



The Centre for Digital Economic Policy Research (C-DEP) response to:

“Consultation Paper on Encouraging R&D in Telecom, Broadcasting, and IT (ICT) Sectors”

Q14: How can participation of the private sector in R&D be encouraged? Which incentivization model(s) or combination thereof would produce better results: (i) Tax-break model, or (ii) Product-Linked Incentivization model (iii) Any other model. Please provide details of the suggested model(s) in terms of structure, functioning, monitoring, and evaluation.

A14:

In academic literature, technological and scientific innovation is widely acknowledged as a key factor influencing the economic competitiveness and growth potential of businesses within an economy. Research indicates that enterprises capable of successful innovation tend to surpass their global counterparts, generating value for investors, customers, and other stakeholders. Consequently, fostering innovation through reforms to the regulatory and institutional framework governing innovative activities has emerged as a crucial policy goal, both on a national and international scale.

The overall spend of R&D in India is extremely low, 0.5% or so [of GDP], whereas countries such as Korea and Japan 3.5-5% of their GDP. As per data from the World Intellectual Property Organization (WIPO) Patent Cooperation Treaty (PCT), no Indian has appeared. In the telecom sector in India, imports of telecom equipment and latest technology is pervasive as there is a lack of a comprehensive government framework to boost domestic telecom products manufacturing.

In the Economic Survey for 2022 Report, noteworthy observations were made regarding the current state of research and development (R&D) and innovation in India. One key revelation highlights that India seems to be falling short in terms of innovation when compared to the size of its GDP. Another significant finding points out that the Indian government's contribution to Gross Expenditure on Research and Development (GERD), standing at approximately 56%, is notably higher than the contributions made by governments of other leading economies in the field of R&D and innovation, which typically hover below 20%.

Additionally, the report underscores a notable discrepancy in the contribution of the business sector to the total GERD in India, accounting for about 37%. This stands in stark contrast to other major economies like China, the United States, Japan, and the United Kingdom, where the business sector typically contributes an average of around 68%. One of the reasons why business sector investment in R&D has lagged behind is because of traditional models.

We propose a R&D model that encompasses stake based investment in R&D by the private sector.

Structure

The budget requirements for any Government led R&D project can involve commercialization of the project at the outset with interested stakeholders/companies investing a certain amount to



acquire a stake in the project. For example, a budget of 100 crores, may be divided in a manner among 10 interested stakeholders equally so as to avoid any particular investment to have a greater say in the matter of research.

The researchers involved may be chosen at the behest of the stakeholders through a voting system.

Functioning

The model will conduct research independently based on the objectives set it place at the outset of the project without any interference from any stakeholders. However, any subsequent changes to the established objectives may necessitate a voting based system for approval.

The model through commercialization at the outset will be able to pre-define its objectives based on the interests of all the stakeholders involved. Currently, R&D systems majorly conduct research and subsequently explore commercialization options to ensure its viability. By raising funding through a stake based system, commercial viability is already a guarantee, and any other interested companies will be able to purchase post R&D completion through a preference based system where initial stakeholders are given preference for sale for a limited period, and at an additional cost greater than that initial stakeholders will pay for a limited period.

Monitoring & Evaluation

Considering that the R&D is funded through a stake based system, companies have greater accountability to ensure the success of the venture. A viable solution to achieve effective monitoring and evaluation is for each stakeholder to appoint an officer in charge of monitoring the progress of the research, and cross stakeholder collaboration that can effectively address any challenges.

The approach may be classified under what is known as an 'open innovation' model where a project opens itself up to better reach the innovation objectives. By considering the views of stakeholders involved, it may be that the right researchers are chosen, cross-industry collaboration is conducted, and may resolve the issue of commercialization of R&D.