

**भारतीय रिज़र्व बैंक**
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RBI Bulletin – April 2024

Today, the Reserve Bank released the [April 2024](#) issue of its monthly Bulletin. The Bulletin includes Monetary Policy Statement (April 3-5) 2024-2025, five speeches, six articles, and current statistics.

The six articles are: [I. State of the Economy](#); [II. What Drives India's Services Exports?](#); [III. Food and Fuel Prices: Second Round Effects on Headline Inflation in India](#); [IV. India's Foreign Exchange Reserves in High Volatility Episodes – An Empirical Assessment](#); [V. Gauging Linguistic Complexity of Regulatory Communication: A Case Study for India](#); and [VI. Off-site Monitoring System for Surveys \(OMOSYS\): A Geographic Information System \(GIS\) Based Approach for Quality Assurance](#).

I. State of the Economy

Global growth momentum has been sustained in the first quarter of 2024 and the outlook for global trade is turning positive. Treasury yields and mortgage rates are ticking up in major economies as expectations of interest rate cuts are being pared. In India, conditions are shaping up for an extension of a trend upshift in real GDP growth, backed by strong investment demand and upbeat business and consumer sentiments. CPI inflation has gravitated to 4.9 per cent in March after averaging 5.1 per cent in the preceding two months. In the near term, however, extreme weather events may pose a risk to inflation along with prolonged geo-political tensions that could keep crude oil prices volatile.

II. What Drives India's Services Exports?

By Dhirendra Gajbhiye, Sujata Kundu, Rajas Saroy, Deepika Rawat, Alisha George, Omkar Vinherkar and Khushi Sinha

Over the last three decades, India's services export growth not only outpaced merchandise export growth, but also captured a larger share of world exports. This article offers a detailed analysis of India's major services exports and provides deeper insights into key issues such as the contribution of price and volume effects, the long-term trend, revealed comparative advantage and price and income elasticities.

Highlights:

- The decomposition of India's services export growth into volume and price effects reveals that volume effects have majorly dominated its export performance.

- An analysis of the long-term trend and cyclical components of India's services export growth shows a moderately increasing trend in services export growth since 2016.
- The dominating trend component during the early 2000s boom of the services sector moderated after the global financial crisis of 2008-09. However, it reversed around 2016, benefiting from the improvements in infrastructure (transport, logistics and information technology), technological advancements and services value chains.
- An analysis of India's revealed comparative advantage in services exports indicates that it has an edge in telecom and IT services. The significant growth in India's software and business services exports in the recent years is a reflection of the expansion of global capability centres (GCCs) in India and the rise in digital delivery of services.
- Empirical estimates suggest that global demand and movements in India's real effective exchange rate are significant determinants of India's services exports in the post-global financial crisis period.

III. Food and Fuel Prices: Second Round Effects on Headline Inflation in India

By Harendra Kumar Behera and Abhishek Ranjan

Policymakers face challenges in dealing with high inflation emanating from supply shocks as it is difficult to know *ex ante* the nature of these shocks, permanent or temporary, and whether they are going to have second-round effects. Employing a time-varying approach, this article estimates the impact of food and fuel price shocks on core inflation to know whether these shocks could potentially lead to second-round effects.

Highlights:

- We find the existence of subdued second-round effects of food and fuel inflation on headline inflation.
- The impact of food shock on core inflation has reduced over time while that of fuel shock has increased recently.
- Overall, the second-round effects of food and fuel inflation on headline inflation have become subdued, especially after the adoption of flexible inflation targeting (FIT) in India.
- The decline in persistence and pass-through of food shocks to core inflation is attributed to a better anchoring of inflation expectations.

IV. India's Foreign Exchange Reserves in High Volatility Episodes – An Empirical Assessment

By Saurabh Nath, Dipak R. Chaudhari, Vikram Rajput and Gaurav Tiwari

This article analyses the trend in India's foreign exchange (FX) reserves during major high volatility episodes *viz.*, Global Financial Crisis, Eurozone debt crisis/ Taper Tantrum, EME outflows/ US-China trade war and the recent Russia-Ukraine conflict / monetary policy tightening in the US. The article empirically examines major underlying factors impacting variation in FX reserves such as US Dollar Index (DXY), oil prices, foreign portfolio flows, US financial conditions and market volatility.

Highlights:

- During the recent Russia-Ukraine conflict/ Federal Reserve tightening episode, exchange rate management and reserves faced strong headwinds from DXY, oil prices, foreign portfolio outflows and tight US financial conditions.
- An autoregressive distributed lag (ARDL) model results show that the severity of these factors was the highest in the Russia-Ukraine conflict / Fed monetary policy tightening episode *vis-à-vis* the previous high volatility episodes.
- The Reserve Bank, however, has managed to contain INR volatility and keep FX markets largely stable in all high volatility episodes. Importantly, INR's implied volatility has remained one of the lowest amongst major EME peer as well as select AE currencies during Russia-Ukraine/Fed tightening episode, despite unprecedented headwinds witnessed during this period.

V. Gauging Linguistic Complexity of Regulatory Communication: A Case Study for India

By Nishita Raje, Khajiram Mate, Sayli Londhe, Sandhya Kuruganti

With increased scope and scale of regulation, there is growing awareness for adoption of simple or plain language in central bank's regulations. This article attempts to measure the linguistic complexity of written regulatory communication in India. It analyses a set of circulars issued by the Department of Regulation (DoR), Reserve Bank of India. The focus is on the complexity of the language used in regulatory communication rather than complexity implicit in regulation by the very nature of the area/aspect that is being regulated. It aims to capture various dimensions of linguistic complexity and contributes towards developing a multifaceted understanding of the subject.

Highlights:

- Text mining techniques have been leveraged to study different dimensions of linguistic complexity.
- A sample of circulars of Department of Regulation, Reserve Bank of India, applicable for banks were subjected to commonly used readability indicators.
- These readability indicators suggest that most circulars require at least graduate level education, which is generally the education level of commercial bank employees.
- A composite score was developed to rank circulars based on linguistic complexity.
- There is no visible change in readability scores across the years, though in 2020-21, regulations were smaller and scored better in readability.

VI. Off-site Monitoring System for Surveys (OMOSYS): A Geographic Information System (GIS) Based Approach for Quality Assurance

By Sukhbir Singh and Vishal Maurya

This article presents the Off-Site Monitoring System for Surveys (OMOSYS), aimed at ensuring data quality in geographically extensive field surveys.

Highlights:

- The OMOSYS proposed in this article utilises Geographic Information System (GIS) data obtained through computer-assisted personal interview (CAPI) instruments to develop statistical measures for identifying doubtful cases through off-site monitoring. The model driven indicator (MDI) and fixed control indicator (FCI) approaches developed in this article help identify doubtful cases in a flexible manner without any manual intervention.
- Utilising the synthetic dataset generated from the settings and design of the Reserve Bank's household surveys to illustrate the effectiveness of OMOSYS, it is shown that both the MDI approach, which uses historical data to set control limits, and FCI approach, which employs fixed limits, effectively identify doubtful cases.
- OMOSYS facilitates targeted tracking of field visits, maximizing efficiency and maintaining survey quality in diverse geographical domains, crucial for time-sensitive and resource-constrained surveys.

The views expressed in the Bulletin articles are of the authors and do not represent the views of the Reserve Bank of India.

(Yogesh Dayal)
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