, the latest date for which numbers are available as on the date of this review, reserves had edged up marginally to $351.5 billion.

The stock of outstanding external debt rose 7 per cent year-on-year to $482.9 billion in April –June 2015, driven mainly by a rise in external commercial borrowings. However, the share of short-term debt by residual maturity to reserves was marginally lower at 51.9 per cent at the end of June 2015, down from 54.2 per cent at the end of March 2015. External debt as a per cent of GDP was 24 per cent in June 2015, up from 23.7 per cent in the previous quarter.

O.7 Prices

On the inflation front, the good news continues. Both the consumer price index (CPI) and the wholesale price index (WPI) trended lower, with the WPI slipping into negative territory in November 2014 and falling steadily for 11 straight months to touch a low of –4.95 in August 2015 before inching up to 4.54 per cent in September 2015. Likewise, the CPI trended down for most of the first half of the current fiscal. Barring a slight reversal in the trend in June 2015, it continued to decline in July and August 2015 before rising again in September 2015 when it touched 4.41 per cent in response to the higher prices of pulses and vegetables.

This is in line with both the RBI's expectations and the waning of base effects. According to the RBI's Monetary Policy Report presented along with its fourth bi-monthly monetary policy statement, CPI inflation is expected to average 5.5 per cent in 2015–16 and then moderate to about 4.8 per cent in Q4,

2016–17. Food inflation edged up to 3.9 per cent, considerably higher than the number for August 2015 (2.2 per cent) but well below any discomfort zone, suggesting distinctly better management of the food economy by the government.

Much more will be needed on this front given that FY16 marks the second successive year of sub-par monsoon. Food inflation, as measured by both the CPI as well as the WPI, has already moved up. At the WPI level, food inflation (primary articles + manufactured food products) turned positive in September after staying in negative territory in July and August 2015, due to a sharp increase in the price of pulses. However, with the government swinging into action—promising to import more pulses, expanding the coverage of the price stabilisation fund established earlier for onions and potatoes to cover pulses, and creating a buffer stock of pulses—prices are expected to stabilise.

Ironically, despite the marked improvement on the inflation front, the RBI's latest (September 2015) survey of inflation expectations of urban households shows a firming up of household inflation expectations, suggesting inflation expectations are too deeply ingrained to really change in response to lower inflation. However, to the extent the survey is based on a sample of about 5,000 households in 16 cities, the findings need to be taken with a pinch of salt. More worrisome than the stickiness of inflation expectations, per se, is the increase in the standard deviation of the year-on-year monthly WPI and CPI inflation, which suggests that uncertainty regarding inflation has increased, rather than decreased, over the year. But for now, there is no doubt whatsoever that the RBI's baseline projection of 5.8 per cent for January 2016 will be comfortably achieved.

O.8 Public Finance

Budget 2015–16 was presented against the backdrop of heightened expectations because it was the first full budget of the Modi government. Opinion was divided on whether the government would adhere to the targets laid out in the medium-term fiscal policy statement or opt for a slightly more relaxed pace of adjustment. In the event, the government opted for the latter. Seeking to boost growth, the finance minister re-worked the fiscal consolidation roadmap.

Accordingly, the fiscal deficit (FD) target has been set at 3.9 per cent for FY 2016 as against the earlier target of 3.6 per cent. Though this seemed rather ambitious in February 2015 given the shortfall in revenues in the previous fiscal, the government plans has so far done a fairly commendable job on the fiscal front. It has been aided, of course, by Lady Luck since the sharp fall in oil prices has reduced the subsidy bill substantially.

The government's record on the fiscal front during the first half of FY16 is largely commendable. Though it marginally exceeded the FD target for FY15, as per the provisional number in the Budget-at-a-glance presented in February 2015, it finally closed the year with the FD at 4 per cent of GDP, down from 4.1 per cent in the revised estimates and only marginally higher than the 3.9 per cent projected as per the Budget Estimate (BE) for FY15.

According to the latest number released by the Controller General of Accounts, the FD during the period April–September 2015 stood at ₹3.79 lakh crore or 68.1 per cent of the budget estimate for the year. This marks a considerable improvement over the comparable period last year when the FD stood at 82.6 per cent of the Budget estimate (₹ 5.55 lakh crore).

Tax collections (net to Centre) are better at 40.2 per cent of the BE and total receipts too are better at ₹ 5.32 lakh crore (43.5 per cent of the BE), mainly on account of substantially higher non-tax revenue (64.8 per cent) as against just 44.6 per cent in the comparable period last fiscal. The one area on the receipts side that has disappointed is disinvestment where the proceeds to date—₹12,600 crore—are a far cry from the target of ₹69,500 crore. Though there has been talk of scaling down the target, officially we have no confirmation as yet, but government officials are confident the shortfall will be made up and the year will end with only a marginal shortfall of about 5 per cent.

Total expenditure during the same period stood at ₹9.11 lakh crore or 51.2 per cent of the BE. Of the total expenditure, Plan spending stood at ₹2.54 lakh crore, while non-Plan spending was considerably higher at ₹6.57 lakh crore. Not surprisingly, the revenue deficit (RD) during the period April–September 2015 was 68 per cent of the BE. However, this is substantially less than the RD during the comparable period last year (91.2 per cent). So, while the government's claim that it will be able to stick to the fiscal straight-and-narrow is likely to be tested in the months ahead, overall the prognosis on the fiscal front is good, despite the fact that the disinvestment target (₹69,500 crore) now looks quite iffy with only ₹12,600 crore being raised so far through stake sale in four PSUs—IOC, PFC, REC, and Dredging Corporation.

In line with the government policy of opening up the G-sec market progressively to FPI as well as the clamour from FPIs, the limit for FPI investment was hiked in September 2015. The new limit has been set at 5 per cent of the outstanding stock of government securities. This is to be done in phases by March 2018 and is expected to lead to room for additional investment of ₹1,20,000 crore in central government securities (i.e., almost a doubling of FPI investment in G-secs from the existing limit of ₹1,53,500 crore).

O.9 Forecast

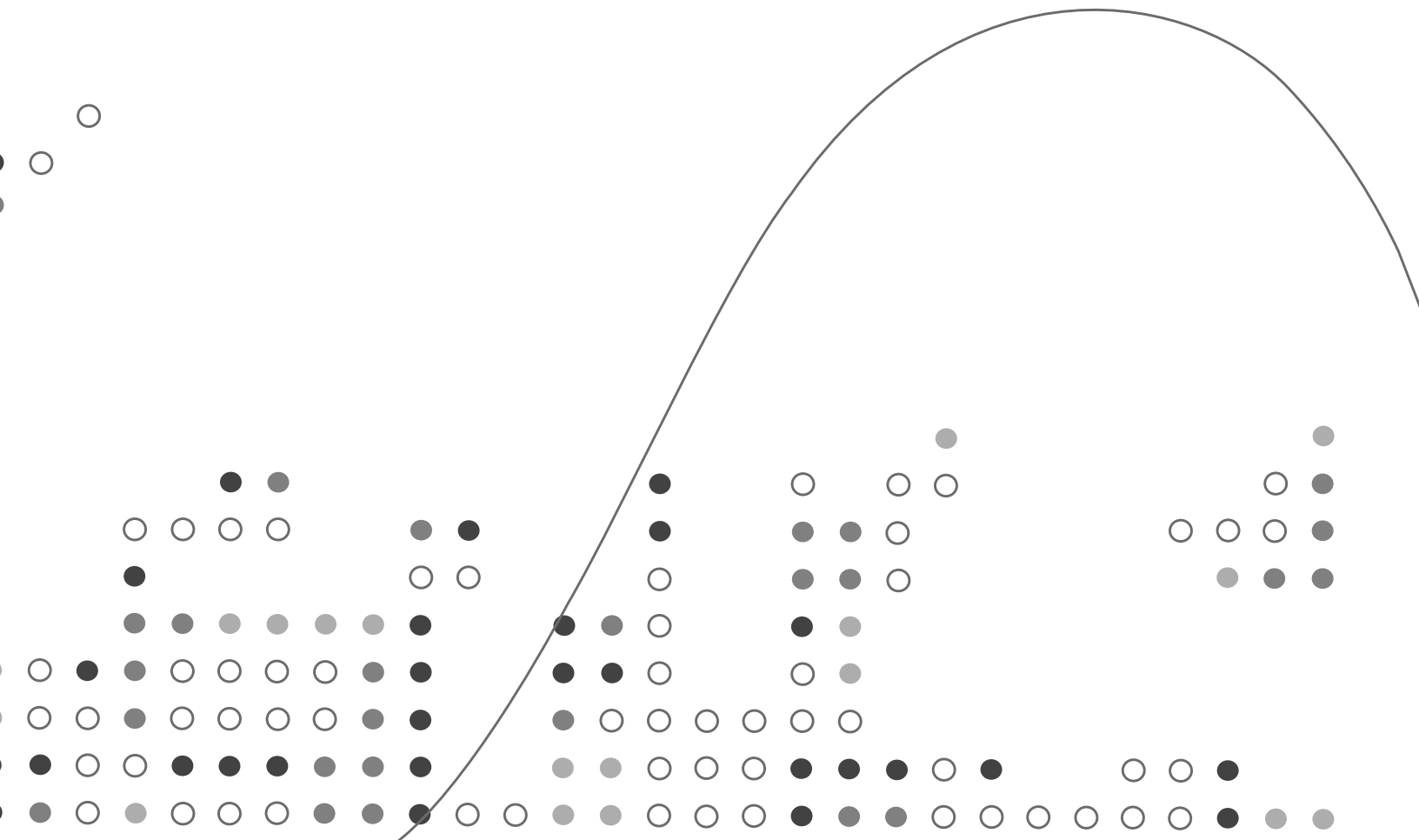
The NCAER quarterly model is predicting Gross Value Added at Basic Prices (2011–12) to be 7 per cent in 2015–16. The annual model is predicting that Gross Domestic Product at Market Prices (2011–12) will grow at 7.4 per cent in 2015–16. There are signs of green shoots in the economy. However, continued weather and global economy shocks have kept economic growth muted. And despite efforts on the part of the government, both demand and investment remain moderated.

O.10 Conclusions

Given the uncertain and volatile times in which we live, any forecast, whether based on an analysis of past trends or on econometric modelling, is always a bit of a shot in the dark. But what we can definitely say and with much greater confidence is that our macro fundamentals are in far better shape than in November 2014.

Mid-Year Review of the Indian Economy 2015–16

Part II: Recent Trends and Patterns in the Economy



Agriculture

Anil Kumar Sharma

For the second year in a row, the rainfall received during the June–September period of 2015–16 has remained below normal. Both temporal as well as spatial distribution of overall seasonal rainfall during this year was poor in comparison with the normal. In comparison with last year's monsoon rainfall, the only difference is in the pattern of the temporal distribution. The spatial distribution, however, was better last year. The first advance estimates from the Ministry of Agriculture exhibit a decrease of about 2 per cent in this year's kharif food grain output over the previous year. NCAER estimates, however, show that overall food grain output during this year's kharif season may be marginally higher compared with last year due to better rainfall conditions in areas where coarse cereals and pulses are grown.

A.1 South-west Monsoon

For the second year in a row, the actual rainfall received during the June–September period has remained below normal. Last year it was 13 per cent below normal and in 2015–16 it has been 14 per cent below its long-term average. This is despite the fact that there was huge excess rainfall during the first month of the monsoon season in almost all parts of the country. Of the total 36 agro-meteorological sub-divisions, 19 sub-divisions covering about 61 per cent of the total area in the country have received normal to excess rainfall. The remaining 17 sub-divisions constituting 39 per cent of the total area of the country received deficient rainfall. This is very much in line with the predictions made by the India Meteorological Department (IMD) in its forecasts in April and June 2015. The April forecast had predicted seasonal rainfall at 91± 5 per cent of its long period average and the June projection had lowered the forecast to 88±4 per cent of the LPA.

A month-by-month analysis of the progress of monsoon rainfall during the season shows marked fluctuations. The south-west monsoon arrived in Kerala on June 5, 2015, five days after its normal date of onset. After this initial delay, the monsoon advanced northwards and westwards fairly rapidly. In the first phase it covered the north-eastern parts and the southern peninsula. This was followed by the second phase that covered major parts of central India, the northern plains, and the western Himalayan region. The monsoon then covered the remaining parts of western India and the entire country on 26th June, about 20 days ahead of its normal date (15th of July). The consequence was that the overall rainfall during the month of June was surplus in all four regions of the country – east, west, north and south (Table A.1).

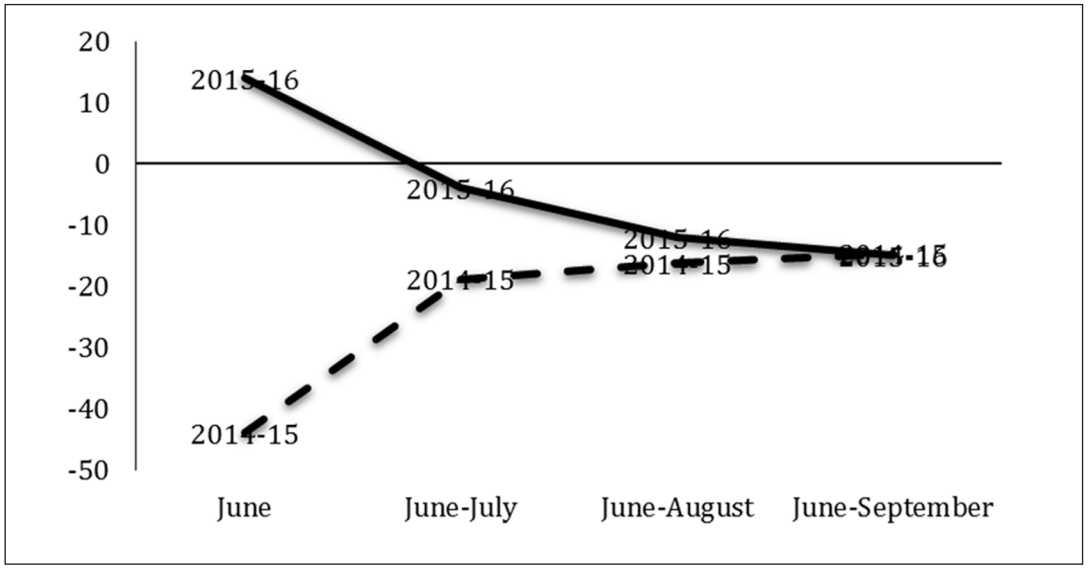
As the season progressed, rainfall activity reduced substantially over major parts of southern and central India. Rainfall was subdued in the first week of July. This was followed by intense rainfall activity along the Indo-Gangetic plains and northwest India. This continued in the second half of July, which witnessed vigorous monsoon conditions over central India, the western Himalayan region, and the west coast. However, despite some improvement in rainfall conditions in a few parts of the country, the June–July period of the season ended with a deficiency of 4 per cent at the national level and a huge deficiency of 20 per cent in the southern region. These deviations in rainfall indices have been computed on the basis of un-irrigated area under food grains as weights.

Rainfall conditions during the month of August witnessed further deterioration, which led to a huge change in the overall monsoon scenario in many parts of the country with heavy to very heavy rainfall at isolated places over the eastern, northern, and central parts of India and weak monsoon in several parts of the country. As a result, the overall rainfall deficiency, which was 4 per cent until the end of July, increased to 12 per cent by the end of August. At the regional level, the worsening of the rainfall situation was particularly large in the western and northern regions.

The weakening of monsoon conditions and the protracted break observed during the month of August continued in September as deficiency in rainfall increased further in three of the four regions – east, west, and north. Many parts of these three regions—for example, Bihar and Odisha in the eastern region, Haryana, Himachal Pradesh, Punjab, Uttarakhand, and Uttar Pradesh in the northern region, and parts of Gujarat, Madhya Pradesh, and Maharashtra—experienced a huge deficit in monsoon rainfall. The consequence was a 15 per cent deficit at the national level and at the regional level a deficit of 9 per cent in the eastern region to 18 per cent in the southern region.

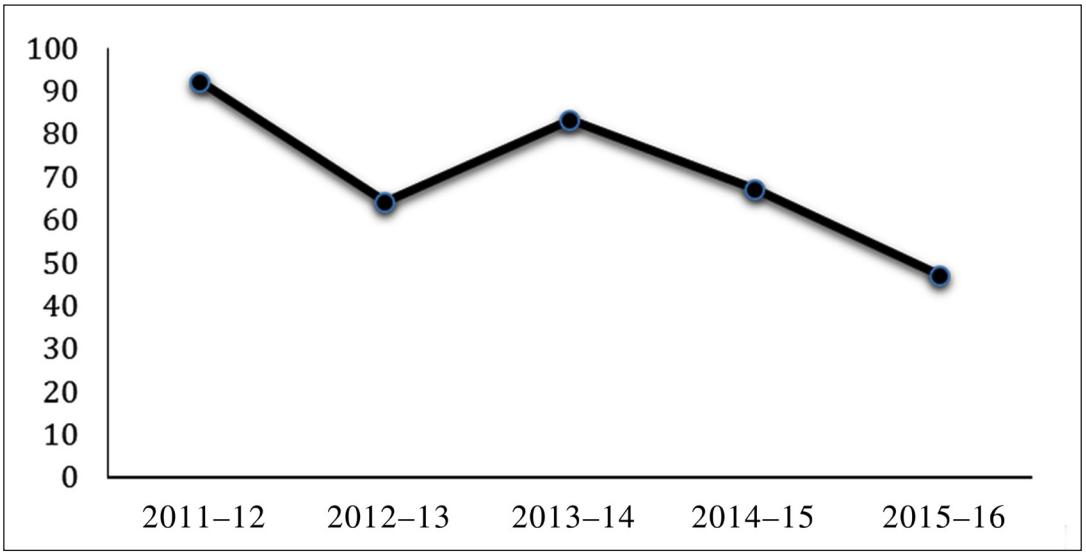
It is, therefore, no surprise that both temporal as well as spatial distribution of overall seasonal rainfall during this year was poor in comparison with the normal. In comparison to last year's rainfall as well, the only difference is in the pattern of the temporal distribution during the season, but the spatial distribution was better last year (Figure A.1A). This is evident in the low share of sub-divisions that received normal to excess rainfall during the current year (Figure A.1B).

Figure A.1A: Temporal Distribution of Monsoon Rainfall 2014–15 and 2015-16



Source: Author's computations from Indian Meteorological Department.

Figure A.1B: Spatial Distribution of Monsoon Rainfall 2011–12 and 2015–16



Source: Author's computations from Indian Meteorological Department.

A.2 Prospects for 2015–16

The impact of poor distribution of seasonal rainfall is evident in the first advance estimates of kharif output released by the Ministry of Agriculture (MoA). According to these estimates, the output of kharif food grains is likely to be in the region of 124.1 million tonnes, which exhibits a decrease of about 2 per cent over the previous year's estimated output of 126.3 million tonnes. The shortfall in output is on account of marginal loss in the output of rice (0.3 per cent) and about 6 per cent decrease in the production of coarse cereals.

Our own estimates, however, show that the overall food grain output in the *kharif* season of this year may be marginally higher, approximately 1 per cent to 2 per cent. This implies that food grain output during the current *kharif* season may be in the region of 127 to 130 million tonnes (Table A.2). Our estimates of output for all three components of *kharif* food grains—rice, coarse cereals, and pulses—are expected to be slightly better than the first advance estimates put out by the ministry. This is essentially due to better rainfall conditions in areas where coarse cereals and pulses are grown compared with last year.

Our own estimates for this year's output of oilseeds are somewhat in line with the first advance estimates of the ministry, which suggest a 9 per cent increase in the expected output of kharif oilseeds. For cotton, the ministry's estimates place output at about 34 million bales, which is about 6 per cent lower than last year's output, but estimates computed by the NCAER suggest a marginal increase. In the case of sugarcane, the preliminary estimates by the ministry have placed the output of sugarcane at about 341 million tonnes, which is about 5 per cent below last year's output. Our own estimates, however, suggest a modest increase compared to last year's output of sugarcane.

On these differences in projections made by us and those prepared by the MoA, it is important to note the differences in methods used to arrive at these estimates. While the ministry's estimates are based on

preliminary information supplied by the individual state governments on area sown, our estimates are based on regression models. These models incorporate the impact of monsoon rainfall as well as trend, which is a catch- all variable. Notwithstanding these differences, as we have seen in the past, it is unlikely that the actual rates of growth in agricultural output will be considerably different from our estimates.

Going forward, the overall performance of this sector during the current year may not turn out to be as bad as had been anticipated. The level of water storage in the major reservoirs of the country as on 5 November 2015 was about 73 per cent of the last 10 years' storage level. And, for most crops the incidence of pests and diseases continues to remain below economic threshold levels and there have been no reports of any shortages in the supply of fertilisers or other inputs such as seeds, insecticides, and pesticides.

Also, food inflation has been much less this year compared with last year (Table A.3). A large number of commodity groups like cereals, vegetables, fruits, milk, eggs, meat, and fish, have exhibited much lower rates of inflation during the current year, which is in contrast to the trends observed in their prices last year. The only exception this year has been pulses, which have experienced a very high rate of inflation this year mainly due to a significant fall in the output of pulses last year (11 per cent), poor outlook for 2015–16, and market imperfections, which get pronounced during shortages. It is also a known fact that pulses are grown in poor physical environments, on marginal lands with low irrigation intensity, and are highly susceptible to pests and diseases. A long-term solution to these problems lies in developing new varieties that have higher yields, well-functioning markets, and a liberalised trade environment.

Table A.1: Deviations in Monsoon Rainfall Indices from the Normal

S. No.	Region	June	June–July	June–August	June–September
1.	Eastern Region	0.8	–3.7	–3.9	–9.3
2.	Western Region	21.7	–2.6	–14.9	–16.7
3.	Northern Region	16.3	5.6	–12.8	–17.4
4.	Southern Region	25.4	–20.3	–20.6	–17.7
	All India	14.40	–4.0	–11.6	–14.5

Source: Computed.

Notes:

[1] These are deviations in regional level rainfall indices computed on the basis of un-irrigated area under food grains as weights.

[2] The eastern region includes Assam, Bihar, Jharkhand, Orissa, and West Bengal.

[3] The western region includes Chhattisgarh, Gujarat, Madhya Pradesh, Maharashtra, and Rajasthan.

[4] The northern region includes Haryana, Himachal Pradesh, Jammu and Kashmir, Punjab, Uttar Pradesh, and Uttarakhand.

[5] The southern region includes Andhra Pradesh, Karnataka, Kerala, and Tamil Nadu. 5. The southern region includes Andhra Pradesh, Karnataka, Kerala, and Tamil Nadu.

Table A.2: Estimated Rates of Growth in Kharif Crop Output during 2015–16

Crops	Estimated Output (Ministry of Agriculture) (million tonnes/bales*)		Estimated output and rates of growth for 2015–2016	
	2014–15	*2015–16 (First Advance Estimates)*	*Estimated Output (million tonnes/bales*)*	*Estimated rates of growth (per cent)*
Rice				
Kharif	90.9	90.6	90.6 to 92.2	–0.3 to 0.6
Coarse cereals				
Kharif	29.8	27.9	30.7 to 32.1	3.1 to 5.3
Pulses				
Kharif	5.6	5.6	5.7 to 5.8	2.0 to 2.6
Food grains				
Kharif	126.3	124.1	127.1 to 130.1	0.6 to 1.8
Oilseeds				
Kharif	18.3	19.9	18.9 to 19.1	3.7 to 4.2
Cotton*	35.5	33.5	37.3 to 38.1	5.2 to 6.6
Sugarcane	359.3	341.4	360.0 to 370.0	1.6 to 3.0

Source: Computed.

Notes:

1 Estimate I has been worked out using output equations.

2 Estimate II has been worked out using area and yield equations.

Table A.3: Changes in Wholesale Price Indices of Food Articles in 2014–15 and 2015–16 (April – September)

S. No.	Product	Increase in 2014–15 over 2013–14	Increase in 2015–16 over 2014–15
1.	Food articles	7.2	1.6
2.	Cereals	5.7	–0.7
3.	Pulses	2.7	31.2
4.	Vegetables	–5.3	–12.8
5.	Fruits	21.9	2.7
6.	Milk	10.6	4.8
7.	Eggs, meat and fish	3.9	0.8
8.	Condiments and spices	24.8	12.9
9.	Other food articles	6.6	–3.3

Source: Computed.

Industry

Poonam Munjal

While the industry sector has a long way to go in meeting "Make in India" targets, the cumulative industrial y-o-y growth in 2015–16 so far appears to be catching up with the growth last seen in 2011–12. The industry clocked growth of 4.1 per cent for the period April–August in 2015–16, up from the 3 per cent growth during the same period in 2014–15 and significantly up from the near-zero growth in the two consecutive preceding years. However, the growth numbers have to be viewed with caution. The month-on-month (m-o-m) growth based on seasonally adjusted series shows that manufacturing growth in August 2015 is largely due to the low base. The manufacturing Purchasing Managers' Index fell to a 22–month low at 50.7 in October 2015 from 51.2 in September 2015. With this, the PMI has been on a decline for the fourth straight month. Weak external demand is inhibiting the recovery of this sector. Both expansionary fiscal and monetary policy will hopefully help to stimulate demand and consequently growth of the industrial sector.

I.1 Introduction

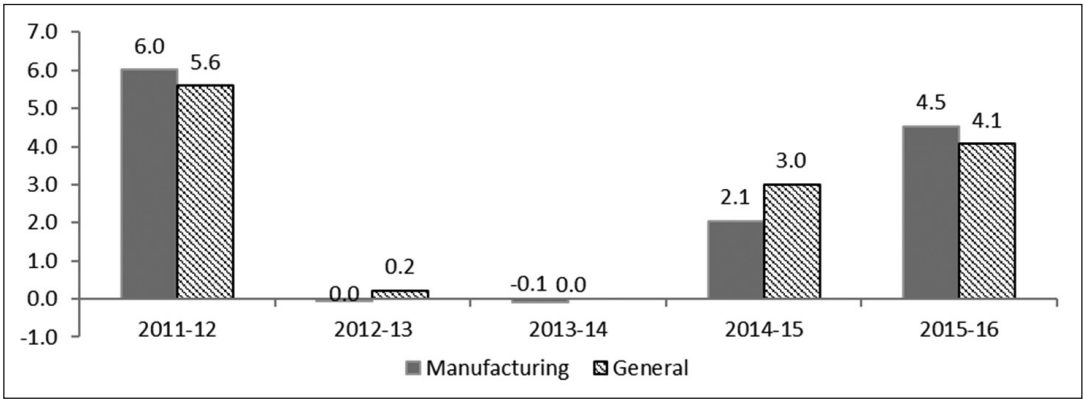
The new methodological changes in the computation of the Gross Domestic Product (GDP) mean that the Index of Industrial Production (IIP) is only an imperfect measure of industrial growth[1]. First quarter estimates from the current fiscal show that GDP Industry slowed to 6.4 per cent on a year-on-year (y-o-y) basis from 7.2 per cent in 2014–15:Q4 (Table I.1). Interestingly, the IIP showed continued growth of 3.3 per cent in both quarters i.e. 2014–15:Q4 and 2015–16:Q1 (Table I.2). In the absence of other statistics, however, we fall back on the IIP to indicate the health of the industrial sector.

Proceeding with the above caveat, the industrial sector (IIP) is unequivocally showing recovery but one still needs to proceed with caution in interpreting the numbers. Cumulative industrial growth in 2015–16 so far appears to be catching up with the growth last seen in 2011–12 (Figure I.1). The industry clocked a growth of 4.1 per cent for the period April–August in 2015–16, up from the 3 per cent growth during the same period in 2014–15 and significantly up from the near-zero growth in the two consecutive preceding years. While this is still slower than the growth of 5.6 per cent recorded in the same period in 2011–12, it is more impressive owing to the fact that all the broad sectors—manufacturing, mining and electricity—contributed positively to aggregate growth unlike in 2011–12 when the mining sector showed a contraction of 0.5 per cent (Table I.2).

The largest y-o-y growth spurt was experienced in August 2015 (6.4 per cent) versus 0.5 per cent in August 2014. This is the highest growth evidenced since October 2012. Further, the latest August numbers are encouraging, not just due to high aggregate growth but also because the growth appears to be largely broad-based. The growth rates in the production of hitherto weak investment (capital goods) and consumer goods (accounting for 38.6 per cent of total manufactured goods) appear to have picked steam, along with the growth in other industrial goods.

[1] Bhattacharya, S. 2015. Clearing the fog on the new GDP numbers. http://www.ideasforindia.in/article.aspx?article_id=1470. June 24.

Figure I.1: Growth in Industrial Production during April–August (%, y-o-y), 2011–12 to 2015–16



Source: Central Statistical Office.

The manufacturing sector, accounting for 75 per cent of the total industry, grew by 6.9 per cent in August 2015 on a y-o-y basis. The good news is that growth in the manufacturing sector, in tandem with the overall industry, has been positive for 10 straight months in a row, a feat it could not achieve in the past four years. The mining sector too grew stronger at 3.8 per cent and electricity increased by 5.6 per cent in August 2015 on a y-o-y basis.

I.2 Use-based Categories of the Manufacturing Sector

On use-based classification, basic goods and intermediate goods (y-o-y) grew moderately at 3.4 per cent and 2.6 per cent, respectively, in August 2015 but both decelerated sharply during the cumulative period of April–August in 2015–16 compared with the growth witnessed during the corresponding period of the previous year (Table I.3). From 8.4 per cent in this period in 2014–15, basic goods' growth weakened to 4.5 per cent this fiscal. Similarly, intermediate goods grew slower at 1.8 per cent this fiscal compared to 2.4 per cent in 2014–15.

On the other hand, capital goods and consumer goods posted their best performance in the past many months, comfortably offsetting the mediocre growth of basic and intermediate goods. The production of capital goods, an indicator of investment demand, rose by 21.8 per cent in August 2015 after posting a growth of 10.6 per cent in the preceding month (Figure I.2). Similarly, consumer durables has been growing at an impressive double-digit growth rate consecutively for the past three months, while it had stayed in negative territory in almost every month in over the past two-and-a-half years. Weak consumer and investment demand were the prime reasons behind the poor manufacturing sector growth in the past few months.

For the cumulative period of April–August 2015–16, capital goods grew at 7.4 per cent on a y-o-y basis, which is its fastest growth in the past four years for this period. Meanwhile, consumer durables with 7.7 per cent has exhibited its highest growth in the past five years. These categories are likely to strengthen further as the banks cut their lending rates after four rounds of reduction in policy rates that add up to 125 basis points so far.

Figure I.2: Growth of Use-based categories of industry (% y-o-y)(Aug'14 to Aug'15)

Use-based categories of industry	Monthly % growth (Aug'14 to Aug'15)	Max growth (%)	Min growth (%)	Average growth Apr'14 to Aug'14 (%)	Average growth Apr'15 to Aug'15 (%)	
Basic Goods		9.7 (Oct-14)	2.6 (Mar-15)	8.4	4.5	⬇
Capital Goods		21.8 (Aug-15)	-10.0 (Aug-14)	4.8	7.4	⬆
Intermediate Goods		4.7 (Nov-14)	-3.4 (Oct-14)	2.4	1.8	⬇
Consumer Goods		7.7 (Jun-15)	-18.2 (Oct-14)	-4.3	3.0	⬆
Consumer Durables		17.4 (Jun-15)	-35.2 (Oct-14)	-12.8	7.7	⬆
Consumer Non-Durables		10.5 (Feb-15)	-4.6 (Jul-15)	1.9	0.1	⬇
General		6.4 (Aug-15)	-2.7 (Oct-14)	3.0	4.1	⬆

Note: Grey bars indicate negative growth.

Source: Central Statistical Office.

I.3 Performance at the Two–Digit Level

Of the 22 industries at the 2–digit level, 15 industries posted positive growth during April–August 2015 (Table I.4). Of these, the industries that clocked double-digit positive y-o-y growth were furniture, manufacturing n.e.c. (46.7 per cent); wearing apparel, dressing and dyeing of fur (18.3 per cent); electrical machinery & apparatus n.e.c. (11.8 per cent) and wood and products of wood (10.9 per cent). Of the seven industries that posted negative growth in this period, two industries shrank by double-digit negative growth rates. These are radio, TV and communication equipment & apparatus (–14.5 per cent) and office, accounting & computing machinery (–12.0 per cent).

I.4 Performance of Core Sectors

The latest data on eight core infrastructure industries shows an improvement as the overall index rose by 3.2 per cent (y-o-y) in September 2015 from 2.6 per cent in the preceding month. The eight infrastructure industries are coal, crude oil, natural gas, petroleum refinery products, fertilisers, steel, cement and electricity (together carrying the weight of 38 per cent in the total industry). However, during the cumulative period of April–September 2015–16, the index grew at a much slower pace of 2.3 per cent this year compared with 5.1 per cent in the same period last year. During this period, sharp deceleration is seen in the electricity, cement, steel and coal sectors (Table I.5). These sectors account for 62.8 per cent of the overall core industries' index.

I.5 Amidst Euphoria, Dark Clouds Hover

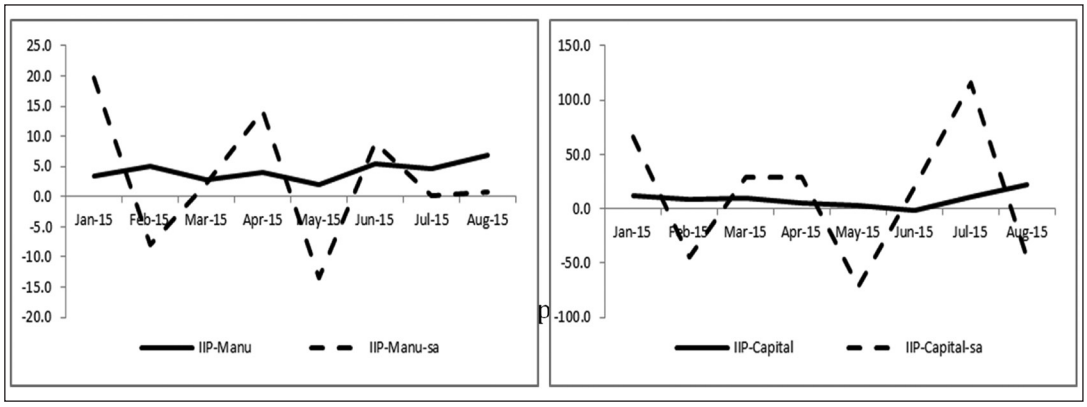
While the latest IIP data, as mentioned in the previous sections, do point towards the revival of the industry sector, the performance of some other indicators still makes us think otherwise or at least tells us to be cautious.

According to the latest GDP estimates, the overall economy grew faster by 7.1 per cent in the first quarter of 2015–16 compared with the growth of 6.1 per cent in the preceding quarter (Table I.1). In contrast, the industrial GDP growth moderated from 7.2 per cent in 2014–15:Q4 to 6.4 per cent in 2015–16:Q1. Similarly, the manufacturing sector's growth decelerated from 8.4 per cent to 7.2 per cent during the same period on a y-o-y basis. Going forward, whether the robust industrial growth in July and August 2015, as seen in IIP data, will give an impetus to industrial growth in the second quarter of 2015–16 is yet to be seen.

The m-o-m growth based on seasonally adjusted series shows that the outstanding apparent manufacturing growth in August 2015 owes largely to the low base. The manufacturing sector recorded a deceleration of growth of 1.1 per cent in August 2014, which helped in attaining 6.9 per cent growth in the same month this year, when the annualised m-o-m growth on the seasonally adjusted series stood at just 0.7 per cent (Figure I.3). The base effect is much more evident in the case of capital goods, a star performer within the manufacturing sector this year. On the back of a sharp contraction of 10 per cent in August 2014, this sector grew by an annual growth rate of 21.8 per cent in August 2015. In contrast, the annualised m-o-m growth on the seasonally-adjusted series stood at –45.5 per cent in August 2015.

The manufacturing PMI (Purchasing Managers' Index), the index that measures the performance of the manufacturing sector based on a survey of 500 manufacturing companies, fell to a 22–month low of 50.7 in October 2015 from 51.2 in September 2015 (Figure I.4)[2]. With this, the PMI has been on a decline for the fourth straight month. The latest fall was led primarily by slower increases in new orders and production. While production growth has been the weakest since May 2014, growth in new orders has been the lowest since June.

Figure I.3: IIP growth (Actual and annualised m-o-m on de-seasonalised series), January–August 2015



Source: Central Statistical Office.

[2] A PMI reading above 50 indicates an expansion of the manufacturing sector compared to the previous month, a reading below 50 represents a contraction and 50 indicates no change.

Figure I.4: A Counter-view of Industry, 2015

Use-based categories of industry	Monthly % growth (Aug'14 to Aug'15)	Max growth (%)	Min growth (%)	Average growth Apr'14 to Aug'14 (%)	Average growth Apr'15 to Aug'15 (%)	
Basic Goods		9.7 (Oct-14)	2.6 (Mar-15)	8.4	4.5	⬇
Capital Goods		21.8 (Aug-15)	-10.0 (Aug-14)	4.8	7.4	⬆
Intermediate Goods		4.7 (Nov-14)	-3.4 (Oct-14)	2.4	1.8	⬇
Consumer Goods		7.7 (Jun-15)	-18.2 (Oct-14)	-4.3	3.0	⬆
Consumer Durables		17.4 (Jun-15)	-35.2 (Oct-14)	-12.8	7.7	⬆
Consumer Non-Durables		10.5 (Feb-15)	-4.6 (Jul-15)	1.9	0.1	⬇
General		6.4 (Aug-15)	-2.7 (Oct-14)	3.0	4.1	⬆

Note: Grey bars indicate negative growth.

Source: CSO, Ministry of Commerce & Industry and Markit Economics.

Further, while the Indian economy is mainly driven by consumer demand, household consumption being about 60 per cent of the total GDP, external demand (exports) also contributes about one–fourth to the economy. Hence, weak demand from overseas impacts the Indian manufacturing sector to a great extent. China's slowdown, the trailing European economy, weak demand from the US and turmoil in the Middle East have all resulted in the shriveling of India's exports. The exports of goods shrank by nearly a quarter (24.3 per cent) in September 2015 from a year ago (Figure I.4). This is its tenth consecutive contraction and is a constant pressure on economic growth. From the trade chapter (Chapter 7) we know that India's merchandise exports consist predominantly of manufactured goods that accounted for 67.4 per cent of total exports during 2014–15.

The recent Trans-Pacific Partnership (TPP) among 12 Pacific Rim nations, which ensures lower trade barriers among the member countries apart from the main goal to promote economic growth, will further hurt the prospects for India's exports, particularly of textiles and leather products. While the member countries will have no-duty access to big markets, like the US and Canada, India will have to pay 14–32 per cent duty on textiles. Weak external demand has meant that the recent fiscal has already seen the decline of textiles exports (3.3 per cent) and readymade garments (4.9 per cent) during April–August 2015–16 on a y-o-y basis (Chapter 7: Trade).

Therefore, despite the initiatives of the Government of India and its emphasis on manufacturing (Box I.1), the recovery has best been modest.

Box I.1: Vision "Make in India": Too Good But Too Far

The "Make in India" initiative was launched on 25th September 2014 and it aims to ensure a conducive environment to both domestic and overseas investors in order to turn India into a strong manufacturing hub and create huge job opportunities. The prime focus is on job creation and skill enhancement in 25 sectors of the economy, which includes automobiles, chemicals, IT, pharmaceuticals, textiles, ports, aviation, leather, tourism and hospitality, wellness, railways, design manufacturing, renewable energy, mining, bio-technology, and electronics. The major thrust is on the manufacturing sector, which is slated to increase its share in GDP from about 18 per cent to 25 per cent by 2022. Also, 100 million additional jobs are to be created in the manufacturing sector alone. India is envisaged to become the top destination for manufacturing.

However, according to the World Bank's current statistics, India's share in global manufacturing GDP rose from 1.1 per cent in 2000 to 2.8 per cent in 2014 as against China whose share increased from 6.1 per cent to 25.8 per cent during the same period. The share of manufacturing in Indian GDP continued to hover around 18 per cent for the past five years, while it is more than 20 per cent for many other manufacturing countries like Thailand (33 per cent), China (31 per cent), South Korea (30 per cent), Malaysia (24 per cent) and Indonesia (22 per cent).

India's exports have fallen short of targets for the past three years and are likely to miss the target again this year, as per the data till now. India's share in global exports has remained almost stagnant at 1.7 per cent since 2010. This state of the manufacturing sector is reflected in its job creation as well. Under the "Make in India" initiative, 100 million jobs are aimed to be created by 2022. In reality, only four million jobs are estimated to have been created in the sector since 2010.

While there have been many big-ticket announcements of investment into India in response to the "Make in India" initiative, particularly in sectors like electronics, automobiles, and defence, their implementation is taking too long to achieve the desired outcomes. On top of this, India loses its competitiveness due to persisting factors such as infrastructure constraints, red-tape and corruption.

Sources: World Development Indicators, CSO, Ministry of Commerce & Industry.

I.6 Outlook

The latest Industrial Outlook Survey of the RBI shows improvement in expectations for quarter three of the current fiscal (Table I.6)[3]. Going forward, industrial growth is likely to benefit from the favourable base effect coupled with increased domestic demand of consumer goods ahead of the festive season. Further impetus is likely to come from the effective policy transmission after the RBI urged banks to pass the reduction in policy rates to consumers. The implementation of the Seventh Pay Commission recommendations in the fourth quarter of the current fiscal and increased public capital expenditure may both stimulate demand

[3] The Industrial Outlook Survey conducted during July–September 2015 provides a qualitative assessment of the business situation of companies in the Indian manufacturing sector for 2015–16:Q2 and their expectations for the ensuing quarter 2015–16:Q3. The survey elicited responses from 1,304 manufacturing companies.

and crowd in investment, respectively. Meanwhile, no respite is expected from the overseas demand amidst global economic conditions, particularly in India's largest trade partners, the US and Europe, which together make up 30 per cent of India's total exports. This will be a significant pull-down factor for the Indian manufacturing sector until the global economy recovers to some extent.

Table I.1: GDP Growth – Quarterly Estimates by Sector

		Agriculture	Industry	Mining & quarrying	Manufacturing	Electricity, gas & water supply	Services	Overall GDP
2012–13	**Q1**	1.0	3.3	3.1	3.0	5.9	7.0	5.0
	Q2	1.8	9.0	0.5	11.2	3.1	6.2	6.2
	Q3	0.8	5.6	–1.2	7.1	4.4	5.5	4.4
	Q4	1.4	3.1	–2.8	4.2	2.7	5.4	4.1
2013–14	**Q1**	2.7	5.9	0.8	7.2	2.8	8.9	7.2
	Q2	3.6	4.2	4.5	3.8	6.5	9.7	7.5
	Q3	3.8	5.5	4.2	5.9	3.9	8.3	6.6
	Q4	4.4	5.5	11.5	4.4	5.9	5.6	5.3
2014–15	**Q1**	2.6	8.1	4.3	8.4	10.1	8.4	7.4
	Q2	2.1	7.2	1.4	7.9	8.7	10.2	8.4
	Q3	–1.1	3.8	1.5	3.6	8.7	11.1	6.8
	Q4	–1.4	7.2	2.3	8.4	4.2	8.0	6.1
2015–16	**Q1**	1.9	6.4	4.0	7.2	3.2	8.6	7.1

Source: Central Statistical Office.

Table I.2: IIP - Broad Sectors (% growth, y-o-y)

	Mining	Manufacturing	Electricity	General
Weights	***141.57***	***755.27***	***103.16***	***1000.00***
		Annual		
2012–13	–2.3	1.3	4.0	1.1
2013–14	–0.6	–0.8	6.1	–0.1
2014–15	1.5	2.3	8.4	2.8
		Quarterly		
2013–14: Q1	–4.7	–1.1	3.5	–1.0
2013–14: Q2	–0.2	1.4	8.4	1.9
2013–14: Q3	0.5	–1.6	5.0	–0.8
2013–14: Q4	1.8	–1.6	7.6	–0.4
2014–15: Q1	3.0	3.9	11.3	4.5
2014–15: Q2	0.5	0.4	9.4	1.3
2014–15: Q3	2.1	1.1	9.4	2.0
2014–15: Q4	0.3	3.7	3.7	3.3
2015–16: Q1	0.4	3.8	2.3	3.3
		Monthly		
Aug–14	1.2	–1.1	12.9	0.5
Sep–14	0.1	2.7	3.9	2.6
Oct–14	4.5	–5.6	13.7	–2.7
Nov–14	4.0	4.7	10.0	5.2
Dec–14	–1.7	4.1	4.8	3.6
Jan–15	–1.8	3.4	3.3	2.8
Feb–15	1.6	5.1	5.9	4.8
Mar–15	1.2	2.7	2.0	2.5
Apr–15	–0.6	3.9	–0.5	3.0
May–15	2.1	2.1	6.0	2.5
Jun–15	–0.5	5.4	1.3	4.4
Jul–15	0.9	4.6	3.5	4.1
Aug–15	3.8	6.9	5.6	6.4
		April–August		
2011–12	–0.5	6.0	9.5	5.6
2012–13	–1.7	0.0	4.8	0.2
2013–14	–3.6	–0.1	4.6	0.0
2014–15	2.1	2.1	11.7	3.0
2015–16	1.1	4.5	3.2	4.1

Source: Central Statistical Office.

Table I.3: Electricity Generation (Billion Units, BU) – Targets and Achievement, (April–August) 2013 and 2014

	Basic Goods	Capital Goods	Intermediate Goods	Consumer Goods	Consumer Durables	Consumer Non–Durables	General
Weights	***456.82***	***88.25***	***156.86***	***298.08***	***84.60***	***213.47***	***1000***
April–August							
2013–14	0.2	0.7	2.4	–1.6	–11.2	6.8	0.0
2014–15	8.4	4.8	2.4	–4.3	–12.8	1.9	3.0
2015–16	4.5	7.4	1.8	3.0	7.7	0.1	4.1
Monthly							
Aug–14	9.0	–10.0	–0.1	–6.2	–15.0	0.4	0.5
Sep–14	5.0	12.3	2.0	–4.0	–11.1	1.3	2.6
Oct–14	9.7	–3.2	–3.4	–18.2	–35.2	–3.6	–2.7
Nov–14	9.5	7.0	4.7	–1.6	–14.5	7.0	5.2
Dec–14	5.9	6.1	1.1	0.6	–9.2	5.6	3.6
Jan–15	4.8	12.4	0.1	–1.9	–5.7	0.3	2.8
Feb–15	4.9	8.3	1.2	4.9	–3.8	10.5	4.8
Mar–15	2.6	9.1	2.8	–0.6	–4.6	1.9	2.5
Apr–15	2.6	5.5	2.3	2.8	1.3	3.7	3.0
May–15	6.2	3.0	1.2	–2.2	–3.9	–1.0	2.5
Jun–15	5.3	–2.1	1.1	7.7	17.4	2.2	4.4
Jul–15	5.0	10.6	1.7	0.9	10.3	–4.6	4.1
Aug–15	3.4	21.8	2.6	6.8	17.0	0.4	6.4

Source: Central Statistical Office.

Table I.4: IIP – 2–digit Industries (% growth, y-o-y)

	April–August			Monthly				
	Weight	***2014–15***	***2015–16***	***Apr–15***	***May–15***	***Jun–15***	***Jul–15***	***Aug–15***
Food products and beverages	15.7	9.7	–5.9	3.8	–10.0	–6.3	–13.4	–4.5
Tobacco products	61.6	6.6	–7.2	–25.8	–7.6	8.0	–1.9	–9.5
Textiles	27.8	3.2	1.6	4.7	–1.4	1.6	0.2	3.1
Wearing apparel; dressing and dyeing of fur	5.8	–8.6	18.3	9.9	15.0	27.7	21.7	19.5
Luggage, handbags, saddlery, harness & footwear; tanning and dressing of leather products	10.5	8.7	4.0	5.4	0.5	4.6	2.7	7.1
	April–August			**Monthly**				
	Weight	***2014–15***	***2015–16***	***Apr–15***	***May–15***	***Jun–15***	***Jul–15***	***Aug–15***
Paper and paper products	10.8	3.0	1.6	4.4	–0.3	5.8	0.8	–2.0
Publishing, printing & reproduction of recorded media	67.2	–5.8	–6.7	6.1	–9.2	–11.5	–9.5	–9.1
Coke, refined petroleum products & nuclear fuel	100.6	–2.4	7.2	–2.9	11.1	8.9	8.4	10.1
Chemicals and chemical products	20.2	0.3	3.0	8.4	3.1	2.0	–1.3	3.6
Rubber and plastics products	43.1	2.5	0.7	5.6	1.6	0.2	–4.2	0.6
Other non–metallic mineral products	113.4	7.8	–1.9	–6.3	–2.1	–0.2	–2.0	2.0
Basic metals	30.8	13.8	6.4	7.3	9.9	11.3	6.7	–2.9
Fabricated metal products, except machinery and equipment	37.6	–0.3	2.0	–1.8	–4.6	0.7	4.9	11.1
Machinery and equipment n.e.c.	3.1	5.4	4.4	9.7	1.8	8.3	–2.8	4.4
Office, accounting and computing machinery	19.8	–41.2	–12.0	–39.1	–21.3	16.4	–16.3	0.8
Electrical machinery and apparatus n.e.c.	9.9	23.3	11.8	13.1	3.1	–9.9	20.9	40.8
Radio, TV and communication equipment & apparatus	5.7	–50.1	–14.5	–33.9	–24.3	–1.8	0.9	–9.0
Medical, precision and optical instruments, watches and clocks	40.6	–0.2	–5.7	–3.2	–9.7	–7.0	–4.9	–3.5
Motor vehicles, trailers and semi trailers	18.2	–3.9	7.7	6.8	4.2	8.5	7.9	11.4
Other transport equipment	30.0	11.7	1.5	5.4	–0.7	0.9	0.5	1.7
Furniture; manufacturing n.e.c.	141.6	1.5	46.7	9.4	10.9	83.6	61.1	90.8

Source: Central Statistics Office.

Table I.5: Growth in Core Sectors (% growth, y-o-y)

	Overall Index	Coal	Crude Oil	Natural Gas	Petroleum Refinery Products	Fertilisers	Steel	Cement	Electricity
Weight	**37.903**	**4.379**	**5.216**	**1.708**	**5.939**	**1.254**	**6.684**	**2.406**	**10.316**
April–September									
2014–15	5.1	7.7	–1.2	–5.8	–2.7	0.0	6.6	9.7	10.4
2015–16	2.3	4.2	0.4	–2.1	3.6	8.0	–0.4	1.3	4.1
Monthly									
Sep–14	1.9	7.2	–1.1	–6.2	–2.5	–11.6	4.0	3.2	3.8
Oct–14	6.3	16.2	1.0	–4.2	4.2	–7.0	2.3	–1.0	13.2
Nov–14	6.7	14.5	–0.1	–2.9	8.1	–2.8	1.3	11.3	10.2
Dec–14	2.4	7.5	–1.4	–3.5	6.1	–1.6	–2.4	3.8	3.7
Jan–15	1.8	1.7	–2.3	–6.6	4.7	7.1	1.6	0.5	2.7
Feb–15	1.4	11.6	–1.9	–8.1	–1.0	–0.4	–4.4	2.7	5.2
Mar–15	–0.1	6.0	1.7	–1.5	–1.3	5.2	–4.4	–4.2	1.7
Apr–15	–0.4	7.9	–2.7	–3.6	–2.9	0.0	0.6	–2.4	–1.1
May–15	4.4	7.8	0.8	–3.1	7.9	1.3	2.6	2.6	5.5
Jun–15	3.0	6.3	–0.7	–5.9	7.5	5.8	4.9	2.6	0.2
Jul–15	1.1	0.3	–0.4	–4.4	2.9	8.6	–2.6	1.3	3.5
Aug–15	2.6	0.4	5.6	3.7	5.8	12.6	–5.9	5.4	5.6
Sep–15	3.2	1.9	–0.1	0.9	0.5	18.1	–2.5	–1.5	10.8

Source: Ministry of Commerce and Industry, GoI.

Table I.6: Summary Table: Net response[1] (NR in %) comparison over previous quarter, September 2015

Indicator	Assessment period		Expectation period	
	2015–16:Q1	2015–16:Q2	2015–16:Q2	2015–16:Q3
Production	16.3	15.2	28.9	29.2
Order Books	13.2	11.4	25.8	25.5
Pending Orders	13.6	13.5	8.5	7.6
Capacity Utilisation	6.7	3.6	17.6	17.5
Exports	10.1	5.7	19.6	16.7
Imports	10.7	8.4	9.9	9.2
Employment	7.4	5.9	9.9	9.6
Overall Financial Situation	14.4	13.5	25.1	26.0
Cost of Finance	–12.1	–11.4	–8.7	–7.6
Cost of Raw Material	–35.9	–24.8	–32.9	–28.1
Selling price	3.1	–4.0	7.9	6.2
Profit Margin	–14.2	–16.9	–1.6	–1.3
Business Situation	19.6	13.9	32.0	31.6
Salary	34.2	28.9	27.3	22.0
Inventory of raw material	–7.7	–6.3	–6.0	–5.1
Inventory of finished goods	–10.9	–10.6	–8.2	–5.3
Business Expectation Index[2]	104.8	102.4	113.1	113.4

Notes:

[1] Net Response (NR) is the difference between the percentage of respondents reporting optimism and that reporting pessimism. The range is –100 to 100. Any value greater than zero indicates expansion/optimism and any value less than zero indicates contraction/pessimism, i.e., NR = (I – D), where I is the percentage response of 'Optimism', and D is the percentage response of 'Pessimism' and E is the percentage response as 'no change/equal'; I+D+E=100. For example, increase in production is optimism, whereas decrease in cost of raw material is optimism (details are indicated in the relevant tables).

[2] The Business Expectation Index (BEI) is a composite indicator calculated as weighted (share of GVA of different industry groups) net response on nine business indicators. The nine indicators considered for computation of the BEI are: (1) overall business situation, (2) production, (3) order books, (4) inventory of raw material, (5) inventory of finished goods, (6) profit margin, (7) employment, (8) exports and (9) capacity utilisation. It gives a single snapshot of business outlook in every quarter. The BEI lies between 0 and 200, and 100 is the threshold separating expansion from contraction.

Source: Reserve Bank of India.

Services

Devender Pratap

While the first quarter of the current fiscal showed moderate growth in the services sector excluding construction, lead indicators from the second quarter show continued muted growth. The fall in merchandise trade shows that cargo handled by both ports and airports is slowing down. However, production of commercial vehicles showed significant growth in the second quarter. Services trade dipped in the first quarter, and the second quarter shows recovery more due to the low base effect than actual sustained improvement. Inflow of FDI in the services sector is relatively lower than in the previous year. Therefore, in the first half of the current fiscal, services growth is positive but relatively moderate. The improvement in the PMI gives hope, but indicators from other sectors remain relatively subdued. World growth is going to be slow too. Therefore, the outlook for the second half remains mixed.

S.1 GDP Estimates of the Services Sector

The services sector, excluding construction, shows more or less stagnant growth in the first quarter of the current fiscal compared with the last fiscal year. The services sector, excluding construction, slowed down in the first quarter of the current fiscal on a year–on-year (y-o-y) basis to 8.9 per cent compared with 2014–15:Q4 (9.2 per cent) but showed marginally higher growth (8.7 per cent) compared with 2014–15:Q1 (Table S.1). Primarily buoyed by the construction sector, services including construction showed higher growth. 'Financial, insurance, real estate and professional services' is the sector that showed the maximum slowdown in the first quarter compared with both the first and fourth quarters of the last fiscal. 'Trade, hotels, transport and communication and services related to broadcasting' showed more or less stagnant growth in the first quarter of the current fiscal compared with the corresponding period last year; however, relative to 2014–15:Q4, it has slowed down. 'Public administration, defence and other services' showed recovery in 2015–16:Q1 compared with 2014–15:Q4. Construction showed y-o-y growth of 6.9 per cent in 2015–16:Q1. This was significantly higher than in 2014–15:Q4 (1.4 per cent) but comparable to the 2014–15:Q1 estimate (6.5 per cent).

S.2 Leading Indicators of the Services Sector during 2015–16:H1

Leading indicators of the services sector present mixed signals in the first half of the current fiscal (Table S.2). Tourist arrivals accelerated to growth of 5.8 per cent during the first half of the current fiscal compared with growth of 4.8 per cent in the second half of the previous fiscal. The growth of banking indicators turned mixed. Growth in aggregate deposits dipped at y-o-y improved to 10.6 per cent in 2015–16:H1. The y-o-y growth of bank credit to the commercial sector decelerated to 9 per cent in 2015–16:H1 compared with a 9.8 per cent rise in 2014–15:H2. There is a significant jump in the production of commercial vehicles from 6.9 per cent growth in 2014–15:H2 to 8.7 per cent in 2015–16:H1 on a y-o-y basis.

Growth in cargo handled at major ports dipped to 4.1 per cent in the first half of the current fiscal compared with a 5.5 per cent rise 2014-15:H2. The y-o-y growth in cargo traffic had improved to 4.7 per cent in 2014–15 over a 1.8 per cent y-o-y rise in 2013–14. The slowdown in the external world has affected merchandise trade, which in turn is affecting the cargo handled at major ports. The revenue-earning goods

traffic from Railways deteriorated during the first half of the current fiscal. The 2015–16:H1 numbers for this indicator dipped to 1.6 per cent compared with a 4.2 per cent increase in 2014–15:H2. The cumulative addition in total telephone during April–August 2015–16 compared with the similar period of last fiscal also dipped marginally.

The aviation sector (international and domestic) picked up growth momentum in the passenger segments in the first half of the current fiscal (Table S.3). Domestic passenger traffic, which constitutes 73.3 per cent of total passenger traffic (domestic and international), registered an increase of nearly 20 per cent in 2015–16:H1 compared with a 10.6 per cent rise in the corresponding period last year on a y-o-y basis. Growth in international passenger traffic dipped marginally to 8.2 per cent during this period compared with an 8.6 per cent increase last year in the corresponding period. Total cargo traffic (domestic and international) deteriorated during the first half of the current fiscal compared with a similar period last year. International cargo traffic, which constitutes 61 per cent of total traffic (international and domestic), fell by 6.5 per cent during this period compared with an 8.4 per cent increase a year ago. Domestic cargo traffic also dropped considerably to 4.7 per cent in 2015–16:H1 compared with 22.2 per cent rise in 2014-15:H1.

Domestic passenger traffic showed significant growth in the first half of the current fiscal in contrast to the cargo sector, which shows significant reduction. Viewed in tandem with the slowdown in the cargo handled at major ports, this is probably due to the global economic meltdown affecting merchandise trade (Chapter 7: Trade). The new aviation policy (Box S.1) may provide the much-needed fillip to this sector.

Box S.1: National Civil Aviation Policy 2015: A View at the Start

A long-awaited draft of the National Civil Aviation Policy 2015 was released by the Ministry of Civil Aviation (MoCA) at the end of October 2015. The report underscores the relevance of bringing air travel within reach of the common man and promoting regional air connectivity within the country. The aviation policy aims at providing a conducive environment and level playing field for various segments of the industry, such as airlines, airports, cargo, maintenance repairs and overhaul services, general aviation, aerospace manufacturing and skill development.

The MoCA proposes a 2 per cent fare levy and an INR 2,500 cap on one-hour flights. The 2 per cent levy on both domestic and international commercial flights will act as a cushion to provide upfront subsidy on air travel to non-metro routes. This is the first step to enhance the newly conceived regional connectivity.

The draft policy further suggests that future airports under public -private partnership will determine tariff on a 30 per cent 'hybrid till' to arrive at the user fee. The 30 per cent non-aeronautical revenue will be cross-subsidised by aeronautical revenue.

The air cargo segment is expected to cross-subsidise the passenger segment and also has huge employment potential for semi-skilled workers. The Air Cargo Logistic Promotion Board has been constituted to promote the growth of the cargo segment of the aviation industry.

(Contd.)

Box S.1: National Civil Aviation Policy 2015: A View at the Start (Contd.)

The Maintenance, Repair and Overhaul (MRO) business of Indian carriers has also been touched upon. The proposed waiver of the 12.36 per cent service tax on MRO, relaxation of customs duty on aircraft maintenance tools, extension of tax-free storage period for parts imported by MRO, and simplified procedures for customs clearance are some of the welcome steps to boost this segment of the aviation industry. This will provide a further boost to the INR 5,000 crore MRO industry, which outsources 90 per cent of its work to countries such as Sri Lanka, Singapore, Malaysia and the UAE. This is an effort to make India an MRO hub in Asia. A large fiscal incentive is also announced by considering MRO, ground handling, cargo and ATF infrastructure located at airports under the benefits of the infrastructure sector with incentives under the Income Tax Act.

As a road map of its ecosystem, the draft policy envisages handling 30 crore domestic ticketing by 2022, which will touch 50 crore by 2027. Similarly, international ticketing is forecast to increase to 20 crore by 2027.

In the end, the aviation policy specified in the revised Draft Report has tried to address various policy uncertainties and help ease certain regulatory bottlenecks. Certain fundamental issues, however, remain to be addressed. The issue of sales tax on Aviation Turbine Fuel (ATF) has not been addressed. ATF constitutes nearly 40 to 50 per cent of the operating cost of an airline in India. Also, the sales tax on ATF levied by different states varies from 4 to 30 per cent, which adds to the fuel cost and makes operations more expensive. Hence, lack of clarity on the sales tax on ATF could hinder the growth prospects of the aviation sector.

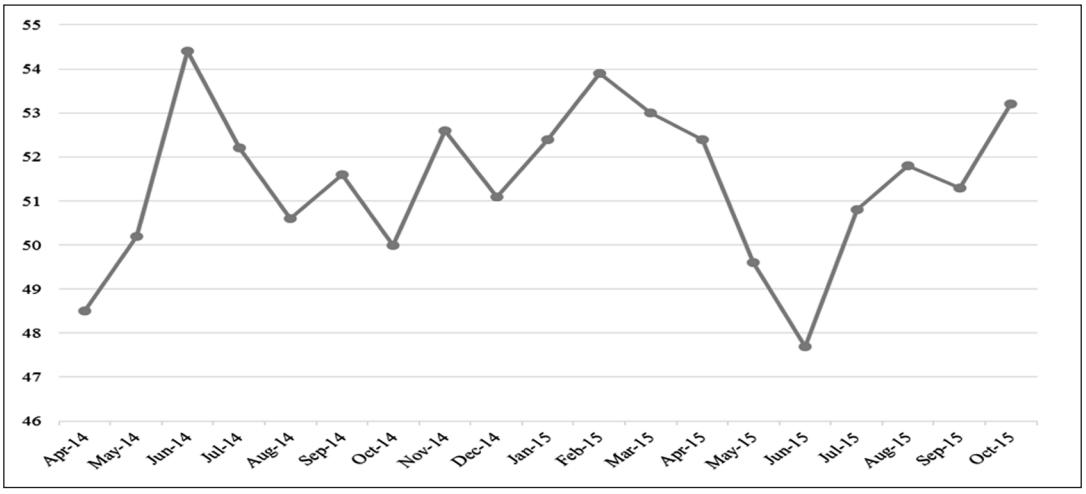
The proposed 'hybrid till' approach currently used by Delhi, Mumbai and Bangalore airport operators to determine the user fee computes aeronautical and non-aeronautical revenues separately. This approach is viewed as a win-win situation for both airport developers and passengers. This needs to be interpreted cautiously.

An escalation in user fee by private airports can be expected due to the 'hybrid till'. This is a concern that has already been voiced by International Air Transport Association (IATA) experts for India. It has implications for the central government move on proposed privatisation of four other airports run by the Airport Authority of India, namely, Chennai, Kolkata, Ahmedabad and Jaipur.

Source: Ministry of Civil Aviation, Government of India. 2015. Draft National Civil Aviation Policy. http://www.civilaviation.gov.in/sites/default/files/Revised_Draft_NCAP%202015_30Oct2015_1.pdf.

Yet another leading indicator for the services sector is the Nikkei India Services PMI (Purchasing Managers' Index). The survey covers 350 private sector service companies. An index above 50 shows increase, while an index below 50 shows a decrease. The PMI has constantly increased from June 2015, except for a fall in September 2015, which indicates growth of the services sector (Figure S.1).

Figure S.1: Purchasing Managers' Index for Services Sector, April 2014 to October 2015



Note: An index above 50 indicates increase, and below 50 indicates decrease.
Source: Markit Economics.

S.3 External Sector

Trade

Services exports contribute immensely to net invisible earning to further mitigate the current account balance of our country. During fiscal 2014–15, the major components of services exports were: software services (47 per cent), business services (18.3 per cent), travel (13.1 per cent), transportation (11.2 per cent), financial services (3.6 per cent), and communication and other residual services (5 per cent). The export growth of software services nearly stagnated at 5.3 per cent during 2014–15 compared with a 5.4 per cent rise in the previous fiscal. The y-o-y growth of travel and transportation exports improved to 13.5 and 0.6 per cent, respectively. Exports of all remaining segments of services, except insurance, lowered in 2014–15. The export growth of business services, which has an 18 per cent share in total services, also declined marginally in this fiscal.

The y-o-y growth of all major components of total services except travel, and software, dipped during 2015–16:Q1 (Table S.4). Exports of travel services (referred to as travel in Table S.4) deteriorated to 7.9 per cent in this quarter compared with a double- digit growth of 12.6 per cent in the earlier quarter. During this quarter, the growth story of non-software miscellaneous services appears slightly better compared with 2014-15:Q4; this could mainly be attributed to the rise in growth of business services. A continuous negative growth in exports of transportation and insurance services gives worrisome signals.

The Reserve Bank of India posts the latest statistics on services exports and imports in US$ million for July and August 2015 (Table S.5). After services exports reduced further in July 2015, it shows double-digit y-o-y growth. Imports shows double-digit growth in both July and August 2015. Since exports had shown negative growth in August 2014, the growth may be due to a low base effect rather than improvement. And the numbers seem to indicate that services exports hardly changed between July and August 2015. Overall, services exports have remained muted.

Foreign Direct Investment (FDI)

FDI inflows showed a mixed pattern of growth during the first quarter of the current fiscal year. The services sector (financial and non-financial) received 6.5 per cent of total FDI inflows in this period. This is lower than the share of 10.5 per cent during 2014–15. The historical cumulative share of this segment turned nearly 17 per cent during April 2000 to June 2015. The other component of services, 'telecommunication', attained 4.9 per cent of total FDI during the first quarter of the current fiscal. The share has been dismal compared to its historical cumulative share of 6.8 per cent. 'Computer software and hardware' attained 30.5 per cent of total FDI, which appears to be considerably higher compared with 2014–15 and its historical commutative total. FDI inflows to the order of US$ 2,556 in the first quarter of the current fiscal turned even higher than FDI inflows of US$2,200 in 2014–15. The percentage share in total FDI in the construction sector is stagnant at US$ 2.5 billion during this period. The stagnant FDI inflows in the construction sector in the latter half of current fiscal are a cause for concern.

The RBI has monthly data up to September for FDI, but it does not have sectoral inflows. The data show that overall FDI has gone up by 12.8 per cent on a y-o-y basis in the first half of the current fiscal year.

S.4 Outlook

In Budget 2015–16, the government increased service taxes, including cess, from 12.36 per cent to 14 per cent. It was announced on 6 November 2015 that an additional cess of 0.5 per cent would be imposed on services to fund the Swachh Bharat (SB) initiative. This pushes total service taxes to 14.5 per cent, thereby having an upward pressure on prices. The analysis from Kothe (2014) suggests the price elasticity of demand for services is inelastic[1]. Further, the government is already earning more than in the corresponding period last year from service taxes. By September 2015, it had earned ₹ 78,735 crore versus ₹ 65,201 crore in September 2014 (Controller General of Accounts website). The additional revenue may help crowd in investment while improving the quality of life for people in the long run if the SB initiative is properly implemented and bears fruit.

The indicators of the services sector suggest a mixed pattern of growth during the first half of the current fiscal. This leaves growth expectations for the second half of the current fiscal a little unclear. As a way forward to 2015–16:H2, the outlook needs to be interpreted cautiously. With the near stagnancy in aggregate deposits, subdued growth in bank credit, and a dip in the construction sector, the outlook appears uncertain. In contrast, the improved FDI inflows in 'computer software and hardware' may provide some optimism to growth momentum.

[1] Kothe, S,K. 2014. Price and Income Elasticity of Demand for Services in India: A Macro Analysis. http://ecomod.net/system/files/Price%20and%20Income%20Elasticity%20of%20Demand%20for%20Services%20in%20India%20for%20ECOMOD2014.docx.

Table S.1: Quarterly Estimates of GVA at Basic Prices (% y-o-y), 2013–14:Q1 to 2015–16:Q1

Sector	2013–14				2014–15				2015–16
	Q1	*Q2*	*Q3*	*Q4*	*Q1*	*Q2*	*Q3*	*Q4*	*Q1*
Construction	1.5	3.5	3.8	1.2	6.5	8.7	3.1	1.4	6.9
Trade, hotels, transport, communication and services related to broadcasting	10.3	11.9	12.4	9.9	12.1	8.8	7.4	14.1	12.8
Financial, real estate & professional services	7.7	11.9	5.7	5.5	9.3	13.5	13.3	10.2	8.9
Public administration, defence and other Services	14.4	6.9	9.1	2.4	2.8	7.1	19.7	0.1	2.7
Services	10.2	10.6	9.1	6.4	8.7	10.3	12.5	9.2	8.9
Services including construction	8.9	9.7	8.3	5.6	8.4	10.1	11.1	8.0	8.6
GVA at Basic Price	7.2	7.5	6.6	5.3	7.0	7.8	7.5	6.1	7.5

Source: Central Statistical Organisation.

Table S.2: Indicators of the Services Sector (%, y-o-y), Q1:2012–13 to Q2:2015–16

Fiscal Year/ Quarter	Tourist Arrivals (Number)	Revenue-Earning Goods Traffic by Railways (Mn Tonnes)	Cargo Handled at Major Ports ('000 tonnes)	Production of Commercial Vehicles ('000 Numbers)	New Telephone Connections (Fixed+ Wireless in Millions)	Growth in Aggregate Deposits (₹ Cr)	Bank Credit to Commercial Sector (₹ Cr)
2012-13 H1	*5.4*	*4.8*	*-3.3*	*-4.8*	*3.4*	*15.1*	*17.8*
H2	2.7	3.6	-1.9	-15.1	-5.6	12.6	14.7
2013-14 H1	3.1	6.2	2.4	-11.5	-4.0	13.8	15.3
H2	7.3	2.7	1.2	-20.3	3.9	15.2	13.8
2014-15 H1	14.9	4.2	3.9	-6.8	6.4	12.7	11.1
H2	4.8	4.2	5.5	6.9	6.8	11.0	9.8
2015-16 H1	5.8	1.6	4.1	8.7	6.6	10.6	9.0
2013–14 Q1	4.8	4.9	-1.0	0.2	-6.5	13.5	13.4
Q2	1.7	7.5	5.9	–22.0	–4.0	14.1	17.2
Q3	6.7	1.9	1.0	–21.3	2.2	15.9	13.6
Q4	7.9	3.4	1.4	–19.5	3.9	14.6	13.9
2014–15 Q1	14.5	4.2	4.4	–15.4	4.4	12.4	12.8
Q2	15.3	4.2	3.4	3.1	6.4	13.0	9.4
Q3	6.4	6.7	6.7	5.0	6.1	11.1	10.6
Q4	3.2	1.8	4.3	8.5	6.8	10.9	9.1
2015–16 Q1	3.6	1.8	4.4	5.3	6.8	10.6	8.8
Q2	7.9	1.5	3.8	12.0	6.6*	10.5	9.1
GVA at Basic Price	7.5	6.6	5.3	7.0	7.8	7.5	6.1

Note: * y-o-y, % growth over cumulative number as on August 2015.

Sources: Foreign Tourist Arrivals – Press Information Bureau, Ministry of Tourism; Railway traffic – Press Information Bureau, Ministry of Railways; Port Cargos – Indian Port Association; http://ipa.nic.in/pcs/default.asp; and Aggregate Deposits and Bank Credit – Reserve Bank of India.

Table S.3. Domestic and International Air Passenger and Cargo Traffic

	Domestic Traffic				International Traffic				Total Traffic			
Year	***Passenger (lakh)***	***% Change***	***Cargo '000' tonnes***	***% Change***	***Passenger (lakh)***	***% Change***	***Cargo '000' tonnes***	***% Change***	***Passenger (lakh)***	***% Change***	***Cargo '000' tonnes***	***% Change***
2013-14	1,223.0	5.1	836.1	6.6	466.2	8.3	1,443.1	2.6	1,689.2	6.0	2,279.2	4.0
2014-15	1,393.0	13.9	986.4	18.0	508.0	9.0	1,542.5	6.9	1,901.0	12.5	2,528.9	11.0
April – September												
2014–15	668.5	10.6	492.4	22.2	243.2	8.6	781.6	8.4	911.7	10.0	1,273.9	13.4
2015–16	801.5	19.9	515.4	4.7	263.1	8.2	832.2	6.5	1,064.6	16.8	1,347.5	5.8

Source: Airport Authority of India.

Table S.4: Growth Rate of Services Sector Exports (%, y-o-y), 2012–13:Q1 to 2015–16:Q1

Year	Quarter	Travel	Trans-portation	Insurance	G.n.i.e	Software Services	Non-Software Miscellaneous Services	Total Services
2012–13	Q1	–5.2	–2.4	–6.5	14.5	4.6	13.1	5.0
	Q2	–6.6	–6.2	–10.9	1.8	15.3	9.4	7.3
	Q3	–0.4	–7.5	–33.6	–3.7	2.1	–1.7	–1.3
	Q4	0.5	–3.6	–4.8	166.9	2.9	–6.5	–0.7
2013–14	Q1	9.1	–2.7	–5.5	–18.0	5.5	–2.1	2.1
	Q2	0.9	–1.6	–1.9	–33.0	5.7	8.2	4.7
	Q3	0.8	–5.4	–8.2	–25.6	6.1	–1.5	1.6
	Q4	–8.7	10.3	–3.8	21.7	4.5	21.6	7.5
2014–15	Q1	10.6	7.7	6.8	1.7	6.4	–6.7	2.9
	Q2	25.1	9.3	9.4	37.7	3.9	–4.0	4.6
	Q3	7.3	13.2	16.0	51.6	7.0	–2.2	5.4
	Q4	12.6	–23.1	–14.4	–25.1	4.0	–8.0	–2.0
2015–16	Q1	7.9	–13.1	–10.3	–1.2	4.6	–0.2	1.3

Note: Exports means data on credit merchandise in RBI BOP terms in US$ million; G.n.i.e.= Government not included elsewhere.

Source: RBI online database; http://dbie.rbi.org.in/DBIE/dbie.rbi?site=statistics.

Table S.5: Services Exports and Imports, April–August, 2015

Year	Month	Services Exports (US$ million)	Growth of Services Exports (%y-o-y)	Services Imports (US$ million)	Growth of Services Imports (%y-o-y)
2014	April	13,362	4.0	8,058	9.2
	May	13,920	8.8	8,027	15.0
	June	12,972	5.1	7,194	15.7
	July	13,344	3.1	6,822	3.1
	August	12,242	–0.6	6,767	7.5
	September	12,940	5.3	6,174	–9.1
	October	12,146	–3.3	5,942	–14.7
	November	12,473	1.3	6,155	0.6
	December	14,303	11.1	7,240	7.7
	January	14,250	2.3	7,788	7.2
	February	14,099	7.2	7,896	23.6
	March	14,049	–1.9	7,866	–7.3
2015	April	13,012	–2.6	7,324	–9.1
	May	11,874	–14.7	6,318	–21.3
	June	12,765	–1.6	7,522	4.6
	July	13,386	0.3	7,502	10.0
	August	13,580	10.9	7,773	14.9

Source: Reserve Bank of India.

Money and Capital Markets

Pallavi Choudhuri

The Reserve Bank of India undertook a front-loaded policy initiative with a 50 basis point policy repo cut intended to create an environment conducive to boosting investment expenditure in the near future. With the Indian economy still struggling on the path to recovery, the rate cut is a bid to reboot the economy and return to the high-growth trajectory.

M.1 Introduction

The Reserve Bank of India (RBI) cut the repo rate by 50 basis points (bps) in its fourth bi-monthly review, resulting in a drop in the repo rate, reverse repo rate, and marginal standing facility rate to 6.75 per cent, 5.75 per cent, and 7.75 per cent, respectively. The actions of the RBI were largely based on its belief that CPI inflation will remain benign in the medium term, there will be reduced risk from food inflation, and the delay in policy normalisation by the US Federal Reserve amid deflation in global markets and tepid demand.

With the RBI's inflation target revised to 5.8 per cent for January 2016 and a further 5 per cent by the end of fiscal year 2017 and CPI inflation registering 4.4 per cent in September 2015 year-on-year (y-o-y), the RBI can be expected to keep its monetary policy accommodative. However, inflation risks have not completely abated with the reversal of base effects and considerable pressure from food prices, especially the prices of pulses, which will offset any benefits from depressed global oil prices. In addition, transmission in terms of reduced cost of capital and increased capital expenditure could take more time, with uncertainty prevailing over central government reforms on the goods and services tax.

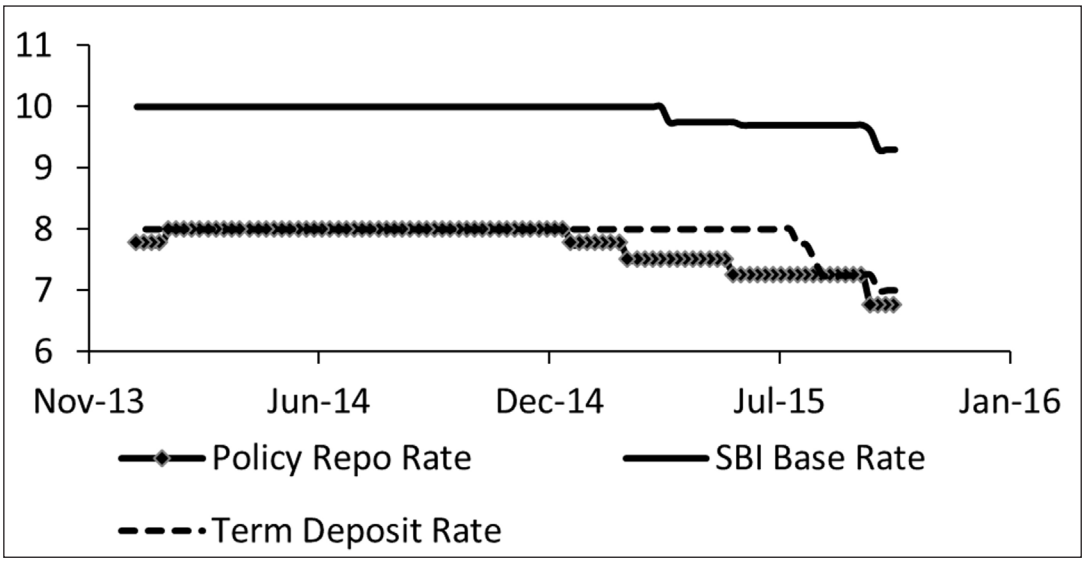
During the first half of 2015–16, emerging market (EM) economies have been caught up in a web of low export demand, weakening currencies, and capital outflows, which was exacerbated after the depreciation of the Chinese Renminbi or Yuan. The depreciation triggered sharp corrections in equity prices globally, along with increases in financial market volatility. Global growth, including growth in the EM economies, continues to remain at risk, and the IMF predicted the growth rate for EM and developing economies to decline to 3.1 per cent for 2015, 0.2 percentage points lower than in 2014. India, however, has largely been insulated from external shocks, buoyed by better macroeconomic fundamentals. With the Indian rupee having fallen only 5.5 per cent against the dollar over the first half of 2015–16, it has outperformed most of the EM currencies. The IMF World Economic Outlook (October 2015) projected domestic demand in India, which is higher than in other major EM economies, to be strong for the second half of 2015–16, with projected economic growth slated to be higher than in the current year by 2 per cent and reaching 7.5 per cent next year.

M.2 Interest Rates

Monetary transmission has remained weak, with a 125 bps cut in repo rate until September 2015 resulting in median base lending rates falling by only 50 to 70 bps, in spite of easy liquidity conditions and a sharper

reduction in one-year bank deposit rates by an average of 130 bps. Over the past two quarters, the repo level data shows that, on average, cuts in policy rates are followed by a wider interest rate spread with a greater drop in deposit rates compared to lending rates; thus, banks retain some of the upsides of rate cuts to restructure their balance sheet (Figure M.1). The weak transmission is also evident from the widening gap between the base rate and the repo rate. While some banks have reduced the base rate to some extent, the quantum of the drop has been far short of the drop in the rates of certificates of deposit (CDs).

Figure M.1: Interest Rates (January 2014 to October 2015)



Source: Reserve Bank of India.

The transmission, however, has been substantially higher through commercial paper, as noted by the RBI in its fourth bi-monthly monetary policy statement. Three-month commercial paper has fallen by more than 100 bps since the beginning of the year and by 155 bps over the past 18 months. This resulted in Indian companies raising more funds through commercial paper over time, with the outstanding stock of commercial paper at ₹ 26.84 lakh crore at the end of the second quarter of the current fiscal year increasing by 45.6 per cent in September 2015, y-o-y, and by 38.9 per cent over the first half of 2015–16 . The monetary policy transmission mechanism holds tremendous importance for the overall growth of the economy and Box M.1 explores some of the reasons behind the slow transmission evident in India.

[1] One should, however, be careful while drawing a comparison between commercial paper and bank credit. While the commercial paper market has registered substantially higher growth rate over the past 15 months, the total volume of bank credit to the commercial sector (BCC) is still higher in absolute numbers. Further, commercial paper is a promissory note issued by large corporations to fund short-term debt obligations, and is backed only by an issuing bank or by the corporation's promise to pay the designated amount on maturity. On the other hand, bank credit can be for both short term and long term, and can be either secured or unsecured.

Box M.1: Incomplete Monetary Policy Pass-Through – Factors and Policies: A Snapshot

Asset-liability Management: A large part of the monetary policy pass-through does not take place immediately because of asset-liability mismatch on bank balance sheets. Most term deposits mature in the range of one to three years, while the average maturity horizon for loans is between three to five years, with the maturity horizon for housing and infrastructure loans extending to 10 years or beyond. Further, deposits attract differential rates based on size (with the inflection point at ₹ one crore) and maturity period (with longer maturity deposits offering higher interest rates). In addition, most deposits below ₹ one crore are callable, i.e., they can be withdrawn prematurely, resulting in a potential asset-liability mismatch. To correct the situation, the RBI has recently allowed banks to extend schemes offering non-callable (i.e., cannot be broken prematurely) time deposits for funds up to ₹ one crore, with the potential for earning higher interest rates on such deposits.

Asymmetric Adjustment: Empirical evidence also shows asymmetric adjustments of bank interest rates to monetary policy. While deposit rates are quick to adjust downwards to monetary policy loosening, they are slow to adjust upwards during regimes of monetary policy tightening. Lending rates, on the other hand, respond more quickly to tightening than loosening. Every time the RBI reduces the policy repo rate, banks are unable to pass on the benefits to customers immediately since they cannot reprice time deposits on the bank balance sheet unless they are due for maturity. This results in banks carrying a higher cost of funding on their existing balance sheet.

NPAs: Most banks in India depend on net interest income for their profitability. With banks remaining saddled with a high volume of gross non-performing assets (NPAs) and restructured assets from their old balance sheets, they are less likely to be able to pass on the full benefits of rate cuts to borrowers. While a higher lending rate and a wider interest rate spread can generate greater net interest income, it also has the potential to increase the level of non-performing assets, thus worsening the quality of assets on the bank balance sheet, especially in the event of extended periods of low credit off-take. The increase in stressed assets has put substantial pressure on bank profits, measured by ratios such as return on assets (defined as net income over total assets), because interest-earning assets are moved to the non-performing asset class. The RBI has adopted several measures to tackle the stressed assets problem, which involves examining signs of divergence in reporting of NPAs in bank balance sheets, urging banks to constitute a joint lenders forum, along with restructuring of debt in order to revitalise distressed assets in the economy.

LAF: Another potential issue for weak monetary policy pass-through relates to the fact that banks can borrow from the RBI through the Liquidity Adjustment Facility (LAF) at the existing repo rate for up to 2 per cent of their net demand and time liabilities in order to meet short-term liquidity requirements. With the repo rate influencing the cost of only up to 2 per cent of bank borrowings, the banks' average cost of funding on the existing balance sheet does not change substantially.

New Formula proposed by the RBI: For stronger transmission of rates on the lending side, the RBI has recently proposed linking the bank rate (which is based on the base rate) to the marginal cost

(Contd.)

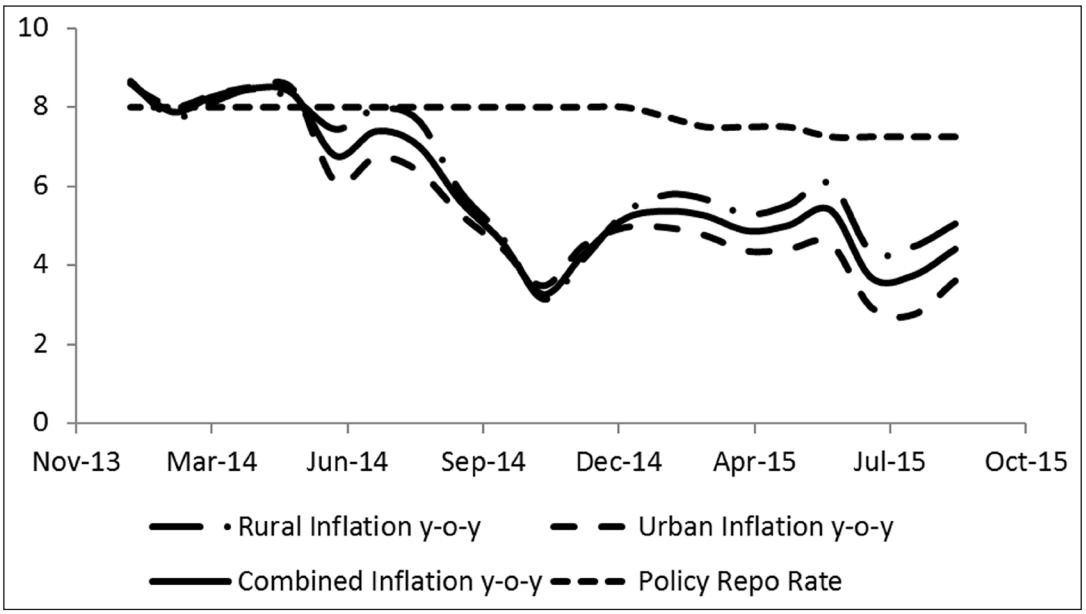
Box M.1: Incomplete Monetary Policy Pass-Through – Factors and Policies: A Snapshot (Contd.)

of finance rather than to the average cost of finance to better reflect changes in the RBI's repo rate. Under the new marginal cost pricing formula, banks are required to price their lending rates based on incremental cost of funds and not take into account historical or longer-term liabilities that tend to put downward pressure on the bank's net interest margins. The new formula, which is being reviewed by the Indian Banking Association (IBA), will be in effect from April 2016.

M.3 Inflation

With inflation tapering over the past few months, the RBI had more room to pursue an accommodating monetary policy and reduce interest rates. However, a deeper look into the inflation figures brings up several points for consideration. The WPI figures, buoyed by a fall in commodity prices in international markets, depict a deflationary trend at –4.54 per cent in September 2015, y-o-y (Figure M.2). However, CPI inflation is positive at 4.41 per cent during the same time frame. Further, while inflation has been decreasing in both urban and rural regions, there is a widening gap between the two, with rural inflation declining at a more measured pace and below the target set by the RBI. While urban inflation stood at 4.5 per cent, rural inflation was much higher at 6.5 per cent, 0.5 percentage points higher than the January 2016 overall CPI inflation target set by the RBI. The excess inflation in rural areas mainly arises from fuel, transportation, food, and core inflation. The fall in global commodity prices, especially the drop in oil prices, has mainly benefitted urban India so far, with rural areas still heavily dependent on locally sourced fuel and affected by severe supply-side bottlenecks that outweigh the deflationary pressure from lower rural wage growth and two successive drought years. In addition, import penetration of food products is low in rural areas, leading to higher food prices in some categories, further adding to the woes.

Figure M.2: Retail Inflation Rate and Interest Rate, November 2013 to October 2015 (%y-o-y)



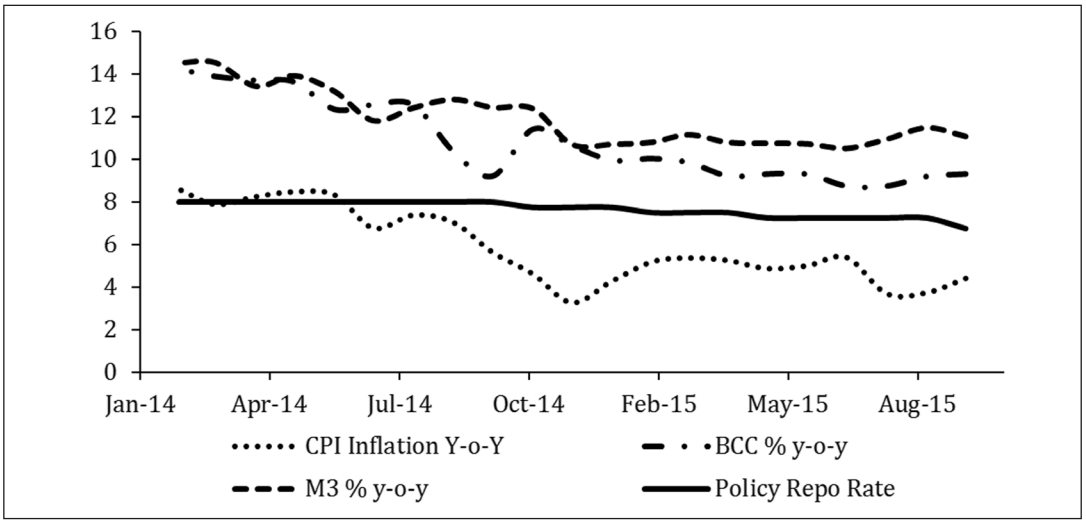
Source: Reserve Bank of India.

M.4 Liquidity Conditions

Easy liquidity conditions prevailed during the first half of 2015–16, more so with the central government initiating direct cash transfers into beneficiary bank accounts for its social welfare programmes. As of October 2015, the outstanding balance in all Pradhan Mantri Jan-Dhan Yojna (PMJDY) accounts stood at ₹ 25,913 crore, with only 37.5 per cent of accounts having no balance, which is a drop of 20 percentage points over the first half of 2015–16. Nominal demand for credit witnessed some sluggishness in growth for the first half of 2015–16. The y-o-y growth rate of bank credit to the commercial sector (BCC) fell to 9 per cent in March 2015 and has stayed at that level since then. On a quarterly basis, the growth rate in BCC stood at one per cent for September 2015 compared to 3 per cent for June 2015, quarter-on-quarter, showing weak signs of monetary transmission of credit growth. The credit deposit ratio also shows further warning signs, dropping by 1.28 per cent in September 2015, y-o-y, although this is less than the fall of 3.13 per cent over a similar period in the previous year. On the one hand, the drop in the credit deposit ratio could reflect weak credit demand as the economy continues to recover at a sluggish pace. On the other hand, it could also reflect cautiousness on the part of banks in extending credit and their inability to induce a full rate cut in tune with the policy repo rate, especially because NPAs have continued to rise, on average. Box M.1, as mentioned previously, briefly discusses some of the factors influencing incomplete pass-through of the monetary policy stimulus and some of the measures that the RBI has taken in this regard.

The overall quality of assets on bank balance sheets have deteriorated further, with the level of stressed assets (NPAs and restructured loans) rising to over 11 per cent in March 2015 from 9.2 per cent during the previous year. Data from the RBI also show gross NPAs rising consistently on a quarter-on-quarter basis since March 2014, with the cumulative gross NPAs increasing to 33 per cent between March 2014 and June 2015 for the 39 publicly listed banks. The latest data also show that 34 of the 39 publicly listed banks reported higher gross NPAs for Q2 of 2015–16, rising by 22.85 per cent from the Q2 of 2014–15, and by 5.95 per cent over the previous June 2015 quarter[2].

Figure M.3: Money and Credit Trends (% y-o-y), January 2014 to September 2015



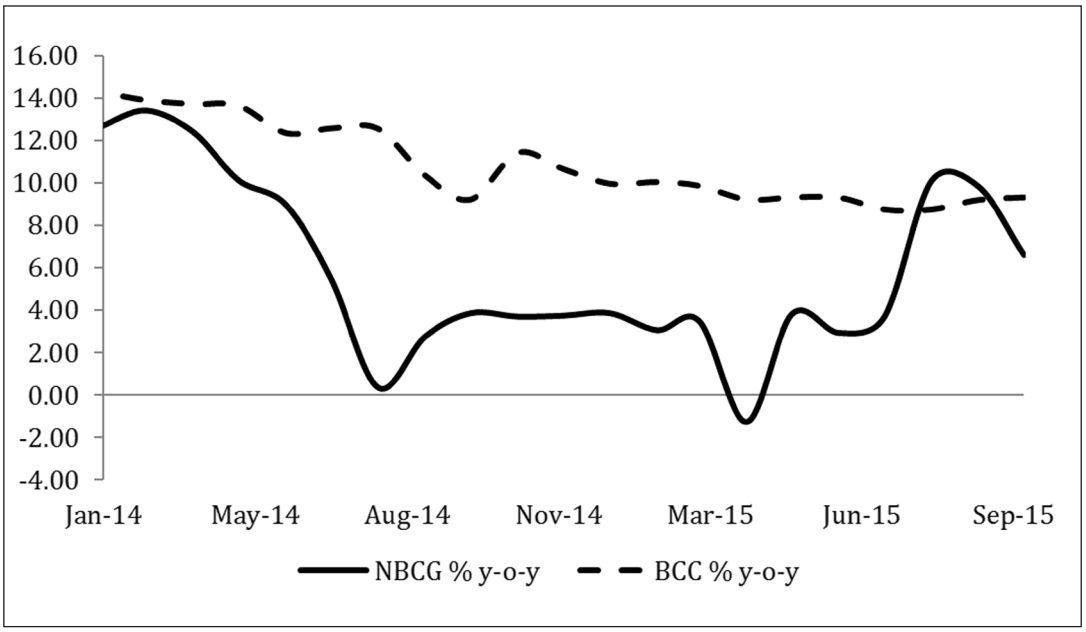
Source: Reserve Bank of India.

[2] http://www.livemint.com/Companies/9DRrDu74tEHBeJhiiYwDLO/No-reprieve-from-bad-loans-for-staterun-banks-in-September.html

The y-o-y growth rate of M3[3] dropped to 11 per cent for September 2015, compared to 13 per cent in 2014 for the same period (Figure M.3). The monthly y-o-y growth rate has been below 14 per cent since April 2014, hovering at 13 per cent before it fell to 12 per cent in November 2014 and 11 per cent earlier this March. The growth rate in M1[4] has been 12 for September 2015, y-o-y, picking up from 10.66 per cent in September 2014, y-o-y. Money multipliers (ratios of M3/M0 and M1/M0) declined during the first half of 2015–16. M3/M0 dropped to –1.11 per cent in September 2015, y-o-y, compared to 2.6 per cent in September 2014, y-o-y, while M1/M0 dropped to –0.16 in September 2015, y-o-y, compared to 0.98 during the previous year.

Trends in NBCG (Net Bank Credit to Government) also show a positive turnaround with the growth rate at 6.6 per cent y-o-y (Figure M.4). Net Foreign Exchange Assets (NEFA) with the RBI also picked up substantially by 21.5 per cent as can be seen from Table M.1 The key point emerging from the review of monetary aggregates is that the economy has been in dire need of a strong monetary policy stimulus, and the RBI's 50 bps rate cut is a much-needed boost at this point even if the full benefits of this transmission show up at a lag of one or two quarters. A comparison of broad movements in monetary aggregates between 2015 and 2013 is presented in Table M1.

Figure M.4: Growth of Bank Credit to Commercial Sector (BCC) and Net Bank Credit to Central Government (NBCG) (% y-o-y, January 2014 to September 2015)



Source: Reserve Bank of India.

[3] M3 comprises of M1 and time deposits with the banking system (RBI definition).
[4] M1 comprises of currency with the public, demand deposits with the banking system, and other deposits with the RBI (RBI definition).

M.5: Economy

The RBI rate cut of 50 bps is primarily a front-loaded policy initiative that is intended to create an environment conducive for boosting investment expenditure in the near future via a drop in the cost of capital. Even if monetary transmission remains weak in the near term, corporate capex plans tend to respond favourably when there is greater certainty about monetary policy stimulus. According to Industrial Outlook Survey data from the RBI, there has been a drop in capacity utilisation by 3.1 percentage points in Q2 of 2015–16 from 6.7 per cent in Q1, along with a drop in business sentiment (as inferred from the Business Expectations Index) from 104.8 to 102.4 over the same period. However, as noted by the RBI, the outlook on business sentiment remained within the expected range for the third quarter of 2015–16. As interest rates on retail and corporate loans come down, investment expenditure and consumption expenditure (especially expenditure on consumer durables) are expected to pick up over the next few months. A drop in interest rates will also improve earnings and returns on capital expenditures, eventually resulting in an increase in firm equity valuation.

M.6: Financial Markets

The Reserve Bank has recently issued licences for differentiated banks (11 Payment Banks and 10 Small Finance Banks) for the purpose of enhancing outreach and promoting financial inclusion.

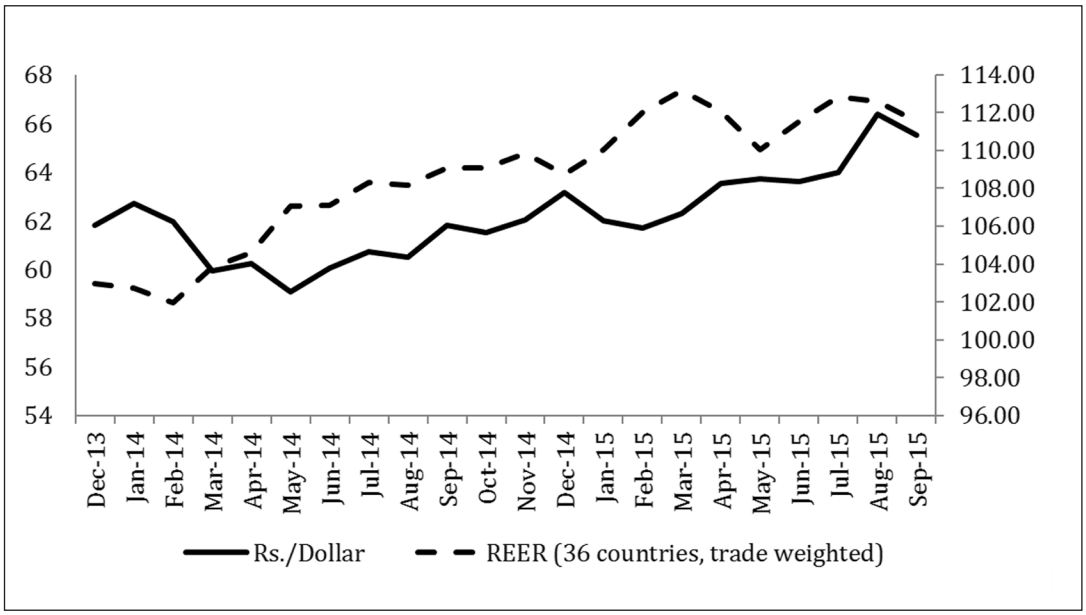
Payment Banks: Payment banks can accept deposits up to ₹ 1 lakh per individual and can offer non-risk sharing financial products. However, such banks cannot partake in any lending activities. Payment banks have been primarily launched to push forward with the RBI's vision of making India a cash-free economy, and they have the potential to generate additional sources of funds for credit through the banking system. Consider a situation where payment banks successfully mobilise demand deposits, which results in currency with the public reducing by 1 per cent every year. Using September 2015 figures, this would result in an increase in demand deposits to the tune of ₹ 1.5 lakh crore over the year. This further has the potential to increase credit by ₹ 5.88 lakh crore through the credit multiplier. Since payment banks are required to invest up to 75 per cent of their deposits in government securities, the entire amount can be extended for granting loans in infrastructure and related projects.

Small Finance Banks: The primary objective of these banks is to extend credit to the unbanked, small businesses and farmers, micro and small industries and the unorganised sector, which do not have access to finance from the larger banks. The structure of SFBs is similar to commercial banks, except that their operations will be on a smaller scale. One potential challenge that SFBs can face is tapping into a new customer base for deposits, because they face competition from public and private sector banks that have opened PMJDY accounts for the unbanked, and to spur transaction activity in these accounts. While the PMJDY scheme has been successful in opening 19 crore accounts (as on 28.10.15), only 62.5 per cent of PMJDY accounts have a positive balance. Hence, SFBs also face the challenge of tapping into customer savings since the target customer segments overlap.

Foreign Institutional Investment: Data from the Securities and Exchange Board of India (SEBI) show funds from foreign institutional investors (FIIs) hitting a new low, with a drop of 127.6 per cent in September 2015, y-o-y. While injection in the debt market was positive at ₹ 692 crore in September 2015, the equity

market has continued to register FII outflows since May 2015. China's surprise devaluation of the Yuan in August 2015 saw a massive outflow of FII funds from the Indian market. Most EM currencies started falling against the U.S. dollar soon after the Chinese devaluation. The situation was exacerbated by uncertainty over an interest rate hike by the U.S. Federal Reserve and fears of a large-scale global slowdown, along with weak growth in EM countries. This was reflected in FIIs withdrawing from riskier asset classes such as EM equities. India also bore the brunt in the equity market because is was bracketed with other EM countries despite sporting better macroeconomic fundamentals and the rupee faring better than most EM currencies, dropping by only 6 per cent in September 2015, y-o-y (Figure M.5).

Figure M.5: Trends in Exchange Rate of the Rupee



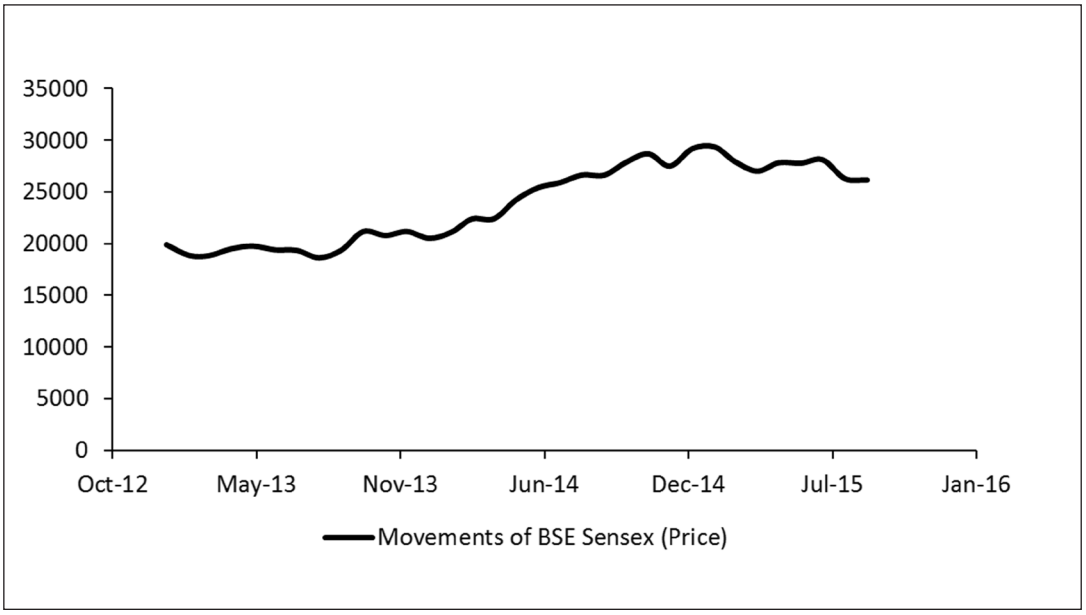
Source: Reserve Bank of India.

Foreign Portfolio Investment: With the RBI allowing more foreign portfolio investors (FPI) to purchase Indian government securities in rupee terms, yields were pushed to their lowest since July 2013, which will eventually induce banks to align their rates more closely with the market. According to the fourth bi-monthly RBI report, FPIs are allowed to own up to 5 per cent of total outstanding rupee-denominated federal government bonds by March 2018. This can result in injection to the tune of ₹1,20,000 crore in central government securities in addition to the existing limit of ₹1,53,500 crore. FPIs will also be allowed a separate 2 per cent of the outstanding stock of state development loans (SDL) during the same period.

Current Account Deficit (CAD), which is the difference between exports and imports of goods, contracted to 1.3 per cent of GDP for the quarter ending June 2015. The trade deficit for April–September, 2015–16 was estimated at ₹4.36 lakh crore, which is lower than the deficit of ₹4.37 lakh crore during 2014–15 for those months. Data from the Commerce Ministry further shows a drop in 21 per cent in CAD in September 2015, y-o-y, showing strong signs of improvement in India's trade position. The RBI maintains a reasonably comfortable position of financing the CAD, given the higher foreign exchange reserves, although prolonged FII outflows could take a hit on those numbers. The RBI added US$8.3 billion to

its foreign exchange reserves in the first half of 2015–16, bringing the total forex reserves to US$349.98 billion. Two years ago, hints of quantitative easing (QE) by the U.S. Federal Reserve created turmoil in the Indian markets, translating into a massive pull out of capital and a corresponding sharp drop in the rupee. Even if the Fed raises rates in the future, it is unlikely to have a similar effect, with fiscal consolidation on track, sound external buffers, and a smaller CAD.

Figure M.6: Movements of BSE Sensex (January 2013 to September 2015)



Source: BSE.

The BSE Sensex was lower by 1.78 per cent at the end of September 2015 compared with September 2014 (Figure M.6). The Sensex registered a fall by 6.4 per cent during the first half of 2015–16. The drop in the Sensex reflects the slow pace of economic recovery, especially the cooling down of the manufacturing sector and low capacity utilisation. Overall, economic indicators and monetary aggregates show that the Indian economic condition is far from robust, and the RBI's front-loaded policy repo cut will prove to be a breather in the months to come as the economy attempts to reboot and return to the high-growth path.

Table M.1: Monetary Aggregates: Pattern of Changes between 2013–14 and 2015–16

Item	Stock End-September 2015	Sept '15 over Sept '14	March '15 over March '14	Sept '14 over Sept '13
	(₹ Billion)			
Reserve money (M0)	19,193.25	12.33	11.3	9.6
Narrow money (M1)	23,710.81	12.15	11.26	10.66
Broad money (M3)	1,10,317.67	11.08	10.8	12.44
Currency with public	14,998.7	11.6	10.56	9.24
Demand deposits	92,26.6	12.62	9.7	10.7
Time deposits	86,606.86	10.8	10.68	12.9
NRBICG	4,159.5	-20.35	-48.25	-23.06
NBCG	32,294.03	6.6	-1.27	3.86
BCC	72,065.40	9.32	9.22	9.22
NFEA RBI	23,103.18	21.48	18.02	11.73
NFEA Banking Sector	24,171.31	20.9	16.98	11.47
Ratios	**Ratio**			
M3/M0	5.75	-1.11	-0.44	2.6
M1/M0	1.24	-0.16	-0.03	0.98
Credit/deposit	74.76	-1.42	-1.27	-3.24
Non-food credit/ deposit	73.72	-1.22	-0.98	-3.2

*All data from 2014–15 onwards are provisional.

Source: Reserve Bank of India.

Note: NRBICG=Net RBI Credit to Central Government; NBCG=Net Bank Credit to Government; BCC=Bank Credit to Commercial Sector; NFEA RBI=Net Foreign Exchange Assets of the RBI; NFEA Banking Sector= Net Foreign Exchange Assets of the Banking Sector.

External Sector

Rajesh Chadha and Ishita Gambhir

The first half of the year looks very weak on the external front. The forecast for world economic growth was moderated further by the IMF in October 2015, led by a slowdown in the emerging economies. China's growth slowdown is one of the major concerns for the world economy. Merchandise trade has collapsed. The period April–September 2015–16 has posted a sharp y-o-y decline of 17.6 per cent in merchandise exports over the corresponding period in 2014–15 (55.5 per cent). Merchandise imports decreased by 14.2 per cent in April–September 2015–16 compared with a decline of 1.6 per cent in the corresponding period of 2014–15. The prospects for recovery remain poor in the rest of the half-year. The solution is to turn our attention towards domestic reforms in order to boost total factor productivity.

E.1 World Economic Outlook

The world economy is expected to grow at 3.1 per cent in 2015—more moderate than was predicted in July 2015. While there has been a persistent but modest recovery in advanced economies for the past five consecutive years, growth in the emerging economies has declined concomitantly. It appears that there are some persisting medium-term and long-term factors leading to such a divergence in growth paths. "These include low productivity growth since the crisis, crisis legacies in some advanced economies (high public and private debt, financial sector weakness, low investment), demographic transitions, ongoing adjust¬ment in many emerging markets following the post-crisis credit and investment boom, a growth realign¬ment in China—with important cross-border repercussions—and a downturn in commodity prices triggered by weaker demand as well as higher production capacity."[1]

While the growth forecast for 2015 has been estimated at 2 per cent for the advanced economies, it is 4 per cent for emerging markets and developing countries (Table E.1). Emerging and developing Asia is losing steam in its growth and is expected to grow at 6.5 per cent compared with 6.8 per cent in 2014. While the Chinese economy is slowing down, India is expected to maintain its growth momentum.

China's renminbi depreciation in August 2015 has led to a spike in global financial market volatility leading to an increase in global risk aversion and weakening of the currencies of many emerging markets. The global outlook and financial markets are also wary of an impending hike in the fed rate some time soon.

Oil and commodity prices have been declining. While this would provide some boost to demand in commodity importers, it is at the cost of the growth outlook for commodity exporters. There is surplus supply of oil. Demand for metals has gone down due to a slowdown in manufacturing activity, particularly in China, leading to slowing commodity-intensive investment. The slump in commodity prices has affected the growth of commodity-exporting advanced economies including Canada and Norway. The International Monetary Fund (IMF) outlines the likely impact of the subdued oil and commodity prices on the world economy as follows:

[1] The discussion in this section is based on the details provided in the World Economic Outlook, October 2015, IMF.

- Among oil importers, lower oil prices have reduced price pressures and external vulnerabilities, which will ease the burden on monetary policy. These positive effects are, however, offset in oil importers that export other commodities by weaker export prices and the ensuing exchange rate depreciation.
- Among oil exporters without fiscal space, lower oil revenues require a reduction in public spending. For those with space, it is appropriate to adjust the fiscal position gradually, but medium-term adjustment plans should be formulated and initiated to maintain policy credibility.
- Among commodity-exporting countries with flexible exchange rate regimes, currency depreciation can help offset the demand impact of terms-of-trade losses, but sharp exchange rate changes in some countries can exacerbate vulnerabilities associated with high corporate leverage and foreign currency exposure.
- Structural reforms to raise productivity and remove bottlenecks to production are urgently needed in many economies.

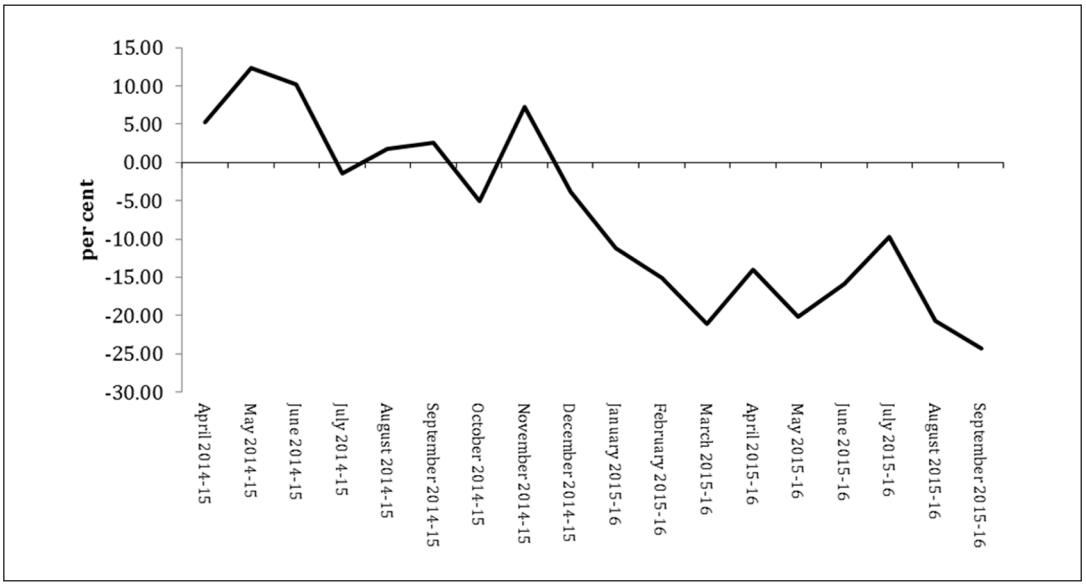
E.2 India's Merchandise Trade

The external sector did not present an encouraging picture during 2014–15. Merchandise exports decreased by 1.2 per cent and touched US$ 310.5 billion[2]. Imports declined by 0.6 per cent to US$ 447.5 billion. The slowdown in imports was mainly due to a reduction in oil imports. Non-oil imports increased 8.3 per cent. The trade deficit on merchandise goods widened to US$ 137 billion, an increase of 0.9 per cent over the previous year.

The period April–September 2015–16 has posted a sharp decline of 17.6 per cent in merchandise exports over the corresponding period of 2014–15 which had posted a year-on-year (y-o-y) growth of 55.5 per cent. In fact, exports have declined steeply ever since January 2015, with a monthly decline of more than 20 per cent in the months of March, May, August and September 2015 (Figure E.1). The month-on-month (m-o-m) export growth is weak and sporadic (Figure E.2).

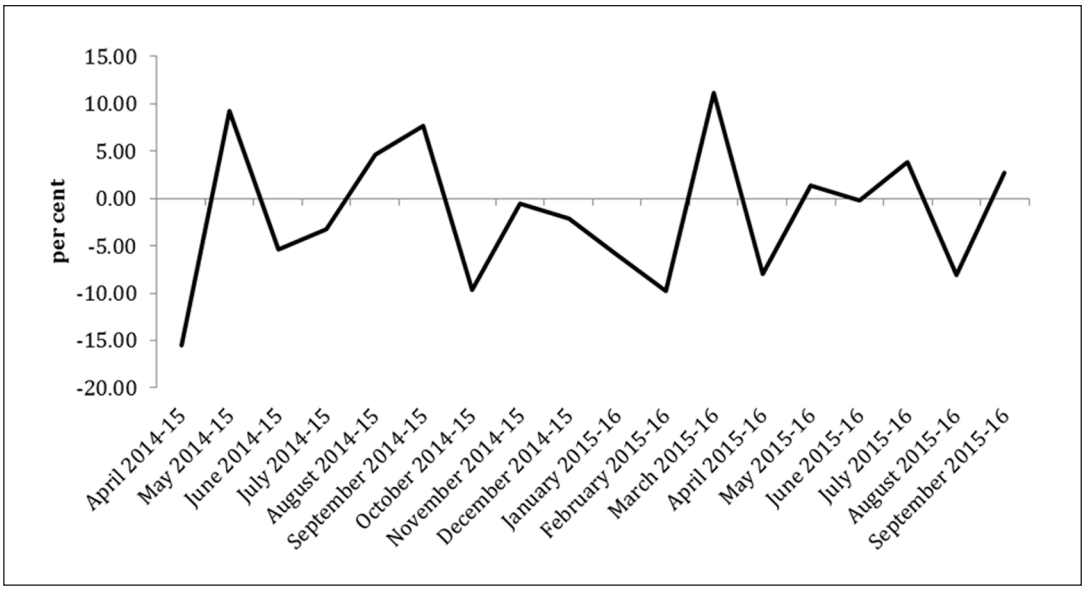
[2] Reserve Bank of India.

Figure E.1: Growth in India's Total Exports (% y-o-y), April 2014–15 to September 2015–16



Source: Department of Commerce, Ministry of Commerce & Industry, GoI.

Figure E.2: Growth in India's Total Exports (% m-o-m), April 2014–15 to September 2015–16



Note: This series has not been de-seasonalised.

Source: Department of Commerce, Ministry of Commerce & Industry, GoI.

E.3 Composition of Exports

India's merchandise exports consist predominantly of manufactured goods that accounted for 67.4 per cent of total exports during 2014–15. Within the manufactured goods category, the shares of engineering goods, gems & jewellery, chemicals & related products, transport equipment, and textiles & readymade garments are 22.4, 13.3, 10.4, 8.0, 5.8 and 5.4 per cent, respectively. Exports of petroleum products

accounted for another 18.3 per cent of total exports followed by agriculture & allied exports with a share of 12.5 per cent. The share of ores & minerals was 0.8 per cent. During 2014–15, exports of most broad categories registered positive growth except for ores & mineral, petroleum products, agriculture & allied products and electronic goods.

The composition of exports has remained broadly unchanged during April–August 2015–16[3]. Exports of most of the major export categories, with the exception of readymade garments, declined during this period. The steepest decline was posted by exports of petroleum products. While textiles exports declined by 3.3 per cent, readymade garments posted a growth rate of 4.9 per cent.

E.4 Destination of Merchandise Exports

The pattern of international trade has changed over the past years with the emergence of intra-regional trade. The Asian region has become the most important export destination of India with a share of 48 per cent during 2014–15. Other important export destinations for India include USA and Europe with export shares of 19.2 and 18.8 per cent, respectively. The share of exports to Africa has been around 11 per cent.

During the period of April–August 2015–16, the regional distribution of exports remained largely unchanged[4]. The top 20 export destinations accounted for 67.8 per cent of total exports. India's leading export destination countries include USA (share in total exports at 15.8 per cent), the UAE (11.8 per cent), Hong Kong (4.4 per cent) and the UK and China (3.5 per cent each). Exports to each of the top 20 countries decreased during April–August 2015–16 with the sharpest decline to Sri Lanka. India's exports to Sri Lanka mainly comprise manufactured products, including engineering goods and transport equipment, followed by other commodities.

E.5 Composition of Merchandise Imports

India's commodity imports declined marginally by 0.6 per cent during 2014–15 mainly on account of lower oil imports. Oil imports accounted for 31 per cent of total imports and declined by 16.1 per cent (although in quantity terms, oil imports rose by 1.4 per cent), whereas non-oil imports with a share of 69 per cent of total imports rose by 8.3 per cent. This decline has been ascribed to falling oil prices in the international market. Imports of each of the three major product categories, namely, engineering goods, electronics, and chemicals & related products increased during the year.

Merchandise imports decreased by 14.2 per cent in April–September 2015–16 compared with a decline of 1.6 per cent in the corresponding period of 2014–15. This was driven by a notable decline in oil imports that contracted by 41.6 per cent, while non-oil imports grew at a marginal rate of 0.7 per cent.

Data from April to August 2015 show that major non-oil products that registered positive growth include gold and other precious metal jewellery (110 per cent), readymade garments (9.7 per cent), electronic goods (7.1 per cent) and chemicals & related products (3.4 per cent), while engineering goods witnessed a marginal decline (0.1 per cent). Overall, imports of manufactured goods increased by 4.6 per cent. The

[3] The data have been sourced from the CMIE and at the time of writing the September data were not available.
[4] The data have been sourced from the CMIE.

imports of agricultural & allied products increased by 2.1 per cent, while imports of ores & minerals decreased by 16.6 per cent.

E.6 Sources of Imports

Like exports, the importance of intra-regional trade is recognised for imports as well. During 2014–15, imports from Asia accounted for 58.1 per cent of total imports followed by 16.8 per cent from Europe, 12.4 per cent from America and 9.1 per cent from Africa.

During April–August 2015–16, much of India's import requirements continued to be sourced from Asia (56.2 per cent). The cumulative share of the top 20 import-sourcing countries was 73.3 per cent, indicating greater concentration in imports compared with exports. The growth pattern has been mixed across source countries, with an increase observed for imports from seven of the top 20 countries. These include China, Switzerland, USA, Japan, Singapore, South Africa and Hong Kong.

E.7 Balance of Payments

As per RBI data, the merchandise trade deficit increased from US$ 34.6 billion in April–June 2014–15 to US$ 34.2 billion in the April–June 2015–16. This marginal decline was enabled by a decline in merchandise exports by 16.8 per cent and in imports by 12.1 per cent. The surplus on invisibles was 28 billion in April–June 2015. The current account deficit (CAD) thus touched US$ 6.2 billion, which is lower than a CAD of US$ 7.9 billion in the corresponding quarter of 2014–15 (Table E.2). Consequently, the CAD declined from 1.9 per cent of the GDP to 1.4 per cent of the GDP. There is a surplus of US$ 18.1 billion on capital account. With CAD at US$ 6.2 billion, capital account surplus at US$ 18.1 billion and errors and omissions at US$ (–) 0.5 billion, the balance overall balance of payments showed a surplus of US$ 11.4 billion (18.1 minus 6.2 minus 0.5) in April–June 2015–16. Foreign exchange reserves increased correspondingly by US$ 11.4 billion.

E.8 Outlook

The downside risks of the world economic outlook have increased due to a declining trend in commodity prices, depreciating currencies in the emerging markets, and increasing financial market volatility. China's growth slowdown is one of the major concerns for the world economy. The foreign currency exposure of corporate balance sheets has increased. The contagion risks from Greece-related events to other euro area economies continue to be of concern even though they are lower than earlier in the year. Other risks include the lingering weak demand and low inflation. However, subdued oil prices and the lagged effects from previous declines could boost domestic demand and growth among oil importers. Oil exporters stand to lose.

What does this entail for India? The prospects of growth in exports continue to remain low. The potential for India's export growth is subdued. While the world trade discipline has been in disarray, there is not yet a clear view about whether India has gained from its preferential trade agreements already signed and the potential of the future proposals. The external sector is going through an uncertain phase.

It is time to look inward and set the domestic economic policies right to gain a comparative advantage by undertaking various pending reforms particularly those in the factor markets—land, labour and capital. The major solution to the growth boost lies in pushing up total factor productivity in all sectors of production. The Foreign Trade Policy Statement explains the vision, goals, and objectives underpinning the foreign trade policy for the period 2015–2020 (Box E.1). It describes the market and product strategy envisaged and the measures required, not just for export promotion but also for the enhancement of the entire trade ecosystem. It pays explicit attention to the domestic reform agenda.

Box E.1: Foreign Trade Policy Statement[5]
Anchoring Trade Policy in the Domestic Policy Framework

There is a symbiotic relationship between the Foreign Trade Policy (FTP) and the government's "Make in India" initiative. The "Make in India" initiative aims to achieve global recognition for the Indian economy, promote the country as an investment destination, spur manufacturing, and promote employment. It encompasses initiatives for skill development to ensure the availability of skilled manpower for manufacturing and to improve the ease of doing business through initiatives such as self-certification of documents and innovative revenue models. It also envisages the development of infrastructure including i-ways, besides highways, ports, optical fibre networks, gas grids, and water grids.

There is a clear recognition within the government that exports should not merely be a function of marketable surplus but should also reflect a genuine enhancement of economic capacity and development. Through its foreign trade policy, the government envisages:

- Employment creation in both manufacturing and services through the generation of foreign trade opportunities;
- Zero defect products with a focus on quality and standards;
- A stable agricultural trade policy encouraging the import of raw material where required and the export of processed products;
- A focus on higher value addition and technology infusion;
- Investment in agriculture overseas to produce raw material for the Indian industry;
- Lower tariffs on inputs and raw materials; and
- Development of trade infrastructure and provision of production and export incentives.

Source: Quoted from Foreign Trade Policy Statement, Directorate General of Foreign Trade, Ministry of Commerce and Industry, Government of India http://dgft.gov.in/exim/2000/policy/FTP_Statement.pdf

[5] http://dgft.gov.in/exim/2000/policy/FTP_Statement.pdf

Table E.1: Growth of Global Output and Trade (% y-o-y), 2002 and 2013–15

	2013	2014	Projections	
			2015	*2016*
World Output	3.3	3.4	3.1	3.6
Advanced Economies	1.4	1.8	2.0	2.2
United States	2.2	2.4	2.6	2.8
Euro Area	–0.4	0.9	1.5	1.6
Germany	0.5	1.6	1.5	1.6
France	0.3	0.2	1.2	1.5
Italy	–1.9	–0.4	0.8	1.3
Spain	–1.2	1.4	3.1	2.5
Japan	1.5	–0.1	0.6	1.0
UK	1.7	3.0	2.5	2.2
Emerging Market and Developing Economies	4.7	4.6	4.0	4.5
Commonwealth of Independent States	2.2	1.0	–2.7	0.5
Russia	1.3	0.6	–3.8	–0.6
Emerging and Developing Asia	6.6	6.8	6.5	6.4
China	7.7	7.3	6.8	6.3
India	5.0	7.3	7.3	7.5
ASEAN-54	5.2	4.6	4.6	4.9
Latin America and the Caribbean	2.7	1.3	–0.3	0.8
Brazil	2.5	0.1	–3.0	–1.0
Mexico	1.1	2.1	2.3	2.8
World Growth Based on Market Exchange Rates	2.5	2.7	2.5	3.0
World Trade Volume (goods and services)	3.0	3.3	3.2	4.1
Imports				
Advanced Economies	1.4	3.4	4.0	4.2
Emerging Market and Developing Economies	5.3	3.6	1.3	4.4
Exports				
Advanced Economies	2.4	3.4	3.1	3.4
Emerging Market and Developing Economies	4.4	2.9	3.9	4.8
Commodity Prices (U.S. dollars)				
Oil	–0.9	–7.5	–46.4	–2.4
Non-fuel (average based on world commodity export weights)	–1.2	–4.0	–16.9	–5.1

Source: World Economic Outlook, IMF, October 2015.

Notes: For India, data and forecasts are presented on a fiscal year basis and GDP from 2011 onward is based on GDP at market prices with FY2011/12 as a base.

Table E.2: Overall Balance of Payment in India (US$ million)

	April–June 2015 P			April–June 2014 PR		
	Credit	***Debit***	***Net***	***Credit***	***Debit***	***Net***
A. CURRENT ACCOUNT						
I. MERCHANDISE	**68,024**	**102,221**	**–34,197**	**81,712**	**116,274**	**–34,562**
II. INVISIBLES (a+b+c)	**58,560**	**30,553**	**28,007**	**57,474**	**30,771**	**26,703**
a) Services	38,046	20,623	17,423	37,568	20,582	16,986
i)Travel	4,566	3,845	721	4,232	3,838	394
ii) Transportation	3,870	4,128	–258	4,452	3,931	521
iii) Insurance	482	282	200	537	304	234
iv) G.n.i.e.	131	269	–139	132	248	–115
v) Miscellaneous, of which:	28,997	12,098	16,899	28,213	12,261	15,952
Software Services	18,335	676	17,658	17,533	519	17,014
Business Services	7,792	7,302	490	7,066	6,306	761
Financial Services	1,286	778	509	1,581	1,415	166
Communication Services	495	154	341	450	262	188
b) Transfers	17,287	1,130	16,157	17,561	1,149	16,413
i)Official	146	264	–117	50	263	–213
ii)Private	17,141	867	16,274	17,512	885	16,626
c) Income	3,228	8,800	–5,573	2,345	9,040	–6,696
i) Investment Income	2,345	8,272	–5,928	1,501	8,352	–6,851
ii) Compensation of Employees	883	528	355	844	689	155
Total Current Account (I+II)	**126,584**	**132,774**	**–6,190**	**139,186**	**147,045**	**–7,859**
B. CAPITAL ACCOUNT						
1. Foreign Investment (a+b)	**78,588**	**70,713**	**7,874**	**80,575**	**60,255**	**20,321**
a) Foreign Direct Investment (i+ii)	15,479	5,303	10,177	11,548	3,667	7,881
i) In India	14,159	2,680	11,478	9,986	1,957	8,029
Equity	9,735	2,617	7,117	7,459	1,904	5,555
Reinvested Earnings	2,315	–	2,315	2,059	–	2,059
Other Capital	2,109	63	2,046	468	53	415
ii) Abroad	1,321	2,622	–1,302	1,562	1,711	–149
Equity	1,321	1,122	198	1,562	714	849
Reinvested Earnings	–	742	–742	–	276	–276
Other Capital	–	758	–758	–	721	–721
b) Portfolio Investment	63,108	65,411	–2,303	69,027	56,587	12,440

(Contd.)

Table E.2: Overall Balance of Payment in India (US$ million) (Contd.)

	April–June 2014 P			April–June 2013 PR		
	Credit	*Debit*	*Net*	*Credit*	*Debit*	*Net*
i) In India	**62,848**	**65,318**	**–2,469**	**68,858**	**56,393**	**12,465**
FIIs	**62,575**	**65,318**	**–2,742**	**68,858**	**56,393**	**12,465**
ADR/GDRs	273	–	273	–	–	–
ii)Abroad	260	93	167	169	194	–25
2.Loans (a+b+c)	**27,869**	**29,662**	**–1,793**	**31,916**	**30,418**	**1,498**
a)External Assistance	1,500	1,207	293	1,215	1,265	–50
i)By India	14	134	–120	16	129	–113
ii) To India	1,486	1,074	412	1,200	1,136	63
b) Commercial Borrowings (ST, MT & LT)	3,824	5,102	–1,278	6,602	5,276	1,326
3.Banking Capital (A+B)	**27,637**	**16,609**	**11,028**	**23,967**	**24,081**	**–115**
4. Rupee Debt Service	**–**	**34**	**–34**	**–**	**56**	**–56**
5. Other Capital	**6,159**	**5,162**	**997**	**8,156**	**10,626**	**–2,470**
Total Capital Account (1 to 5)	**140,253**	**122,181**	**18,073**	**144,614**	**125,435**	**19,179**
C. Errors & Omissions	**–**	**453**	**–453**	**–**	**141**	**–141**
D. Overall Balance (A+B+C)	**266,838**	**255,408**	**11,430**	**283,800**	**272,621**	**11,179**
E. Monetary Movements (i+ii)	**–**	**11,430**	**–11,430**	**–**	**11,179**	**–11,179**
i) I.M.F.	–	–	–	–	–	–
ii) Foreign Exchange Reserves (Increase - / Decrease +)	–	11,430	–11,430	–	11,179	–11,179

Source: Monthly Bulletin, RBI, October 2015.

Notes: PR: Partially Revised. P: Preliminary.

Prices

Shesadri Banerjee

All indicators of inflation are unanimously showing a decelerating trend over the past one-and-a-half years. The downward trend of inflation is mostly driven by the pass-through effect of declining international commodity prices coupled with the disinflationary stance of the monetary policy of the RBI. Nevertheless, the inflation outlook is still subject to considerable uncertainties surrounding international commodity prices, weather-related disturbances, prices of pulse products and spillovers from the external sector through the exchange rate channel.

P.1 Overall Trends of Inflation

All indicators of inflation are unanimously showing a decelerating trend over the past one-and-a-half years (Table P.1). The half-yearly assessment of inflation rates on a year-on-year (y-o-y) basis reveal that retail inflation declined between 2014–15:H1 and 2015–16:H1 on an average of 1.4 percentage points across its different indicators. For retail inflation indicators, the highest average drop (across three six-month periods —2014–15:H1, 2014–15:H2, and 2015–16:H1) is observed for the Consumer Price Index for Agricultural Labourers (CPIAL) with 2 percentage points (y-o-y), while the smallest one of 0.8 percentage points is found for the Consumer Price Index of Industrial Workers (CPIIW). In contrast to retail inflation indicators, the average size of moderation is strikingly larger for inflation rate calculated based on the Wholesale Price Index (WPIINFL). During the period of 2014–15:H1 to 2015–16:H1, WPI inflation has fallen sharply with an average of 4.1 per cent (y-o-y). The difference in the declining trends of the WPI and CPI inflation implies that the divergence has only increased.

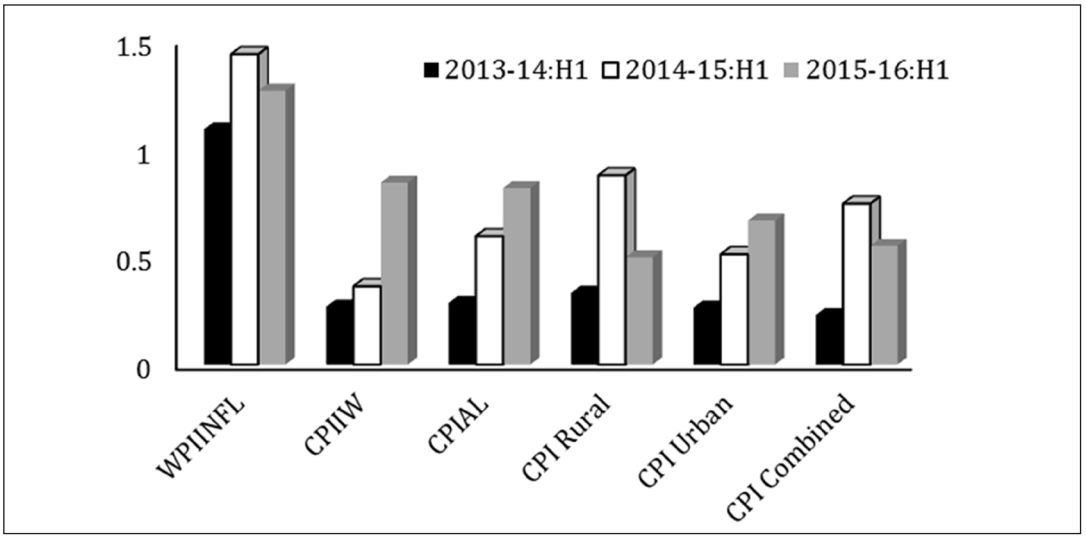
The downward trend of inflation is mostly driven by the pass-through effect of declining international commodity prices (28 per cent as per the RBI estimate) led by the dramatic fall in crude oil prices. While domestic food, fuel, and service prices were decreasing in line with international prices, their declines were expedited with the disinflationary stance of the monetary policy. The formal agreement between the Government of India and the Reserve Bank of India (RBI) regarding the inflation targeting monetary policy framework also contributed to the downswing of inflation by enhancing the transparency and credibility of the current monetary policy regime.

The inter-quarter variation spanning 2014–15:Q1 to 2015–16:Q2 resembles the semi-annual downward trend except for an uptick in inflation during 2014–15:Q4 for consumer price inflation rates (Table P.1). During 2014–15:Q4, the prices of fruits (9.1 per cent y-o-y) and vegetables (11 per cent y-o-y) firmed up and pushed CPI inflation marginally upward[1]. However, the WPI inflation rate has experienced continuous deflation since 2014–15:Q4.

1. Inflation indicator is based on CPI rural and urban combined with base year 2012 = 100 (*Source*: MOSPI).

In the case of monthly inflation, the first half of 2015–16 signals a deflationary trend for WPI inflation and a downward correction of CPI inflation excluding the months of June and September 2015. The uptick in retail inflation rates in June 2015 suddenly surfaced due to an unexpected rise in energy prices (–42.9 per cent in 2015– 16:M04 to –38.4 per cent in 2015–16:M05). Besides, food prices showed spikes induced by the prices of pulses that propelled the momentum of inflation. Retail inflation of pulses moved up from 12.4 per cent to 29.8 per cent on a y-o-y basis during the period of 2015–16:M04 to 2015–16:M09. Finally, rupee depreciation during 2015–16: M08 has caused a marginal increase in CPI inflation[2].

Figure P.1: Variability (Standard Deviation) of Half-Yearly Inflation (% y-o-y), 2013–14:H1 to 2015–16:H1



Sources: NCAER computations from Office of Economic Advisor, Labour Bureau and Ministry of Statistics and Programme Implementation.

In addition to movements in the level of inflation, it is interesting to look at inflation uncertainty by comparing the variability in monthly inflation rates in the first half of the past three years. Based on standard deviations of the monthly (y-o-y) inflation rates of both the WPI and CPI indicators, it appears that uncertainty, hovering around inflation, has risen over the years (Figure P.1). A body of theoretical and empirical literature exists that shows that inflation uncertainty is detrimental for economic growth[3]. Given the implementation of the new monetary regime in January 2015, we graphically present 'before' and 'after' scenarios spanning the past three fiscal years using the measure of coefficient of variation of y-o-y basis monthly inflation rates of both the WPI and the CPI indicators in Box P.1.

[2] Inflation indicator is based on CPI rural and urban combined with base year 2012 = 100 (Source: MOSPI)

[3] For example, see Ragan (1994), Al-Marhubi (1998) and Judson and Orphanides (1999).

References:

Ragan, C. (1994). A framework for examining the real effects of inflation volatility, Economic Behaviour and Policy Choice Under Price Stability, Bank of Canada

Al-Marhubi, T. (1998). Cross-Country evidence on the link between inflation volatility and growth, Applied Economics, Vol 30, pp. 1317 – 1326.

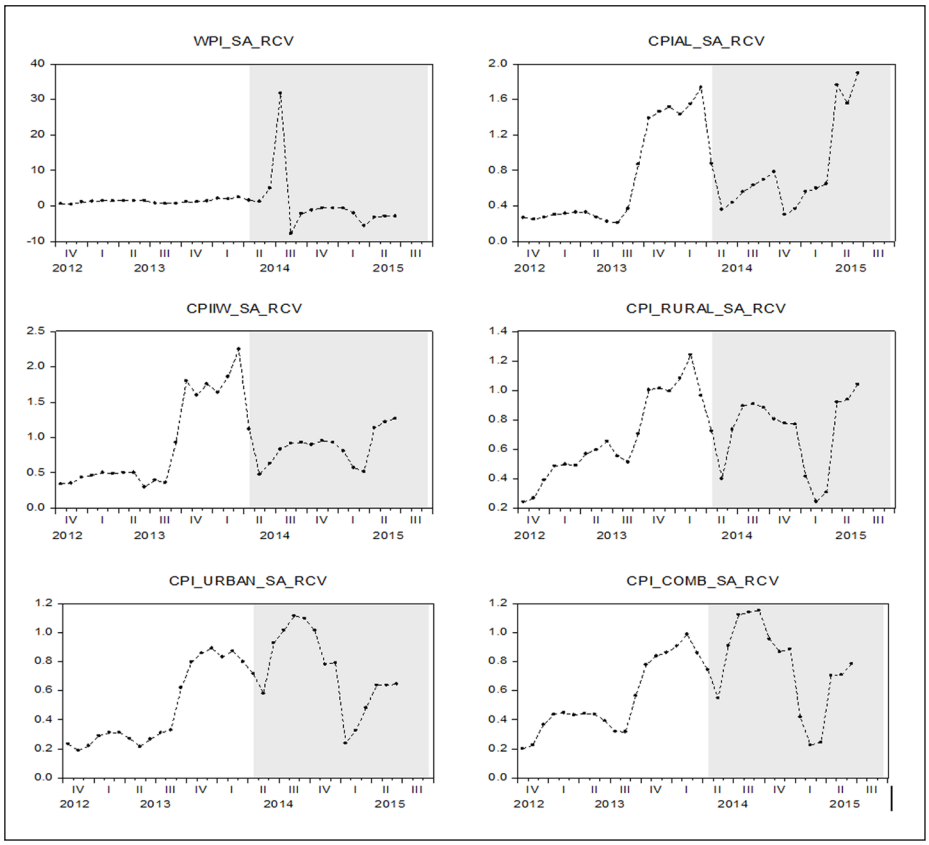
Judson, R. and Orphanides, A. (1999). Inflation, volatility and growth, International Finance, Vol. 2(1), pp. 117-38.

Box P.1: Evaluating Inflation Uncertainty in the New Monetary Policy Regime

Variability, one of the key attributes of inflation dynamics, provides information regarding *uncertainty* that revolves around the time path of inflation. Precisely, greater variation of inflation rates implies greater uncertainty about its future evolution and vice versa. Following the inception of the flexible inflation-targeting regime, there has been downward correction of inflation indicators, suggesting that the level of inflation has been curbed and gradually directed towards its long-run target. While the current policy discussion addresses the state of moderation under the new monetary policy framework, the issue of inflation uncertainty remains less emphasised. Given the potential adverse consequences of inflation uncertainty on economic growth, a sub-sample analysis is undertaken to assess inflation uncertainty for the period of 2011:M01 to 2015:M09.

By de-seasonalising the monthly price indices and converting them to annualised inflation, the coefficient of variation is calculated for WPI inflation, CPI inflation for agricultural labourers, CPI inflation for industrial workers, Rural CPI inflation, Urban CPI Inflation, and CPI Combined inflation for rural and urban for the sample period. In Figure P.1.1, seven-month rolling coefficient of variations are plotted for these six inflation indicators. The shaded region (2014:M04 – 2015:M09) signifies the era of the new monetary policy regime.

Figure P.1.1: Plots of Inflation Variability across Different Inflation Indicators , 2011:M01 to 2015:M09



(Contd.)

Figure P.1.1: Plots of Inflation Variability across Different Inflation Indicators (Contd.)

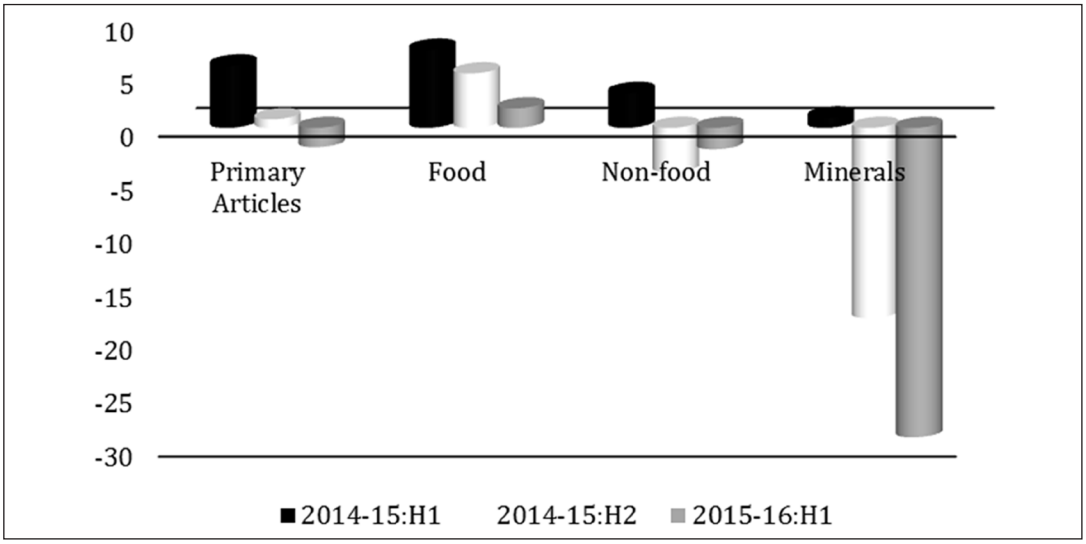
Note: Description variables mentioned in the above figure are as follows. WPI_SA_RCV: Rolling Coefficient of Variation of Seasonally Adjusted WPI Inflation; CPIAL_SA_RCV: Rolling Coefficient of Variation of Seasonally Adjusted CPI Inflation for Agricultural Labourers; CPIIW_SA_RCV: Rolling Coefficient of Variation of Seasonally Adjusted CPI Inflation for Industrial Workers; CPI_RURAL_SA_RCV: Rolling Coefficient of Variation of Seasonally Adjusted CPI Inflation for Rural; CPI_URBAN_SA_RCV: Rolling Coefficient of Variation of Seasonally Adjusted CPI Inflation for Urban; CPI_COMB_SA_RCV: Rolling Coefficient of Variation of Seasonally Adjusted CPI Inflation for Rural and Urban Combined.

WPI inflation indicates a decline in uncertainty after a spike in the second and third quarters of 2014–15 (coinciding with the sharp fall in worldwide crude oil prices). Retail inflation, however, gives a different picture. Both the CPI for agricultural labourers and the CPI for industrial workers exhibit rising uncertainty, with a couple of breaks in their movement. The volatility plots of CPI rural, CPI urban and CPI combined together show big swings, with peaks and troughs that suggest increasing variation and the progressively time-varying nature of inflation uncertainty. Using CPI Combined inflation rate, it is noticeable that though mean inflation is restrained by the anti-inflationary monetary policy, the element of uncertainty is still predominant.

P.2 Decomposing WPI Inflation of Primary Articles

WPI inflation of primary articles has plunged from 5.9 per cent in 2014–15: H1 to –1.8 per cent in 2015–16:H1. Decomposing this on-going declining trend of primary articles, it is apparent that all of its constituents, namely, food, non-food, and minerals, have decreased substantially and driven down inflation (Figure P.2). WPI food inflation has substantially moderated from 7.3 per cent in 2014–15:H1 to 1.8 per cent in 2015–16:H1 (Table P.2). Non-food inflation has experienced a sharp downward correction of 7.5 per cent during the period of 2014–15:H1 to 2014–15:H2, and finally arrived at –2 per cent in 2015–16:H1. Mineral prices have undergone strong deflation, with –17.8 per cent in 2014–15:H2 and –29 per cent in 2015–16:H2. The overall trend of WPI inflation of primary articles is consistent with the movements of international commodity prices and implies greater alignment of the domestic and external market prices.

Figure P.2: WPI Inflation of Primary Articles and Its Constituents (% y–o–y), 2014–15:H1 to 2015–16:H1



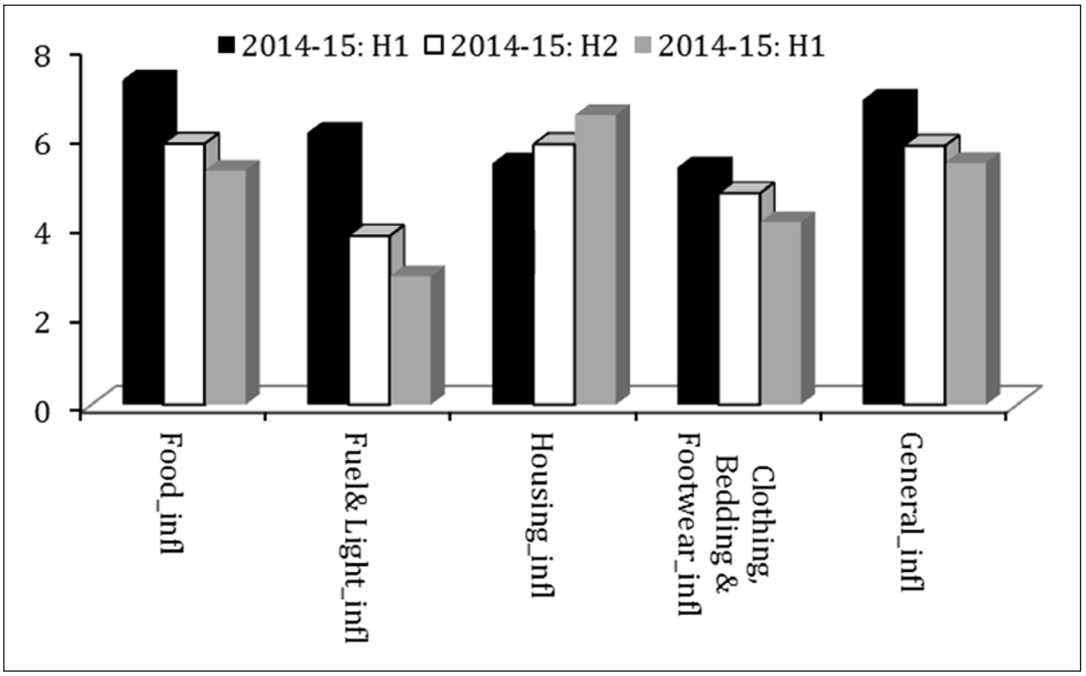
Source: NCAER computations from Office of Economic Advisor.

Although the half-yearly analysis of y-o-y percentage change in the price of food articles indicates clear moderation (Table P.2), the disaggregated quarterly level of the major categories of WPI inflation of food articles on a y-o-y basis exposes considerable heterogeneity in inflationary pressures triggered by its different components. While food grains and condiments & spices infused inflationary momentum during 2014–15:Q4 to 2015–16:Q2 due to production shortfall in pulses and demand-supply mismatches, protein items reduce the pressure gradually. Components like fruits and vegetables, milk, and other food articles impart volatility to the overall situation of food inflation. The components of food inflation show nearly similar patterns when we consider monthly break-ups for the first half of 2015–16. The major inflationary shocks have shown up during the months of April to June 2015–16. In the later months, the impacts of the shocks have slowly dissipated.

P.3 Unwinding Consumer Price Inflation across Different Groups and Sub-groups

Inflation based on the CPI for Industrial Workers (CPIIW) exhibits considerable moderation over the past 18 months. The record of inflation rates on a half-yearly basis underscores the same across its different groups and subgroups, other than the category of housing inflation (Figure P.3). During the period of 2014–15:H1 to 2015–16:H1, the prices of food, fuel and light, and clothing, bedding, & footwear have dropped from 7.3 to 5.2 per cent, 6.1 to 2.9 per cent, and 5.3 to 4.1 per cent, respectively. The magnitude of moderation is the highest for fuel and light inflation due to a steep decline in energy prices in the world market. Inflation of housing price stands out in this group, with 0.1 per cent per quarter increment for the past six quarters.

Figure P.3: Consumer Price Inflation for Industrial Workers across Sub-groups (% y–o–y), 2014–15:H1 to 2015–16:H1



Source: NCAER computations from Ministry of Statistics and Programme Implementation.

The inflation indicator of CPI Urban and its sub-groups provides an impression similar to the one observed in the CPI for Industrial Workers. Inflationary pressures from rural wage growth have remained relatively muted on the back of a moderation in nominal wage growth and, in effect, CPI Rural inflation has remained sticky with a modest downward correction, except for a steep decline in food prices during the period of 2014–15:Q4 to 2015–16:Q2.

Inflation rates measured by CPI Rural and Urban combined also reflect moderation similar to the CPIIW but differs in terms of regularities across its different sub-groups over the past three quarters. During the period of 2014–15:Q4 to 2015–16:Q2, food prices have steadily fallen from 6.5 to 3.3 per cent. This can be attributed to the pre-emptive efforts by the government to fend off food price pressures such as actions against hoarding and black marketing, suspension of futures trading in select pulses, discouraging exports and incentivising imports of pulses and onions, and restraining food inflation despite the deficient and spatially uneven monsoon[4]. Other categories like housing, and clothing & footwear prices followed moderation with 5 to 4.6 per cent and 6.5 to 5.9 per cent, respectively, during the same period. Fuel inflation heads off marginally from 4.6 per cent to 5.6 per cent due to an unexpected upsurge in international crude oil prices during 2015–16:Q1.

In the disinflationary environment, the only exception is observed for pulses and allied products across Rural CPI, Urban CPI and the Combined CPI of Rural and Urban (Table P.3) during the period of the past three quarters. These food items have recorded inflation for consecutive quarters, on average, of 13.9 per cent, 25.8 per cent and 17.9 per cent, respectively.

As a whole, the ongoing broad-based disinflation, facilitated by a disinflationary impulse in food items, downward adjustment in the prices of petrol and diesel, and widespread easing of goods and services inflation, ebbs inflationary pressure significantly.

P.4 Pass-through Effects of Global Inflation

Over the past one-and-a-half years, the global market has witnessed steady deflation (Table P.4). The half-yearly assessment shows that energy prices have gone through significant deflation, from –0.7 per cent to –46 percent y-o-y, largely led by crude oil prices (0.1 per cent to –49.1 per cent) between 2014–15:H1 and 2015–16:H1. The softening of international crude oil prices and pass-through to domestic prices of petrol and diesel generated the disinflation in respect of transport and communication. However, the pass-through was less than complete. It is only a third of the 17 per cent decline in international crude oil prices[5].

Parallel with energy prices, the non-energy basket with agricultural products, metals and minerals, and fertilisers has also experienced considerable deflation of –2.4 per cent to –16 per cent during 2014–15:H1 to 2015–16:H1. The effect of softening international commodity prices engendered a softening of the input price pressure, which reduces domestic inflation through various channels. Except for some firming up

[4] Monetary Policy Report of the RBI (September, 2015–16).

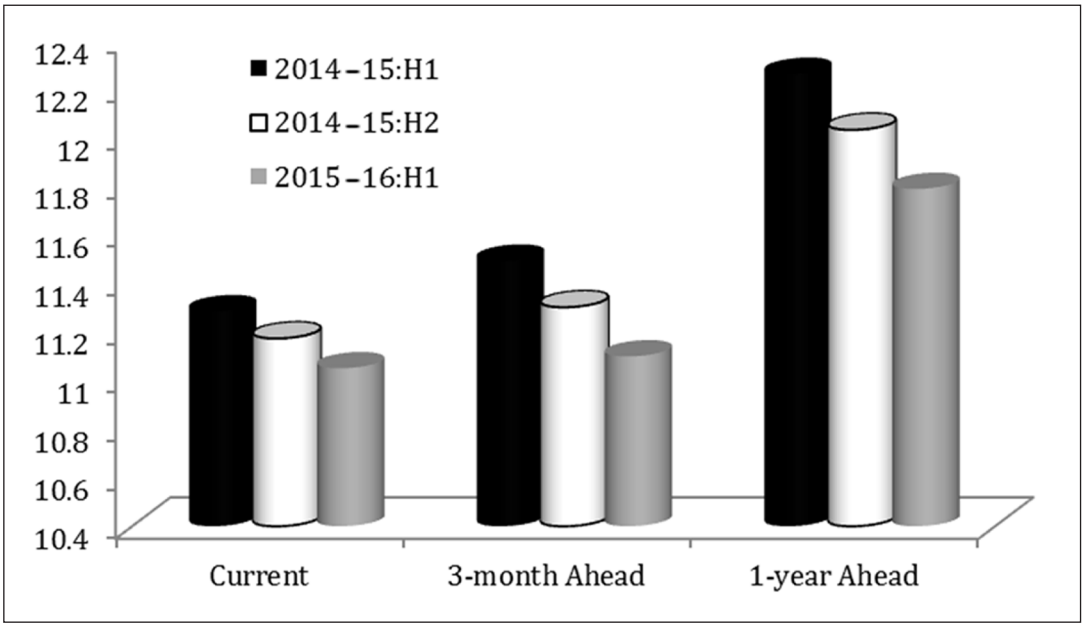
[5] Monetary Policy Report of the RBI (September, 2015–16).

in May–June 2015 induced by the hardening of international crude oil and gold prices, the CPI excluding food and fuel inflation continued with disinflationary momentum across different sectors of the economy.

P.5 Dynamics and Impact of Expected Inflation

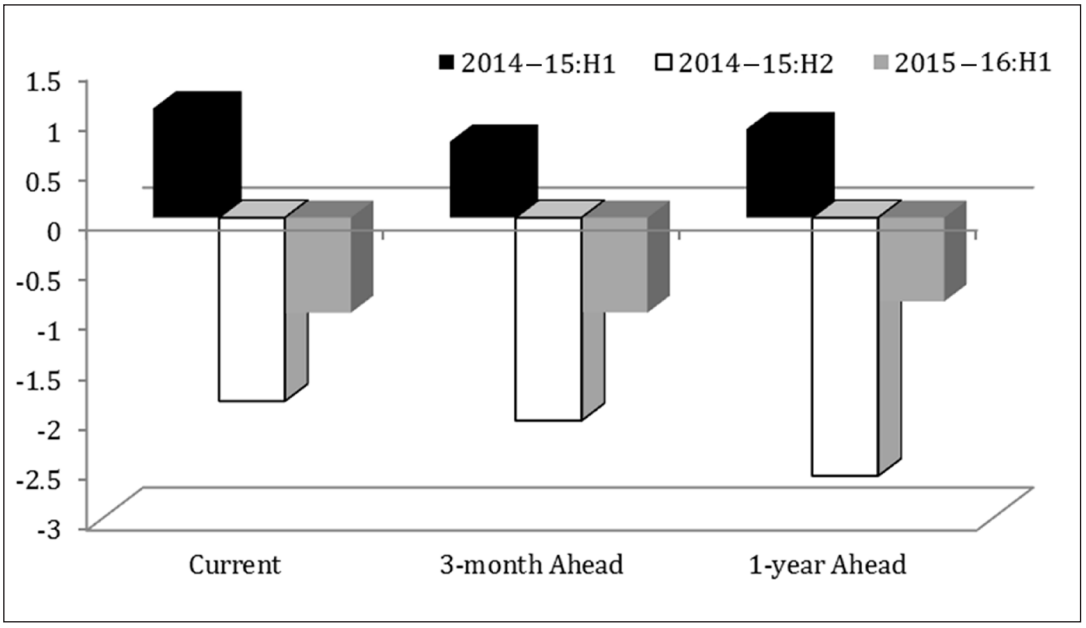
In the present price scenario, one of the major concerns of the RBI is expected inflation. Expected inflation plays a crucial role in the future course of inflation via inflation indexation into wage and price contracts. The Inflation Expectations Survey of Households for September 2015 (41st round) by the RBI has indicated a rise in inflation expectations. The semi-annual record of current expected inflation (9.1 per cent in 2014–15:H2 to 10.3 per cent in 2015–16:H1), expected inflation 3 months ahead (8.9 per cent in 2014–15:H2 to 10.4 per cent in 2015–16:H1), and expected inflation 1 year ahead (9.5 per cent in 2014–15:H2 to 11 per cent in 2015–16: H1) show an uptick in their movements for the first half of the current financial year. In order to understand the dynamics and implications of different time-series constituents, the quarterly data series of expected inflation is decomposed into the long-run trend and business cycle components for the sample period of 2006:Q4 to 2015:Q2. The results of the decomposition indicates that the long-term trend component is slowly easing (Figure P.4) but the short-term element is exerting inflationary momentum (Figure P.5). The promising aspect is that the anti-inflationary monetary regime has started to have an impact on anchoring expectations for the longer term. But the downside is that short-term expected inflation still needs to be stabilised.

Figure P.4: Declining Trend of Long-run Expected Inflation (% y–o–y for 2014–15: H1 – 2015–16: H1)



Source: NCAER.

Figure P.5: Cyclical Variation of Expected Inflation (% y–o–y for 2014–15: H1 – 2015–16: H1)



Source: NCAER.

The potential impact of expected inflation can be understood from its association with actual inflation (Table P.5). While examining the dynamic cross-correlations between expected and actual inflation over business cycles, a statistically significant positive correlation is found over two-quarter leads and lags. Since the short-term component is more predominant in the current and expected inflation 3 months ahead, the dynamic cross-correlation is evaluated with the quarterly WPI inflation for the period of 2006–07:Q4 to 2015–16:Q2. The dynamic cross-correlation exercise also indicates behavioural aspects of expectation formation (Table P.5). It appears that expectations are formed more in a forward-looking manner than in its backward-looking counterpart.

P.6 Inflation Outlook

Although moderation is visible in the economy across the different sectors and inflation indicators, the inflation outlook is still subject to considerable uncertainties surrounding international commodity prices, weather-related disturbances, volatility in seasonal items, shortfall of pulse products and spillovers from external developments through exchange rate and asset price channels. Inflation expectations reflect the memory of close to double-digit inflation, which indicates the possibility that short-run inflation will pick up in the coming quarters.

Table P.1: Major Indicators of Inflation (% y–o–y), 2014–15 and 2015–16

Frequency	Year: Period	WPIINFL	CPIIW	CPIAL	CPI Rural	CPI Urban	CPI Combined
Half-Yearly	2014–15:H1	4.8	6.8	7.7	8.2	7.1	7.7
	2014–15:H2	–0.7	5.8	5.6	5.2	5.4	5.3
	2015–16:H1	–3.4	5.1	3.7	5.3	4.5	5.0
Quarterly	2014–15:Q1	5.8	6.9	8.1	8.6	7.4	8.1
	2014–15:Q2	3.9	6.8	7.3	7.8	6.9	7.4
	2014–15:Q3	0.3	5.0	5.4	4.8	5.2	4.9
	2014–15:Q4	–1.8	6.6	5.8	5.6	5.5	5.6
	2015–16:Q1	–2.4	5.9	4.4	5.7	5.1	5.4
	2015–16:Q2	–4.5	4.6	3.1	5.0	3.9	4.5
Monthly	2015–16:M4	–2.4	5.8	4.4	5.4	5.0	5.2
	2015–16:M5	–2.2	5.7	4.4	5.6	5.2	5.4
	2015–16:M6	–2.1	6.1	4.5	6.1	5.1	5.6
	2015–16:M7	–4.0	4.4	2.9	4.8	3.8	4.3
	2015–16:M8	–4.9	4.3	3.0	4.8	3.7	4.4
	2015–16:M9	–4.5	5.1	3.5	5.3	4.3	4.9

Notes: Base Year: 2004–05 for WPI, 2001 for CPI for Industrial Workers, 1986–87 for CPI for Agricultural Labourers and 2012 for CPI Rural, Urban and Combined.

Sources: Office of Economic Advisor, Labour Bureau, and Central Statistical Organisation.

Table P.2: Inflation Rate (% y–o–y) of Major Categories in Food Articles in WPI, 2014–15 and 2015–16

Frequency	Year: Period	Food Articles	Food Grains (Cereals & Pulses)	Fruits & Vegetables	Milk	Eggs, Meat & Fish	Condiments & Spices	Other Food Articles
Half-Yearly	2014–15:H1	7.3	5.2	7.0	10.6	4.2	24.8	6.6
	2014–15:H2	5.1	2.9	5.9	9.2	0.9	19.1	12.6
	2015–16:H1	1.8	4.8	–4.1	4.8	1.7	13.1	–4.1
Quarterly	2014–15:Q1	8.9	5.8	8.6	9.9	11.0	18.6	5.6
	2014–15:Q2	5.8	4.6	5.3	11.4	–2.6	31.0	7.6
	2014–15:Q3	2.9	2.6	–3.2	10.4	1.0	20.6	14.7
	2014–15:Q4	7.4	3.1	15.1	8.1	0.9	17.6	10.5
	2015–16:Q1	4.2	4.2	3.4	6.5	0.9	15.8	–5.5
	2014–15:Q2	5.7	4.4	5.2	11.4	–2.9	30.9	6.2
Monthly	2015–16:M4	5.9	3.0	7.9	7.4	4.0	16.6	–3.0
	2015–16:M5	2.7	4.1	1.4	6.9	–4.0	13.8	–3.9
	2015–16:M6	3.1	6.1	0.5	5.2	–2.3	16.9	–5.0
	2015–16:M7	–1.2	4.9	–15.0	5.3	2.5	10.6	–4.0
	2015–16:M8	–1.1	5.1	–12.4	2.1	3.3	8.8	–1.4
	2015–16:M9	0.7	6.1	–7.4	2.2	2.0	11.7	–2.7

Note: Base Year is 2004-05.

Source: Office of Economic Advisor, Government of India.

Table P.3: Pulses and Products Inflation (% y–o–y for 2014–15:Q4 to 2015–16:Q2)

	2014–15:Q4	*2015–16:Q1*	*2015–16:Q2*
Rural CPI	8.0	12.8	20.9
Urban CPI	15.6	25.4	36.4
CPI Rural & Urban Combined	10.5	17.1	26.1

Source: NCAER computations from Ministry of Statistics and Programme Implementation.

Table P.4: Major Inflation Indicators of International Commodity Market (% y–o–y), 2014–15 and 2015–16

Frequency	Year: Period	Energy Prices				Non-energy Prices			
		Crude Oil	Natural Gas	Coal	Total	Agriculture	Metals & Minerals	Fertilisers	Total
Half-Yearly	2014–15:H1	0.1	–4.3	–8.0	–0.7	–1.8	–2.3	–13.4	–2.4
	2014–15:H2	–39.4	–21.3	–19.1	–36.5	–8.7	–11.7	0.5	–9.3
	2015–16:H1	–49.1	–33.4	–19.8	–46.0	–14.4	–20.9	–3.5	–16.0
Quarterly	2014–15:Q1	6.9	–2.7	–11.0	5.0	–0.7	–3.7	–20.5	–2.3
	2014–15:Q2	–6.6	–5.8	–5.0	–6.4	–3.0	–0.8	–6.3	–2.4
	2014–15:Q3	–29.0	–8.7	–18.3	–26.3	–5.7	–8.1	4.3	–6.1
	2014–15:Q4	–49.8	–33.9	–19.9	–46.7	–11.7	–15.4	–3.2	–12.6
	2015–16:Q1	–43.1	–37.4	–18.2	–41.3	–15.5	–14.6	–0.2	–14.7
	2015–16:Q2	–55.1	–29.4	–21.4	–50.7	–13.2	–27.2	–6.9	–17.4
Monthly	2015–16:M4	–44.8	–39.3	–18.5	–42.9	–15.7	–15.8	–2.0	–15.2
	2015–16:M5	–39.9	–35.5	–18.9	–38.4	–16.3	–12.1	–0.2	–14.4
	2015–16:M6	–44.7	–37.6	–17.4	–42.7	–14.6	–15.9	1.6	–14.4
	2015–16:M7	–50.9	–29.4	–18.1	–47.0	–12.1	–25.5	–4.0	–16.1
	2015–16:M8	–56.7	–28.1	–23.2	–52.0	–14.8	–29.9	–7.3	–19.3
	2015–16:M9	–57.6	–30.7	–23.0	–53.1	–12.8	–26.2	–9.4	–16.9

Source: World Bank Commodity Price Data (The Pink Sheet).

Table P.5: Dynamic Cross-Correlations between Expected and WPI Inflation, 2006–07:Q4 to 2015–16:Q2

	Current Expected Inflation & WPI Inflation (i)		3–month Ahead Expected Inflation & WPI Inflation (i)	
Order (i)	lag	lead	lag	lead
1.	0.34	0.48	0.31	0.52
2.	0.07	0.22	0.05	0.28

Source: NCAER.

Public Finance

Mythili Bhusnurmath

To the government's credit, FY15 ended with the fiscal deficit (FD) at 4 per cent of GDP, down from 4.1 per cent in the revised estimates and only marginally higher than the 3.9 per cent projected in the Budget Estimates for FY15. Buoyed by this, Budget 2015–16 opted to boost growth at the cost of a small slippage in fiscal targets; the FD target has been set at 3.9 per cent for FY 2016 as against the target of 3.6 per cent in the medium-term fiscal roadmap presented along with Budget 2015. Thanks partly to fortuitous factors, the government's record on the fiscal front during the first half of FY16 is largely commendable. Key fiscal parameters for H1 FY15 compare favourably with the comparable period in the last fiscal.

PF.1 Budget 2015–16

Budget 2015–16 was presented against the backdrop of heightened expectations because it was the first full budget of the Modi government. Opinion was divided on whether the government would adhere to the targets laid out in the medium-term fiscal policy statement or opt for a slightly more relaxed pace of adjustment. In the event, the government opted for the latter. Seeking to boost growth, the finance minister re-worked the fiscal consolidation roadmap.

Accordingly, the FD target has been set at 3.9 per cent for fiscal year 2015–16 (FY 2016) as against the earlier target of 3.6 per cent. Even this seems a trifle ambitious given the shortfall in revenues in fiscal year 2014–15 (FY 15) and the reluctance of the private sector to step up investment. However, the government plans to achieve the target through a combination of compression of revenue expenditure and increase in non-debt capital receipts.

Gross tax revenue is budgeted to grow 16.4 per cent, raising the tax/Gross Domestic Product (GDP) ratio to 10.3 per cent in FY16. The net tax revenue to the Centre is budgeted to decline sharply to 6.5 per cent of GDP, down from 7.2 per cent in FY15 due to higher devolution to the states following the recommendations of the Fourteenth Finance Commission. These estimates assume higher buoyancy both for direct as well as indirect tax. Service tax, in particular, is projected to show a buoyancy of two, driven by a hike in service tax, pruning of the negative list under service tax, and withdrawal of certain exemptions.

Non-tax revenue, which includes dividends from public sector undertakings, the Reserve Bank of India, public sector banks, and spectrum auctions, is budgeted to grow 12.6 per cent in FY16. Disinvestment proceeds are budgeted sharply (unrealistically?) higher at ₹69,500 crore, with ₹28,500 crore coming through strategic sales.

Total expenditure is budgeted to increase 8.1 per cent, with revenue expenditure declining as a percentage of GDP. Capital expenditure is budgeted to increase sharply, reflecting the front-ending of government spending on investment. Plan expenditure is expected to increase in FY16 as a result of higher capital expenditure. On the non-Plan expenditure front, subsidies are budgeted to decline thanks to a close to 48 per cent reduction in the petroleum subsidy following the decline in global oil prices and de-regulation

of diesel prices. Food subsidies are budgeted to move up a tad, while fertiliser subsidies are expected to decline.

Overall, the main thrust of Budget 2015–16 is to improve the quality of government spending by re-orienting it towards investment rather than subsidies.

PF.2 Performance to Date

The government's record on the fiscal front during the first half of FY16 is largely commendable. Key fiscal parameters for H1 FY15 compare favourably with the comparable period last fiscal (Table PF.1). According to the latest numbers released by the Controller General of Accounts, fiscal deficit (FD) during the period April–September 2015 stood at ₹3.79 lakh crore or 68.1 per cent of the Budget estimate for the year. This marks considerable improvement over the comparable period last year when the FD stood at 82.6 per cent of the Budget estimate (₹5.55 lakh crore).

Tax collections (net to Centre) are better at 40.2 per cent of the BE with both direct and indirect tax collections improving. Total receipts, too, are better at ₹5.32 lakh crore (43.5 per cent of the BE), mainly on account of substantially higher non-tax revenue (64.8 per cent) as against just 44.6 per cent in the comparable period last fiscal. Under the head of non-tax revenue, the biggest contribution has come from 'dividend and profits' which have already touched 75 per cent of the BE in the first half. The one area on the receipts side that has disappointed is disinvestment where the proceeds to date—₹12,600 crore—are a far cry from the target of ₹69,500 crore. Though there has been talk of scaling down the target, officially we have no confirmation as yet; government officials are confident the shortfall will be made up and the year will end with only a marginal shortfall of about 5 per cent.

Total expenditure during the same period stood at ₹9.11 lakh crore or 51.2 per cent of the BE. Of the total expenditure, Plan spending stood at ₹ 2.54 lakh crore, while non-Plan spending was considerably higher at ₹6.57 lakh crore. The sharpest increase in Plan expenditure was by the ministries of new and renewable energy (163 per cent of BE), petroleum and natural gas (93 per cent), civil aviation (90 per cent of BE), and drinking water and sanitation (87 per cent of BE). The department of financial services has spent an astounding 183 per cent of BE!

Not surprisingly, the revenue deficit (RD) during the period April–September 2015 was 68 per cent of the BE. However, this is substantially less than the RD during the comparable period last year (91.2 per cent). So, while the government's claim that it will be able to stick to the fiscal straight and narrow is likely to be tested in the months ahead, overall the prognosis on the fiscal front is good. This is despite the fact that the disinvestment target (₹69,500 crore) now looks quite iffy with only ₹12,600 crore being raised so far through stake sale in four PSUs–IOC, PFC, REC, and Dredging Corporation.

PF.3 Government Borrowing Programme

The government's gross borrowing target for the current fiscal (2015–16) is ₹6 lakh crore, up from ₹5.92 lakh crore in the previous year; the net borrowing, adjusted for redemption and switches is ₹4.56 lakh crore. As in the past, the issuance calendar announced on 23 March 2015 was skewed towards the first

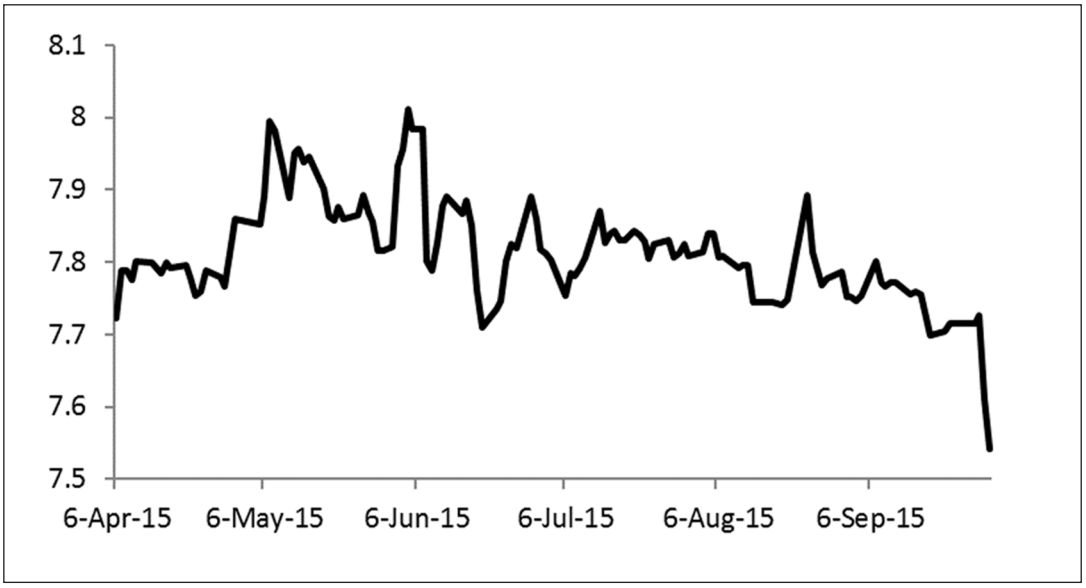
half in the belief, presumably, that the second half of the year is the time when demand traditionally picks up. Also, it reflects the hope that recovery will gather more steam in the second half, and hence it would be expedient for the government to front-end its borrowings.

As per the borrowing calendar, the government would be raising ₹3.60 lakh crore in the first half of the year, i.e., ₹16,000 crore every week until the first week of June, followed by ₹15,000 crore per week until the week ended 17 July 2015 and then ₹14,000 crore until 25 September 2015. For the first time the government is also likely to issue a 40–year bond to meet the demand for long-term funds for infrastructure.

The government's borrowing programme for the first half went through without any major hiccups thanks to lacklustre demand for credit from corporates. As against the target of ₹3.6 lakh crore, the government raised ₹3.51 lakh crore. Yields were largely unchanged. The yield on the benchmark 10-year G-secs has been largely unchanged since April 2015 (Figure PF.1), fluctuating in the range of 7.74 (April 2015) – 7. 8 per cent (September 2015) for most of the half-year (barring a brief period in May 2015 when yields moved up to 8 per cent). Early October saw yields soften dramatically to 7.51 per cent (5 October 2015) thanks to the higher limit for FII investment in government securities announced in the RBI's fourth bi-monthly monetary policy on 29 September 2015.

The borrowing calendar for the second half was announced on 28 September 2015. Overall, borrowing has been kept unchanged at ₹6 lakh crore. Thus, a total of ₹2.49 lakh crore will be borrowed in the second half—₹2.34 lakh crore through bonds and another ₹15,000 crore through gold bonds (Boxes PF.1 and PF.2). As per the borrowing calendar for the second half, the weekly borrowing would be in the range of ₹14,000–15,000 per week.

Figure PF.1: 10-Yr G-Sec Yields April, 2015 to September, 2015



Source: Reserve Bank of India.

Box PF.1: Sovereign Gold Bonds Scheme

The details of the above scheme were finalised in September 2015. Under the scheme, the amount received from the bonds will be used by the Government of India in lieu of government instruments and the notional interest saved on this amount will be credited in a 'Gold Reserve Fund'. The savings in the costs of hedging compared with the existing rate on government borrowings will be credited in the Gold Reserve Fund to take care of the risk of increase in gold price that will be borne by the government. Calculations show that, given the trends in gold price in the past and projections for the future, this risk is sustainable.

On maturity, the redemption will be in rupee amount only. The amount of interest on the bonds will be calculated on the value of the gold at the time of investment. The principal amount of investment, which is denominated in grams of gold, will be redeemed at the price of gold at that time. If the price of gold has fallen from the time the investment was made, the holder has the option to roll over for three years or more. The deposit is not to be hedged and all risks associated with gold price and currency will be borne by the government.

Box PF.2: Gold Monetisation Scheme

The Cabinet also approved the gold monetisation scheme in early September 2016. Under the scheme, idle gold can be deposited in banks for various maturities. Depositors of gold will earn interest on their gold accounts. The interest earned will be tax-free. The amount credited will depend on the purity of the gold. The deposited gold will be melted and can be re-cycled to jewellers, thereby reducing dependence of imported gold.

The new scheme is along the lines of GDS 1999 but offers a higher interest rate. While the 1999 scheme offered interest between 0.75 per cent and one per cent for tenures between three to five years, the new scheme can offer up to 2 per cent. Individuals are free to deposit a minimum of 30 grams of gold bullion in the account and it can be deposited for the short term (one to three years), medium term (five to seven years) and long term (12–15 years). Jewellery and coins held by individuals will have to be taken to the purity testing centre and will have to be melted before they can be deposited into the gold account. While redemption in the case of short-term deposits can be done in either cash or gold, in the case of medium- and long-term deposits it would be only cash.

PF.4 Public Debt

According to the quarterly report on public debt management issued by the finance ministry for Q1 FY16, 23.6 per cent of the BE had been raised in the first quarter. As against 26.6 per cent in the comparable quarter of the last fiscal, the government issued dated securities worth ₹180,000 crore (30 per cent of BE), lower than the ₹198,000 crore (33 per cent of BE) in Q1 of FY15. Net market borrowings during the quarter at 23.6 per cent of BE were also lower than the 26.6 per cent of BE in the previous year. Auctions during Q1 of FY16 were held broadly in accordance with the pre-announced calendar. Four new securities were issued during the quarter, including a new 10–year benchmark paper. The weighted

average maturity (WAM) of dated securities issued during Q1 of FY16 was at 15.19 years. The weighted average yield (cut-off) of issuance during Q1 of FY16, was at 7.92 per cent as against 7.79 per cent in Q4 of FY15, reflecting marginal hardening in yields during the quarter. Liquidity conditions in the economy remained tight during the middle of the quarter and eased towards the end of the quarter. The cash position of the government during Q1 of FY16 was comfortable and remained in surplus mode during the quarter. The issuance amount under treasury bills was also broadly as per the calendar.

The public debt (excluding liabilities under 'Public Account') of the central government provisionally increased by 3.5 per cent in Q1 of FY16 on a q-o-q basis. Internal debt constituted 92.3 per cent of public debt as at end-June 2015, while marketable securities accounted for 84.2 per cent of public debt. About 29.5 per cent of outstanding stock has a residual maturity of up to five years, which implies that over the next five years, on average, around 5.9 per cent of outstanding stock needs to be rolled over every year. Thus, the rollover risk in the debt portfolio continues to be low. The implementation of budgeted buy back/ switches in coming years is expected to reduce the rollover risk further.

H1 FY16 was marked by a somewhat unnecessary spat between the government and the RBI on the issue of public debt management. It has long been the stated position of the government, one with which the RBI concurs, that public debt management should be moved out of the RBI to an independent agency. However, the inclusion in the Finance Bill of amendments to the RBI Act that would, de-facto, have rendered the central bank's position as monetary authority untenable (see below) resulted in the government finally withdrawing the clauses in question.

PF.5 Public Debt Management Agency

In the public finance arena, H1 FY16 was notable for the tussle between the finance ministry and the RBI over the Public Debt Management Agency (PDMA). In his Budget speech, the finance minister announced the setting up of a PDMA outside the RBI, which has traditionally managed the government's debt. The government's argument was that an 'independent' PDMA would remove all scope for any conflict of interest between the RBI's role as monetary policy authority and as the manager of the government's debt. However, the announcement did not go down well with the RBI, which pointed to its track record in managing government debt successfully without any obvious conflict of interest. In the face of determined opposition from the RBI, the FM finally dropped the provisions in question in the Finance Bill while moving it for approval in Parliament. Other provisions amending Sections 45U and 45W of the RBI Act which, in effect, would have taken away money market regulation from the central bank, were also dropped, setting at rest a controversy. For now!

PF.6 G–Sec Yields

The G-sec market opened FY16 on a positive note on account of weak US job data. However, yields hardened during the quarter due to bearish sentiment about any easing of monetary policy, weakening of the rupee, the global market sell-off originating in German bunds, and concerns about a sub-par monsoon. The yield of 10–year benchmark paper breached 8 per cent in May 2015, for the first time since mid– December 2014. The 10- year benchmark yield closed at 7.87 per cent on 30 June 2015 as against 7.80 per cent on 31 March 2015. Trading volumes were marginally higher (0.91 per cent) in the

first quarter over the previous quarter, with treasury bills contributing to most of the increase in trading activity. The annualised outright turnover ratio for central government dated securities for Q1 of FY16 was at 4.6.

The second quarter saw yields soften as crude oil prices eased. However, the Black Monday crash in the Shanghai composite index on 24 August saw yields jump 11 basis points. Fortunately, the increase in yields proved short-lived and yields softened subsequently, driven by the Fed's decision to opt for the status quo and growing market consensus that the RBI would cut the repo rate in its fourth bi-monthly policy statement on 29 September.

In the event, the RBI's decision to go in for a sharper-than- expected cut in the repo rate by 50 basis points resulted in yields falling dramatically to end the half year in the range of 7.5– 7.7 per cent.

PF.7 Foreign Portfolio Investors & G-Secs

In line with the government policy of opening up the G-sec market progressively to Foreign Portfolio Investment (FPI) as well as the clamour from FPIs, the limit for FPI investment was hiked in September 2015. The new limit has been set at 5 per cent of the outstanding stock of government securities. This is to be done in phases by March 2018 and is expected to lead to room for additional investment of ₹1,20,000 crore in central government securities (i.e., almost a doubling of FPI investment in G-secs from the existing limit of ₹1,53,500 crore).

H1 FY16 also saw the RBI announce the maiden opening up of the state government securities market to FPIs. FPIs will henceforth be allowed to invest up to 2 per cent of state development loans (SDLs), i.e., ₹500 billion by March 2018.

The limit for FPI investment in G-secs during H2 FY16 is to be increased in two tranches from 12 October 2015 and 1 January 2016, with each tranche resulting in an increase in ₹130 billion for central government securities (₹75 billion for long-term investors and ₹55 billion for others). For SDLs, the limit is ₹ 35 billion.

As on 24 September 2015, cumulative investment by FPIs in the debt market stood at $57.3 billion with FPIs almost exhausting their limit for investment in G-secs ($30 billion). While there is no doubt the increased participation of FPIs in the G-sec market has widened the investor base, opinion is less divided on the recent moves of the RBI to increase the limit for FPIs to 5 percent of the outstanding stock of government debt

PF.8 Medium-term Fiscal Policy

The medium-term fiscal policy statement issued along with the budget documents shows that the government has a very ambitious plan of reducing the effective revenue deficit (revenue deficit less revenue expenditure for creation of capital assets) from 2 per cent in 2015–16 to zero in two years' time (2017–18). The revenue deficit is projected to decline to 2 per cent from 2.8 per cent in the current fiscal, while the fiscal deficit is projected to come down to 3 per cent.

Despite the enormous slice of luck on account of the sharp fall in global oil prices that is expected to bring down the subsidy bill substantially (from 2.5 per cent of GDP to 1.6 per cent of GDP in FY16 as per the latest estimates), the projections look a tad over-ambitious on two counts— one, the cost implications of the recent announcement of OROP (one-rank-one-pension) for the defence forces and, two, the fallout of the recommendations of the Seventh Pay Commission, which is expected to submit its report in December.

Though the impact of both these developments is expected to be muted in FY16 since payouts are not likely until FY17, the chances are that the government will not be able to adhere to its medium-term policy statement, making a mockery of the Fiscal Responsibility and Budget Management (FRBM) exercise. Of course, the BJP government will not be the first to adopt a cavalier approach to FRBM obligations—in all fairness, it must be said that BJP governments have tended to be more fiscally prudent than Congress-led governments. The bottom line, nonetheless, is that attempts to institutionalise financial discipline have largely failed.

The current financial year also marks the first year of the 14th Finance Commission award, which sharply raised the amount transferred to states the amount of resources at the centre.

The Expenditure Management Commission headed by the former RBI governor, Bimal Jalan, is expected to submit its final report shortly. Interim reports have already been submitted and the final report is awaited. The terms of reference of the Commission, which was constituted on 4 September 2014, include reviewing all matters related to central government spending, suggesting space for increased development spending and reviewing the budgeting process and norms under the Fiscal Responsibility and Budget Management Act, suggesting ways to meet a reasonable proportion of spending on services through user charges and achieve a reduction in financial costs through better cash management, greater use of information technology, and improved financial reporting systems.

PF.9 Outlook

Though the government has done a commendable job on the fiscal front in the year to date, its luck is running out. Commodity prices, after collapsing dramatically, are slowly reversing some of their losses, reducing the gains on the subsidy front. The impact of the report of the Seventh Pay Commission is also bound to hit the fiscal adversely. Clearly, the government will have to gear itself to face a less benign situation on the fiscal front.

Table PF.1: Fiscal Indicators (% of Actual to Budget Estimates)

	H1 2014–15	H1 2015–16
Revenue receipts	45.0	35.1
Tax revenue (net)	40.2	33.1
Non-tax revenue	64.8	44.6
Total receipts	43.5	33.5
Non-Plan exp	50.0	50.5
Plan exp	54.6	42.8
Total exp	51.2	48.0
Fiscal deficit	68.1	82.6
Revenue deficit	68.2	91.2
Primary deficit	181.8	243.0

Source: Controller General of Accounts.

Forecast

Bornali Bhandari

The quarterly model is predicting Gross Value Added at Basic Prices (2011–12) to be 7 per cent in 2015–16. The annual model is predicting that Gross Domestic Product at Market Prices (2011–12) will grow at 7.4 per cent in 2015–16. There are signs of green shoots in the economy. However, continued weather and global economy shocks have kept economic growth moderated. And despite efforts on the part of the government, both demand and investment remain moderated.

F.1 Introduction

India is forecast to grow faster than other emerging and developing countries around the world. The question really is: Is it a figure among the cyphers? The answer remains ambiguous. With the change in the methodology in the way the Gross Domestic Product (GDP) numbers have been computed, it is not clear whether the higher growth is due to the change in measurement or there are really signs of economic growth. Further, the evidence of green shoots in the Indian economy is marked by a certain cautionary outlook because of prevailing uncertainties. Manufacturing shows higher economic growth and sends signs of bottoming out. The workhorse of the Indian economy, the services sector, is sending mixed signals. Average inflation has reduced unambiguously, but food inflation keeps re-surfacing in one form or another. Paradoxically, inflation expectations continue to remain high despite falling inflation. However, with uncertainties of growth in the agriculture sector, slow world economic growth, and the banking sector still plagued by high non-performing assets thereby making the transmission of monetary policy weak, growth is going to remain moderated for the rest of the year. NCAER forecasts suggest that the economy is still ambling its way through rather than taking the brisk walk that the country needs. Better economic management from both the fiscal and monetary side means that India probably is better placed in terms of economic growth prospects compared with the rest of the world, but that is not translating to enough real outcome of sustainable inclusive growth within India.

F.2 Medium-run Uncertainty

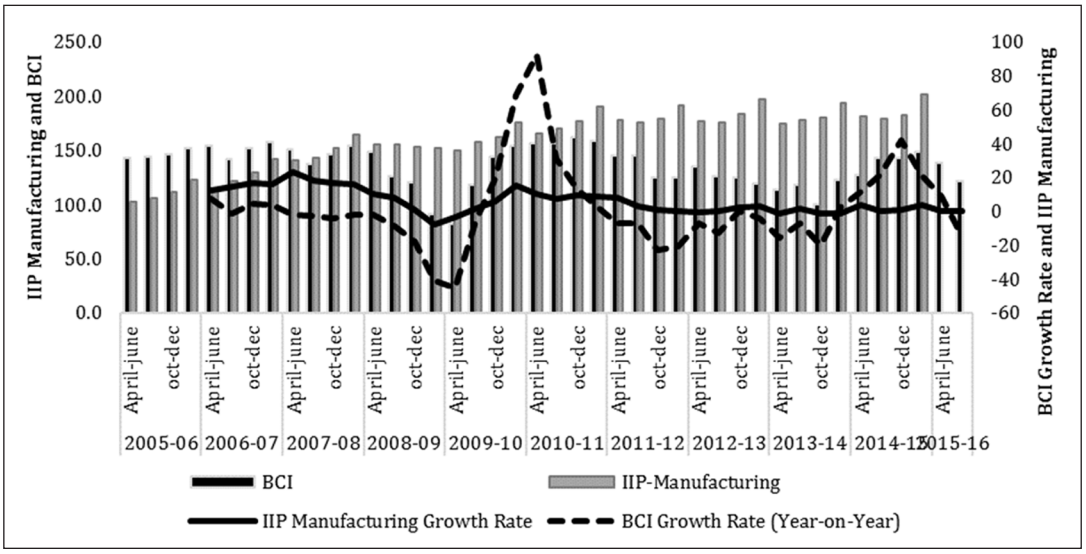
The uncertainties have increased tremendously after the Lehman crisis and even further so after 2011 in the medium run. The short-run uncertainties this year have added to the medium-run volatility. The short run is discussed in the section below.

The increase in medium-term volatility is reflected in Table F.1 where the coefficient of variation (CV, an indicator of volatility) is higher for key variables after 2008–09. The average of Bank Credit to the Commercial Sector (BCC) has come down while the CV has gone up tremendously. Volatility in the inflation rate has gone up also after the Lehman crisis, albeit marginally. However, the worrisome feature is the average growth and volatility in the Index of Industrial Production (IIP).

Business sentiments on the ground tend to reflect those uncertainties, which means that the sentiments sometimes have little to do with hard data. Figure F.1 reflects the scenario where the IIP growth rate has

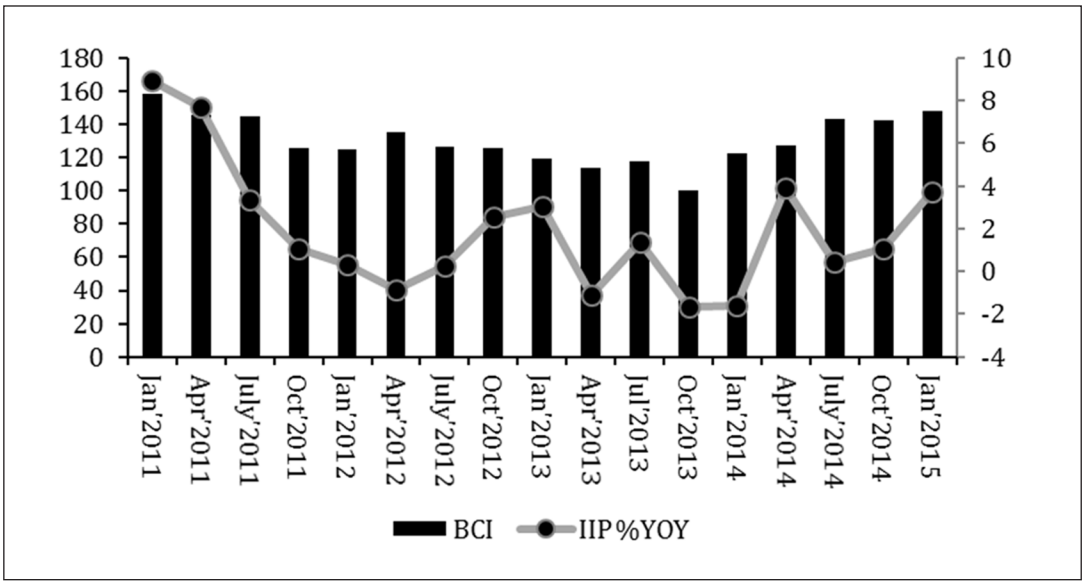
remained relative stable in contrast to the NCAER Business Confidence Index for the period 2005–06:Q1 to 2015–16:Q1. Figure F.2 shows the increase in uncertainty after 2011.

Figure F.1: Index of Industrial Production and NCAER Business Confidence Index, 2005:Q1 to 2015–16:Q1



Source: Bhide, S. and B. Bhandari. 2015. "Measuring Business Confidence". PowerPoint presentation made at the 9th Statistics Day, RBI, Mumbai. July 24.

Figure F.2: Increase in Uncertainty: Index of Industrial Production and NCAER Business Confidence Index, January 2011 to January 2015



Source: Bhide, S. and B. Bhandari. 2015. "Measuring Business Confidence". PowerPoint presentation made at the 9th Statistics Day, RBI, Mumbai. July 24.

This increase in uncertainty may be attributed to both domestic and global factors. These include weather shocks fuelling food inflation, continued high commodity prices and then its sudden and unanticipated fall in the past year, uncertain world economic growth (US, Europe and now China), domestic policy paralysis in the run-up to the elections, and post-election euphoria.

A significant number of reforms have taken place in the economy in the past one to two years. The most important of them is the introduction of inflation targeting in the economy, which seems to have contributed to bringing down inflation (aided by the drop in prices of energy) but not expectations. The analysis in the inflation chapter suggests that inflation volatility has increased after inflation targeting. Is that a short-run transitional phenomena or a more permanent side effect is something that has yet to be explored. Further, the changes introduced by the new government, i.e., the transition from the Planning Commission to the NITI Aayog and implementation of the recommendations of the 14th Finance Commission, have meant changes that, in turn, have introduced some degree of uncertainty as all stakeholders learn "new" ways of doing things. The amendment of the Land Acquisition Resettlement and Rehabilitation Act 2013 was stalled in the current fiscal. This was viewed as a setback by some stakeholders and as a win by others. Uniformly viewed as a setback was the stalling of the Goods and Services tax. Further opening up of sectors to FDI may result in additional flow of capital.

A side effect of the troublesome economic times since 2011 is that public sector banks have accumulated non-performing assets, which has resulted in banks passing on lowered interest rates to their borrowers only very slowly . Increasing financial inclusion, the burden of which is borne by the same public sector banks, has positive effects too. The ability to electronically transfer benefits, the introduction of payment banks etc., reforms in the rail sector, the draft aviation policy, and the emphasis on skill development are areas touched upon by the one-year-old government. Table F.2 shows that the reforms by the government have translated into improvement in India's rankings in Ease of Doing Business. The challenge in a country like India always remains whether this is actually having any impact in terms of sustainable and inclusive growth[1].

F.3 Macroeconomic Background: Short-run Uncertainty

There are two major exogenous macro shocks to the Indian economy in the first half of the current fiscal. The most significant shock to the system has come from weather. Unseasonal rainfall in March this year affected the agriculture sector adversely. Plus, for two consecutive years, India has had a deficit south-west monsoon. As the agriculture chapter in the Mid-Year Review of the Economy (MYR) says, it was not just the deficit but also the spatial and temporal variations that added to the problems. The temporal pattern, in addition, changed this year when rainfall was in deficit in the latter part of the monsoon season. This adds to the uncertainty and information set of farmers. In anticipation of good rainfall, farmers planted crops and the area sown was higher under *kharif* crops than last year. The total area sown under *kharif* crops on 16 October 2015 reached 1,038.81 lakh hectares compared with 1,025.85 lakh hectares last year at this time[2]. The first advance estimates suggest lower output of *kharif* food grains—124.1 million tonnes in 2015–16 versus 126.3 million tonnes last year, although NCAER estimates suggest that the output is higher. And for the rabi season, the total area sown as on 6 November 2015 was 83.95 lakh hectares

[1] Thomas and Venkatesan (2015) report that the in-kind subsidies and direct benefit transfers may have to exist side-by-side, going by Puducherry's experience, for overall development.

Thomas, P.M. and J. Venkatesan. 2015. "Casting the DBT net wide: Puducherry's experience". Hindu Business Line. http://www.thehindubusinessline.com/economy/casting-the-dbt-net-wide-puducherrys-experience/article7834187.ece. November 2.

[2] http://pib.nic.in/newsite/pmreleases.aspx?mincode=27.

compared with 87.27 lakh hectares last year at this time[3]. Unfortunately, this is not the end of it, because global temperatures are predicted to cross the one degree Celsius mark, which is above pre-industrial levels in 2015[4]. One of the side effects may be that the monsoon is going to be even more erratic. With 56 per cent of households in rural areas whose primary occupation is agriculture (2011–12) and the percentage of gross irrigated area to total cropped area being 46.9 per cent in 2011–12[5], the costs of an erratic monsoon are really high[6]. The contribution to demand of these households was 54.4 per cent of total rural demand in 2011–12. Further, the contribution to overall demand by all households whose primary source of income is agriculture stood at 32.2 per cent in 2011–12. This means that, on the margin, erratic monsoon has a negative impact on rural demand.

The second macro shock came from the real world. Greece, followed by China, shook the world. The IMF World Economic Outlook October 2015 says the following:

> Global growth for 2015 is projected at 3.1 percent, 0.3 percentage point lower than in 2014, and 0.2 percentage point below the forecasts in the July 2015 World Economic Outlook (WEO) Update. Prospects across the main countries and regions remain uneven. Relative to last year, the recovery in advanced economies is expected to pick up slightly, while activity in emerging market and developing economies is projected to slow for the fifth year in a row, primarily reflecting weaker prospects for some large emerging market economies and oil-exporting countries. In an environment of declining commodity prices, reduced capital flows to emerging markets and pressure on their currencies, and increasing financial market volatility, downside risks to the outlook have risen, particularly for emerging market and developing economies.

Commodity prices have fallen significantly despite the adverse El Niño effect. Inflation has fallen significantly within India too except in pulses (Table F.3). India stood out amid the crisis with the forecast for GDP Market Prices (2011–12) for the year 2015 being 7.3 per cent in 2015 and 7.5 per cent in 2016. The 2015 forecast was revised downwards by 0.2 percentage points. The World Bank and the Asian Development Bank (ADB) forecasts for 2015 (October updates) were 7.5 per cent and 7.4 per cent, respectively. The ADB forecasts were also revised downwards.

It is not surprising that merchandise trade has collapsed (Table F.3). Therefore, with external demand down and rural demand adversely affected, it is left to urban demand to pull the economy through. SIAM has reported higher sales of passenger vehicles and commercial for the April–October period of 2015–16 on a year-on-year (y-o-y) basis at 8.5 per cent and 8.02 per cent, respectively. Two- and three-wheelers exhibit declining sales. It is also hoped that the implementation of the recommendations of the Seventh Pay Commission may stir demand and have positive effects on overall growth. However, that will only happen in the fourth quarter and is reflected more in the annual model than in the quarterly one.

[3] http://pib.nic.in/newsite/pmreleases.aspx?mincode=27.

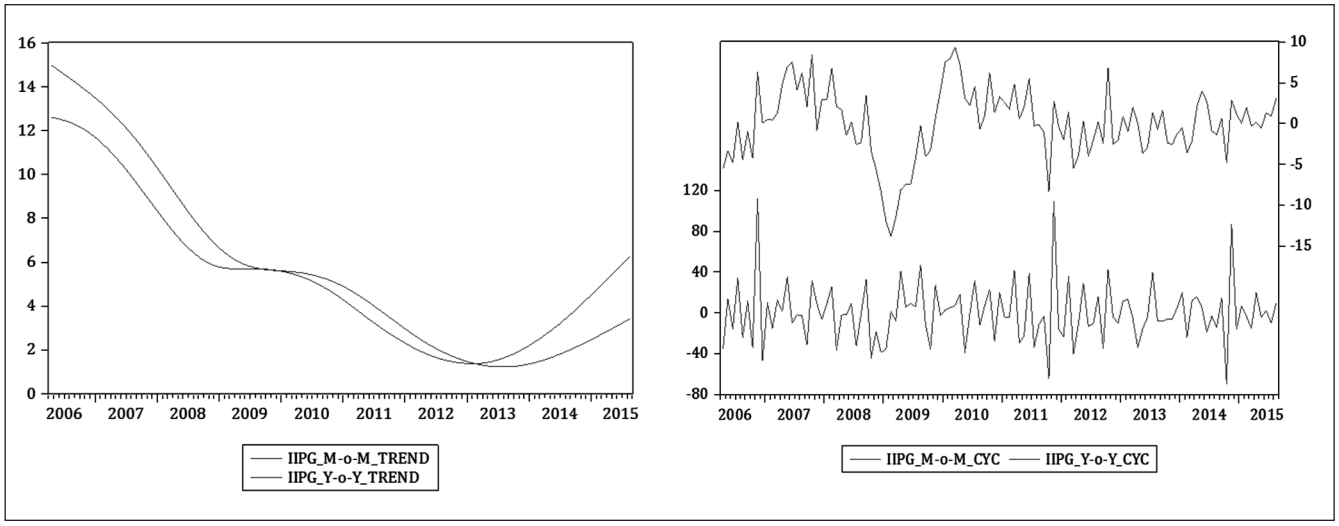
[4] http://www.bbc.com/news/science-environment-34763036.

[5] Department of Agricutlure.

[6] NSSO 2004–05 and 2011–12.

What about investment? As the industry chapter highlights, the IIP of capital goods shows double-digit increase on a y-o-y basis in July and August 2015 at 10.6 and 21.8 per cent, respectively. However, the growth rate becomes insignificant if growth rate is calculated on a month-on-month basis. The NCAER Business Expectations Survey gives a glimpse of investment conditions. One of the parameters of the Business Confidence Index is whether the present investment climate is positive. Out of more than 500 firms surveyed, the percentage of firms responding positively to this question had fallen from 55.5 per cent in January 2015 to 38 per cent in July 2015. In the survey conducted in September (results yet to be published), this number has recovered to 43.3 per cent. Improvement is good news but the numbers indicate prevailing low sentiments. Still, if one looks at the de-seasonalised IIP, the cyclical component has no discernible trend but the long run is showing improvement (Figure F.3). The worrisome feature is that the y-o-y growth of the IIP and the m-o-m growth of deseasonalised IIP are not moving in the same direction.

Figure F.3: Movement of IIP Growth rate: Long-run Trend and Cyclical Variation (Annualised m-o-m rate and y-o-y rate; seasonally adjusted)



Source: NCAER computations.

Inflation has moderated significantly (Table F.3) and interest rates were eased again by the Reserve Bank of India in late September. Bank Credit to the Commercial Sector (BCC), however, has stagnated. As mentioned earlier, the inflation chapter mentions increased volatility after the introduction of inflation targeting. The worrisome characteristic is the stubbornness of double-digit inflation expectations. However, the inflation chapter shows expectations are moderating in the long run.

Last but not least, the way GDP is computed changed in 2015. This has implications for forecasting in an increasingly uncertain world. The two measures are conceptually different[7]—the new one measures value, whereas the previous one measures volume. Further, the absence of the previous years' numbers (numbers are available only from 2011-12) means that we do not know how to anchor our expectations[8].

[7] http://www.ideasforindia.in/article.aspx?article_id=1470.

[8] http://www.ideasforindia.in/Article.aspx?article_id=1482.

And worse, forecasting the future is challenging. We have to use old models that measure volume to make predictions about value. In other words, one is using oranges to make predictions about apples! And to add to the average forecaster's confusion, the two main agencies, the Reserve Bank of India (RBI) and the Ministry of Finance are tracking two different indicators; the former is tracking Gross Value Added at Basic Prices (GVABP) and the government is tracking GDP at market prices (GDPMP). This is not a small matter because the numbers give different signals!

With the above caveats, we proceed to forecasting in the next two sections. In order to sync with both agencies, the quarterly model is used to predict Gross Value Added at Basic Prices and the annual model is used to predict GDP at market prices.

F.4 Quarterly Assumptions for 2015–16

Assumptions for 2015–16

- **Prices** – The ARIMA model predicts continued deflation for the rest of the fiscal, although it moderates. The average WPI inflation is forecast to be –3.6 per cent in 2015–16.
- **Rainfall** – The IMD reported that the season (June to September) rainfall over the country was 86 per cent of its long period average. This boiled down to –6.2 per cent y-o-y change. The first quarter data is taken from rainfall in 2014–15 and the data for the remaining three quarters are from the current monsoon season. This is revised downwards from 0.7 per cent last quarter.
- **BSE** – Based on ARIMA.
- **Bank Credit to the Commercial Sector (BCC)** – This assumption continues to be the same as last quarter at 10.1 per cent. However, actual BCC growth in the first two quarters were 9.24 and 9.4 per cent, respectively. With the reduction in interest rates in September 2015, it is hoped that since the monetary policy works with a lag and improvement in some investment sentiments, the BCC will rise marginally to 10.5 per cent in 2015–16:Q3 and to 11.2 per cent in 2015–16:Q4.
- **Total Expenditure at the Central Level** – This assumption of 10 per cent is retained from the previous quarter based on the budget documents.

Based on the above assumptions, Table F.5 shows the Quarterly Gross Value Added at Basic Prices (2011–12) for 2015–16. The average GDP growth rate is predicted to be 7.0 per cent on a y-o-y basis. The lead indicators tend to signal continued growth at the same pace in the second quarter as in the first in industry and services. Third quarter growth is predicted to be lower due to the adverse effects of the monsoon. The fourth quarter also sees adverse effects but due to base effects sees a larger growth.

F.5 Annual Assessments for 2015–16

The annual model is used to forecast GDP Market Prices at 2011–12 prices. Average GDP growth is predicted to be 7.4 per cent. This is revised downwards marginally from the previous quarter.

The key assumptions on which the forecast is based are the following.

- **Rainfall**: The y-o-y change in rainfall is –6.7 per cent. This is revised downwards from 0.7 per cent last quarter.
- **BSE**: Based on ARIMA and volatility in the stock market, the assumption is revised downwards from 10 per cent last quarter to y-o-y growth of 5 per cent in 2015–16.
- **World GDP growth**: As mentioned earlier, the IMF World Economic Outlook October 2015 downgraded the economic growth rate to 3.1 per cent in 2015.
- **International crude oil price**: From the World Economic Outlook October 2015, we assume –46.4 per cent growth in 2015.
- **Non-fuel commodity prices in the international markets**: From the World Economic Outlook October 2015, we assume –16.9 per cent growth in 2015.
- **FDI net inflows and net invisibles receipts**: FDI net inflows are assumed to continue growing at 10 per cent on a y-o-y basis in 2015–16. Net invisibles y-o-y growth is assumed to grow at 5 per cent, the same as in the last quarter.
- **Foreign institutional investment**: We continue to assume y-o-y 10 per cent growth from the last quarter.
- **Domestic energy price index (WPI for fuel, power, light and lubricants)**: WPI energy prices are assumed to fall by –12.8 per cent. This is revised downwards from 10 per cent last quarter based on available data (Table F.3).
- **Interest and exchange rates**: We continue to assume the LIBOR to be 0.3 per cent. The exchange rate is assumed to be ₹60.9 per dollar. There is marginal depreciation of the rupee to ₹65.25 per US$ from the ₹65 assumed earlier. We have data for the first half of the year. For the third and fourth quarters, we assume ₹66 and ₹67 per US$, respectively. This is due to the possibility of stock market volatility due to the hike in the US interest rate.
- **Central government finances**: The Budget documents show disinvestment revenue to be ₹69,500 crore. Further, we calculate the changes in the effective tax rates of both direct and indirect taxes.

In addition to above assumptions, we have made an intercept adjustment in private investment functions to capture the changes in investment in both industry and services.

The revised assessment places overall GDP (GDP at market prices) growth, in constant 2011–12 prices, at 7.4 per cent in 2015–16 (Table F.6). This marginal fall is due to the anticipated slowdown in the agriculture sector.

Table F.1: Average, Standard Deviation and Coefficient of Variation of Key Macroeconomic Indicators, 2004–05:Q1 to 2015–16:Q2

Year: Quarter	Indicator	BCG (% y-oy)	BCC (% y-oy)	Interest Rate	CPI IW, (% y-oy)	IIP* (% y-oy)
2004–05:Q1 to 2008–09: Q1	Average	5.0	25.0	6.4	5.5	13.1
	SD	3.2	4.4	1.2	1.5	3.2
	CV	63.5	17.5	18.7	28.3	24.1
2009–10: Q1 to 2015–16:Q2	Average	18.7	15.3	7.4	9.3	3.4
	SD	12.9	4.5	1.9	2.7	4.5
	CV	68.8	29.3	25.5	29.2	131.0

1. The three quarters of 2008–09:Q2 to 2008–09:Q4 have been deliberately left out of the analysis because that was a significant breaking point.
2. BCG stands for Bank Credit to the Government; BCC stands for Bank Credit to the Commercial Sector; Interest rate is the 91-day Treasury Bill Rate; CPI IW is the CPI for Industrial Workers; and IIP is the Index of Industrial Production. SD stands for standard deviation and CV is the coefficient of variation or the normalised standard deviation.

* The first period includes data from 2006–07:Q1. It also leaves out 2015–16:Q2 data as the September data was not published at the time of writing.

Sources: NCAER computations from Ministry of Statistics and Programme Implementation, Reserve Bank of India and Labour Bureau.

Table F.2: Ease of Doing Business Rankings (out of 189 countries)

Ease of Doing Business	2013	2014	2015	2016
Overall Ranking	131	134	134	130
Starting a Business	183	182	184	183
Dealing with Construction Permits	CV	63.5	17.5	18.7
Getting Electricity	110	111	90	77
Registering Property	91	92	138	138
Getting Credit	24	28	36	42
Protecting Investors	32	34	8	8
Paying Taxes	159	158	156	157
Trading Across Borders	129	132	133	133
Enforcing Contracts	186	186	178	178
Resolving Insolvency	119	121	136	136

Source: Doing Business, World Bank.

Table F.3: Recent Trends in Select Economic Indicators

% Change YOY	2014–15	2014–15	2014–15	2014–15	2015–16	2015–16	2015–16	2015–16
	Q1	*Q2*	*Q3*	*Q4*	*Q1*	*July*	*August*	*September*
I. Growth Environment: IIP								
Manufacturing	3.9	0.4	1.1	3.7	3.8	4.6	6.6	2.6
Mining and Quarrying	3.0	0.5	2.1	0.3	0.4	0.9	4.2	3.0
Electricity	11.3	9.4	9.4	3.7	2.3	3.5	5.6	11.4
General	4.5	1.3	2.0	3.3	3.3	4.1	6.3	3.6
II. Price environment								
WPI (2004–05)								
Primary articles	7.5	4.1	–0.2	0.7	–0.4	–4.0	–3.7	–2.1
Fuel, power, etc.	9.6	4.4	–4.0	–12.7	–10.4	–11.6	–16.5	–17.7
Manufacturing	3.8	3.6	1.9	0.4	–0.6	–1.5	–1.9	–1.7
Rice or paddy	11.9	7.2	5.5	2.6	–1.0	–2.9	–3.5	–3.6
Wheat	2.9	0.1	–2.2	–1.7	2.0	2.0	2.0	3.3
Edible oils	–0.7	–0.5	–3.2	–0.8	0.8	1.4	1.4	3.2
All commodities	5.8	3.9	0.3	–1.8	–2.3	–4.0	–4.9	–4.5
CPI								
Industrial workers (2001=100)	6.9	6.8	5.0	6.6	5.9	4.4	4.3	5.1
Agricultural labourers (1986–87=100)	8.1	7.3	5.4	5.8	4.4	2.9	3.0	3.5
Combined (2012=100)	8.6	7.8	4.7	5.6	5.7	4.3	4.4	4.9

(Contd.)

Table F.3: Recent Trends in Select Economic Indicators (Contd.)

% Change YOY	2014–15	2014–15	2014–15	2014–15	2015–16	2015–16	2015–16	2015–16
	Q1	*Q2*	*Q3*	*Q4*	*Q1*	*July*	*August*	*September*
III. Monetary/ Capital market variables								
Sensex	22.8	38.0	33.2	35.1	14.7	8.6	–1.3	–1.8
M3	12.2	12.9	11.7	11.1	10.7	11.2	11.1	10.7
RM	9.8	9.3	8.3	5.7	9.6	10.1	8.8	11.8
Bank credit to commercial sector	13.0	10.9	11.1	9.9	9.2	8.9	8.9	9.1
LIBOR (3 months, %)*	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3
IV. External account								
Exports (US$ merchandise)	9.3	1.5	–0.8	–16.0	–16.8	–10.3	–21.1	–24.4
Imports (US$ merchandise)	–6.9	11.2	8.0	–13.4	–12.6	–10.3	–10.7	–25.1
Exchange rate Rs/US$ (+ depreciation/- appreciation	7.0	–2.3	–0.1	0.7	6.0	5.1	7.0	8.8
Brent $/barrel*	109.8	102.1	76.0	54.0	62.1	55.9	47.0	47.2
Forex Currency Assets (US$)	13.1	15.9	9.6	15.3	14.3	12.3	11.8	13.9

These are actual values and not YOY change.

Data source: Official statistics accessed from a number of sources.

Notes: Conversion from monthly to quarterly: Most are averages except for

BCC, Exports and Imports, which have been summed; M3, RM, Foreign currency assets, where last month values have been taken as quarterly values.

Table F.4 GVA at Basic Prices (Sectoral Break-up) and GDP at Market Prices

GVA at Basic Prices at Constant 2011–12					GDP at Market Price at constant 2011–12 prices
Year	Agriculture and Allied Sector	Industry	Services	Total	
Percentage change over the same period previous year					
2013–14					
Q1	2.7	4.8	10.2	7.2	7.0
Q2	3.6	4.0	10.6	7.5	7.5
Q3	3.8	5.0	9.1	6.6	6.4
Q4	4.4	4.3	6.4	5.3	6.7
2014–15					
Q1	2.6	7.7	8.7	7.4	6.7
Q2	2.1	7.6	10.4	8.4	8.4
Q3	-1.1	3.6	12.5	6.8	6.6
Q4	-1.4	5.6	9.2	6.1	7.5
2015–16					
Q1	1.9	6.5	8.9	7.1	7.0
Annual					
2013–14	3.7	4.5	9.1	6.6	6.9
2014–15	0.2	6.1	10.2	7.2	7.3

Source: MOSPI.

Table F.5: Quarterly Gross Value Added at Basic Price Estimates for 2015–16

	August 2015	October 2015
2015–16:Q1	6.0	7.1
2015–16:Q2	7.3	7.2
2015–16:Q3	7.6	6.4
2015–16:Q4	7.9	7.4
2015–16	7.2	7.0

Note: Unshaded indicates actual value.

Source: NCAER computations.

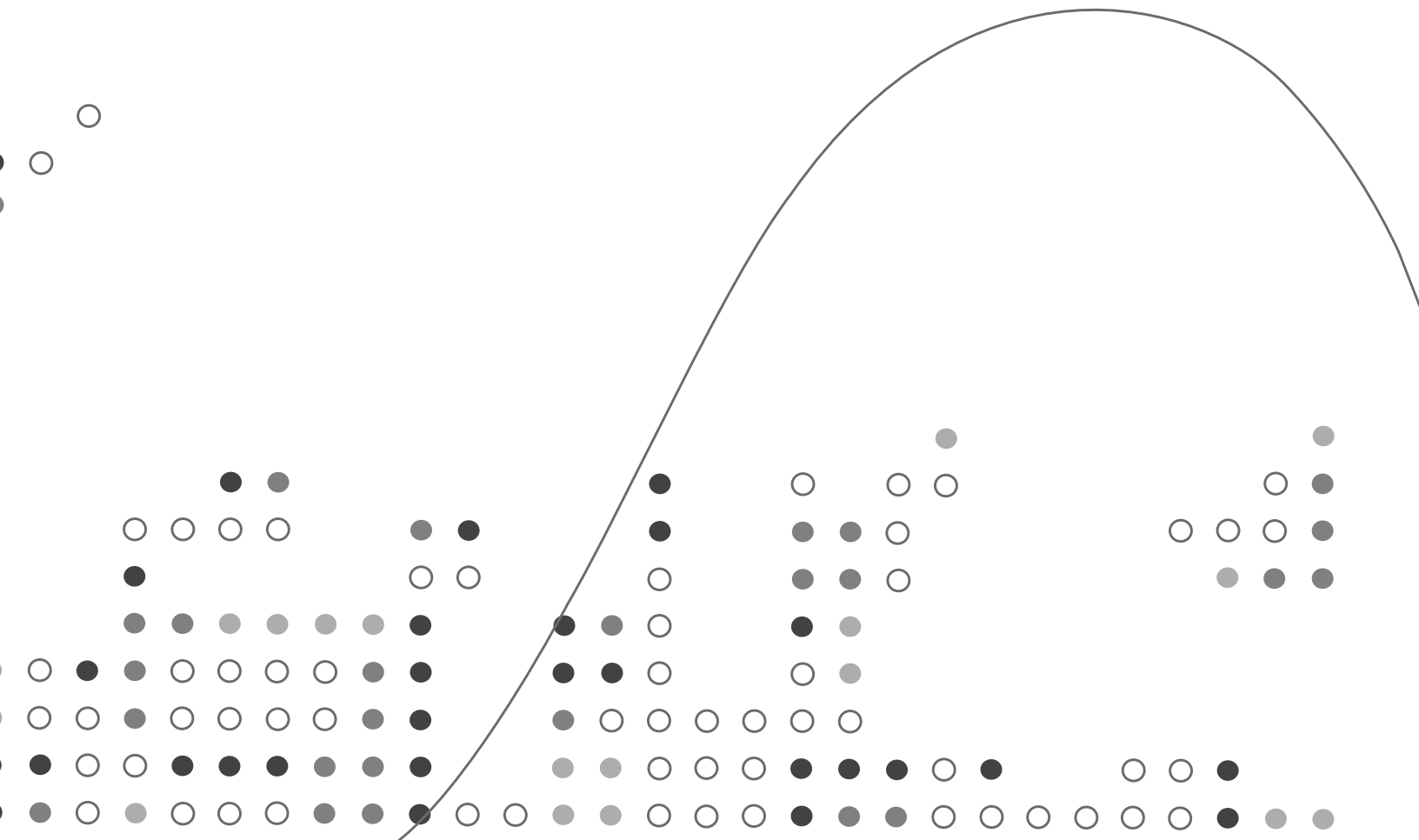
Table F.6: GDP Growth Rate Estimates for 2015–16

Item	NCAER forecast for 2015–16 made in April 2015	NCAER forecast for 2015–16 Made in July 2015	NCAER forecast for 2015–16 Made in October 2015
GDP Market Prices (2011–12 prices) % yoy)	7.8	7.5	7.4
Exports ($ value) (%yoy)	5.8	–19.3	–17.5
Imports ($ value) (%yoy)	6.2	–20.5	–14.4
Inflation (WPI) (% yoy)	0.22	–1.5	–2.5
Current account balance as percentage of GDP	-1.1	–0.9	–1.1
Fiscal Deficit (Centre) as percentage of GDP	4.1	4.1	4.1

Note: This has been estimated using GDP factor cost 2004–05 price and then linked with GDP market prices at 2011–12 to predict growth rates.

Mid-Year Review of the Indian Economy 2015–16

Part III: Selected Themes



Leveraging Urbanisation for Inclusion, Integration, and Transformation

Ashok K. Jain and Devendra B. Gupta

India is at the crossroads of rural and urban growth. With the initiation of new policies and programmes, this is a rare moment to transform the urban scenario and make it more smart, inclusive and sustainable, while simultaneously ensuring economic growth and social equity. This is an opportunity to indigenise urban planning and make it part of the larger eco-system. This implies fresh thinking to reorient planning to address our own demographies, culture, humanity, and local geography.

The current planning is by and large reactive. We need to gradually move towards more transformative action. This calls for moving incremental actions to radical actions (alternative ways of land management, planning housing and infrastructure development, pollution prevention and urban renewal). These involve strategic planning and collaborative partnerships together with a review of and reform in regulatory, governance, and implementation processes.

Capacity building has to play an important input in this agenda. At present there is a woeful lack of "urban managers" who could comprehensively foresee and manage overall urban development that aims at sustainability, transparency, efficiency, delivery, and partnership.

Information and communication technology (ICT) and e-governance are emerging as tools for community empowerment, efficient service delivery, and reduced corruption. Local governments and service agencies, are gradually adopting ICT tools in place of time-consuming paperwork. The key result areas of better urban governance are enhanced efficiency, employment generation, social inclusion, education, healthcare, gender equity, and protection of human rights.

Four critical areas, viz., community empowerment, partnerships, governance reforms, and communications, are vital for leveraging urbanisation for inclusion, integration, and transformation. This needs legal and institutional reforms, local planning, economic and social inclusion, transparency, accounting reforms, and mobilisation of investments.

U.1 Introduction

India is on the path of massive urbanisation. As per Census 2011 (Table U.1), 377 million, i.e., 31.2 per cent of the total population of India lives in urban settlements[1]. The number of cities/towns have grown from 5,161 in 2001 to 7,935 in 2011. The decadal growth of the urban population (31.8 per cent) is higher than rural growth (12.2 per cent) as per Census (2011a).

There are 475 Class I cities (each with a population above 1 lakh/0.1 million) and the number of million plus cities increased from 35 in 2001 to 53 in 2011. The 475 Class I cities together constitute 70.2 per cent of the total urban population and the 53 million plus cities constitute 42.6 per cent of the total urban

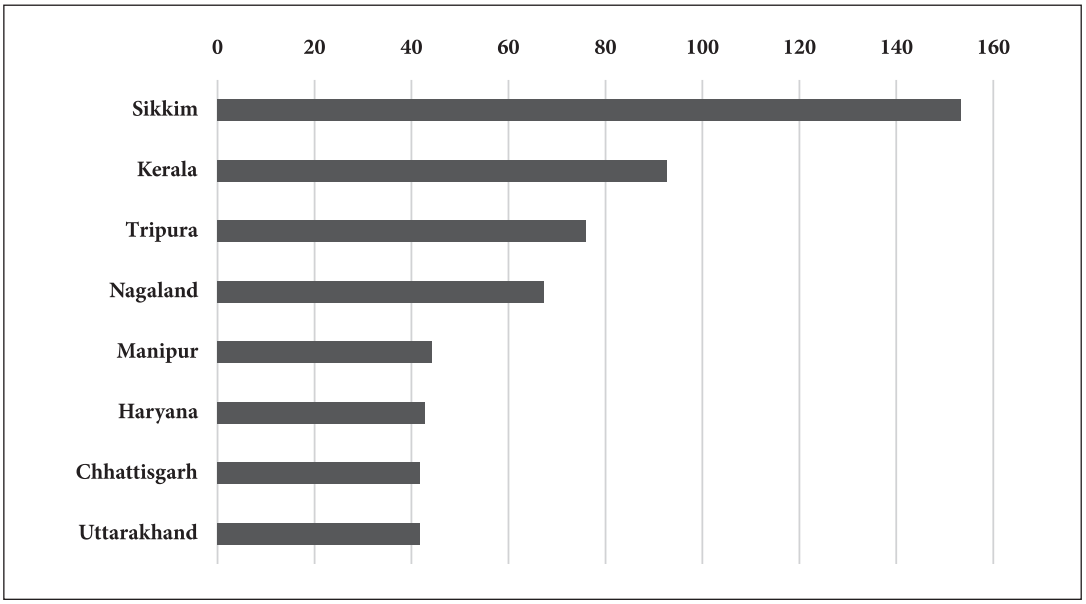
[1] Appendix U.1 gives the definitions on urban areas are defined in India.

population. As per Census 2011, there are three mega-cities, viz., Greater Mumbai (18.4 million), Delhi (16.8 million), and Kolkata (14.1 million) that have crossed the 10 million population mark, while five cities, viz., Chennai, Bengaluru, Hyderabad, Ahmedabad, and Pune have each attained more than five million population. From an urban population of 377 million in 2011, it is projected that by the year 2031, 600 million people will live in urban areas and 78 cities in India will become metropolitan (million plus) (Table U.2).

The trends of urban population in 29 Indian states and seven union territories (UTs) for the year 2011 indicate that among the UTs, high percentages were recorded in Delhi (97.5 per cent), Chandigarh (97.3 per cent), Lakshadweep (78.1 per cent), Daman and Diu (75.2 per cent), and Puducherry (68.3 per cent). Among the states, the percentage share of urban population was high in Goa (62.2 per cent), Mizoram (51.5 per cent), Tamil Nadu (48.5 per cent), Kerala (47.7 per cent), Maharashtra (45.2 per cent), and Gujarat (42.6 per cent).

The states and UTs that have observed high decadal growth of the urban population during 2001–2011 are Daman and Diu (218.8 per cent), Dadra and Nagar Haveli (218.2 per cent), Sikkim (156.5 per cent), Kerala (92.8 per cent), Lakshadweep (86.6 per cent), Tripura (76.2 per cent), and Nagaland (66.6 per cent). The states that have recorded significant growth in urban population during 2001–11 are Kerala and the four north-eastern states of Sikkim, Tripura, Nagaland, and Manipur (Figure U.1). In terms of numbers, urban population in 2011 was above 20 million in Maharashtra (50.8 million), Uttar Pradesh (44.5 million), Tamil Nadu (34.9 million), West Bengal (29.1 million), Andhra Pradesh (28.2 million), Gujarat (25.8 million), Karnataka (23.6 million), and Madhya Pradesh (20.1 million).

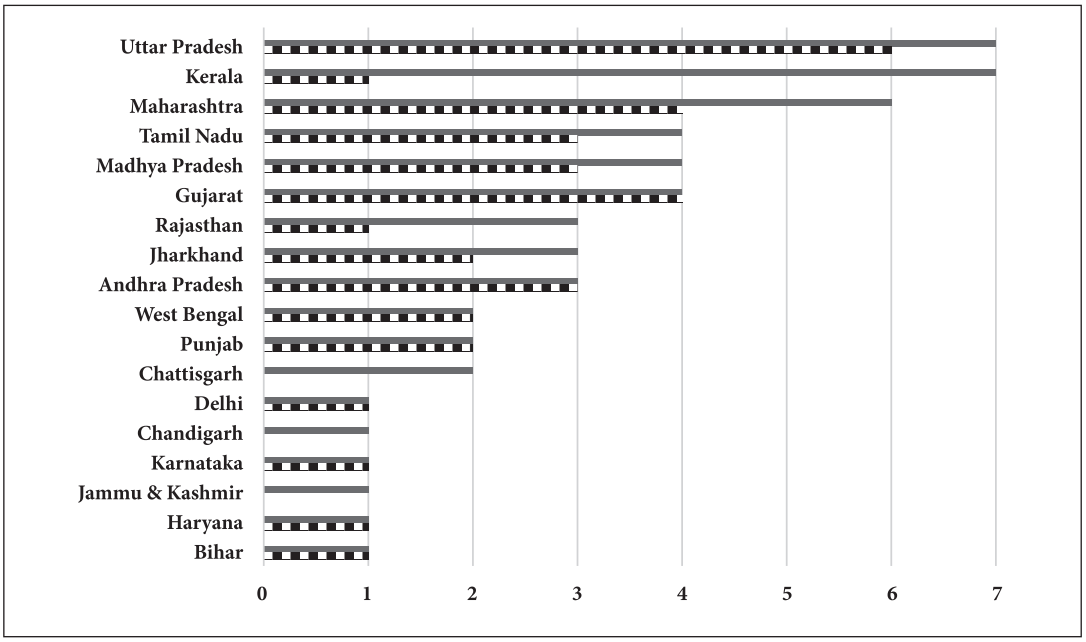
Figure U.1: Indian States Experiencing High Growth of Urban Population, 2001–11 (% decadal change)



Source: Based on the data from Census of India (2011b): Primary Census Abstract – Data Highlights, India, Series 1.

The 53 UAs (Urban Agglomerations)/cities with a population of more than one million are situated in 18 states/UTs (Figure U.2). Kerala and Uttar Pradesh have the largest number of UAs/cities (seven each), followed by Maharashtra, which has six. Kerala stands out, because the number of cities have jumped from one to seven. No million plus UAs/ cities exists in any of the north-eastern states or in Himachal Pradesh, Uttarakhand, Goa, or Odisha.

Figure U.2: Number of Urban Agglomerations/Cities with a Population of More Than One Million (States and UT wise), 2011



Source: Based on Census of India (2001 & 2011a).

Table U.3 lists the UAs/cities that have recorded the highest and lowest population growth rates during 2001–11. It shows that as many as five UAs/cities in Kerala, one in Maharashtra (Vasai Virar) and one in Uttar Pradesh (Ghaziabad) have recorded very high growth rates. UAs/cities registering the lowest growth rates include Kolkata, Kanpur, and Greater Mumbai.

Small cities are growing the fastest as evidenced by the growth of Census Towns (CTs) between 2001 and 2011 (definition in Appendix U.1). It grew from 1,362 in 2001 to 3,894 in 2011, showing a decadal growth of 185.9 per cent. Pradhan (2013) states that the new CTs account for almost 30 per cent of the urban growth in the last decade.

Although Indian cities generate approximately 60 per cent of GDP (Government of India 2013), the state of housing and basic infrastructure services remains poor, which impedes sustainability and the economy. Almost 40 per cent of towns are unplanned villages or 'quasi towns' that face haphazard growth without infrastructure services. The normative basis of the Census of India for defining a town and a village does consider the work pattern, level of infrastructure and services, housing stock, and living conditions. However, other definitions of urbanisation may also be developed. For example, Uchida and

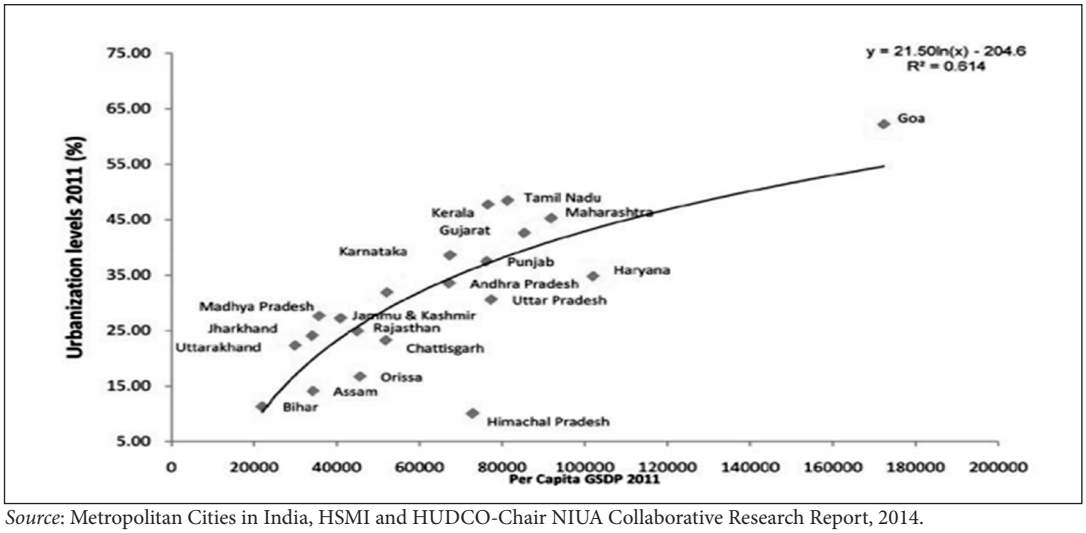
Nelson (2008) have proposed an agglomeration index to define 'urban', which is based on three factors—population density, population of a large urban centre, and travel time to that large urban centre. Some alternative definitions argue for a more comprehensive approach.

The next three sections explore the myriad linkages between urbanisation and growth, urbanisation and development and urbanisation and environment. The next four sections critically examine four key policy challenges. The last section presents a way forward.

U.2 Correlation between Urbanisation and Incomes

The links between urbanisation and per capita income have grown stronger in the Indian economy. The fitted line for the level of urbanisation and PCGSDP (per capita Gross State Domestic Product) are upward sloping, with R^2, or the explanatory power, being 0.549 for 2001 and 0.614 for 2011, respectively (HSMI and HUDCO-Chair NIUA Collaborative Research Report, 2014). Figure U.3 illustrates this positive relationship for 2011.

Figure U.3: Correlation between per capita income and urbanisation levels across States (2011)



Source: Metropolitan Cities in India, HSMI and HUDCO-Chair NIUA Collaborative Research Report, 2014.

Further investigation shows the following:

- The states were ranked by their urbanisation level and their PCGSDP in 2011 (Table U.4). The rank correlation between level of urbanisation and per capita income (PCGSDP) among states=0.8.
- Over 60 per cent of GDP comes from urban areas (Central Statistical Organisation 2010 via Ministry of Housing and Urban Poverty Alleviation, 2016).

U.3 Urbanisation and Development

According to Census reports, 44 per cent of urban population growth in India between 2001 and 2011 was due to natural increase and 29.5 per cent to the reclassification of rural settlements into census towns (Bhagat, 2011 and Pradhan 2013). Further, Pradhan (2013) estimates that 24.2 per cent of urban growth between 2001 and 2011 could be due to migration and expansion of boundaries. Millions of people every

year flock from villages to cities in hope of finding jobs and basic sustenance. Latest detailed data on migration is available for the period 2007–08 conducted by the National Sample Survey Office, which covered a total of 1,25,578 households, of which 79,091 were rural households and the remaining 46,487 were urban, indicates the following:

- Nearly 57 per cent of urban migrant households migrated from rural areas.
- The rural to urban migration stream shared nearly 20 per cent of the total internal migrants.
- Nearly 60 per cent of male migrants and 59 per cent of female migrants had migrated from rural areas.

However, many of them find the living conditions in urban areas bordering on almost inhuman levels as evidenced by numbers on slum population[2]. The Census 2011 defines "a slum as residential areas where dwellings are unfit for human habitation by reasons of dilapidation, overcrowding, faulty arrangements and design of such buildings, narrowness or faulty arrangement of street, lack of ventilation, light, or sanitation facilities or any combination of these factors which are detrimental to the safety and health" (Office of the Registrar General & Census Commissioner 2013).

India recorded a slum population of 65.5 million in 2011 according to data released by the Office of the Registrar General and Census Commissioner. A decadal comparison shows that India's slum population increased by 25 per cent during 2001–11. At the all-India level, one can say that about 5 per cent of India's total population and 17 per cent of India's total urban population lives in slums (Table U.5). Due to the rising population, slum households, numbering 13.9 million in 2011, have also grown by 37 per cent during 2001–11. Table U.6 indicates the pathetic state of housing conditions in the slums:

- 43.3 per cent of households do not have a main source of drinking water within the premises, and according to the census office, the dwellers have to travel about 100 metres or more to collect drinking water.
- 34 per cent of households do not have a toilet within the premises and people either use public latrines or defecate in the open.
- 19 per cent of households have no bathing facility.
- 63.1 per cent do not have closed drainage connectivity.
- 0.5 per cent of households have no electricity.

The data indicates that slum dwellers face a number of problems, such as unsafe housing, high-density rooms, loss of time and income in obtaining drinking water, lack of toilet facilities within the premises (implying lack of privacy, especially for women and girls), health and hygiene problems, and insufficient lighting in houses.

[2] Planning Commission estimates using the Tendulkar Methodology showed that 13.7 per cent of people are poor in urban India (Planning, Commission 2013a).

According to a study on affordable housing in India by the National Council of Applied Economic Research (2015b), India's urban housing shortage, which is estimated at 18.8 million, is confronted by the following major issues:

- Policy support and incentives for affordable housing
- Land availability, along with the basic services, amenities and work places.
- Housing development, building technology and resources
- Financing: Housing cost and access to finance

The NCAER has suggested that a more systematic, Geographical Information System (GIS)-based land inventory can release substantial public land for affordable housing redevelopment in existing urban areas. The financing of the social housing can be supplemented by a mortgage guarantee fund, social housing fund, micro finance, land housing-infrastructure bundling, mutual funds, provident funds, insurance and pension funds, general obligation bonds, etc.

Optimising the densities and Floor Area Ratio (FAR)/Floor Space Index (FSI) can be effective tools to reduce the cost of social housing. An industrial approach can convert housing construction into housing production, saving both cost and time. Proven technologies and approaches and regulatory support can enable large-scale, low-cost housing production. Industrial approaches (using components manufactured off-site), standardisation, improved purchasing and other processes can reduce the time by one-third.

U.4 Urban Ecology and Climate Change

India's urbanisation and economic development are changing the lifestyles of its people. Increasing production, mobility, consumption, and comfortable lifestyles are increasing carbon emissions and climate change. Local eco-systems are also affected by unplanned urbanisation and encroachments as we have seen in the case of floods in Srinagar in 2014 (Basu 2014).

Models predict an average increase in temperature of 2.3 to 4.8°C in India for a doubled carbon dioxide scenario, which is the benchmark. (Jain 2015c) Although per capita carbon emissions in India are one of the lowest in the world, at 1.2 metric tonnes (mt) per year, it is predicted to double within the next 10 years. Already in urban areas people with cars and air conditioners emit 4.5mt of CO2 equivalent per year, while low-income people without cars and air conditioners emit an average of 1.1m of CO2/GH gases. According to the UN Climate Change Panel, a benchmark of 3.0 mt per capita per year should be the upper limit.

This implies that planned urbanisation is necessary for sustainable growth by increasing productivity and allowing innovation and new ideas, such as walk to work, urban agriculture, zero-polluting industry, smart sanitation, and other urban services.

U.5 Urban Policies and Programmes

To make cities more liveable and inclusive, the Government of India in 2015 embarked on a Smart Cities programme for 100 cities and the Atal Mission for Rejuvenation and Urban Transformation for 500 cities (MoUD, 2015c). The focus is on core infrastructure services such as adequate and clean water supply, sanitation and solid waste management, efficient urban mobility and public transportation, affordable housing for the poor, power supply, IT connectivity, e-governance, and citizen participation along with municipal reforms and providing aid to state governments and Urban Local Bodies (ULBs).

It made a commitment that by the time the nation completes 75 years of independence, every family will have a pucca house with water connection, toilet facilities, and 24x7 electricity supply. In 2015, the central government launched the 'Pradhan Mantri Awaas Yojana for Housing for All by 2022'. The mission seeks to provide 20 million houses and take up a slum rehabilitation project. The programme provides interest subsidy of 6.5 per cent on housing loans with a tenure of up to 15 years for economically backward sections (EWS) and low-income groups (LIG), which works out to ₹1,00,000 to ₹2,30,000 per unit. It promotes slum-free cities and mandates that the house is in the name of women or in joint ownership.

To conserve the urban heritage and cultural resources, in 2015 the government launched the 'Historic City Development Augmentation Yojana' (MoUD, 2015a). It will initially cover 12 cities, viz., Ajmer, Amrawati, Amritsar, Badami, Dwarka, Gaya, Kanchipuram, Mathura, Puri, Varanasi, Velankanni, and Warangal.

Swachh Bharat Mission (SBM) is another major government initiative that covers 4,041 statutory towns and six lakh villages (MoUD, 2014). SBM has a focus on providing household toilets, community toilets, public toilets, and solid waste management and in bringing behavioural change in people regarding healthy sanitation practices in order to make cities and villages clean and hygienic.

The restoration of rivers is a high priority on the government agenda. The Namami Gange Plan aims to integrate the efforts to clean up the Ganga river, with an outlay of ₹2,00,000 million for the next five years. It focuses on pollution abatement interventions, such as interception, diversion and treatment of wastewater flowing in open drains through bio-remediation, in situ treatment, use of innovative technologies, sewage treatment plants (STPs), effluent treatment plants (ETPs), as well as the rehabilitation and augmentation of existing STPs. Short-term measures include arresting the pollution at exit points on the riverfront to prevent the flow of sewage, effluents, and solid waste into the river.

All these missions focus on the urban transformation of India. However, their success is largely contingent on rigorous and sustained efforts by the ULBs and meticulous planning, together with legal, institutional, and financial reforms.

Smart Cities Mission

The Smart Cities Mission was launched by the Prime Minister on 25 June 2015. The objective of the Smart Cities Mission of the Ministry of Urban Development is to promote cities that provide core infrastructure

and give a decent quality of life to its citizens, a clean and sustainable environment, and the application of 'Smart' solutions. The focus is on sustainable and inclusive development. The core infrastructure elements in a Smart City include the following:

i. Adequate water supply
ii. Assured electricity supply
iii. Sanitation, including solid waste management
iv. Efficient urban mobility and public transport
v. Affordable housing, especially for the poor
vi. IT connectivity and digitisation
vii. Good governance, especially e-Governance and citizen participation
viii. Sustainable environment
ix. Safety and security of citizens, particularly women, children, and the elderly
x. Health and education

Some features of comprehensive development in Smart Cities are described below (MoUD 2015b):

1. Promoting mixed land use. This covers planning for 'unplanned areas' and contains a range of compatible activities and land uses close to one another in order to make land use more efficient. The states will enable some flexibility in land use and building bye-laws to adapt to change.

2. Housing and inclusiveness: — Expand housing opportunities for all.

- Create walkable localities — reduce congestion, air pollution and resource depletion, boost the local economy, promote interactions, and ensure security. The road network is created or refurbished not only for vehicles and public transport, but also for pedestrians and cyclists, and necessary administrative services are offered within walking or cycling distance.
- Preserve and develop open spaces — parks, playgrounds, and recreational spaces in order to enhance the quality of life of citizens, reduce urban heat effects, and promote eco-balance.
- Promote a variety of transport options — Transit-Oriented Development (TOD), public transport and last mile para-transport connectivity.
- Make governance citizen-friendly and cost-effective — increasingly rely on online services to bring about accountability and transparency, especially using mobiles to reduce the cost of services and provide services without having to go to municipal offices; form e-groups to listen to people and obtain feedback; and use online monitoring of programmes and activities through a cyber tour of worksites.
- Giving an identity to the city — based on its main economic activity, such as local cuisine, health, education, arts and crafts, culture, sports goods, furniture, hosiery, textile, and dairy.

- Applying Smart Solutions to infrastructure and services in area-based development in order to make them better. For example, making areas less vulnerable to disasters, using fewer resources, and providing cheaper services.

The strategic components of the Smart Cities Mission are city improvement (retrofitting), city renewal (redevelopment) city extension (Greenfield development), and a pan-city initiative in which Smart Solutions are used in identified parts of the city (MoUD 2015b).

Retrofitting aims to transform the existing built-up areas and, make them more efficient and liveable. Redevelopment aims to upgrade the existing built-up environment, along with co-creation of a new layout with enhanced infrastructure, mixed land use, and increased density. Redevelopment envisages a minimum area of 50 acres.

Greenfield development (more than 250 acres) aims to address the needs of the expanding population through innovative planning, plan financing, and plan implementation tools (e.g. land pooling/ land reconstitution) with provision for affordable housing, especially for the poor.

Pan-city development envisages the application of Smart Solutions to the existing city infrastructure, services, and urban transport, including waste water recycling and smart metering. For assured electricity supply, at least 10 per cent of the energy requirement has to be from renewable sources. The cities will incorporate rain water harvesting, IT connectivity and digitisation, pedestrian-friendly pathways, encouragement for non-motorised transport (e.g., walking and cycling), intelligent traffic management, non-vehicle streets/zones, smart parking, energy-efficient street lighting, innovative use of open spaces, replacing overhead electric wiring with underground wiring, encroachment-free public areas, and ensuring the safety of citizens especially children, women and the elderly.

In the case of redevelopment and Greenfield Smart Cities, in addition to the features mentioned above at least 80 per cent of buildings should be energy-efficient and green. Of the total housing provided, at least 15 per cent should be in the affordable housing category.

The 100 Smart Cities have been distributed among the states and UTs based on the urban population of the state/UT and the number of statutory towns in the state/UT. The selected cities are listed in Table U.7.

The Ministry of Urban Development has already selected 98 cities and towns for development as smart cities based on a 'City Challenge' competition. Of these, 24 cities are capital cities; 24 are business and industrial centres; 18 are of cultural and tourist importance; 5 are port cities; and 3 are educational and healthcare hubs.

In terms of population, eight cities have a population of up to one lakh. These are Panaji (Goa), Diu, Silvassa (Dadra & Nagar Haveli), Kavaratti (Lakshadweep), Dharmashala (Himachal Pradesh), New Town (West Bengal), Pasighat (Arunachal Pradesh), and Namchi (Sikkim). Of the remaining cities, 35 cities have a population between one and five lakh; 21 cities are in the population range of 5 to 10 lakh;

25 have a population between 10 and 25 lakh; five cities are in the range of 25 to 50 lakh and four cities (Chennai, Greater Hyderabad, Ahmedabad and Greater Mumbai) have a population above 50 lakh.

The Smart Cities Mission envisages its integration with other missions, particularly AMRUT and the SBM. It aims to harness public, private and community resources and central government grants and funding. A focus on capacity building and implementation are necessary to achieve the results. Planning is a pre-requisite that should be based on a comprehensive information system, digitised mapping, and geo-portal. The planning of smart cities should be related to the local culture and climate. It should be inclusive, providing provides jobs, livelihoods, local economic dynamism, and a venue for cultural expression, learning, and communication. Several smart city projects have been initiated in India, which include a network of smart cities along the Delhi-Mumbai Industrial Corridor and GIFT Gandhinagar. Various state governments are preparing blueprints for their smart city, with Ananthpur, the new capital of Andhra Pradesh, being the latest.

U.6 Urbanisation and Land Policy

In the initial years after Independence, socialist policies were adopted for land acquisition and urban development such as the large-scale land acquisition, development and disposal policy. The Land Acquisition Act of 1894 had been applied for the acquisition of land for planned development with government-centric planning, land management and development, including infrastructure services, housing, and construction.

The liberalisation of the Indian economy in 1992 gave a new direction to urban and infrastructure development and the private sector entered in a big way in real estate, housing, and infrastructure projects including ports and airports, rail freight corridors, and Special Economic Zones (SEZs). According to CAG report (2014), 45,635 hectares (ha) of land was notified for SEZs, of which 28,488 ha has been utilised, while 17,147 ha of land is still unused. The emergence of transport corridors with a substantial increase in industrial investment, services, flow of goods, and people along them has been a significant feature of spatial change in recent years. The Golden Quadrilateral network of National Highways linking Delhi, Mumbai, Chennai, and Kolkata, as well as the North-South and East-West Corridors, promote this type of growth. Two recent initiatives are the 1,483-kilometre Delhi-Mumbai Industrial Corridor (DMIC) and the 1,279-kilometre Delhi-Kolkata (Eastern) Rail Freight Corridor. A separate corridor for freight trains would enable the Railways to achieve higher speed, facilitate guaranteed transit time to the customer, reduce the unit cost of transportation, and provide a competitive edge over other modes of transport.

The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 has replaced the Land Acquisition Act of 1894. It obliges the government and others to give a rehabilitation package to displaced people if they buy more than 50 acres of land in urban areas and 100 acres in rural areas. Under the new Act, the government can acquire land for its own use or for public purposes. Farmers will get four times the market price in rural areas, and in urban areas it will be double the market price.

The acquisition of land under the new Land Acquisition Act is not only difficult, but also very expensive. There is no option but to adopt new ways of planning and development. The alternative should facilitate

optimal use of the land with rationalised FAR/FSI and densities. Brownfield development rather than green development should be taken up, and should ensure the planned development of public services, urban transport, greens and social housing. Land pooling, town planning scheme, transferable development rights and accommodation reservation can be alternative methods of land assembly for planned development.

According to NCAER (2012), the land-pooling model provides a viable alternative to compulsory land acquisition for urban development. This needs new capacity building in the agencies that deal with urban development, together with legal reforms and simplified procedures based on digitised revenue records. It also involves adopting scientific methods for valuation of land and circle rates, such as the Hedonic Model, and re-engineering land development norms, specifications, and practices (NCAER, 2015a).

U.7 Urban Governance

The process of urban development is intimately linked with the system of governance. It concerns the participation of civil society, issues of transparency and ethics, and a democratic decision-making process. In this, urban local bodies play a key role.

Independent India inherited a colonial set-up of urban local bodies, which continued in the post-independence era. The District Collector remains a strong link between the government and the people in towns. There is only one channel through which decisions, orders and instructions flow, which is from top to bottom, with no meaningful participation by people in their affairs. The frequent supersession of local and municipal bodies shows total disregard for the principle of people's representation. During the past decades, the government initiated grassroots reforms in the management of local bodies. With the 74th Constitutional Amendment Act (1992), ULBs have been assigned a greater role in urban planning and governance. The responsibility for providing basic services and implementing development programmes is mainly with the local government. India has the distinction of having the largest number of democratically elected local governments in the world—more than 2,50,000 rural and urban local bodies with almost three million elected representatives. However, in most states, the government is reluctant to part with its powers. Poor municipal capacity and finances are acting as barriers to decentralisation and the strengthening of the local bodies.

India, with more than 1,210 million people, 3.3 million sq. km of area, 29 states, 7 UTs, 671 districts, around 8,000 cities and towns, and 6,00,000 villages, needs to have a differential and effective governance structure that addresses local issues in its ecological, social, cultural, and economic contexts. Urban land, housing, and planning are state subjects that are inextricably linked with the political and governance system.

India's urban centres are seen as engines of its economic growth. However, in spite of the Constitutional provisions for decentralised, local governance, orthodox urban administration, along with inadequate infrastructure and the limited resources of the local governments, are acting as the retardants in making Indian cities sustainable, equitable, and productive. There is a need to develop a comprehensive insight into urban problems and policies, and evolve a paradigm of urban governance with the imperatives of

decentralisation, localisation, partnerships, equity, transparency, and accountability. Civic engagement and participatory development is not subsidiary to the main strategy of 'governance', but should be its basis. To meet these challenges in the context of decentralisation of power from central/state governments to local levels, there is a clear need to strengthen the ULBs and to empower the local communities.

The process of urban governance, linked with participatory democratic decentralisation, has a direct bearing on the issues of livelihoods, poverty, infrastructure/ basic services, equity, and capacity building. Local bodies act as a bridge between the people, NGOs, Community Based Organisations (CBOs), the political apparatus, and the government.

U.8 Resources for Urban Development and Infrastructure

The finances required to meet the urban infrastructure requirements are staggering. The Rakesh Mohan Committee in its monumental India Infrastructure Report (NCAER, 1995) identified the problem, size, and resources needed to make a dent in infrastructure development. The total estimated requirement for urban infrastructure development covering the backlog in service provision, new investments and operations & maintenance for the 10 years was ₹2,50,000 crore, that is, a per annum estimated requirement of ₹25,000 crore.

According to the Isher Ahluwalia Committee report (2011) on urbanisation, India's economic growth momentum cannot be sustained if urbanisation is not actively facilitated (Ahluwalia et al. 2011). This Report recommends increasing investments in urban infrastructure from 0.7 per cent of GDP in 2011–12 to 1.1 per cent by 2031–32 to cater to the increasing urbanisation, which will be more than double that in 2001. The investment for urban infrastructure over the 20-year period is estimated at ₹39.2 lakh crore at 2009–10 prices. Of this, ₹17.3 lakh crore (44 per cent) is accounted for by urban roads. The backlog for this sector is very large, ranging from 50 per cent to 80 per cent across the cities of India. Sectors delivering urban services such as water supply, sewerage, solid waste management, and storm water drains will need ₹8 lakh crore (20 per cent). The Committee has recommended an explicit provision of ₹4 lakh crore towards investment in renewal and redevelopment, including slums.

According to the World Bank (2015) nearly $8,600 billion (at 2004 prices) will be needed to provide adequate water, sanitation, and roads, or about ₹40 lakh crore for 40 years or about ₹1 lakh crore per year. This does not include housing, electricity, transportation, education, or health. The costs may double if these are also included, of which at least a third of this amount would have to be raised by local bodies.

At present, urban development is funded through budgetary support from central/state governments and local bodies through Five-Year Plans and Annual Plans. The resources are sometimes supplemented with funds from the Life Insurance Corporation, the World Bank, and multinational and bilateral programmes, which are routed through central/state governments.

The central government funds are passed on to the states and local bodies as part of the budgetary system. The funds are made available partly as grants and partly as soft loans. The recovery of costs from the beneficiaries is usually not effective and neither are the repayments of loans. In many cases, these loans

remain in the books of accounts, ultimately to be adjusted or written off by the state/central government. This leads to a vicious cycle of a mounting backlog of resources for these sectors. The shortfall in investments, recurring delays, and increasing prices have resulted in the crisis that we witness today.

To strengthen the resource base of local bodies/service agencies, it is necessary to explore various options and innovative sources of resources. There are already various options and institutional arrangements available to mobilise long-term funds, and financial intermediaries provide investment opportunities in urban development and infrastructure. Various funds have been constituted with contributions from the national and state governments and bilateral and multilateral agencies. The private sector and institutional sources of urban finance can be tapped to finance municipal services. Some states already have an urban development fund that can be tapped by project sponsors and urban local bodies to facilitate the supply of capital for infrastructure projects. The government is promoting public-private partnerships in urban development through an enabling policy framework in which the central and state governments share the project cost. To mobilise private sector and institutional resources and get a multiplier effect from budgetary allocations, the government is adopting a facilitating approach.

There is a need to think beyond public private partnerships (PPPs) and learn from other countries. The UK government evolved the concept of "compulsory and competitive tendering" for the delivery of public services (Rao and Young 1995). This has been legally incorporated in the UK Local Government Act, 1988. In its preamble it states: "An Act to secure that local and other public authorities undertake certain activities only if they can do so competitively; to regulate certain functions of local and other public authorities in connection with public supply or works contracts; to authorize and regulate the provision of financial assistance by local authorities for certain housing purposes"[3]. Under this, local authorities no longer have a monopoly as sole providers of public services such as electricity, public transport, housing or sanitation but they have to compete in the market with the private sector. The programme aims at "rolling back the frontiers of the state, and revitalizing the enterprise". The concept has been introduced in the UK in the form of consequential legislation and by the adoption of a working strategy and a new structure, which involved denationalisation of public corporations and compulsory contracting out of public services through competitive tendering.

Competitive tendering in the UK opened up an alternative to the monopolies of ULBs or PPPs for the delivery of services. Competition helps to reduce the burden on the state and the lethargy of ULBs in the improvement of public services.

This has resulted in a drastic change in the government structure, and a considerable slimming down of government bodies and corporations. Many of the local authorities have geared up for the competition, whereas some local bodies that were too large, unproductive or unable to change their working have been wound up. In India, with all-round dissatisfaction with the performance of the local governments in the face of mounting establishment expenditure and losses, there is a serious concern about refurbishing the sagging image of local government. For this, the route of compulsory and competitive tendering can be adopted, for which the Competition Act, 2003 already provides a legal back-up.

[3] The Official Home of Revised Enacted UK Legislation 1267- Present: Changes over Time. http://www.legislation.gov.uk/ukpga/1988/9/pdfs/ukpga_19880009_en.pdf.

U.9 The Way Forward

Indian cities are a crossroads. With the initiation of new policies and programmes, it is a rare moment to transform the urban scenario to become smart, inclusive, and sustainable, and to leverage economic growth and social equity. This is an opportunity to indigenise urban planning and make it part of the larger eco-system of sociology. This implies thinking afresh in order to reorient planning to address our own demographies, culture, humanity, and local geography. Gautam Bhatia puts it succinctly:

> 'Today India is at the crossroads of some serious choices: to either enter the world market as a shameless imitator of China and the West, competing with them on expanding highways, ports, and racing restlessly to compare GDP figures. Or we choose a different destiny, a path of serious discovery and inventiveness, directing our energies to more imaginative forms of architecture, planning and urban living, that produce altogether different — but relevant — models — ideas that may even do away with inessential and expensive Western-type infrastructure. Whatever their final form, new cities could accommodate a wide swath of diverse citizens and lifestyles, and give everyone that much-needed uplift that comes with living in a place they love. Surely the choice should not be difficult' (Bhatia, 2014).

The current planning is by and large reactive, but it should gradually move towards transformative action. This involves incremental initiatives (e.g. land management, planning, engineering, services, etc.) and radical action (e.g. alternative ways of land management, planning and infrastructure development, pollution prevention, and urban renewal) for inclusion, integration, and co-ordination.

Capacity building has to play an important input in this agenda if it has to be successfully implemented. At present, there is a woeful lack of urban management and "urban managers" who could comprehensively foresee and manage overall urban development that aims at sustainability, transparency, efficiency, delivery, and partnership.

Four critical areas, viz. community empowerment, community action, governance reforms, and communications, are vital for equity and inclusive governance. This needs legal and institutional reforms, local planning, economic and social inclusion, transparency, accounting reforms, and the mobilisation of investments.

Information and communication technology (ICT) and e-governance are emerging as tools of community empowerment, efficient service delivery, and reduced corruption. Local municipal governments, the police, service agencies, banks, etc. are gradually setting up websites, adopting e-banking and e-governance, and replacing time-consuming and corruption-generating paperwork. This is the fundamental building block of urban governance. The key result areas to achieve better governance are enhanced efficiency, employment generation, social inclusion, education, healthcare, gender equity, and protection of human rights.

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Tables

Table U.1: Snapshot of Census 2011

Total Population	1,210.2 million
Growth rate	17.6% (2001–11)
Literacy	74.0%
Population density	382 persons/sq. km.
No. of Districts	640
No. of Sub-districts	5,924
Towns	7,935
Municipal/Census Towns	3,893
Urban Agglomerations	475
Villages	6,41,000
Urban population	377 million (31.16 percent)
Metropolitan cities (+million population)	47

Source: Census of India (2011a) and other sources.

Table U.2: India's Urban Trajectory, 2011 and 2031

Year	**2011**	**2031**
Population	1,210 million	1,440 million
Urban Population	377 million (31.16%)	600 million
Cities and Towns	7,935	-
Million+ Cities	53	78
Housing Shortage	18.8 million units	30.4 million units
Slum Population	65.5 million	150 to 200 million

Source: Census of India (2011a); McKinsey Report (2010).

Table U.3: UA/s Cities Experiencing Highest and Lowest Population Growth, 2001–11

UAs/Cities	State	High Growth Rate 2001–11 (%)	UAs/Cities	State	Low Growth Rate 2001–11 (%)
Malappuram UA	Kerala	896.8	Kolkata UA	West Bengal	6.9
Thrissur UA	Kerala	461.9	Kanpur UA	Uttar Pradesh	7.5
Vasai Virar City	Maharashtra	316.3	Greater Mumbai UA	Maharashtra	12.1
Kannur UA	Kerala	229.8	Dhanbad UA	Jharkhand	12.2
Kollam UA	Kerala	192.0	Durg-Bhilainagar UA	Chhattisgarh	14.7
Ghaziabad UA	Uttar Pradesh	143.6	Ludhiana City	Punjab	15.4
Kozhikode UA	Kerala	130.7	Jabalpur UA	Madhya Pradesh	15.4

Source: Census of India (2011a).

Table U.4: Correlation between Urbanisation & Per Capita GSDP

State/UTs	Urbanisation level 2011 (%)	Urbanisation Rank 2011	PCGSDP 2009–10 (₹)	Rank on PCGSDP
Delhi	97.5	1	1,16,886	2
Chandigarh	97.3	2	1,18,136	1
Puducherry	68.3	3	88,158	3
Mizoram	51.5	4	45,982	17
Tamil Nadu	48.5	5	63,547	9
Kerala	47.7	6	59,179	12
Maharashtra	45.2	7	74,027	6
Gujarat	42.6	8	63,961	8
Karnataka	38.6	9	52,097	13
Punjab	37.5	10	60,746	10
A & N Islands	35.7	11	74,340	5
Haryana	34.8	12	50,365	16
Andhra Pradesh	33.5	13	51,025	15
West Bengal	31.9	14	41,219	20
Uttarakhand	30.6	15	59,584	11
Manipur	30.2	16	27,332	26
Nagaland	28.97	17	45,353	18
Madhya Pradesh	27.6	18	27,250	27
Jammu & Kashmir	27.2	19	30,582	25
Tripura	26.2	20	35,799	22
Sikkim	24.97	21	68,731	7
Rajasthan	24.9	22	34,042	23
Jharkhand	24.1	23	27,132	29
Chhattisgarh	23.2	24	38,059	21
Arunachal Pradesh	22.7	25	51,405	14
Uttar Pradesh	22.3	26	23,395	30
Meghalaya	20.1	27	43,555	19
Odisha	16.7	28	33,226	14

Source: NIUA & HUDCO/(HSMI) 2013, Metropolitan Cities in India, Phase I Report, 2012-13, New Delhi.

Table U.5: Urban and Slum Population in India

Indicator	2001	2011
Total Population of India (in billion)	1.0	1.2
Urban population of India (in million)	286.1	377.1
Urban to total population (%)	27.8	31.2
Decadal growth of urban population (%)	31.5	31.8
Number of statutory and census towns	5,161	7,933
Number of UAs/cities (population>100,000)	384	475
Number of UAs/cities (population>1 million)	35	53
Total slum population of India (in million)	52.4	65.5
Absolute change in slum population 2010–11 (in million)	-	13.1
Decadal growth of slum population, 2001–11 (%)	-	25.1
Slum population to India's total population (%)	5.1	5.4
Slum population to India's total urban population (%)	18.3	17.4
Number of slum households in India (in million)	10.3	13.9
Absolute change in number of slum households, 2001–11 (in million)	-	3.8
Decadal growth of slum households, 2001–11 (%)	-	37.1
Number of Indian towns reporting slums	1,743	2,613

Source: Office of the Registrar General and Census Commissioner, India, 2011.

Table U.6: Housing Stock in Slums and Amenities available to Slum Households, 2011

UAs/Cities	State	High Growth Rate 2001–11 (%)	UAs/Cities	State	Low Growth Rate 2001–11 (%)
Households by type of occupied census house	-Permanent -Semi-Permanent -Temporary	77.7 16.0 5.3	Households by main source of drinking water	-Tap water -Hand pump -Within premises -Outside premises	74.0 12.7 56.7 43.3
Households by ownership status	-Owned -Rented	70.2 26.3	Households by sanitation	-Latrine facilities (within premises) -Public latrine -Open -Bathing Facility -Closed drainage -Open and no Drainage	66.0 15.1 18.9 81.0 36.9 63.1
Households by number of dwelling rooms	-No exclusive rooms -1 room -2 rooms -3 rooms -4+ rooms	4.4 44.8 29.5 12.3 8.9	Households by main source of lighting	-Electricity -Kerosene -Any other -No lighting	90.5 8.2 0.7 0.5

Source: Office of the Registrar General and Census Commissioner, 2011.

Table U.7: 100 Smart Cities

No.	Name of State/UT	No. of cities shortlisted	Names of selected Cities	Population of Cities (lakh)
1.	Andaman & Nicobar Islands	1	1. Port Blair	1.4
2.	Andhra Pradesh	3	1. Vishakhapatnam 2. Tirupati 3. Kakinada	18.8 3.7 3.5
3.	Arunachal Pradesh	1	1. Pasighat	0.2
4.	Assam	1	1. Guwahati	9.6
5.	Bihar	3	1. Muzaffarpur 2. Bhagalpur 3. Biharsharif	3.9 4.1 3.0
6.	Chandigarh	1	1. Chandigarh	10.6
7.	Chhattisgarh	2	1. Raipur 2. Bilaspur	10.5 3.7
8.	Daman & Diu	1	1. Diu	0.2
9.	Dadra & Nagar Haveli	1	1. Silvassa	1.0
10.	Delhi	1	1. New Delhi Municipal Council	2.5
11.	Goa	1	1. Panaji	1.0
12.	Gujarat	6	1. Gandhinagar 2. Ahmedabad 3. Surat 4. Vadodara 5. Rajkot 6. Dahod	2.9 55.8 44.7 17.5 13.2 1.3
13.	Haryana	2	1. Karnal 2. Faridabad	3.0 14.1
14.	Himachal Pradesh	1	1. Dharamshala	0.2
15.	Jharkhand	1	1. Ranchi	10.7
16.	Karnataka	6	1. Mangaluru 2. Belagavi 3. Shivamogga 4. Hubballi-Dharwad 5. Tumakuru 6. Davanegere	4.8 4.9 3.2 9.4 3.1 4.4

(Contd.)

Table U.7: 100 Smart Cities (Contd.)

No.	Name of State/UT	No. of cities shortlisted	Names of selected Cities	Population of Cities (lakh)
17.	Kerala	1	1. Kochi	6.0
18.	Lakshadweep	1	1. Kavaratti	0.1
19.	Madhya Pradesh	7	1. Bhopal 2. Indore 3. Jabalpur 4. Gwalior 5. Sagar 6. Satna 7. Ujjain	19.2 22.0 12.2 11.6 2.7 2.8 5.2
20.	Maharashtra	10	1. Navi Mumbai 2. Nashik 3. Thane 4. Greater Mumbai 5. Amravati 6. Solapur 7. Nagpur 8. Kalyan-Dombivali 9. Aurangabad 10. Pune	11.2 14.9 18.4 124.0 7.5 9.5 24.6 15.2 11.7 31.2
21.	Manipur	1	1. Imphal	2.7
22.	Meghalaya	1	1. Shillong	3.5
23.	Mizoram	1	1. Aizawl	2.9
24.	Nagaland	1	1. Kohima	1.1
25.	Odisha	2	1. Bhubaneshwar 2. Raurkela	8.4 3.1
26.	Puducherry	1	1. Oulgaret	3.0
27.	Punjab	3	1. Ludhiana 2. Jalandhar 3. Amritsar	16.2 8.7 11.6
28.	Rajasthan	4	1. Jaipur 2. Udaipur 3. Kota 4. Ajmer	30.7 4.8 10.0 5.5
29.	Sikkim	1	1. Namchi	0.1

(Contd.)

Table U.7: 100 Smart Cities (Contd.)

No.	Name of State/UT	No. of cities shortlisted	Names of selected Cities	Population of Cities (lakh)
30.	Tamil Nadu	12	1. Tiruchirapalli 2. Tirunelveli 3. Dindigul, 4. Thanjavur 5. Tiruppur 6. Salem 7. Vellore 8. Coimbatore 9. Madurai 10. Erode 11. Thoothukudi 12. Chennai	9.2 4.7 2.1 2.2 8.8 8.3 5.0 16.01 15.6 5.0 3.7 67.3
31.	Telangana	2	1. Greater Hyderabad 2. Greater Warangal	67.3 8.2
32.	Tripura	1	1. Agartala	4.0
33.	Uttar Pradesh**	12	1. Moradabad 2. Aligarh 3. Saharanpur 4. Bareilly 5. Jhansi 6. Kanpur 7. Allahabad 8. Lucknow 9. Varanasi 10. Ghaziabad 11. Agra 12. Rampur	8.9 8.7 7.1 9.0 5.1 27.7 11.1 28.2 12.0 16.5 15.6 3.3
34.	Uttarakhand	1	1. Dehradun	5.8
35.	West Bengal	4	1. New Town Kolkata 2. Bidhannagar 3. Durgapur 4. Haldia	0.4 6.3 5.7 2.7

Notes:

*Jammu & Kashmir has asked for more time to decide on the potential Smart City.

**12 cities have been shortlisted in Uttar Pradesh against the 13 cities allocated to that state.

Appendix U.1

In India, 'urban area' is defined by the Office of the Registrar General and Census Commissioner in the following way:

All statutory places with an urban local government are called 'Statutory Towns'.
The Census of India may declare an area as urban or Census Town, if it satisfies the following three criteria simultaneously:

a. A minimum population of 5,000;
b. At least 75 per cent of the male working population is engaged in non-agricultural pursuits; and
c. A population density of at least 400 per sq. km. (1,000 per sq. mile).

'Cities' are urban areas with a population of one lakh (0.1 million) and above. Others are termed 'towns'. 'Metropolitan cities' are defined as cities with a population of 10 lakh (1 million) and above. 'Urban Agglomerations (UAs)' are defined as continuous urban spread constituting a town and its adjoining outgrowths (OGs), or two or more physically contiguous towns and any adjoining urban outgrowth of such towns. An Urban Agglomeration must consist of at least a statutory town, and its total population (i.e., all the constituents put together) should not be less than 20,000 as per the 2001 Census.

An 'out growth (OG)' is a viable unit such as a village or a hamlet or an enumeration block made up of such village or hamlet and clearly identifiable in terms of its boundaries and location. Examples are a railway colony, university campus, port area, and military camps that have come up near a statutory town outside its statutory limits but within the revenue limits of a village or villages contiguous to the town. While determining the outgrowth of a town, it has been ensured that it possesses urban features in terms of infrastructure and amenities such as pucca roads, electricity, taps, drainage system for disposal of waste water etc., educational institutions, post offices, medical facilities, banks etc. and is physically contiguous with the core town of the UA.

Mini Metros: They include Hyderabad, Ahmedabad, Pune, Coimbatore, and Chandigarh. They are growing fast and have more well-to-do homes than metros because of a higher density of professionals and skilled migrants.

Tier I Towns: 33 towns with a population of over 10 lakh. These include Jodhpur, Visakhapatnam, Indore, Bhopal, Jaipur, Lucknow, Kanpur, Allahabad, Surat, Baroda, and Patna.

Tier II Towns: 28 towns with population above six lakh but below 10 lakh, such as Mangalore, Thiruvananthapuram, Raipur, Jalandhar, Amritsar, Bhubaneswar, Mangalore, Nashik, Ranchi, Bhopal, and Raipur.

Tier III Towns: 152 towns, with population between two and six lakh, such as Silguri, Shimoga, Agartala, Sonepat, Aizwal, and Vellore.

Tier IV Towns: 201 towns with population between one and two lakh, such as Shimla, Dibrugarh, and Wardha.

Peri-Urban Towns: Around 4,600 towns with population under one lakh that surround big cities or are next to highways.

A Critical Perspective on the Trinity: Jan-Dhan Yojana, Aadhaar, and Mobile Telephone (JAM)

*Vineeta Dixit**

Information Communication Technologies (ICTs), the Internet and mobile phones are becoming institutionalised for the delivery of Government to Citizen (G2C) services and financial inclusion. Digital identity is being seen as the keystone on which delivery of such services is dependent to plug leakages in and improve targeting of welfare schemes. The incumbent government in India has labelled this as the trinity of Jan-Dhan (J), Aadhaar (A) and Mobile (M). This paper seeks to examine the policy utility and challenges of J.A.M for the delivery of public services. The success of Jan-Dhan and Mobile have demonstrated that when agency is given to people, they feel empowered and are motivated to take necessary action. Aadhaar, on the other hand, continues to face serious challenges—legal, constitutional, political, and social as of November 2015. At the core are the challenges linked to connectivity, identity, and enabling legislation. The paper argues that there is an inherent distinction between the old world and new world economy and policymakers need to think afresh to address the challenges of the new economy. While a focused approach leads to success faster and incremental and relevant inclusions at different stages add value to the programmes, after the initial success, each requires a re-think to ensure their continued success and relevance.

ICT.1 Introduction

Around the world, the use of Information Communication Technologies (ICTs), Internet, and Mobile is increasingly becoming institutionalised for the delivery of Government to Citizen (G2C) services, transactions, and interactions. In India, the use of ICTs for enabling public service delivery began with the computerisation of land records (Singh, 2013) in the late 1980s (Habibullah and Ahuja, 2005). The first real taste of success came with the computerisation of the passenger reservation system in 1999–2000 (Nath, 2009). In the meantime, state- and district-level projects such as Bhoomi , CARD[2], and Gyandoot[3] were attempting to transform the public service delivery network at the grassroots level. In the last decade these efforts was institutionalised for the first time, for a nationwide rollout, in the form of the National e-Governance Plan (NeGP). NeGP's three pillars for public services delivery were the 31 Mission Mode Projects, which aimed at computerisation of select public services; the three key infrastructure projects —State Wide Area Network (SWAN) to provide connectivity up to the block level, State Data Centre (SDC) for securely housing all government applications, and the State Services Delivery Gateway (SSDG) for creating a gateway between the backend legacy and new applications and the front end service delivery mechanism. The latter are in the form of Common Service Centres (CSCs), which are 100,000+ Internet-enabled service delivery centres for accessing, public, social, and private sector services. By the beginning of 2011, mobile too was increasingly viewed as an effective option, at least for information provisioning and status tracking of services.

* The views expressed are personal. This paper was written in November 2015. Since then there have been significant changes in legislation. In particular, the Aadhar Bill 2016 and Goods and Services Tax have been passed in the Parliament. This means that earlier interpretations of the status in November 2015 may have changed. Revised interpretation in the context of the new changes would require new work in the future.

[1] Chawla.

[2] CARD website.

[3] CeEG (2002).

While the success of the NeGP is yet to be fully determined, it helped create a new paradigm in public service delivery, that of bringing public services to the doorstep of citizens. It also opened a plethora of opportunities for addressing other key issues and challenges, namely, expanding financial inclusion and creating a digital identity for a person that could be universally used, accessed, and accepted. While the former resulted in expansion of the Business Correspondent model and ultimately the creation of the Direct Benefit Transfer (DBT) scheme for directly debiting subsidies into a beneficiary's bank account, the latter formulated into a full-scale digital identity programme—*Aadhaar*—under the Unique Identification Authority of India (UIDAI)[4], which increasingly became the basis for the identification of the seeker of public services.

Perhaps the first large-scale use of financial inclusion, digital identity, and mobile was attempted in the Mahatma Gandhi National Rural Employee Guarantee Act (MGNREGA)[5], when the government mandated (MoRD, 2010) wage disbursement directly into the beneficiary's bank account and created a success story (Zee News, 2010). The UPA government attempted to replicate the success by launching Direct Benefit Transfer (DBT) in 2013[6]. It aimed at providing the benefits directly to individuals' bank accounts electronically, and ensuring accurate targeting of the beneficiary and curbing pilferage and duplication. *Aadhaar* formed the bedrock for confirming the identity of the beneficiary and status updates could be had if the beneficiaries provided their mobile numbers.

Both *Aadhaar* and DBT had their share of detractors. While the Supreme Court (Monalisa and Roy, 2013) said the government cannot make Aadhaar numbers mandatory for availing of the benefits of government services and subsidies, including those under the DBT, political parties saw these primarily as poll gimmicks (Business Standard, 2010), states wanted *Aadhaar* to be delinked from DBT (First Post, 2013), and civil society opposed them on the grounds for constitutional issues, potential exclusion, privacy risks, etc. (Suryadas, 2011).

It was expected that with the new government coming to power these projects would be reviewed and perhaps their implementation curtailed. However, over the last 12 months (i.e. prior to November 2015) since the new government came to power, it seems that the projects have been reviewed, re-branded, and re-launched. Therefore, NeGP is now Digital India[7] with similar components; services, infrastructure, and digital empowerment and *Jan-Dhan Yojana* (JDY), *Aadhaar*, and Mobile aka J.A.M (MoF, 2015) are being projected as the holy trinity to promote welfare (Deccan Chronicle, 2015).

This paper seeks to examine the policy utility and challenges of these three pillars of Digital India for the delivery of public services. The paper is divided into three sections in which each pillar is examined and the concluding section has suggestions and recommendations.

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[4] UIDAI website.

[5] "The MGNREGA Act (2005) aims to enhance livelihood security for all adults willing to perform unskilled manual labour in rural areas. Any household is entitled to 100 days of employment in a financial year at a minimum daily wage rate. Work can be split among household members, but workers must be at least 18 years old" (Desai, Vashishtha and Joshi, 2015).

[6] DBT website.

[7] Digital India website.

ICT.2 Jan-Dhan Yojana (JDY)[8]

Census 2011 shows that 58.7 per cent of households avail of banking services; in urban areas it was 67.8 per cent, but it was 54.4 per cent in rural areas. The percentage of the unbanked population tends to be higher in the north-eastern and eastern regions. The percentage of households availing of banking services in the seven sisters was Tripura (79.2%), Sikkim (67.5%). Mizoram (54.9%), Arunachal Pradesh (53%), Assam (44.1%), Meghalaya (37.5%), Nagaland (34.9%), and Manipur (28.6%). The statistics for the states and union territory in eastern India were: Andaman and Nicobar Islands (89.3%), Jharkhand (54%), West Bengal (48.7%), Odisha (45%), and Bihar (44.4%).

The efforts to increase the outreach of financial services have been hampered by the high cost associated with service delivery to rural and remote areas, challenges related to identity establishment and management, and the lack of integration between various social benefit schemes and banking services. This aided the proliferation of cash-based distribution of social benefits that often resulted in rent-seeking behaviour.

The transfer of MGNREGA wages directly into no-frills accounts created specifically for this purpose was perhaps the first attempt at scale to bring the unbanked under the ambit of institutionalised financial services. To date (9 November 2015) 71 million bank accounts have been opened under the scheme, of which 53 million belong to active[9] workers, and within the active ones 87.8 per cent are individual accounts (MGNREGA website). The rest are joint accounts. Also, the number of bank accounts opened was only 49.7 per cent of the total registered active persons. However, these were often hampered by the limited number of service outlets and working hours/days on which services can be accessed by such account holders.

Another attempt was made by encouraging banks to adopt the Banking Correspondent (BC) model (RBI, 2006). In addition to non-government organisations (NGOs), self-help groups (SHGs), microfinance institutions (MFIs), etc., Common Services Centres (CSCs) set up by the government were also authorised to become BCs. In its initial stages, the BC model suffered from many shortcomings, the biggest of which was 'exclusivity'—the BC of one bank could not provide service for another and the software and hardware used to conduct business were not compatible, thereby resulting in vendor lock-in. It took almost a decade to iron out these and other issues related to the BC model.

Financial inclusion initiatives received further impetus under the Direct Benefit Transfer mechanism initiated by the Planning Commission[10]. The scheme had several challenges including a non-digitised database of potential beneficiaries, lack of bank accounts, non-enrolment in *Aadhaar* and non-seeding of *Aadhaar* in the database of relevant schemes (PMO, 2013).

[8] JDY translates to People Wealth Scheme.

[9] Active Workers: Any individuals of households who has worked any one day in either the last two financial year or in current financial year.

[10] DBT website.

When Prime Minister Modi expressed a clarion call from the ramparts of the Red Fort in 2014 for financial inclusion and announced the *'Pradhan Mantri Jan-Dhan Yojana'* (PMJDY)[11]—a scheme to offer zero-balance bank accounts to every household—it seemed novel. As explained above, the idea of *Jan-Dhan* is not new. What is unique about PMJDY is its inclusive approach as well as the vision to forge both forward as well as backward integrations in the scheme. The pillars of the PMJDY are:

Year 1

1. One account per household
2. Financial literacy
3. Bank within five km.

Year 2

4. Micro insurance
5. Credit Guarantee Fund
6. Pension Transfer.

From a policy perspective, the conceptualisation and implementation of the scheme was unique from multiple angles:

- **Citizen Centricity**: The scheme was people-centric and not government scheme-centric i.e. it focused on people's need to open a bank account and not drive banks or government departments to open bank accounts based on some pre-specified target. Therefore, while banks may have been assigned targets and the Department of Financial Services, Ministry of Finance (DFS) carried a target of one account per household, the scheme was positioned such that it put the onus on people to reach out to the banks to open accounts. This created the perception of a sense of agency within people and created motivation towards the goal of account opening.

- **Simplicity**: Multiple Know Your Customer (KYC) channels—Voter Identity Card, driving licences, Permanent Account Number (PAN), passport, introduction by another account holder etc. were permitted and *Aadhaar* was not made mandatory. This was unlike DBT that had suffered from challenges of accurate identification of beneficiaries. When the scheme was launched, it was not linked to any other specific government scheme or enrolment in *Aadhaar*. People could walk into a bank and get an account opened or convert an existing bank account into a PMJDY account by applying for a RuPay[12] debit card. Instant positive outcomes for the beneficiaries added to the already positive atmosphere and gave further impetus to the scheme.

[11] PMJDY website.

[12] The Reserve Bank of India, after setting up the Board for Payment and Settlement Systems in 2005, released a vision document incorporating a proposal to set up an umbrella institution for all retail payment systems in the country. The objective was to consolidate and integrate the multiple systems with varying service levels into a nation-wide uniform and standard business process for all retail payment systems. This led to the formation of the National Payments Corporation of India (NPCI). RuPay, a new card payment scheme launched by the National Payments Corporation of India (NPCI), has been conceived to fulfil the RBI's vision to offer a domestic, open loop, multilateral system that will allow all Indian banks and financial institutions in India to participate in electronic payments (NPCI website).

- **Build and Scale**: Unlike DBT, which was launched in select districts, the PMJDY was launched across India, which gave the scheme instant scale. It covers both urban and rural households and is therefore more inclusive in its approach. To maintain the momentum of the scheme, MNREGA wages and Direct Benefit Transfers for LPG (DBTL) transfers were linked to these accounts. While the former may be seen as natural synergy, the latter linked to subsidy on cooking gas through the Ministry of Petroleum and Natural Gas was done to make cooking gas more readily available to the poorer sections of society. In addition, a few other social security schemes, i.e., Pradhan Mantri Suraksha Bima Yojana, Pradhan Mantri Jeevan Jyoti Bima Yojana, and Atal Pension Yojana, were launched that could be directly linked to the PMJDY, gave the impression of support but required limited action or financial commitment from the government. Instead, the government worked closely with financial institutions to roll out these schemes. This ensured wider partnership for the scheme.

- **Outcome Focus:** The focus of the scheme was simple—one bank account per household. To ensure the success of the programme it was essential that the scheme was not linked to any other specific government scheme or action. This prevented complications around process re-engineering, de-duplication, cleaning and seeding of relevant databases, etc. and ensured speedy rollout. It also used existing implementation channels —banks, BCs, post offices —most of which lie outside the ambit of government processes and structure. This could therefore be implemented in a fast and efficient manner with limited process delays. It used core banking infrastructure so that the accounts themselves could be transferred from one branch to another without any hassle.

- **Incentivisation:** While opening a bank account by itself may be seen as an incentive, the government cleverly introduced several incentives at the launch of the scheme. For example, for those opening bank accounts before 26 January 2015, ₹ 30,000 of life cover was available; for those using the RuPay debit card, an overdraft facility was available.

- **Publicity**: Usually, government schemes are launched with fanfare and die a quiet death. The PMJDY not only received a thumping start by the PM himself during his Independence Day speech, but also the DFS and its partners kept the drumbeat rolling through the mass media and on-ground events including financial literacy camps to ensure the success of the scheme.

As per the data available from the Scheme's report card published by the government on its first anniversary[13]:

- 17.74 crore accounts have been opened under the PMJDY with deposits of more than ₹22, 000 crore.

- Zero balance accounts in the PMJDY have declined from 76 per cent to 45.74 per cent from September 2014 to 19 August 2015.

- *Aadhaar* has been seeded in 41.82 per cent of accounts opened under the PMJDY.

- More than ₹4,273 crore has been routed through these accounts by June 2015 towards payment of wages under the MNREGA.

[13] Department of Financial Services (2015).

- Transfer of subsidy of more than ₹17,446 crore through *Jan-Dhan* accounts from November 2014 to 31 July 2015.

Some recent industry reports claim that as a direct result of the PMJDY, India's unbanked population has more than halved to 233 million in 2015 from 557 million in 2011(IAMAI, PCI and PwC 2015). Demirguc-Kunt et al. (2015) also finds strong growth in account ownership between 2011 and 2014 with increase in accounts from 35 per cent to 53 per cent respectively i.e. 175 million in India became account holders. But the scheme is not without its detractors. The criticism is based on:

- **Potential of misuse**: At the time of the announcement, the RBI Governor, Dr Raghuram Rajan, expressed his reservations about the scheme (Unnikrishnan, 2014). According to him, the key challenges that needed to be addressed are[14]:
  - Since each account is eligible for a ₹ one lakh insurance cover, individuals may open multiple accounts for larger insurance cover.
  - These accounts may be used for illegal or nefarious purposes such as *hawala* transactions.
- **Implementation model**: Since the target of a bank within five kilometres is primarily to be achieved through BCs, critics point to the less-than-satisfactory track record of the BC-based banking model (RBI, 2009):
  - Out of 50 public sector and private sector banks, only 26 banks have so far reported appointing BCs.
  - The number of accounts opened by BCs form only 26.82 per cent of the no-frills accounts reported to be opened by banks,
  - The majority of no-frills accounts opened by BCs have remained non-operational
  - Nearly 47 per cent of BCs were untraceable.

Also, the BC model is heavily dependent upon connectivity for its success. Given the low rural teledensity in India (discussed in the Mobile section), over-dependence on BCs may lead to sub-optimal results.

- **Target orientation instead of result orientation**: The RBI Governor had cautioned against the speed at which the JDY was implemented because the "target is universality and not just speed and numbers" (Rajan, 2014). Public sector banks bore the burden of opening JDY accounts. As of

[14] Khan (2014) discussed the opportunities and challenges of the JDY scheme. The opportunities include of course expanding business by leveraging these accounts. The challenges of technological & operational Khan (2014) discussed the opportunities and challenges of the JDY scheme. The opportunities include of course expanding business by leveraging these accounts. The challenges of technological & operational issues in handling millions of accounts which include the following: (i) ability of banks to issue cards (and related processes for meeting existing mandates on security and safety) to millions of customers; (ii) Issues relating to de-duplication; (iii) the impact on the interoperable ATM networks; (iv) enabling micro-ATMs to accept magstripe cards as per the standards laid down by the IBA; (v) the need for expansion of point of sale (POS) networks (vi) scalability of banks' hardware and software systems; (vii) augmenting human resources at banks to deal with customers' issues and grievances and; (viii) upgrading the capacity & capabilities of the BCs.

4 November 2015, out of 19.1 crore accounts, 14.97 were opened by public sector banks (PMJDY website). Of the 14.97 crore, 37.1 per cent were zero-balance accounts. Already burdened by a higher share of non-performing assets (NPAs), the JDY accounts put significant pressure on the public banking system (Rajan, 2014; Unnikrishnan, 2014).

Decline in MGNREGA performance: Sampath and Rukmini (2015) suggest that there was a sharp decline in work and payment related to MNREGA last year. Given that payments from MGNREGA form a significant portion of savings into JDY accounts, a decline would have an adverse impact on account viability[15].

- **Fine Print**: JDY provides free accident insurance cover only if the RuPay debit card is used once in 45 days. This is often not clear to account holders. Also, those residing in rural and far-flung areas are less likely to have an opportunity to use their debit card and therefore would lose this benefit. Social security schemes i.e., Pradhan Mantri Suraksha Bima Yojana , Pradhan Mantri Jeevan Jyoti Bima Yojana & Atal Pension Yojana gave the impression that cthey an be directly linked to the PMJDY, but they require limited action or financial commitment from the government and put the onus on the beneficiary.

Policy Implications

The PMJDY was created as a platform for inculcating the habit of saving money, providing formal credit facilities, and plugging leakages in public subsidies and welfare programmes.

Although 17.7 crore accounts have been opened under the PMJDY (August 2015), a significant population remain unbanked. While all public sector banks (PSBs) are participating in the scheme implementation, only select private sector banks so far have become part of the initiative and even they have chosen to play a cautious, minor role. In addition, since access to these accounts is mainly designed through BCs, whose performance is suspect, such a model may have limited impact in improving overall access to banking services.

From a policy perspective, the issues that need to be examined include:

- Whether PSU banks should continue to carry the lion's share of the burden of the PMJDY?
- Whether a new implementation model needs to be evolved for improving access?
- What role can mobile banking potentially play in the PMJDY?
- What types of welfare schemes need to be prioritised for integration with the PMJDY?

[15] On the other hand, Ghosh and Ghosh (2015) report that the PMJDY scheme has been very effective in rural areas. A random sample study of State Bank of India (SBI) accounts opened between August 2014 and May 2015 suggest that the number of active accounts has grown 25 times between these dates. The big push in active accounts has come from the rural west followed by the rural north. Semi-urban regions in the eastern and southern regions are also experiencing exponential growth. The authors make the point that remittances may be increasingly channelled through JDY accounts.

- Whether the rule requiring a transaction once in 45 days for RuPay needs to remain mandatory for insurance.

The potential for misuse of these accounts cannot be dismissed out of hand and a measured and balanced approach is needed to ensure that misuse is prevented. Plugging leakages on public subsidies depends on two distinct variables: eligibility and identification. While the PMJDY coupled with *Aadhaar* may play a critical role in identification, the issue of eligibility will continue to plague the system. *Aadhaar* has several problems, which will be examined in the next section.

ICT.3 Aadhaar (A)

Aadhaar is the biometric-based personal identification system being implemented by UIDAI[16]. This unique 12-digit number is expected to serve as proof of identity and address in India. UIDAI provides authentication services for use in several service delivery schemes across the country. As on 15 October 2015, 925 million Aadhaar numbers had been issued in the project (UIDAI website).

Although an initial opponent of *Aadhaar*, the National Democratic Alliance (NDA) since coming to power has adopted *Aadhaar* as its own and decided to implement it for select schemes. The matter is *sub judice* and a Constitution Bench of the Supreme Court recently ruled that (as of writing this paper in November 2015):

- Enrolment for *Aadhaar* is not mandatory for Indian citizens.
- The *Aadhaar* card will remain optional for availing of various government welfare schemes.
- The Aadhaar card will continue to be required for PDS and LPG distribution.
- The court has allowed the details of *Aadhaar* cardholders to be used for criminal investigations.

However, violations of the Supreme Court's ruling exist even now. For example, it is compulsory for an entrepreneur to submit the *Aadhaar* number to register a new business (Dhoot, 2015).

Policy Imperatives and Issues

For any government to provide effective and targeted service delivery to its citizens, it should be able to:

- Define the eligibility for the welfare scheme.
- Accurately identify the beneficiaries.

A combination of both helps in accurate targeting of public services. The delivery of the service itself is a function of its implementation process, which may be treated separately from the identification and eligibility issues.

India with its 1.2 billion population would present a daunting task for any service delivery model, even in a perfect information availability scenario. This is not the first identity programme to be implemented

[16] UIDAI website.

in India. In 2001, the Report on National Security System recommended the issuance of Multi-Purpose National Identity Cards for all people staying along all border areas (PRS, 2011) and the Citizenship Amendment Bill, 2003 also contained a provision for registering every citizen of India and issuing national identity cards. Passports, voter IDs, PAN cards, driving licences, and ration cards have all at some point of time served as identity cards (Indian Kanoon website). Invariably, the service seeker had to submit two documents to access any public service: one as photo identity proof and the other as proof of address. *Aadhaar* was designed and positioned to address these twin issues of identity and address verification. However, any measure undertaken needs to be done under the extant laws of the land.

Legal Position of UIDAI: UIDAI was set up as an attached office of the Planning Commission. Since the dissolution of the Planning Commission and the setting up of NITI Aayog, the status of UIDAI is not clear[17]. In addition, the draft legislation for UIDAI is pending in Parliament as of the date of writing this document in October 2015[18]. UIDAI also needs to meet the full requirements of a 'body corporate' as defined in clause (i) of the explanation to Section 43A of the IT Act. UIDAI has therefore neither constitutional nor statutory backing.

Meeting the requirements of the IT ACT: UIDAI seeks to create an identity database that will enable unique identification of an individual based on a combination of data from biometrics—fingerprint and iris—and demographics—name, address, etc. While several databases already exist in the country containing facial recognition (photo) and demographic details such as passport, voter ID, PAN card and driving licence, UID is the first attempt to include biometric data in personal identity. Such information falls under the 'sensitive personal information' category of the IT Act, 2000.

Some of the critical requirements of the IT Act 2000 (as per notified Rules), what UIDAI professes and the policy, legal and regulatory gaps that need to be addressed are given below (DeitY, 2011).

Rule 4. (iii) purpose of collection and usage of such information;

While the gazette notification states that UIDAI will define usage and applicability of UID for delivery of various services as per information available on the UIDAI website[19], Aadhaar can be used in the delivery of the following programmes:

- Food & Nutrition – Public Distribution System, Food Security, Mid–Day Meals, Integrated Child Development Scheme.
- Employment – Mahatma Gandhi National Rural Employment Guarantee Scheme, *Swarnajayanti Gram Swarozgar Yojana*, Indira Awaaz Yojana, Prime Minister's Employment Guarantee Programme.

[17] Since the writing of this chapter in November 2015, the Aadhar Bill has been passed in Parliament in 2016.

[18] This discussion is based on the situation as of November 2015. With the recent passage of the Aadhar Bill in 2016, the interpretation would change significantly as the bill defines what Aadhar can be used for. This would require follow-up work.

[19] UIDAI website. http://www.uidai.gov.in/images/notification_28_jan_2009.pdf.

- Education – *Sarva Shikhsha Abhiyaan*, Right to Education.
- Inclusion & Social Security – *Janani Suraksha Yojana*, Development of Primitive Tribe Groups, Indira Gandhi National Old Age Pension Scheme.
- Healthcare – *Rashtriya Swasthya Bima Yojana, Janashri Bima Yojana, Aam Aadmi Bima Yojana.*
- Other miscellaneous purposes including property transactions, voter ID, PAN card etc.

Since UIDAI is not the owner or implementer of any of these schemes and no government notification exists to state that UID will be used for these schemes, such claims may be perceived as patently misleading. Also, Rule 5. (2). (b) says, "the collection of the sensitive personal data or information is considered necessary for that purpose".

Rule 5. (3) (b) says, "the purpose for which the information is being collected".

Since the delivery of public services can be enabled using other means of identification, biometric information is not necessary for the delivery of public services mentioned above.

At the time of information collection, neither the purpose of data collection is clear nor is it clarified categorically that *Aadhaar* is not linked to any welfare schemes.

Rule 5. (4) Body corporate or any person on its behalf holding sensitive personal data or information shall not retain that information for longer than is required for purposes for which the information may lawfully be used or is otherwise required under any other law for the time being in force

There is no exit clause in the UID scheme. Once the data is collected, it can potentially be retained in perpetuity by UIDAI.

Rule 5. (5) The information collected shall be used for the purpose for which it has been collected.

Since the purpose of data collection remains ambiguous throughout the process, overreach is in-built. In a recent Supreme Court ruling, the court allowed the use of details of *Aadhaar* cardholders for criminal investigations, which was clearly not one of its purposes and demonstrates the potential of overreach.

Rule 5. (7) Body corporate or any person on its behalf shall, prior to the collection of information including sensitive personal data or information, provide an option to the provider of the information not to provide the data or information sought to be collected. The provider of information shall, at any time while availing the services or otherwise, also have an option to withdraw its consent given earlier to the body corporate

As the government introduces provisions mandating *Aadhaar*, the user no longer has the 'option'. Also, since there is no provision of data removal or destruction, the user also does have the option to withdraw his/her consent given earlier.

Implementation Issues: Policymakers need to find effective solutions to mitigate the following implementation issues:

- **Connectivity**: The entire basis of *Aadhaar* implementation is online, real-time verification of an individual's identity for accessing services and benefits. Given the challenges related to basic connectivity as well as reliable connectivity, a system based purely on *Aadhaar*-based identification may not succeed.
- **Authentication**: Because fingerprints can be damaged or destroyed, authentication failure due to the inability to read fingerprints may lead to the denial of service (Ramanathan, 2013), the alternative is to read the iris (Ghosh, 2013). However, the limited availability of iris scanners and their high cost (so far) are likely to have an adverse impact on service delivery.
- **Collusion**: Implementation challenges in MGNREGA clearly demonstrate that the entire system remains vulnerable to collusive arrangements whereby middlemen siphon off NREGA wage funds from bank accounts in collusion with workers or fictitious workers (NREGA, 2010). To avoid corruption, it is important not to over-rely on bank/PO wage payments and to consolidate (or revive) other transparency safeguards such as the transparency of muster rolls, maintenance of job cards, activation of vigilance committees and social audits.

These challenges may combine to exclude the deserving beneficiary as an unintended consequence.

Identity not eligibility: For welfare schemes to work effectively, both identity as well as eligibility need to be established decisively. Seeding *Aadhaar* numbers in welfare schemes has been proposed as a solution. While *Aadhaar* may address the issue of identity, unless the challenge of eligibility such as manipulation of Below Poverty Line (BPL) lists is mitigated, core governance issues at the heart of welfare schemes will continue to remain unaddressed[20].

Coercive Compliance: *Aadhaar* was launched to give universal identity to every resident of India. At the launch Dr Manmohan Singh, the Prime Minister, clarified that the UID number would now enable people to open bank accounts without any hassle, get rations anywhere in the country and to get job cards, among other facilities (Byatnal, 2011). Soon this enablement was turned into a mandatory requirement (Polanki, 2012), forcing people to register for *Aadhaar* although *Aadhaar* was voluntary (UIDAI website). While successive governments kept making public statements (Indian Express, 2015) about the voluntary nature of *Aadhaar*, behind the scenes the rules are being changed to make *Aadhaar* mandatory for various services (Dhoot, 2015). Contradictory statements and actions by various arms or levels of the government have created a pall of confusion and uncertainty on this very important question.

ICT.4 Mobile (M)

We've been talking about the digital revolution for a while. The changes we have seen in the ecosystem have been tremendous over the past few years, driven by unprecedented connectivity, abundance of storage,

[20] Debroy (2015) discusses the challenges associated with the implementation of the DBT because it takes a long time (two to three years) to firm up BPL lists.

and faster processing. And all of this fits in the palm of your hand. Today, a fist-sized mobile has more computing power than a desktop computer five years ago. In India, the change is even more interesting as a whole generation seems to be leapfrogging over the "computer" and jumping straight to mobile phones and this has helped to create a new digital economy.

Although the telecom industry was liberalised in the early nineties, it was a heavily government-controlled and small market. The New Telecom Policy (NTP-99) provided much-needed impetus to the growth of this industry (Desai, 2006; TRAI, 2012)

This paper examines the policy concerns briefly, from three perspectives: connectivity including Internet penetration, the government's use of mobiles, and the economy fuelled by start-ups and mobile applications (apps)[21].

ICT.4.1 Connectivity

As per the Telecom Regulatory Authority of India (TRAI), India's total subscriber base reached 988 million, with an overall teledensity of over 78 per cent as of 31 August 2015 (TRAI, 2015). The National Optic Fibre Network (NoFN), which was planned to connect all 250,000 Gram Panchayats in the country, is targeted to be implemented by December 2016 (BBNL website). According to some industry reports, there are nearly 220 million mobile Internet subscribers, of which less than 40 per cent use 3G services (up to August 2015). Mobile data and subscribers show a growth of 74 per cent year-on-year (y-o-y) and non-metros were driving the growth in 2014–15. It is expected that more than 20 per cent of India's mobile phone users will go online via a mobile phone in 2015. India had 16 per cent smartphone penetration in 2014–15[22].

While the macro picture is very encouraging, upon closer examination, areas of concern become visible.

- **Teledensity**: Compared to urban teledensity of nearly 151 per cent, rural teledensity is less than 48.6 per cent (as of 31 August 2015) (TRAI, 2015). The goal post on the NoFN has been moved multiple times and the issue of reliable rural connectivity remains.
- **Broadband or narrowband**: India's ranking on broadband penetration dropped to 131 in 2014 — lower by six places since the last year —according to an ITU and UNESCO report titled "The State of Broadband 2015" that covered 189 countries. On mobile broadband subscriptions, India also slipped significantly as it stood at 155 in 2014 compared to 113 in 2013, far below neighbouring Sri Lanka and Nepal, which were ranked 126 and 115, respectively. TRAI (2015) reports that there are only 117.3 million subscribers in India, of which 100.9 million use either phones or dongles. India continues to be largely a narrowband user of the Internet via mobile phones. There is a need to upgrade the infrastructure to make it truly broadband.

[21] A mobile app is a computer program designed to run on mobile devices such as smartphones and tablet computers.

[22] The sources for the paragraph are from these reports unless and until mentioned otherwise. eMarketer (2015), Ericsson (2015) and IDC website.

- **Uneven Growth**: The telecommunications market is divided in four circles: metros and Circles A, B, and C. Category A circles are the fastest growing and account for almost half of the country's mobile data. Category C circles continue to lag. Couple this with low rural teledensity, and the problem of lack of connectivity becomes obvious.
- **2G vs. 3G**: Category B circles consume more 2G data than 3G data. The low share might be more a supply (infrastructure) issue than one of demand. The majority of users continue to rely on feature phones and 2G networks, thereby limiting the types of services that may be accessed/delivered over mobile devices.
- **Performance issue**: India's mobile broadband infrastructure is sub-optimal for providing consistent quality data[23].
- **Potential Gatekeeping**: As mobile data continues to drive growth and with almost 60 per cent of Indians accessing the Internet via mobile phones, there are concerns that mobile companies may choose to act as gatekeepers and block or slow down access or create differentiated access to select services. These concerns have formed the basis of the net neutrality debate[24] in India, and many believe that such practices may hamper the growth of the Internet in India (Dhapola, 2015).

ICT.5 Government and Mobile

The government's efforts in integrating mobile with public services have been ongoing for the past five years. It has launched its own MGov mobile platform (National Mobile Governance Initiative)[25] as well as a mobile app store. As per the data available from this site, 1,951 departments have integrated various services and there are 661 live government mobile apps (as of 4 November 2015). The Prime Minister's Office (PMO) recently launched a crowdsourced initiative with MyGov - Government's citizen engagement platform - and Google, to create a mobile app for the PMO (Indo-Asian News Service, 2015). It is also making government websites mobile-compliant. Several state governments are taking the mobile-first approach towards select government services.

A deeper dive into the MGov site reveals the following:

- **Apps**: While the number of apps is encouraging, the number of downloads is very low (373,974 as of 4 November 2015). This may indicate low awareness, low utility or simply the low quality of the apps.
- **Services**: SMS forms almost 99 per cent of all government mobile services. This indicates sub-

[23] The sources for this section are from the following unless and until mentioned otherwise. Akamai (2015), Ericsson (2014) and Kaushik (2015).

[24] Net neutrality (also network neutrality, Internet neutrality, or net equality) is the principle that Internet service providers and governments should treat all data on the Internet the same, not discriminating or charging differentially by user, content, site, platform, application, type of attached equipment, or mode of communication. The term was coined by Columbia University media law professor Tim Wu in 2003, as an extension of the longstanding concept of a common carrier. (https://en.wikipedia.org/wiki/Net_neutrality). As of August 2015, there are no laws governing net neutraliy in India.

[25] The National Mobile Governance Initiative website.

optimal utilisation of the potential of mobile services by the government. Given that wired broadband penetration in the country is very low, unless government services use mobile platforms more effectively, public service delivery will continue to lag.

- **Websites**: There is no data available on the number of government websites that are mobile-compliant or have adopted a mobile-first approach.

ICT.6 Mobile Economy

Mobile apps are changing consumer lives. From socialising to shopping, improving personal productivity to banking, mobile apps seem to have an answer for all our needs. And business is benefitting too. From improving operations to creating markets to reaching customers, businesses are also leveraging mobile. India today is the world's second largest mobile market (Shah, Jain, and Bajpai, 2015) and the third largest start-up destination globally (iamwire, 2015). This demonstrates that there is a tremendous opportunity for India to leverage the mobile phenomenon and transform service delivery in all spheres of life. From ordering home-cooked takeaways from a neighbourhood chef, to learning educational concepts online to buying and selling new and used goods online—business model disruptions have started to occur and there is a distinct need to create business models that meet India's requirements. For example, in a country where less than 10 per cent of the population owns a credit card, cash on delivery has played a huge role in the success of e-Commerce websites. Uber[26] has added cash payment to its business model. Another aspect of these transactions is the ability to try out the product at home —from clothes to shoes to even jewellery with easy return policies. All these are tailored to meet the unique requirements of Indian markets.

The NCAER IHDS Survey 2004–05 (Desai et al., 2010) estimated that less than 25 per cent of Indians speak or understand English and yet almost all Internet content in India is in English. This is also true of government websites. There is a need to make content available in Indian languages—content that is searchable through multiple input methods including voice and keyboards.

Policymaking in a mobile-first world

- **New world, fresh perspective**: There is an inherent distinction between the old world and the new world economy in terms of mobility, service access/ provisioning, correlation between production and consumption, and input-output correlations. Who could have envisaged a decade ago that we could send and receive money through our phones? Take photos and chat with friends and loved ones in real time? Or watch TV and video online in real time? Control household gadgets from hundreds of miles away while on vacation? A watch that tells time, can keep calorie count, measure the heart rate, make and receive phone calls and much more? There is a need for fresh thinking on developing conducive policies. Applying legacy regulations to new technologies

[26] Uber Technologies Inc. (stylized as U B E R) is an American international transportation network company headquartered in San Francisco, California. The company develops, markets and operates the Uber mobile app, which allows consumers with smartphones to submit a trip request which is then routed to Uber drivers who use their own cars. Uber came to India in 2013. In 2015, it extended its services to auto rickshaw too.

would be akin to applying road transport rules to airplanes just because it has wheels and taxies on the runway! Therefore, there is a need to keep these distinctions in mind when reviewing policy and regulations.

- **Encouraging Innovators**: India's position on Ease of Doing Business improved to 130 in 2016 from 134 in 2015. This improvement was primarily because of improvement in the rankings on three parameters: starting a business, dealing in construction permits, and getting electricity. On the other parameters, the ranks did not change (Doing Business 2015). Therefore, while the improvement is laudable, there are still miles to go. Further, this survey is based primarily on Mumbai and Delhi. While these cities are the nerve centres of India, other cities and regions may have different stories to tell. IT and Internet entrepreneurs prefer to register their start-ups outside India and continue to face several regulatory and policy hurdles (Karnik, 2015); they are primarily located in Bangalore and Hyderabad. Similarly, according to the current tax laws, anything intangible can only be a service and cannot be a product (Babu, 2015). However, software can be a product as well as a service. Hence, taxing software products proves to be a cumbersome process. Another measure that could potentially have a large impact on ease of doing business is the passage of the Goods and Services Tax, which can benefit e-Commerce by resolving supply chain issues (Pathak and Kamath, 2014)[27]. There is a need to support and encourage innovators and small and medium enterprises to create and provide solutions for Indian markets (Mendonca, 2014). Government procurement in India plays a huge role in expanding the local market and often favours larger players.

ICT.7 Conclusion

The holy trinity of JAM is meant to galvanise the economy, plug loopholes in welfare schemes, and make access to information and services ubiquitous. At the core of each are challenges linked to connectivity, identity, and enabling legislation. More significantly in a democratic country is the overriding issue of freedom and choice—freedom to choose a service provider or a data plan, freedom to open an account with a bank of one's own personal choice and keeping whatever money the citizen deems fit, even zero balance, freedom to participate or not participate in *Aadhaar*, freedom to set up business where the entrepreneur pleases and freedom to access public services anytime, anywhere.

PMJDY and Mobile have demonstrated that when such agency is given to people, they feel empowered and are motivated to take necessary action. But both are faced with challenges that need to be addressed quickly if the momentum is to be maintained.

Based on the data available, the percentage of zero-balance accounts is gradually decreasing. However, past experience has demonstrated that this percentage will continue to remain high because the sources of income in rural areas remain limited. One way to address this problem is by linking more government subsidies and/or welfare benefits to these accounts. This, however, entails complex process re-engineering and deduplication, which successive e-Government initiatives are yet to demonstrate conclusively. Also,

[27] The above discussion is based on available information till November 2015. The Goods and Services tax amendment has been passed in 2016 but the model law is yet to be passed and implemented.

as government support to MGNREGA wanes, it will have an adverse impact on rural earnings and consequently on savings, thereby resulting in a direct, negative impact on *Jan-Dhan*.

The Internet and mobile will be shaped and moulded by keeping new users —and new challenges —in mind. Limited digital infrastructure, purchasing power, and human resources will force emerging market innovators to create new digital paradigms. Policymaking therefore needs to focus on:

- Ubiquitous access and coverage of high-speed infrastructure.
- Promoting affordable Internet access and preventing gatekeeping behaviour.
- Improving business environment to encourage innovation and entrepreneurial activities.
- Creating PPP models to provide access to incubation spaces, mentoring, and investment opportunities.
- Reviewing legislations, regulations, and policies and aligning them for promoting businesses that create consumer value.
- Making access to government information and services device- and location-agnostic and available in Indian languages.

Aadhaar has serious legal and constitutional challenges. As the government readies to table the UIDAI bill in Parliament, it must conclusively address these issues. Also, experiences from MGNREGA have shown that it is a combination of various measures —biometric authentication, wages in bank accounts, social audits, etc. —that improve the effectiveness of a programme. Biometric data by itself is not a solution. It is equally critical that clear boundaries for the use of *Aadhaar* need to be defined and strictly adhered to. There is a need to put safeguards for protecting the privacy of each and every citizen even from the government.

From a policy perspective, all three show that a narrow, focused approach leads to faster success and incremental and relevant inclusion at different stages adds value to the programmes. However after the initial success, each requires a re-think to ensure their continued success and relevance.

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Dr Malcolm S. Adiseshiah (1910–1994) was born on April 18, 1910 in Vellore, in Tamil Nadu where he had his early education at Voorhees School and College. He then moved to Loyola College in Chennai from where he took a B.A. (Hons) degree in Economics. After teaching at St. Pauls College, Calcutta for a brief period, he went on to do his Masters at Kings College, Cambridge and then to the London School of Economics for pursuing his doctoral research with specialization in Economics. After attaining his doctorate, he returned to India in 1940 and joined as Professor of Economics at Madras Christian College. He left the College in 1945 and worked with the World University Service in Geneva. In 1948, he joined UNESCO and had a distinguished career there until he retired as Deputy Director in 1970 and returned to India.

In 1971, Dr Malcolm S Adiseshiah and his wife Elizabeth founded the Madras Institute of Development Studies. He served the Tamil Nadu Planning Commission for many years but specifically in the role of its Vice-Chairman during 1971–76. In 1975, Dr Adiseshiah became the Vice Chancellor of the University of Madras. Recognising his outstanding contributions, the Government of India conferred on him the Padma Bhusan in 1976. Dr Adiseshiah was also nominated to the Rajya Sabha in 1978 for a six year term. UNESCO has awarded 'The Malcolm Adiseshiah International Literacy Prize' every year from 1998 in recognition of the outstanding contribution he made to education and to literacy in particular.

The Mid-Year Review of the Indian Economy was initiated at the India International Centre (IIC) in 1975 by Dr Adiseshiah as the Convenor of the Economic Affairs Group of IIC. It soon became very popular with the members of the IIC, and has remained so over the past four decades. Since 2001, the Malcolm and Elizabeth Adiseshiah Trust has supported the Mid-year Review, comprising an annual seminar that assesses the performance of the Indian economy by the middle of the financial year and the publication of the Review as a book.

NCAER was first invited to partner with the IIC on the Mid-year Review in 1995–96. NCAER and IIC partnered again in 1998–99 and 2003–04. NCAER was again invited to prepare the Mid-year Review starting in 2011–12, and has continued to both prepare the Review and publish it using its own resources as a homage to one of India's most eminent economists.

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