India's Innovation Index

Critical Insights for a Hopeful Tomorrow

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SCIENTIFIC and technological advancement and ease of doing research have placed India at 38th position in the Global Innovation Index (GII) in the ranking among 139 economies, as released by the World Intellectual Property Organisation (WIPO). A reason for pride, this is an indication of the changing economic and social picture of the country, besides huge investment in human resources development, promoting technology entrepreneurship, and addressing various Sustainable Development Goals (SDGs). As per WIPO statistics, India is steadily improving its position as an innovation hub, jumping nearly 30 points over the last ten years, highlighting the qualitative changes taking place in the country. The main reasons for this growth are a strong startup ecosystem. India currently occupies the third-largest startup ecosystem in the world. While there were only a few startups in 2014, today the number has crossed 1.40 lakh. Over 110 unicorn companies have increased the pace of innovation in the country.

Government policies, the infusion of the digital revolution, and online payments (UPI, net banking) have not only made financial transactions easy but also led to new fintech innovations. Programmes like Atal Innovation Mission, Atal Thinking Labs, and CSIR-JIGYASA, etc., foster creativity in students at the school level. Strengthening of intellectual property rights and simplification of the patent registration process have led to an increase in the number of indigenous patents filed in India. There has been a huge increase in the number of patents granted so far as compared to 2015. Over the past decade, India has been the world's largest exporter of Information and Communication Technology (ICT) services and has also made its mark in achieving quality results at low cost in space technology and pharmaceuticals. New funds for research are channelised through the 'Anusandhan National Research Foundation (ANRF)', including recently announced Research, Development and Innovation (RDI). India is emerging as a top destination worldwide for producing science and engineering graduates.

While India's Gross Expenditure on Research and Development (GERD) has been steadily growing in absolute terms, but in terms of GDP, it has remained stagnant at 0.7% for the last three years. This figure stands in glaring disparity to the global innovation leaders India aspires to compete with: the United States (3.5%), China (2.4%), and South Korea (4.9%). The 2025 report of the GII serves as a stark reminder of a reality check in where we are excelling at 'Innovation Outputs' (what we create) and also need to critically assess where we are neglecting in "Innovation Inputs" (what we spend).

In the past, R&D performance in India has been measured using (GERD), and some indicators of output (patents, publications). In this context, the excellence of innovation matters through the mapping of the public R&D that has been planned. For strategic development, the Public R&D funding in India is heavily skewed towards five ministries (Science & Technology, Defence, Health, Agriculture, and Electronics & IT), which together account for more than 70% of disbursements, with DBT and CSIR alone accounting for ~30%. Geographically, although Delhi NCR accounts for 35% of Public R&D Institutions (PRIs), new innovation hotspots such as Bengaluru and Hyderabad have registered a 12-point increase in research density over the last five years, as against the northeast and central India regions that continue to trail behind in terms of funding and collaboration. Findings