India Needs to be More Innovative

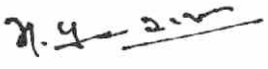
India is the fastest growing major economy of the world, with a large pool of talented manpower. But, it has been faring very bad in terms of innovations, international scientific publications and its investment in science and technology. It is miles behind its Asian counterparts as well as most of the industrialized countries of the world, in creating intellectual property viz patents, trademarks, copyrights etc. Indeed, if we look at our investment in research and development (R&D) which is less than 1% and even below 0.9% of our GDP, it appears pathetic even while since 2003, we have been repetitively setting targets to upscale our R&D investments to 2% of the GDP. In spite of setting an ambitious target of spending 2% of our GDP on R&D in our 10 year science and technology policies of 2003 and 2013, our spending has been at the same pitiable level and we had to repeat the same rhetoric in the science and technology policies of 2003 and of 2013, that we would raise R&D investments to 2% of our GDP in another span of 10 years. According to the data released by the World Intellectual Property Organization (WIPO), India has seen a drop in international patent applications to 1,423 under the Patent Cooperation Treaty in 2015, while the US with 57,385 applications, Japan (44,235), China (29,846) and Korea (14,626) figured in the top-10 list, registering a rise of 20%, 14% and 7%, respectively, from last year. India fared no better in terms of global trademark filings as well, under the Madrid System. It ranked 36th with only 150 trademarks filed in 2015, down from 153 in 2014, when it had seen a more than 70% increase in trademark registrations. It shows a very miserable scenario on the new products front and brand launches. Against a paltry figure of 150 filings, the trademark filings of the US (7,340), Germany (6,831), France (4,021), China (2,401), Japan (2,205) are 14 to 48 times.

Data from the WIPO report highlights that the IITs, though endeavoring to move ahead on research in nanotechnology with over 5,000 scientific papers and 14 patents since 1970, are yet miles behind China, as the Chinese Academy of Sciences tops with 29,591 publications and 705 patent filings. The country has a long distance to go in promoting innovation and research. The figure, when compared to China, is embarrassing low for the elite institutes, considered icons at home.

The reason behind such a lack luster scenario is poor investments in R&D and lack of goal clarity among the premier institutes of technology in the country, especially the IITs and NITs. In response to a Parliamentary question 15 months back, the science and technology minister Harsh Vardhan had accepted that the US and South Korea had invested 2.76% and 4.04% of their GDP respectively on research and development (R&D) compared to 0.88% by India. Even in terms of 'purchasing power parity', Indian

investment in science and technology 2014 was comparatively low. It had invested $36.2 billion whereas China, the US and South Korea had invested $205.4 billion, $429.1 billion and $58.4 billion respectively.

"The private sector's contribution in R&D, as percentage of GDP in India, is only one-third while two-thirds is being contributed by the public sector. Private sector participation in India's R&D has not kept pace with many developed and emerging countries in the world," Dr. Harsh Vardhan had informed the upper House. In absolute terms, India's national R&D expenditure has been estimated to be around Rs 75,000 crores. Indeed, if India has to occupy a front rank among the developed nations, it has to enhance investment in R&D. To ramp up innovations, India needs to think of setting up industry consortiums for most of the emerging areas of high tech manufacturing, with collaboration among the industry, academia and various R & D outfits of the centre and states. India may also think of framing a cooperative research law on the lines of the American "Cooperative Research Act of 1984". Under the present circumstances the consortium approach can be a most feasible approach to enhance meaningful innovations, at a time when India cannot raise the R & D expenses at 2% of the GDP, especially in view of the poor tax GDP-ratio of around 10% for the centre, falling in the range of sub-Saharan Africa. To step-up cooperative research in India, technology development cooperative associations and technology development cooperative agreements need to be promoted. An environment of cooperation for pre-competitive research among the competing firms, R & D organizations and academic institutions needs to be emulated from the industrialized countries, where this model of cooperation in pre-competitive research is successfully perpetuating and flourishing. India, if it makes sincere efforts, can even outshine in making it a bigger means of success for innovations.



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