Annual Statistics Conference of the Department of Statistics and Information Management (DSIM), RBI-Inaugural Address by Governor*

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Good morning!

I am delighted to be here in Guwahati, the gateway to North-Eastern India. The 'Annual Statistics Conference - 2022' of the Department of Statistics and Information Management (DSIM), which is being held after a hiatus[1] is an important event in the calendar of activities of the RBI. The earlier conference, which was scheduled here in March 2020 was cancelled a day before it was to commence due to the onset of COVID-19 pandemic.

The ancient name of the city of Guwahati, *i.e.* Pragjyotishpura means 'the abode of light in the east'. The enlightened and vibrant environment here will certainly provide the right backdrop for deliberations on sharing work-learnings. It will help refine the processes and plan strategies for future work agenda of central and regional offices. Such conferences provide refreshing and valuable impetus to our work in an informal setting with professional peers.

I am glad that many academicians[2] are participating in today's event to provide feedback on the research work done by our officers. Their presence

means a lot, especially for our younger officers, in their pursuit of high quality research work.

The focus of Statistics Department in a central bank is always on compiling reliable data and statistical analysis for assessment of important developments; provide inputs for future policies; and monitor progress of policies and operations. Accordingly, in today's talk, I propose to focus on three core aspects of the working of DSIM, *viz.*, (a) statistical data, (b) statistical methods and (c) communications in statistics.

A. Statistical Data

The need for good data may seem self-explanatory, especially for an audience of statisticians. The key ingredients in building our good reputation on statistics have been: (i) transparent dissemination of good quality information; (ii) use of robust analytical methods; and (iii) keeping pace with changing times and global standards. The fact that we have been synthesising information from large number of reporting entities with diverse levels of technology platforms, adds credence to the effort.

Central banks are both producers and users of data. In our case, the stakes are very high as our decisions impact the lives of over a billion people, who place trust in us for a stable financial intermediation environment and protection from adverse macroeconomic conditions. As financial markets are getting more integrated, robust information systems provide comfort on data guided policy and supervision. It is important to always maintain the rigour and quality of data and analytical studies. The entire process has to be reliable and not susceptible to small errors, which can turn out to give disproportionate misleads.

Statisticians create value by integrating and correlating information from various sources and systems; but even well-collected data may fall short of answering some critical questions, as changes in

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[1] The last Annual Statistics Conference was held during May 9-11 2019.

[2] (i) Prof. Anil K. Ghosh, Indian Statistical Institute, Kolkata.
   (ii) Prof. Amit Choudhury, Gauhati University.
   (iii) Prof. Sangeeta Barthakur, Cotton University, Guwahati.
   (iv) Prof. Pradip K Das, Indian Institute of Technology (IIT), Guwahati.
   (v) Prof. Jiten Hazarika, Dibrugarh University.

context often pose new challenges. For example, the global financial crisis (GFC) of 2008 showed in a hard way the importance of better coverage and granularity of data especially on (a) build up of risk in the financial sector; (b) cross-border spillover; and (c) vulnerability of domestic economies to shocks. These aspects were later addressed through the G-20 Data Gap Initiative.

Compilation of statistics requires cooperation from reporting agencies and other respondents. There is need for constant feedback loop between producers and users of data. In our case, while regulatory powers guarantee unhindered cooperation from regulated entities, our goodwill also ensures cooperation from others, for example, in the case of our enterprises and households surveys.

The COVID-19 pandemic shock highlighted the need to go beyond the standard offering for assessment of macroeconomic conditions. Critical official statistics faced disruptions in compilation. Even regular macroeconomic statistics at times pose unique challenges as they often cease to reflect economic dynamics.

Accordingly, newer data sources[3] that have higher frequency than the traditional macro statistics are now used to assess movements in critical variables, such as, consumption and production. There is a need to augment the array of alternative statistics, to complement the regular aggregates. The unconventional data sources, and even micro voluminous data collected as part of traditional statistical systems - falling under the general ambit of Big data, has gained traction. We are past the stage of asking "if or whether we should use" to "how efficiently and effectively we can use" them.

I would like to suggest to our statistics teams to make a detailed assessment of the quality of such high-frequency indicators as advance signals of economic activity.

A recent Bank for International Settlements(BIS) study highlights the impact of the pandemic on official statistics globally. In this context, I am glad to note that the Reserve Bank's past investment in technology for information management and handholding of bankers stood in good stead during the pandemic period and (i) supported the 'work from home (WFH)' set up within the Bank; and (ii) provided continuity of information flow for public dissemination even during the lockdown periods.

In our pursuit of transparency of statistics and research, it is better to demonstrate trustworthiness by (i) making more data easily available; (ii) remain transparent about compilation and caveats; and (iii) ensure that our data remain credible on statistical criteria of consistency, coverage, quality and timeliness. At the same time, we acknowledge the extremely valuable guidance received from external experts in our data collection and compilation exercises. We will continue to seek their support and guidance in our professional endeavours.

B. Statistical Methods

Research inputs provide the essential base for policymaking. As you are aware, a substantial portion of RBI's research is placed in the public domain. I often rely on our internal research work in decision making and my public interactions. Our researchers have stepped up enquiries and analysis into the structural changes taking shape during the pandemic. This meant frequent revisits and refinements in forecast and nowcast models to derive the short-term outlook on macro financial and economic aggregates. Officers of the Department of Statistics and Information Management (DSIM) should delve deeper in their respective domains and constantly strive to compete with the best in the world.

Central banks have not exactly been at the forefront of the Big Data revolution, which has brought us tools and techniques for rapid processing, but the

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[3] For example: internet searches, mobility trends.

picture is now changing. A number of central banks are using the methodological advances in domains such as economic analysis, agriculture, environmental protection, marketing, etc. At the Reserve Bank, we are making headway in text mining, nowcasting, on-line data based indices and the use of Big data analytics and machine learning algorithms.

I am happy to note that RBI compares well with the advanced economies and emerging market economies in the 2020 survey of "Use of Big data sources and applications for Central Bank" conducted by the Irving Fisher Committee on Central Bank Statistics (IFC) at the BIS. At the same time, we need to intensify our efforts in newer areas.

As statistics gains more prominence in the context of increasing availability and complexity of data and advances in methods, research must strive to unlock their full potential in addressing policy and operational issues. Research entails a strong mindset to explore and willingness to get deeper into the subject domain. I would like this orientation to percolate down to the newer and younger officers with right kind of mentoring.

C. Communication in Statistics

The late US politician Daniel Moynihan once famously said, "Everyone is entitled to their own opinion, but not their own facts". Analysts often offer different answers to the same question from same data set. In such situations, the role of statisticians becomes critical in communicating precise information to minimise any noise emanating from diverse analytical approaches. In statistical terms, as you are aware, it is termed as non-standard error, as opposed to standard error which creeps in due to variability within data sets.

Communication of statistics is indeed a tricky issue. As central bankers, we need to balance and be mindful of different audiences. For example, how experts and general public perceive our communication of, say, forecasts in terms of fan charts or survey results told in terms of net-responses.

An effective communication for explaining a technical and complex matter requires clarity in understanding and ability to speak or write in a manner that the listeners understand.

I often note that the compilers, who have expertise in their statistics, leave its analysis and presentation to others. A method scientist like statistician can handle methodological aspects in any domain but she/he also needs to acquire domain knowledge to provide more robust advice. I see a large number of young officers participating here and my advice to them would be to strengthen their knowledge base, especially in the areas of economics and finance. It will enable them to gain more confidence to excel in the organisation as well as derive satisfaction in their professional life.

As we build and maintain integrated information infrastructure of national importance, data security remains a top priority. Constant tracking of developments and assessing the associated technologies will facilitate holistic assessment of threats and business continuity. We must constantly update ourselves with technological advances and ensure that our information systems are not compromised.

Learning and pursuit of excellence have no boundaries. As we move ahead, each one of you has to be a leader in your own domain and student in other domains. The reputation of any individual or team or institution is built with hard and sustained efforts. I am sure you will continue to enrich your knowledge, enhance your presentation skills, lead your teams and ensure best possible work delivery. You must constantly strive to produce good statistics, analysis and research by investing in yourself.

I wish the conference all success. Enjoy the stay at Guwahati. Thank you.