



India Innovation Index 2021: NITI Aayog

For Prelims: NITI Aayog, India Innovation Index

For Mains: India Innovation Index, its Recommendations

Why in News?

Recently, **India Innovation Index Report 2021** was released by [NITI \(National Institution for Transforming India\) Aayog](#) in which Karnataka retained its top position in the major States category.

- This is the third edition of the Report, which **highlights the scope of innovation analysis in the country by drawing on the framework of the [Global Innovation Index](#)**.
- The number of indicators has **increased from 36 (in the India Innovation Index 2020) to 66 (in the India Innovation Index 2021)**.

What is the India Innovation Index?

- **About:**
 - It is a comprehensive tool for the evaluation and development of the country's innovation ecosystem.
 - It ranks the states and the union territories on their innovation performance to build healthy competition amongst them.
- **Institutions Involved:**
 - **NITI Aayog** with the Institute for Competitiveness.
- **Indicators Used:**
 - There are **7 pillars** in the index - five 'Enabler' pillars measure the inputs and two 'Performance' pillars measure the output.
 - The indicators that the survey **uses includes the level and quality of education and parameters such as:**
 - Number of PhD students and knowledge-intensive employment.
 - Enrolment in engineering and technology and number of highly skilled professionals.
 - Investment in R&D and number of patents and trademark applications filed.
 - Internet subscribers.
 - FDI inflows, business environment and safety and legal environment.

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What are the Highlights of the Report?

- **Categories:**
 - The Innovation Index is divided into three categories—major states, Union Territories, and hill and North East states.
- **Major States:**
 - **Top States:** Karnataka topped with a score of 18.05 followed by **Telangana and Haryana**.
 - Karnataka's success is attributed to its **peak performance in attracting [FDI \(Foreign Direct Investment\)](#)** and a large number of [venture capital deals](#).
 - **Bottom States:** Bihar, Odisha and Chhattisgarh scored the lowest on the index, which **put them at the bottom in the “major States” category**.
 - **Chhattisgarh ranked last with 10.97 points.**
- **Hill and North-East States:**
 - Manipur is leading the category followed by Uttarakhand and Meghalaya.
 - Nagaland ranked **last (10th)**.
- **Union territories/Small States:**
 - Chandigarh is the top performer with a Score 27.88 followed by **Delhi and Andaman and Nicobar**.
 - Ladakh Ranked **last (9th)**.
- **Challenges:**
 - On an average, the country has **not performed well in the knowledge worker pillar**, as much as it has in the human capital pillar.
 - The expenditure on **human capital has been unable to create that knowledge base** in the country.
 - Innovation is **skewed against the manufacturing sector** due to the problems pertaining to and the missing middle.
 - Missing middle, i.e., there are too many tiny, informal enterprises, and too few large, formal ones to employ thousands of people.

What are the Recommendations?

- **GDERD (Gross Domestic Expenditure on R&D)** needs **considerable improvement and should touch at least 2%**, which would play an instrumental role in India **achieving the goal of a 5 trillion economy** and further influence its innovative footprint across the globe.
 - Increasing GDERD promotes private sector participation in R&D and **closing the gap**

between industry demand and what the country produces through its education systems.

- Countries that spend less on GDERD **fail to retain their human capital in the long run** and the ability to innovate is dependent on the quality of human capital; **India's GDERD as a percentage of [GDP \(Gross Domestic Product\)](#) stood at about 0.7%.**
- The private sector **needs to pick up pace in R&D**, public expenditure is productive up to some extent; once the growth follows a trajectory, **it is desirable to shift to R&D mostly driven by the private sector.**

[Source: PIB](#)

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