

BSE 100 companies boost R&D, innovation challenges persist



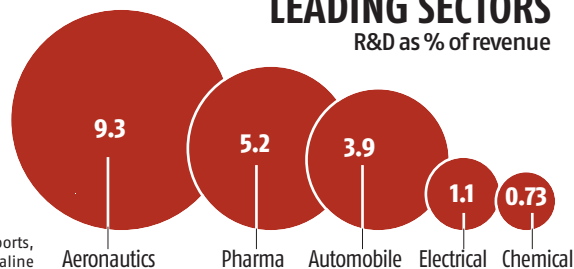
Source: Company annual reports, Bloomberg, Capitaline

INNOVATION PUSH

| | R&D spending in FY24 | |
|-----------------------|----------------------|--------------|
| | ₹ crore | % of revenue |
| Hindustan Aeronautics | 2,826 | 9.3 |
| Dr Reddy's Labs | 2,113 | 7.54 |
| Lupin | 1,484 | 7.41 |
| Tata Motors | 29,398 | 6.71 |
| Cipla | 1,571 | 6.09 |

LEADING SECTORS

R&D as % of revenue



R&D spend grows 152% in 5 yrs to ₹63,072 crore in FY24

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Mumbai, 4 October

Research and development (R&D) spending by BSE 100 companies has grown steadily, rising from 0.89 per cent of revenue in FY20 to 1.32 per cent in FY24, averaging around 1 per cent over the period in-between, according to data compiled from *Bloomberg* and company annual reports.

Also, these companies more than doubled their R&D spending in absolute terms over these five years: From ₹25,041 crore to ₹63,072 crore.

While this reflects a prioritisation of innovation, corporate R&D

investment remains relatively conservative. Experts note that only a handful of companies have significantly increased their R&D spend, indicating that India Inc still faces a long road in ramping up its innovation efforts.

Leading R&D spenders as a percentage of revenue for FY24 include Hindustan Aeronautics, Dr Reddy's Laboratories, and Lupin. Public-sector defence equipment manufacturer Hindustan Aeronautics allocated ₹2,826.24 crore to R&D, up 13.3 per cent year-on-year (Y-o-Y), representing 9.3 per cent of its ₹30,381 crore revenue. Key achievements included the indigenous design of a basic trainer aircraft and the maiden flight of the light combat aircraft (LCA) naval trainer prototype.

Dr Reddy's Laboratories invested

₹2,113 crore in R&D last financial year, a 21 per cent increase Y-o-Y, amounting to 7.5 per cent of its ₹28,011 crore revenue. The pharma company focused on complex generics, biosimilars, and AI-driven drug development, introducing digital health solutions such as Nerivio for migraines and DailyBloom IBS for irritable bowel syndrome, it said in its annual report.

Another pharma major Lupin's R&D spend rose 17 per cent Y-o-Y to ₹1,484 crore, accounting for 7.4 per cent of its ₹20,011 crore revenue. The company is accelerating drug discovery through AI and expanding its biosimilar portfolio in international markets, according to its annual report.

Shivanshu Gupta, senior partner at McKinsey, noted that the pharmaceutical sector's shift towards

specialty medicines as generics become commoditised will require substantially higher R&D investments. The health-care and medtech sectors, though smaller, are expected to see increased R&D activity, especially as the adoption of medical technologies expands in tier 2 and tier 3 cities. Local R&D, Gupta added, will be key to scaling these efforts profitably as global majors may be less active in these markets.

Email queries sent to Hindustan Aeronautics, Dr Reddy's Laboratories, and Lupin did not elicit response.

In FY24, based on absolute terms, Tata Motors, Reliance Industries, and Hindustan Aeronautics emerged as the top three spenders. Auto major Tata Motors' R&D outlay jumped 45 per cent Y-o-Y to ₹29,398 crore, representing 6.7 per cent of its ₹4,37,928 crore revenue. Turn to Page 9 ▶

Govt spending dominates R&D investment

The company, according to an email response to Business Standard's queries, is focusing on expanding its electric vehicle (EV) portfolio and developing hydrogen-powered internal combustion engines. Its India business secured 333 patents and 145 design applications, while its UK subsidiary, Jaguar Land Rover (JLR), obtained 337 patents and 279 design applications in FY24.

Reliance Industries increased its R&D spending by 21 per cent to ₹3,643 crore, accounting for 0.4 per cent of its ₹9,14,472 crore revenue. The conglomerate emphasised bio-innovations and chemical recycling, with Chairman and Managing Director Mukesh Ambani at the annual general meeting highlighting that its transformation into a deep-tech enterprise shall be achieved via in-house technological advancements and an AI-native digital infrastructure. An e-mail sent to Reliance did not elicit any response.

Energy company Adani Power recorded its first R&D expenditure in five years at ₹1.1 crore in

FY24, though the company did not comment on its future R&D plans.

India ranks 40th among 132 economies and leads among lower-middle-income economies in the Global Innovation Index, according to the World Intellectual Property Organization. But the country's gross expenditure on research and development (GERD) stands at 0.64 per cent of GDP (based on the latest available data from the Ministry of Science and Technology for FY21), significantly lower than that of the U.S. (3.4 per cent), Germany (3.1 per cent), and China (2.4 per cent).

According to S Ananthpadmanabhan, partner at Deloitte India, insufficient funding remains a key barrier to expanding R&D efforts in the country. High risks and uncertainties deter private investors and venture capitalists, while a shortage of skilled talent — exacerbated by brain drain — further limits R&D potential. Additionally, shrinking fiscal incentives for R&D and a complex

patenting process add to the challenges.

Government spending dominates R&D investment at 43.7 per cent of total, with the private sector contributing 36.4 per cent, led by defence in the public sector, and pharmaceuticals, IT, chemicals and biotechnology in the private sector. "The concentration of R&D in certain fields needs to broaden for India to become an R&D hub," said Ananthpadmanabhan. He emphasised the importance of creating an ecosystem that attracts R&D investments across various industries.

To address these issues, the government announced the Anusandhan National Research Fund for basic research and prototype development in the 2024-25 Union Budget. A ₹1 trillion financing pool is also being introduced to stimulate private sector-driven research and innovation, alongside a ₹1,000 crore venture capital fund aimed at expanding India's space economy fivefold in 10 years.

Kristy Hsu, director of the

Taiwan ASEAN Studies Centre, pointed out that the government's production-linked incentive (PLI) scheme is focused on "replication", but rapid technological advancement necessitates investment in next-generation technologies like advanced semiconductor chips.

Aerospace, pharmaceuticals, and automobiles are the top sectors by percentage of revenue spent on R&D, while automobiles, pharmaceuticals, and technology lead in absolute spending.

"There has to be disruption for R&D growth, and that's now happening in industry," said Gupta of McKinsey. He noted that geopolitical factors are prompting multinational corporations to seek manufacturers and suppliers in India, with the number of global companies establishing engineering R&D centers in the country rising from around 1,100 to nearly 1,500 in recent years.

Building strong R&D capabilities is crucial for attracting further global investments, which are key to meeting India's innovation aspirations, he added.