

Evaluation of Innovation in Public-Funded R&D Organisations in India

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Role of Public-Funded R&D Institutions in India

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Role of Public-Funded R&D Institutions in India Latest News

- **A detailed report** titled ‘Evaluation of Innovation Excellence Indicators of Public Funded R&D Organizations’ was released by the **Office of the Principal Scientific Adviser**, CII, and the Centre for Technology, Innovation, and Economic Research.
- It aimed to **assess the innovation outcomes and national contributions** of public-funded R&D institutions in India.

Scope of the Study

- **Institutions covered:** 244 public-funded R&D organisations affiliated to various ministries.
- **Excluded:** Scientific institutions such as those belonging to –
 - **Defence research and development, space research, and atomic energy research** – these make up the dominant share of India’s overall R&D spend.
 - Academic institutions and universities.
- **Rationale for exclusions:**
 - **Sensitive nature** of work in defence, atomic, and space domains.
 - Academic institutions not included due to **differing mandates**.

Objective of the Study

- **Core purpose:** To examine whether public-funded labs are:
 - Engaged in academic (curiosity-driven) science,
 - Or aligned with industry-driven innovations and product development.
- **Broader goals:**
 - Contribute to Sustainable Development Goals (**SDGs**).
 - Align with National Missions (e.g., **Deep Ocean Mission, National Quantum Mission**).
 - Support **women scientists, skilling, and employment** generation.
 - Guide labs to address **socio-economic challenges**.

Methodology of the Study

- **Survey format:**
 - Online questionnaire with **62 parameters**.
 - **Labs/institutes self-select themselves** as ‘**Basic, Applied or Services**’ or as ‘**hybrid**’ (if their research falls into more than one of the first three categories).
 - All the data submitted by the labs/institutes was signed off by each lab director to ensure authenticity.
- **Key parameters measured:**
 - Annual R&D expenditure.
 - Share of young scientists.
 - Number of patents and technologies developed.
 - **Participation of women scientists**.
 - Contributions to national missions.
 - **Collaboration with industry (domestic and international)**.
 - Incubation support to startups.

Key Findings of the Study

- **Limited industry and startup engagement:**
 - Only 25% of the labs surveyed gave incubation support to startups.
 - Merely 16% provided support to 'deep tech' startups.
 - Just 15% collaborated with industry overseas.
- **Access and openness:** About 50% opened facilities to external researchers/students.
- **Contribution to national missions:**
 - 50% contributed to 'Make in India'.
 - 35% aligned with Skill India.
 - 30% targeting the Swachh Bharat.
- **Human resource trends:**
 - Decline in permanent staff.
 - Rise in contractual staff from 17,234 to 19,625.
 - **Young** researchers' share increased from **54% to 58%**.
 - **Women** scientists' representation remained **stagnant**.
- **Budget growth:** The combined budget of 155 labs/institutes increased from ₹9,924 crore in 2017-18 to ₹13,162 crore in 2022-23.

Recommendations of the Report

- **Mandate realignment:**
 - All labs to review and align mandates with 'Viksit Bharat' vision.
 - Prioritise critical technologies on a war footing.
- **Strategic collaboration and capacity building:** Strengthen partnerships with:
 - Industry
 - Startups
 - Other R&D labs
 - Higher Education Institutions
- **Institutional reforms:** Promote establishment of **Section 8 Companies** (nonprofit organisations established under the Companies Act, 2013) to –
 - **Provide support to startups,**
 - Open research and testing facilities, and,
 - **Improve cross-linkages with higher educational institutes.**

Conclusion

- Strengthening public-funded R&D institutions through targeted innovation, industry collaboration, and alignment with national missions is essential to propel India towards its vision of **Viksit Bharat**.
- With **strategic reforms and inclusive participation**, these institutions can become powerful engines driving sustainable development, technological self-reliance, and global scientific leadership.

Role of Public-Funded R&D Institutions in India FAQs

Q1. What was the main objective of the study titled 'Evaluation of Innovation Excellence Indicators of Public Funded R&D Organizations'?

Ans. The study aimed to assess whether public-funded R&D labs in India are contributing meaningfully to innovation and national development goals or are primarily engaged in academic science.

Q2. Why were institutions under defence, space, and atomic energy excluded from the study?

Ans. These institutions were excluded due to the sensitive and strategic nature of their research activities.

Q3. What key recommendation did the report make regarding alignment with national goals?

Ans. The report recommended that all public-funded R&D organisations must realign their mandates to support the vision of Viksit Bharat and focus on critical technologies.

Q4. What was a significant finding regarding industry and startup collaboration?

Ans. Only a small fraction of labs (25%) supported startup incubation and even fewer (16%) supported deep-tech startups, indicating limited industry engagement.

Q5. What human resource trend was observed in public-funded R&D institutions in recent years?

Ans. There was a decline in permanent staff and an increase in contractual staff, alongside a modest rise in the share of young researchers.

Source: TH

Source: <https://vajiramandravi.com/current-affairs/evaluation-of-innovation-in-public-funded-randd-organisations-in-india/>

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