

PRESS RELEASE

Foundation for Advancing Science and Technology (FAST India) releases State of Industry R&D in India for the Chemical sector in collaboration with IIFL Securities

20 June 2024, New Delhi: FAST India released its sectoral brief on the Chemical sector for its series on the State of Industrial research and development (R&D) in India in collaboration with IIFL Securities. The latest brief presents an in-depth analysis of R&D trends, innovation outputs, and comparative performance metrics of major Indian chemical sector firms against their global counterparts. The report underscores significant disparities in R&D intensity, the proportion of PhD employees, patent output, and publication rates, providing important insights for policymakers and industry stakeholders.

The report reveals critical insights into the performance of Indian chemical firms in various domains of R&D and innovation, comparing them with their global counterparts as well as categorising Indian firms into high-revenue and low-revenue clusters to provide a more nuanced analysis:

1. **R&D Intensity:**
 - a. Corteva has the highest R&D intensity at 7.0%, more than 2.3x the second ranked firm PI Industries. Overall, the global chemical firms show **1.7x** higher R&D intensity compared to the Indian firms.
 - b. SRF performs best on R&D intensity in the high revenue cluster with 1.1%. UPL follows closely with 1.0%, though it has higher expenditure in R&D than SRF.
2. **Proportion of PhD Employees:**
 - a. Global firms and Indian firms had the same median proportion of PhD employees.
 - b. PI Industries had 3.4% of employees with a PhD, ranking first among all firms studied for this parameter, showing a prioritisation of hiring researchers.
 - c. Coromandel International ranks fifth among all firms for the proportion of PhD employees indicators.
3. **Publications:**
 - a. Overall global firms produced **3.4x** publications per USD billion revenue than Indian firms.
 - b. Tata Chemicals ranks the highest in publications by revenue among Indian firms and fourth overall, showing an impressive performance.
 - c. Though Asian Paints has a higher absolute number of publications, it ranks much lower at 11th overall.
 - d. Ecolab ranks first overall in publications by revenue.
4. **Patent Output:**
 - a. Indian firms significantly lag in patent output, with global firms producing **14.1x** the number of patents per billion USD revenue as compared to Indian firms.
 - b. The top eight ranked firms are global in the patents by revenue parameter. LG Chem is ranked first with **2.6x** patents by revenue of Sika AG, which is ranked second.

Conclusion

A few key Indian firms exhibit a strong performance in comparison to their global counterparts. Firms like PI Industries, UPL, and SRF show impressive performance and punch above their weight.

While Indian firms are competitive with global firms in input parameters, there is still a substantial gap in patents and publications per revenue, highlighting the need for increased focus on innovation and intellectual property.

For a detailed analysis and further information, the full brief is available for stakeholders and interested parties.

About FAST India:

The Foundation for Advancing Science & Technology (FAST India), a nonprofit initiative co-founded by Ashish Dhawan (Founder, of Ashoka University and The Convergence Foundation) and Varun Aggarwal (Co-founder, of Aspiring Minds and The Change Engine), is dedicated to enhancing the Science and Technology ecosystem in India.

In the coming decade, FAST India aims to position India as one of the top three global giants in Science and Technology, harnessing India's immense potential to drive progress on the economic and societal fronts. In the short term, FAST India's objectives include propelling five Indian universities into the top 100 research ranks, tripling the R&D expenditure in the industry, and ensuring that five Indian firms feature in the world's 100 most innovative companies list.

To learn more about FAST India and its transformative initiatives, please visit <https://fast-india.org/>. For press inquiries, please reach out to info@fast-india.org