COUNTING SMARTER

The head of India's statistics ministry, **Saurabh Garg**, explains how he is tackling challenges of scale as demand for real-time data grows

ndia's national statistical system is one of the world's largest, responsible for serving a diverse population of over 1.4 billion. It employs some 5,000 full-time staff members at the central level and over 6,000 field investigators and supervisors during major survey operations across the nation's 28 states and 8 territories.

Saurabh Garg, who expanded use of the innovative Aadhaar digital ID system in a previous role as chief executive of the Unique Identification Authority India, is now spearheading reform of the country's statistical system as secretary of the Ministry of Statistics and Programme Implementation. He spoke with F&D contributor Srikanth Srinivas about how technology and the nation's multiple tiers of digital public infrastructure are transforming the work of statisticians and the challenges ahead.

F&D: This is the age of AI, big data, and machine learning. How is India taking advantage of this in collecting and analyzing national statistics?

SG: Let's start with data collection. We still go door-to-door, to households and businesses, but data collection is tablet based. On the tablet itself, we are working on adding AI chatbots; if the person conducting the survey has a question, the chatbot responds immediately. All the tablet data is uploaded directly to a background portal, called e-SIGMA. This makes data processing easier. We're also using technology to make our website more intuitive and have launched a mobile app. There are more infographics, and data can be downloaded directly. We have developed training videos for researchers, students, policymakers, and other stakeholders on how to access unit-level data.

F&D: More statistics are produced outside the national statistical system, which in some ways compete with official statistics. How do you deal with this?

SG: The main objective of the statistics produced by the national statistical system is to inform policymaking for the public good. Decision-makers rely on official statistics like GDP, inflation, or surveys. Alternative data and high-frequency indicators are increasingly available and provide supplementary insights into the socioeconomic situation from a different perspective. We are exploring how e-commerce, scanner, mobile, satellite, and other alternative data can be incorporated into official statistics. However, official statistics remain as relevant as ever: They are underpinned by rigorous scientific methods and standards that make them internationally comparable. They go through comprehensive quality control to ensure accuracy, reliability, and comparability over time. This enhances credibility.

TRIBHUWAN SHARMA

F&D: Many agencies are involved in data collection, classification, storage, and processing. How do you harmonize different methodologies?

SG: We're looking at ways to make data from other ministries and departments machine readable so that users can collate, combine, and compare different data sets. That's one of our focus areas. We've introduced a number of guidelines. First, we made a registry of all the government data sets available, accounting for different levels of importance. Second, we developed a national metadata structure and shared it with all ministries. Third, we looked at international systems of classification and those we have nationally. We ensure data is based on definitions that are internationally recognized and thus comparable. Fourth, we looked at unique identifiers, for organizations and geographic locations. Each agency must use its own identifier; this ensures that two data sets can be read by each other. And last, we've introduced a method of reconciling discrepancies between administrative data sets.

F&D: The United Nations revised the System of National Accounts (SNA) this year. Is India ready? Will its expenditure data improve?

SG: The new SNA comes at an opportune time. We're in the process of rebasing our national accounts. We're incorporating the changes required by SNA 2025 into our rebased methodology and new guidelines, which we expect to release over the next couple of years. We've published different sectoral accounts every year for the past few years. This year, for instance, we are bringing out forest and water accounts. We're incorporating the changes that have been suggested.

On the production side, our data is extremely robust. I cannot reiterate that enough. When we last undertook a rebasing exercise, about a decade ago, we didn't have GST [goods and services tax] data, which is expenditure-side data. We have GST data now, and it will provide more granular estimates in the rebased GDP. A robust production-side data set will be accompanied by an equally robust consumption-side data set. This will ensure the overall accounts are more accurate.

F&D: What about resources? Does India face a resource constraint?

SG: Resources are both financial and human. We don't have a budget constraint. We don't need much money because our work is human- rather than finance-intensive. Once the IT infrastructure is in place, maintenance and operational costs are manageable.

On the human side, we have three levels. On top, we have the Indian Statistical Service, whose officers are extremely well qualified and drawn from some of India's finest institutions. Skill building is a constant work in progress. A second set of people are supervisors at the ground level. We are fortunate to have good people who are trained in statistics or mathematics; they comprise a large proportion of our staff.

The third set of people are enumerators who do the door-to-door surveys. We train them very intensively. We encourage all our officers to use the government-wide *Karmayogi* platform, which builds skills for people in other areas, like communication.

F&D: Everybody is interested in jobs. Is the ministry working on increasing the frequency of the labor survey?

SG: Until last year, we produced an annual labor force survey with quarterly updates, but that covered only urban India. Since January 2025, we have also produced a monthly report for both the urban and rural sectors. We also have a quarterly report, which gives more detail on sectors and types of employment. We have nearly doubled the sample size. This has increased data granularity. We have introduced new questions on employment status, education, training and skill levels, and where respondents graduated or received certification.

F&D: What challenges must India's statisticians overcome as the economy becomes more complex?

SG: Data at the national or the state level is not enough. We also need it at the district and even subdistrict level and village level. This means increasing sample sizes and—because of that level of granularity—increasing margin of error. Then there is the manpower, financing, and so forth. That's one set of challenges.

The second is frequency. People aren't willing to wait a year for data. Even a month is too long. How do we reduce the time lag between data collection and dissemination? That brings its own complexities.

The third challenge is to ensure that people and organizations continue to cooperate to provide data. How do we ensure that people in this social media age continue to provide data without fearing that their privacy is being invaded and at the same time ensure that data is credible and verifiable?

F&D: How do you protect official statistics from political influence and maintain their integrity?

SG: Trust in official statistical systems depends to a large extent on respect for the fundamental values and principles that govern the statistical system. In 2016, India adopted the United Nations Fundamental Principles of Official Statistics, which underscore statistical agencies' professional independence and accountability. The ministry adheres to these principles, which ensure professional and impartial practices grounded in scientific methods and established standards.

We also hold regular stakeholder consultations to gather wider insights on technical matters. We organize conferences to improve users' understanding of our data and our own understanding of their needs and expectations. The National Statistics Office publishes detailed documentation for its large-scale sample surveys to allow for independent scrutiny. By keeping stakeholders and data users involved and informed, we ensure that the statistics we produce are transparent and respond to the needs of those who rely on them for decision-making. **F&D**

This interview has been edited for length and clarity.