Availability of credible regular and multidimensional data is sine qua non for effective policy. India has elaborate system of administrative data generation process supplemented by various agencies such as statistics commission, DSE of states, NSSO, CSO in addition to usual routine administrative sources. These systematic arrangements need to be revitalised with new technologies and sense of business intelligence. New technologies would be useful in improving coverage (subject or item as well as geographic coverage) frequency, accuracy and cross validation. Department should employ methods of networking and coverage that will enable them to capture online and updated information resulting in big data approach.

These are several physical/technical/natural data inventories that need to be created, nurtured, detailed and updated. E.g. wealth/climate data, land use, water availability, transport flows and density within and between townships etc.

Availability of each data alone can generate timely and informed policy alternatives responses with minimum regulation and processing lag.

Improving Data Management in India

Today, almost every field/sector in India faces issues of data availability, quality, and access. Whatever is available is either, sparse, irregular, of poor quality, or inaccessible to the public. This severely impacts quality of both public and private sector research, implementation of government programmes, and overall public awareness of contemporary challenges.

Crucial information on topics such as female labour force participation, water resources, child welfare, small NGOs, grassroots innovations, unorganised workforce in manufacturing industry, and rural health and education are in dire need of better methods of data collection and validation, and greater availability of information in the public domain.

Recommendations

a. **Establish an overarching institution to facilitate collection, validation and dissemination of data-**

The government should establish a central-level institution with branches at state-level for data management. The institution should facilitate collection, validation and dissemination of data through various sources and channels. It should also serve as a one-stop depository of all government-collected data and facilitate third-party assessment of the validity of data.

b. **Create network of universities, NGOs and research centres-**

The overarching institution must also create a virtual data network of universities, think tanks, research centres and NGOs across the country. This will allow access to and dissemination of robust primary and secondary data and spur innovation, developmental work and research at national level.

c. **Build public-private partnerships -**

The government should encourage various ministries to tie up with NGOs, universities and institutes, and research centres to obtain continuous, authentic and ground-level data. The government must also collaborate with technology centres and the corporate world to

obtain and disseminate latest technological, industrial, financial and economic information.

d. Measure granular data and update it continuously-

India needs to set up systems of reliable, high-frequency data that will show the extent of the problem at a granular level. The finer the level of detail of the data, the more precise and accurate the solutions can be. Upon collection and storage, the data should be sliced by region, sector, gender, type of job etc. for public consumption. It should also be updated regularly with the help of other public/private institutions involved in data management.