

Ease of Doing Research: The Pathway for Addressing Future Challenges

S K Varshney

Science Consultant, RIS



Research & Developments (R&D) are the tacit contributors to the creation of new knowledge, concepts, innovation, applications and products leading to the improvement of national economy, security, and also giving strength to nations for its diplomatic negotiations. Research banks on impending challenges (both social and technology), research ethics, motivation for development and innovation, access to newer technology as well as on research ecosystem and funding. Challenges in research include complexity of systems, sustained funding and almost negligible public perception of the research outputs.

Various countries invest in R&D differently in proportion to their GDP. Developed countries invest more as compared to Developing and Least Developing Countries. Funding comes from different sources, including government, industry, philanthropic organisations etc. Developed countries are able to encourage several stakeholders to make contributions/ investment in R&D, research in Developing countries banks heavily on government sources. Each funding source has different expectations. While government funding focuses on various fields of science, industrial funding is focused on development of newer technological solutions and products. Developed countries look for proceeds of newer technology products whereas Developing countries are looking to meet challenges that they face. Researchers go for scientific networking. Developed countries have such networking for newer technological approaches whereas researchers in Developing countries within south-south as well as in north-south horizons, very often to put on their immediate challenges.

Researchers are spread across academic and scientific institutes as well as in select industries and NGOs. They look for continued funding for the research projects they undertake. However, most of the funds, though committed, come in installments with terms and conditions. Most of the researchers, in developing countries, are more engaged in documentations and in following administrative processes rather than targeted research. The world is facing several common challenges, including climate change, affordable healthcare, sustainable development,

security for food and energy, etc. Many of these challenges have been converted into Sustainable Development Goals (SDG). Several countries have committed to fulfil SDGs by 2030. Newer tech-savvy, green, cost-effective technologies are also being approached to address most of these challenges. While developed countries are in an advantageous position to utilize newer digital, optical, mechanical, biotechnological technologies, developing countries are working hard to achieve the SDGs with technologies available to them.

Governments across the world need to work on mechanisms to develop ease of doing research. Recently, India has undertaken several new initiatives to ease doing research by giving greater flexibility to researchers and digitalising administrative and financial processes. While funding sources may be complex, it is important to recognize the need for research focused on finding solutions and effectively addressing local and global challenges through evidence-based decision making. This would help in expanding knowledge and understanding, driving innovation and technological advancement, informing policy and decision-making, solving problems and improving lives, building credibility and fostering curiosity. There is a need to create systems to overcome hurdles faced by researchers by giving more flexibility to research institutes, as permissible within host institute norms. The overarching aim is to improve science and innovation outputs, not only in publications but also in translating research and practical solutions that drive economic growth, enhance national security, and achieve technological leadership.