



**KAMARAJ IAS ACADEMY**  
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# National Research Foundation

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The Union Cabinet has approved the introduction of the National Research Foundation (NRF) Bill in Parliament, placing once again the debate on science and technology funding in the spotlight.

## About NRF

Setting up the NRF was one of the key recommendations of the National Education Policy 2020.

The NRF intends to act as a coordinating agency between researchers, various government bodies and industry, thus bringing industry into the mainstream of research.

In addition to providing research grants to individuals, the NRF plans to seed, grow and facilitate research in India's universities, especially State universities, by funding research infrastructure and researchers.

## Funding methods of NRF

The NRF will operate with a budget of ₹50,000 crore for five years, of which 28% (₹14,000 crore) will be the government's share, and the remaining 72% (₹36,000 crore) will come from the private sector.

The NRF draft proposes the government's share to increase eventually to ₹20,000 crore per year. Out of the government's share, ₹4,000 crore will be used from the existing Science and Engineering Research Board's budget, which will be subsumed under the NRF.

Therefore, the government has earmarked an additional ₹10,000 crore over the next five years for the NRF.

However, this increase in the nation's gross domestic expenditure on research and development (GERD) seems too meagre, (less than 2% of GERD) especially if one compares the GDP and the comparative spending in other big economies, such as the U.S. and China.

As per the last available statistics (2017-18), India's GERD was ₹1,13,825 crore. While India's GDP was 7.6 and 5.1 times smaller than that of the U.S. and China respectively, India's GERD was nearly 24 times less than both these countries during the same period. And in the last five years, that gap has further widened.

## How can the NRF facilitate the "ease of doing science"

First, the time between applying for a research grant and receiving the money must be minimal, preferably within six months. Although the NRF draft mentions that the peer-review process will be completed within six months, releasing funds may take time, pending financial clearance.

Second, all the paperwork must be digitally processed without sending stacks of papers in hard copies to the NRF.

Third, all finance-related queries, paperwork, approval, and acceptance need to be between the NRF and the finance department of the university/research institution keeping the scientist free to focus on research.

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Fourth, the NRF needs explicit spending guidelines away from the General Financial Rules (GFR) and the government's e-Marketplace (GeM) usage. Scientific research needs independent guidelines for spending money, which provides flexibility while making scientists accountable.

Finally, the release of money needs to be timely. Although the NRF draft mentions timely disbursement of funds, a mechanism needs to be in place to facilitate and implement this.

### **The Way Ahead**

The proposed NRF is largely modelled after the National Science Foundation of the U.S. It borrows some of the best practices from the German, U.K., Swiss, Norwegian, South Korean, and Singapore science agencies.

Even if the NRF draft discusses critical thinking, creativity, and bringing innovation to the forefront, it is unclear how the NRF will transparently seed, fund and coordinate research across institutions.

The success of NRF will lie in how the government sets rules and implements the same, different from what already exists.

While the participation of the private industry in the NRF is an important and welcome step, it is unclear how the government will raise ₹36,000 crore from the industry.

Although the NRF describes a legislative route to facilitate this, a more detailed plan and establishing mechanisms akin to escrow accounts will reassure the scientific community.