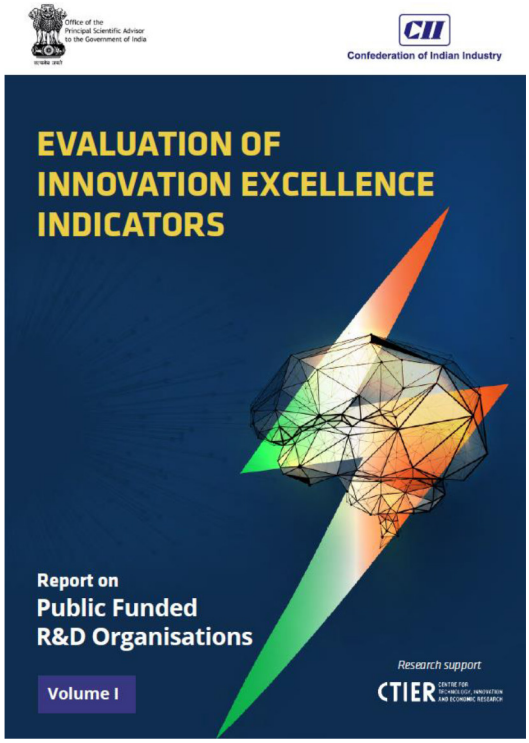
J Data Sci. Info. Citation Studies., 2023; 2(1):61-62.
https://www.jcitation.org

Book Review

# Reports on the Evaluation of Innovation Excellence Indicators in India




Evaluation of Innovation Excellence Indicators: Report on Public Funded R&D Organisations; Volume 1 and Volume 2; New Delhi: Office of the Principal Scientific Adviser to Government of India, 2022. Available Online on www.psa.gov.in.

The report included a multitude of information about India's publicly supported R&D Organizations' strengths and weaknesses, as well as the framework established by NITI Aayog, and is divided into two parts (Volume I and II). The report examines the performance of several publicly sponsored R&D organisations' research ecosystems using a variety of innovation indicators and research outputs. This is the first time Dr. Arabinda Mitra and his team (and other institutional team members co-ordinately involved, such as NITI Aayog, Principal Scientific Adviser, Confederation of Indian Industry, Centre for Technology, Innovation, and Economic Research, and so on) have conducted a complex exercise that can be used to enhance future activities. A total of 193 research labs (ICAR, CSIR, ICMR, DBT and DST, as well as other central government ministries) were investigated (data collection period August 2020 to November 2020) in terms of their socio-economic contribution, STI excellence, and organisational capabilities and practises attributes designed by NITI Aayog (7 main pillars and 11 sub-pillars and 62 evaluation parameters). The report extensively developed a roadmap for improving R&D organisations' outputs and outcomes, as well as their present operations.

Data was accumulated using a questionnaire survey methodology with qualitative and quantitative metrics (numeric, binary and qualitative and Likert scale value). There are three questionnaires developed based on Basic, Applied and Services R&D organisations and each one had 62 questions. According to the 2017-18 DST report, national R&D sectors spend 50% of overall spending (total 1,23,825 Crores Indian Rupees) on the central sector, 37% on the private sector, 7% on higher education, and 6% on the state, while 52% on strategic R&D Laboratories, 32% on major scientific agencies, and 16% on minor scientific agencies. This research covers the pandemic period, and they highlighted some of the substantial achievements of these labs in the following sectors: healthcare, agriculture, energy and

OPEN ACCESS

EPUBL editing. publishing. technology

**DOI:** 10.5530/jcitation.2.1.8



**Publishing Partner :** EManuscript Tech. [www.emanuscript.in]

environment, transportation and infrastructure, livestock, automotive, food processing, textile, and so on. R&D laboratories spend less than 40% of their total budget on institutional techniques and procedures. In 2019-20, the median percentage of female researchers on scientific staff in labs continues at 30 percent. The key analyses of the Reports are:

- Projects are being completed at a higher speed, although the proportion of industrial cooperation is still low.
- Total publishing output is growing, while the percentage of top 10% of journals is decreasing.
- In 2019-20, patent filings and awards have been reduced.
- The most often addressed SDGs are "No Poverty" and "Good Health and Well-being".

50% of laboratories have contributed significantly to national policies, guidelines, or standards, either by their employees serving on different government bodies or through their work directly contributing to a policy or regulation, etc. In 2019-20, there were 666 technologies with Technology Readiness Level (TRL) 0-4 and 1192 technologies with TRL levels 5 and higher (targeting SDGs and national programmes) being developed.

In 2019-20, 197,003 people positively impacted by the training programmes, compared to 156,289 in 2017-18.

There were 16 laboratories with more than 10% of their publications in the top 10% of journals. The influence of healthcare research laboratories may be seen in the data on publications compared to other disciplines.

All laboratories launched at least one new study area, technology, or service each year. All laboratories were also noted to be thinking about installing software to track and monitor the development of their initiatives.

There is a lot of potential for expanding research cooperations with other academic and/or research organisations as well as with industry. Additionally, allowing for more multinational funding through treaties may help to diversify the sources of co-curricular support away from government agencies. The report emphasised the importance of improving intellectual property rights in order to create a vibrant research environment. Cross-linking across laboratories and higher educational institutions should be encouraged, as should increase technology commercialization and women's engagement in research, as well as a greater contribution to global regulation and policy.

Policymakers can adopt this model in a variety of ways. For example, it might be used to highlight how public funding for R&D laboratories contributes to India's innovation environment. The framework may also aid with national and worldwide data on public R&D in India, demonstrate R&D laboratory's future directions for enhancing their own capabilities, and support R&D laboratories' continued commitment to societal benefit and increased global participation. It would be crucial to establish a groundwork of the existing contributions made by these institutes in the subsequent years as India explores new innovation models to propel its growth cycle and as their importance is projected to increase.

**Reviewed by**

**Suman Das**
Dr B R Ambedkar Central Library,
Jawaharlal Nehru University,
New Delhi 110067, India.
Email: das.15@iitj.ac.in

**Cite this article:** Das S. Reports on the Evaluation of Innovation Excellence Indicators in India. Journal of Data Science, Informetrics, and Citation Studies.. 2023;2(1):61-2.