



## PERSONALITY TEST PROGRAMME 2019

### (Current Affairs Interview Issues)

#### QUESTIONABLE CREDIBILITY OF INDIAN STATISTICAL DATA

##### Context

The credibility of India's statistical system has come under intense scrutiny in recent years because of apprehensions raised over the procedural lapses in the release of the gross domestic product (GDP) data, methodology for computing national income series with a new base year, delay in the release of data like Periodic Labour Force Survey for 2017-18, withholding of the Annual Consumption Expenditure Survey for 2017-18 and the Mudra survey in recent times.

For instance, last year, former **Chief Economic Adviser Arvind Subramaniam** claimed that **GDP was actually 2.5% lower than the official figures** between 2011-12 and 2016-17. In May 2019, as many as **108 economists and social scientists expressed concerns over "political interference"** and **"the tendency to suppress uncomfortable data"** and called for restoration of **"institutional independence"** and integrity to the statistical organisations. **IMF** had raised the issue of "transparency" with Indian officials in data collection and, in particular, measurement of the **GDP deflator** - the adjusted inflation rate used to estimate real GDP.

Faced with criticism over quality of data as well as allegations of manipulation, the government has begun discussions on a much-delayed revamp of official statistics.

##### A brief overview of the Indian Statistical System

- The **National Sample Survey Organisation (NSSO)** was established in 1950 by the government on the advice of Professor P C Mahalanobis, then statistical adviser to the Cabinet.
- The **Indian Statistical Institute (ISI)**, too, got a statutory status, with the passing of the ISI Act, 1959.
- To address problems of data collection, tabulation and interpretation the **Indian Statistical Service (ISS)** took shape in 1961.
- In October 1999, the NSSO became an attached office in the ministry of statistics and programme implementation (MoSPI).
- The Ministry of Statistics and Programme Implementation has **two wings i.e.** a) Statistics and b) Programme Implementation.
  - The **Statistics Wing**, till recently, consisted of the **Central Statistical Office (CSO)**, the Computer Centre and the **National Sample Survey Office (NSSO)**.
    - ✓ **CSO** coordinates the statistical activities in the country and also evolves statistical standards. Its activities include preparation of National Account Statistics (NAS), conduct of Annual Survey of Industries (ASI), Economic Censuses, Index of Industrial Production compilation, computation of Consumer Price Indices etc.
    - ✓ **NSSO** is responsible for conducting large-scale sample surveys in diverse fields on an all India basis.
  - The **Programme Implementation Wing** has three Divisions, namely:
    - ✓ **Twenty Point Programme**

Agency	Statistics
<b>Central Statistics Office (CSO)</b>	GDP, Index of Industrial Production, Energy Statistics, Infrastructure Statistics, National Income Accounting, Conduct of Annual Survey of Industries, Consumer Price Indices for Urban Non-Manual Employees, Human Development Statistics, Gender Statistics, Imparting training in Official Statistics.
<b>National Sample Survey Office (NSSO)</b>	Primarily data are collected through nation-wide household surveys on various socio-economic subjects, Annual Survey of Industries (ASI). Also collects data on rural and urban prices, crop statistics.

- ✓ **Infrastructure Monitoring and Project Monitoring and**
- ✓ **Member of Parliament Local Area Development Scheme (MPLADS)**
- Subsequently in line with the recommendations of the **C Rangarajan Commission (2001)**, **Chief Statistician of India (CSI)** and **National Statistical Commission (NSC)** came into existence in **2006**. Both the CSI and NSC are independent in their functioning, **not part of the general bureaucracy**, and were brought to **ensure autonomy and transparency** of the statistical system.
  - **NSC** was supposed to be an apex body for standard setting, quality control, regulation of statistical data collected by multiple ministries and departments, including the Ministry of Statistics and Programme Implementation (MoSPI) and the **governing body for the NSSO**.
  - **CSI** was the functional head of the statistical system.
- As per a **May 2019 order**, the **National Statistics Office (NSO)** and its constituents - National Sample Survey Office (NSSO) and Central Statistics Office (CSO) - became "an integral part of the main ministry" with the **NSSO and CSO merging into the NSO** and the Secretary of MoSPI becoming the new head of the NSO.

### Concerns raised about Indian statistical system in recent times

The problems can be broadly bracketed under 3 categories: Administrative structure or institutional infirmities, methodology and data. Various concerns raised are:

- **Institutional and structural issues:**
  - **Effects of restructuring order of May 2019**
    - ✓ The restructuring order is silent on both the CSI and NSC. So, there is no clarity on what happens to their functioning.
    - ✓ **Apprehensions regarding NSSO:**
      - Under MoSPI, it has become the part of the general bureaucracy and ceases to exist as an autonomous body. **Moreover, the fear is that in absence of the oversight of independent bodies like the CSI and NSC, the statistical system may become amenable to political interference.**
    - ✓ The NSO will be headed by the secretary of the Ministry of Statistics and Programme Implementation (MOSPI). This is in contrast to the original plan proposed by experts to merge various statistical bodies such as the NSSO and others to create a unified statistics body that is accountable to Parliament, rather than the government.
  - **Timely releases:** As of now, the government does have a calendar for release of data sets such as national accounts, Index of Industrial Production and inflation. But there are no specific timelines for release of labour force statistics and consumption expenditure surveys.
    - ✓ Timely release of data sets is crucial for both government policy formulation and investment decisions by the industry.
  - Moreover, **need of more skilled manpower and getting additional resources** in the government is a major problem. The NSC has been pressing for more resources to improve its capabilities, review of data collection, collation and aggregation to ensure quality, timeliness and credibility of the collected statistical output.
- **Methodology:** It includes how raw economic data should be collected, and about the various assumptions that should go into the calculation of GDP and other economic estimations. Concerns are:
  - Government statisticians have for long used small surveys to gather the raw data that are required to make "blown up" estimations about the growth of the wider economy.
  - The data on GDP are initially estimated at current price and then deflated for constant price for comparability of data over time. However, the present series encountered serious **problems for price adjustment, specifically for the services sector** contributing about 60% of GDP, in the absence of appropriate price indices for most service sectors.
    - ✓ The deflators used in the new series could not effectively separate out price effect from the current value to arrive at a real volume estimate at constant price. Price indices going into a low and negative zone in 2014-17 distorted real growth.
  - **Continuation of faulty approach to collect or collate other data:**
    - ✓ In certain cases, such as sugar, production is calculated on average yield data which is over three decades old.
    - ✓ When it comes to calculating agriculture produce prices, agencies depend on "farmgate prices" (net price of the product when it leaves the farm, after marketing costs have been subtracted), which

government economists admit is faulty given that many farms do not have significant marketing costs and it is now possible to get mandi rates of various commodities.

- **Nature of Data:**

- **Coherence of GDP data:** The difference between estimates on household consumption based on the NSSO surveys and the CSO data is large and widening over time. For instance, Arvind Subramanian (in 2019) analysed alternate sets of data to tell a different story than what the GDP data shows (as mentioned above).
  - Data on the large unorganised sector are even cruder and can be extremely unreliable. The proportion of the Indian economy that is based on the unofficial sector, such as household enterprises, makes it a nightmare to assess economic activity.
- **Shortcoming of data under MCA21:**
  - ✓ In May, the NSSO came out with a report which cast serious doubt on the reliability of raw data that is used to calculate India's gross domestic product (GDP).
    - The NSSO stated that it could not either trace or classify 36% of the companies included in the MCA-21, a database of private companies that is maintained by the Ministry of Corporate Affairs, whose financial numbers the government currently uses to calculate GDP figures.
  - ✓ MCA21 data used in the new series **do not have a comparable long series of back data prior to 2009**. The only data was from the Reserve Bank of India (RBI) studies on company financiers covering just a few thousand companies.
  - ✓ The use of MCA21 data and blow up factors thereof **without weeding out defunct enterprises**, and then insufficient work on mapping of comparable ASI data, followed by similar survey on services sector enterprises were another major lacuna. Responding to this, government that these will be weeded out via KYC norms.

- **Steps taken**

- The Ministry of Statistics and Programme Implementation (MoSPI) has sought suggestions on the **Draft National Statistical Commission (NSC) Bill 2019** to make data collection more transparent and reliable.
  - The statutory provisions of the bill are in line with the recommendations of the **Rangarajan Commission (2001)**, international best practices and the country's commitment for basic principles of "**data as public good**" as set out in the **United Nations resolution (2014)**, and notified in **GOI's gazette** in 2016.
  - The bill proposes a **permanent set-up for the commission**, headed by a full-time chairperson and five full-time members, whose tenure is proposed to be of **three years**. Among the other members recommended are the deputy governor of the RBI, the Chief Statistician of India and the Chief Economic Adviser.
  - The bill also proposes to create a powerful set-up **for statistical audit** to maintain and enforce **high quality of data**, financial **independence** through **endowment grants** for the fund, and an **independent secretariat**.
- A broad-based **Standing Committee on Economic Statistics (SCES)** with 10 non-official members and 16 official members has been set up by the government under former Chief Statistician of India Pronab Sen.
  - It will seek to bring consistency among various government economic indices such as Periodic Labour Force Survey, the Annual Survey of Industries, the Annual Survey of Services Sector Enterprises, Index of Industrial Production, Economic Census etc.
  - It will work on developing survey methodology including sampling frame, design, oversee the finalisation of the reports of the surveys, and conduct pilot surveys, if necessary, before finalising schedules for data collection.
- The **Sub-committee on Annual Survey of unincorporated sector enterprises and services sector data** is working on mapping the unorganised sector for data, along the lines of the present Annual Survey of Industries.
- The Indian Council of Medical Research (ICMR)'s National Institute for Medical Statistics (ICMR-NIMS), in partnership with Population Council (International non-profit NGO that conducts research in biomedicine and social science) has launched the **National Data Quality Forum (NDQF)**.
  - The National Data Quality Forum (NDQF) is an integrated national-level platform that aims to improve the quality of health and demographic data by generating meaningful dialogue around the improvement of data quality in general, and for health and medical research in particular.

**Success Story of Indian Statistics- The RBI**

- The monetary and banking data of the Reserve Bank of India is probably the best in the country and respected everywhere.
- This is possible because the data flows from a regulated set of entities which have to comply with the structures.
- The presentation of accounts by banks has been homogenised to ensure that there is no ambiguity in definitions, and hence there are no revisions in the data.

- NDQF's activities will help establish protocols and good practices of data collection, storage, use and dissemination that can be applied to health and demographic data, as well as can be replicated across other industries and sectors also.
- **NITI Aayog has recently released a Vision Document for the NDAP:** National Data and Analytics Platform (NDAP) is a pan-India initiative by NITI Aayog. First version of NDAP is proposed to be released in 2021.
  - NDAP aims to democratize access to publicly available government data.
  - NDAP will spearhead the standardization of formats in which data is presented across sectors.

### Way Forward

- **Institutional strengthening and related structural reforms:**
  - Internationally, there is a process for going for the **National Strategy for the Development of Statistics (NSDS)**. It covers the legal and institutional framework, statistical capacity-building, statistical infrastructure, network for integration and dissemination of data etc. A clear strategy is needed that will be guided by the NSC, for building the capacity to **modernise our data system**.
  - Further, there is a **need for a strong coordination with the states**. This may be served well if each of the states have similar arrangements, and a mechanism for tight coordination, in a holistic manner, is established.
- **Fill data gaps and improve data consistency, quality and coherence:**
  - **Creating regular processes within the Central Statistical Organization (CSO) for systematically testing for data consistency.**
    - ✓ For instance, the difference between estimates on household consumption based on the National Sample Survey Organization (NSSO) surveys and the CSO data, which are large and widening over time, need to be addressed.
  - **Need of an integrated system to produce consistent official statistics:** Along with GDP, we need data to assess competitiveness, inclusive growth, biotechnology, robotics-influencing employment and productivity, environmental protection, sustainable development and social welfare. Hence GDP data needs to be linked with a host of other data for deeper insight. We need to re-engineer the existing system, **creating an integrated system populated with granular data**.
  - **For data coherence**, we should go for big data technology and web-based reporting and have **Data Warehouse** with conformed dimensions and relevant data to try to sort them out considering the bottom-up approach for coherence, wherever possible.
  - **Revamping the systems of data collection:** The urban blocks and village panchayats must be empowered to submit key data on output, employment, price, education and health through the application programming interface (API). The higher levels of administration already have people for reporting data, who can coordinate the training of personnel, undertake quality checks and so on.
- **Need for better price deflators in GDP calculations:** income from the services sector, which accounts for around 60% of GDP, lacks the appropriate price index.
- **Timely releases of surveys and reports:** Putting in place a release calendar for all official economic data sets and ensuring their timely release is key to restoring the credibility of India's statistics
- **Adopting new approach of collecting data in agriculture:** When productivity and remunerative price of output are major concerns for agriculture, it is necessary to collect data on factors such as soil conditions, moisture, temperature, water and fertilizer use determining yield, impact of intermediary and forward trade on farm gate price and so on.
  - For example, Israel collects these data for analysis to support productivity.

### Conclusion

Data is the new oil in the modern networked economy in pursuit of socio-economic development. An integrated statistical system, supported by advanced technology and professionalism, has advantages for producing reliable data. The system should have enough possibilities for quality checks and audit, following the code of practice. Recognising that credible official statistics can enhance democratic fervour, our lawmakers will do well to empower the NSC to discharge its role effectively, dispelling any apprehension on its independence in the production of high-quality official statistics.

## Summary

The credibility of India's statistical system has come under intense scrutiny since the revision of GDP estimates in 2015. It further eroded with the accusations and resignations of key statisticians over political interference.

## Background

- **Chief Statistician of India (CSI) and National Statistical Commission (NSC)** came into existence in **2006**.
- In 2019, the **NSSO and CSO were merged into the NSO** and the Secretary of MoSPI became the new head of the NSO.

## Concerns raised about Indian statistical system in recent times

- Institutional and structural issues:
  - The restructuring order is silent on both the CSI and NSC.
  - NSSO has become the part of the general bureaucracy and ceases to exist as an autonomous body.
  - Timely releases: there are no specific timelines for release of labour force statistics and consumption expenditure surveys.
  - Lack of skilled manpower and resources to improve capabilities, review of data collection, collation and aggregation to ensure quality, timeliness and credibility of the collected statistical output.
- Methodology:
  - In 2015, MCA-21 database was introduced as the mainstay for calculating GDP figures which replaced Annual Survey of Industries (ASI) marking a shift from establishment to enterprise approach.
  - Absence of appropriate price indices for most service sectors.
  - Continuation of faulty approach to collect or collate other data:
    - ✓ Much of the services activity is largely estimated on the basis of the output of organised sector entities making up just a little over quarter of the sector.
    - ✓ In certain cases, such as sugar, production is calculated on average yield data which is over three decades old.
- Nature of Data:
  - Shortcoming of data under MCA21
    - ✓ The NSSO stated that it could not either trace or classify 38.7% of the companies included in the MCA-21.
    - ✓ MCA21 data used in the new series do not have a comparable long series of back data prior to 2009.
    - ✓ The use of MCA21 data and blow up factors thereof without weeding out defunct enterprises
  - Coherence of GDP data: The difference between estimates on household consumption based on the NSSO surveys and the CSO data is large and widening over time.

## Steps taken

- **Draft National Statistical Commission (NSC) Bill 2019** was prepared with an aim to make data collection more transparent and reliable.
- A broad-based **Standing Committee on Economic Statistics (SCES)** with 10 non-official members and 16 official members has been set up.
- ICMR-NIMS, in partnership with Population Council has launched the National Data Quality Forum (NDQF).
- NITI Aayog has recently released a Vision Document for National Data and Analytics Platform (NDAP).

## Way Forward

- **Institutional strengthening and related structural reforms:**
  - Adopting **National Strategy for the Development of Statistics (NSDS)**: it covers the legal and institutional framework, statistical capacity-building, statistical infrastructure, network for integration and dissemination of data etc.
  - Further, there is a **need for a strong coordination with the states**.
  - Rationalise all statistical activities **to avoid duplication** and integration of data and **hive off programme implementation wing of the MoSPI** so that the CSI concentrates only on statistics.
- **Fill data gaps and improve data consistency, quality and coherence:**
  - **Need of an integrated system to produce consistent official statistics**
  - **For data coherence**, we should go for big data technology and web-based reporting and have **Data Warehouse**.

- **Revamping the systems of data collection:** The urban blocks and village panchayats must be empowered to submit key data on output, employment, price etc.
- **Need for better price deflators in GDP calculations:** income from the services sector, which accounts for around 60% of GDP, lacks the appropriate price index.
- **Timely releases of surveys and reports**
- **Adopting new approach of collecting data in agriculture:** it is necessary to collect data on factors such as soil conditions, moisture, temperature, water and fertilizer use determining yield, impact of intermediary and forward trade on farm gate price and so on.

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