

Ease of Doing Research and Development in India: A Review



Ease of Doing Research & Development in India: Removing Obstacles, Promoting Enablers. By The Science & Technology Division, NITI Aayog, New Delhi, 2026, ISBN: 9788199108080.

CHAPTER-WISE REVIEW

Written by an array of thirteen authors, viz., V. K. Saraswat, V.K. Singh, A. A. Sonkusare, Thyagaraju B.M., N. Suroor, S. Kaur, D. Narang, P. Chanana, T. Agarwal, A. Dhamija, S. Bhattacharya, P. Arora, and A. Kanaujia, this timely Report presents a compilation of various obstacles faced by R&D practitioners, along with a set of recommendations to address them. The insights for this report were gathered from an extensive consultation process comprising

open-ended inputs, survey, regional consultative meetings, and a series of brainstorming sessions on “Ease of Doing R&D”. The Report is divided into four chapters, namely, Introduction; The Consultation Process; Challenges and Recommendations; and Charting the Road Ahead: Towards a Robust & Future-Ready R&D Ecosystem.

Chapter 1 frames India’s R&D landscape around a striking paradox: the Global Innovation Index (GII) 2025 characterises India as an “overperformer” on innovation outputs relative to its inputs. While India ranks among the global leaders in scientific publications and patent filings, its stagnant Gross Expenditure on Research and Development (GERD) - hovering at just 0.65% of GDP - remains significantly lower than that of China (2.4%), the US (3.5%), and South Korea (4.5%). The authors argue that without systemic intervention, India risks stagnation. Crucially,



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the chapter links the “Ease of Doing Science” to the overarching national objective of Viksit Bharat@2047. However, whilst the introduction successfully justifies the need for systemic overhaul, it falls slightly short of explaining why recent statutory reforms - such as special scientific relaxations in the Government Financial Regulations (GFR) notified between 2023 and 2025 - failed to alleviate ground-level bureaucratic friction.

Chapter 2 outlines NITI Aayog’s highly thorough, multi-tiered consultative methodology, which combined qualitative and quantitative instruments. The data was sourced from open-ended inputs from over 60 central laboratories, a structured nationwide survey of 878 established scientists conducted with INSA and NASI, and eight regional meetings bringing together 430+ institutional heads (directors and vice-chancellors) across the country. This methodology is exceptionally strong because it bridges the perspectives of “top-down” administrators and “bottom-up” active researchers. Critically, while the initial open-ended pilot omitted Higher Education Institutions (HEIs), NITI Aayog effectively corrected this in subsequent phases by incorporating university leaders and academics.

Chapter 3 is subdivided into seven thematic Pillars (P1-P7). It is highly commendable for its administrative realism and direct confrontation of systemic dysfunctions: Funding and Utilisation (P1): The report exposes how the Public Financial Management System (PFMS) and treasury systems (TSA/Hybrid-TSA), while designed for fiscal discipline, are misaligned with low-value, high-frequency extramural grants. It highlights the absurdity of applying complex TSA approvals to R&D projects that total just ₹4,000 crore annually. Rigid head-wise budget allocations and the “use it or lose it” automatic withdrawal of funds on March 31 cause severe disruptions. The recommendations to establish Project Management Units (PMUs) and allow direct transfers to institutional accounts for low-value grants are highly pragmatic. Human Resources (P2): Measuring India’s researcher density (262 FTE per million) against Switzerland (5,552) or the UK (4,821) illustrates a stark structural gap. The report details critical career bottleneck issues, including 4–5 month delays in initial fellowship disbursement, uncompetitive government pay scales in emerging fields like semiconductors and AI, and rigid post-cadre allocations that prevent HEIs from dynamically hiring faculty. Institutional Structures (P3): A major strength here is the blunt diagnosis of an “audit-centric” and compliance-driven culture. The absence of dedicated, professionally staffed R&D offices forces active scientists to exhaust valuable hours on administrative tasks. The report correctly advocates for decentralisation, trust-based self-certification, and establishing single-window R&D offices. Technology Translation (P4): Critically, the conversion of patents and publications into commercial technologies remains low. There is an acute lack of prototyping and testing validation platforms at intermediate TRL 3–6 stages. The report suggests highly realistic policy updates, such as amending GFR Rule 233 to ease

intellectual property sharing in co-funded projects and reforming double-taxation on deep-tech startup ESOPs at the point of exercise. Access and State Institutions (P5 & P6): These sections highlight profound regional and institutional disparities. While One Nation One Subscription (ONOS) has improved access, it excludes private universities and lacks indexing databases (like Scopus or Web of Science). State HEIs suffer from severe resource constraints, understaffing, and dual control friction between state-appointed registrars and vice-chancellors. The suggestion to systematically transfer functional surplus equipment from centrally funded laboratories to state universities is a highly sensible, low-cost intervention. Policy Administration (P7): The report notes that science policy lacks continuous foresight and outcomes feedback loops. The proposed NISPG acts as a strategic intervention to professionalise the cadre.

The final chapter transitions the theoretical findings into an actionable roadmap, mapping out implementation responsibilities across central ministries (such as DST, DBT, DSIR, DoE, and DPIIT). While the detailed delegation matrix is a great strength, the chapter remains slightly light on how state-level administrative alignment will be enforced, given the dual-control challenges and the diverse political and financial capabilities of individual state governments.

Key Proposed Frameworks

To transition India’s S&T ecosystem from a compliance-heavy structure to an agile, trust-based model, the report proposes six core strategic and digital frameworks:

Removing Obstacles, Promoting Enablers (ROPE)

The foundational conceptual and methodological framework of the entire EoDR&D initiative, used to systematically map localized internal institutional processes against broader, external government policies and regulations.

Unified Architecture for Project Lifecycle Management (UPMS)

A cloud-hosted digital framework developed by the National e-Governance Division (NeGD) to serve as an interoperable, single-window portal. It removes repetitive CV entries, maps national research expertise, and standardises financial reporting via horizontal and vertical API integration.

Vigyan Nidhi

A unified fellowship and personnel support platform designed as digital public infrastructure. Managed by a designated administrative body and seeded with a ₹1,000 crore revolving buffer, it routes central fellowships via automated, Direct Benefit Transfers (DBT) to eliminate disbursement delays and leverages philanthropic and industry capital.

Research, Development and Innovation (RDI) Clusters

Quadruple-helix hubs collaborating across academia, industry, public agencies, and civil society, anchored in strategic industrial regions. Operating on a Public-Private Partnership (PPP) model with a 40:40:20 (Centre, State, industry) funding split, these clusters house shared prototyping, validation, and IP facilitation systems to bridge the critical TRL 3–6 translation gap.

National Institute for Science Policy and Governance (NISPG)

An autonomous leading national institute proposed under the Department of Science and Technology (DST). Modelled on international agencies like South Korea's STEPI and Japan's NISTEP, it is designed to standardise policy evaluation, manage national STI data collection, and provide capacity-building training to science administrators.

Ease of Doing Research and Development (EoDR&D) Assessment Framework

A standardized national benchmarking and scoring mechanism to be run independently or integrated within NAAC or the National Institutional Ranking Framework (NIRF), incentivising institutions to routinely self-assess and reform their internal research administration.

CONCLUSION

The 2026 NITI Aayog report provides an outstanding, refreshingly honest, and evidence-backed evaluation of India's R&D bottlenecks. By shifting the focus from rigid procedural compliance to trust-based governance, digital public infrastructure, and structural translation clusters, it offers a credible, practical path to unlocking India's vast scientific potential.

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