The NCAER 2019–20
Mid-Year Review of the Indian Economy

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New Delhi
MYR Team

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Outline


II. Performance of the Real Economy and Trade
   A. Real Sector Trends
   B. Components of Demand
   C. External Sector
   D. Business Sentiments
   E. Inflation Trends

III. Macroeconomic Policies
   A. Monetary Policy and Credit
   B. Fiscal Trends
Nowcasting GVA growth
Monthly Indicators

1. Industrial variables: Index of Industrial Production, production of two wheelers, production of commercial vehicles.
2. Services variables: Cargo handled at major ports, number of tourist arrivals, number of mobile connections.
3. Monetary variables: Food credit, Non-food credit, Aggregate deposits.
5. Price: CPI-Industrial Workers.
6. Fiscal variables: Revenue receipts, Net tax revenue.

Note: RE, 2016-17 are second RE, 2017-18 are First RE, 2018-19 are Provisional Estimates.
Source: CSO
Nowcasting GVA growth Estimation

• Factor-augmented Time-Varying Parameter Regression Model captures rapid structural changes in Indian economy (Bhattacharya, Chakravarti and Mundle, 2019)
• Factors estimated from monthly indicators converted to quarterly frequency
• Quarterly Growth rate of GVA regressed on factors as follows:

\[ y_t = c_t + \sum_{i=1}^{n} A_{it} F_{it} + \varepsilon_t \]

• Three of the estimated factors which capture 80% variation in the data have been used.
• Nowcast for Q2 2019-20 is obtained by using estimated parameters from data up to Q1 2019-20 and quarterly y-o-y growth rate of monthly indicators available for Q2 2019-20
Nowcasting GVA growth
Model Performance and Nowcast

Note: 1. Quarterly data refers to calendar year
2. Estimated from cited variables
Forecasting Annual GDP growth
Estimation Model and Annual Indicators

- Factor-augmented Time-Varying Regression Model

\[ y_t = C_t + \sum_{i=1}^{n} A_{it} F_{it-1} + \varepsilon_t \]

- **Annual Indicators**
  1. Stock of food grains
  2. Development Expenditure of the Central and State Governments as percentage of GDP at market prices
  3. Non-Developmental Expenditure of the Central and State Governments as percentage of GDP at market prices
  4. Real Non-food credit
  5. Real Effective Exchange Rate
  6. Real Interest Rate
  7. Real Money (M₃)
  8. Foreign Exchange Reserves
  9. Fiscal Deficit as percentage of GDP at market prices
  10. Growth of Gross Capital Formation
  11. Ratio of Export to Import
Forecasting Annual GDP growth
Model Performance and Forecast

Actual GDP | GDP Forecast
--- | ---

4.9
Declining GDP growth

Real GDP Growth
2015-16 to 2019-20 & 2017-18:Q1 to 2019-20:Q1

Source: MoSPI
Agricultural Growth has slowed in the last three quarters

GVA Growth Agriculture (%)
2017-18, 2018-19 & 2017-18:Q1 to 2019-20:Q1

Source: CSO

Source: MoSPI
Normal but spatial and temporal variation in Southwest Monsoon

Sub-Division Rainfall Distribution from June 1, 2019 to August 8, 2019

Source: IMD.
NCAER estimates suggest increased agricultural kharif output in 2019-20

Estimated Kharif Output for 2019-20 (%y-o-y)

Source: Ministry of Agriculture and NCAER Computed using area, yield, output, and rainfall indices.

Notes:
Estimate I: Based on output regression equations.
Estimate II: Based on area and yield regression equations.
Industrial Growth slipping since 2018-19:Q1

Growth in Industry GVA
2017-18, 2018-19 & 2017-18:Q1 to 2019-20:Q1

<table>
<thead>
<tr>
<th>Year</th>
<th>Growth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015-16</td>
<td>9.6</td>
</tr>
<tr>
<td>2016-17</td>
<td>7.7</td>
</tr>
<tr>
<td>2017-18</td>
<td>5.9</td>
</tr>
<tr>
<td>2018-19:Q1</td>
<td>6.9</td>
</tr>
<tr>
<td>2017-18:Q2</td>
<td>1.6</td>
</tr>
<tr>
<td>2017-18:Q3</td>
<td>5.8</td>
</tr>
<tr>
<td>2017-18:Q4</td>
<td>10.2</td>
</tr>
<tr>
<td>2018-19:Q1</td>
<td>8.1</td>
</tr>
<tr>
<td>2018-19:Q2</td>
<td>11.3</td>
</tr>
<tr>
<td>2018-19:Q3</td>
<td>10.0</td>
</tr>
<tr>
<td>2018-19:Q4</td>
<td>7.0</td>
</tr>
<tr>
<td>2019-20:Q1</td>
<td>4.2</td>
</tr>
<tr>
<td></td>
<td>2.7</td>
</tr>
</tbody>
</table>

Source: MoSPI
IIP confirms continuing industrial slowdown


Note: RE, 2016-17 are second RE, 2017-18 are First RE, 2018-19 are Provisional Estimates.

Source: CSO

Source: MoSPI
Services Growth Pattern is mixed

Growth in GVA Services
2017-18, 2018-19 & 2017-18:Q1 to 2019-20:Q1

Source: MoSPI

Note: RE, 2016-17 are second RE, 2017-18 are First RE, 2018-19 are Provisional Estimates.
Sustained decline in cargo traffic across transport modes for several quarters


Note: RE, 2016-17 are second RE, 2017-18 are First RE, 2018-19 are Provisional Estimates.

Source: CSO
Private Consumption Expenditure Growth declining since Q2, 2018-19

Growth in Real Private Final Consumption Expenditure 2017-18, 2018-19 & 2017-18:Q1 to 2019-20:Q1

Source: MoSPI
Sharp Decline in Investment Growth after Q4, 2018-19


Source: MoSPI

Real Government Final Consumption Expenditure (% yoy), 2017-18, 2018-19 & 2017-18:Q1 to 2019-20:Q1

Source: CGA.


Note: Services trade is estimated for September 2019.
Source: Ministry of Commerce and RBI.
NCAER Business and Political Confidence Indices Declining

Indices October 2016 to October 2019

Source: NCAER
PMI Manufacturing and Services declining

Indices April 2018 to October 2019

Source: Nikkei PMI
Different movements of CPI, Core CPI and WPI

CPI, CPI Core and WPI (% y-o-y change)
2017-18:Q1 to 2019-20:Q2 and August- Oct 2019

Source: MoSPI and Office of Economic Advisor
Weak Transmission

Repo Rate, WALR and Term Deposit Rate
April 2018 to October 2019

- **Repo Rate (%)**
- **Bank Group-wise Weighted Average Lending Rates (WALR) on fresh rupee loans sanctioned(%)**
- **Term Deposit Rate (>1 year, %)**

Source: RBI
Yield on risk free 10-year G-sec remains high despite large decline in policy rate

Source: RBI
Non-food Credit slides down in 2019-20:Q2

Non-food Credit (%yoy)
2017-18:Q1 to 2019-20:Q2

Source: RBI.
Credit contraction for micro, small and medium enterprises

Growth of Bank Credit by Sectors (% y-o-y)

Source: RBI
## Unrealistic Tax Revenue Projections

<table>
<thead>
<tr>
<th></th>
<th>Percentage change</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Revenue Receipts (100)</td>
<td>10.3 (-) 7.5</td>
</tr>
<tr>
<td>B. Tax Revenue (89.4)</td>
<td>8.5 (-) 8.5</td>
</tr>
<tr>
<td>B.1 Direct Taxes (48.4)</td>
<td>14.9 (-) 2.2</td>
</tr>
<tr>
<td>B.2 Indirect Tax (41.0)</td>
<td>4.5 (-)14.6</td>
</tr>
<tr>
<td>C. Non-Tax Revenue (10.6)</td>
<td>27.9</td>
</tr>
<tr>
<td>C.1 Dividends &amp; Profits (4.9)</td>
<td>24.1</td>
</tr>
</tbody>
</table>

**Source:** CGA and Union Budget 2019.

**Note:** Figures in parentheses indicate share of revenue receipts.
Corresponding Expenditure Projections also Unrealistic

Total Central Expenditure, 2017-18 to 2019-20 (% change)

- 2017-18 (Actuals): 8.5%
- 2018-19 (Actuals): 7.9%
- BE: 2019-20 over 2018-19 Actual: 20.5%

Central Revenue Expenditure, 2017-18 to 2019-20 (% change)

- 2017-18 (Actuals): 11.5%
- 2018-19 (Actuals): 6.9%
- BE: 2019-20 over 2018-19 Actual: 20.5%

Source: CGA and Union Budget 2019.
Fiscal Deficit Aspiration

Fiscal Deficit as a percentage of GDP

3.5
3.4
3.3
3.2
3.25
3.3
3.35
3.4
3.45
3.5
3.55


Source: CGA

Note: RE, 2016-17 are Second RE, 2017-18 are First RE, 2018-19 are Provisional Estimates.
Thank You!