

Smart Move: A Career in R&D

Economic growth of a nation is determined by the invention and application of new technologies available. Research and development is one sector of investing where these new technologies are developed and driven to action. Investigative activities undertaken by the R&D sector proves to be important for the growth of a business or a nation as a whole. It is a means of acknowledging the future prospects of a business by developing new products and experimenting ways to improve and expand their operations.

In today's innovation driven world R&D has acquired a major position, important for economic competitiveness and national development. In developed economies, the percentage invested in R&D sector is 70-80 per cent accounted for by its industries. Conversely in the developing economies, the amount invested in R&D sector is minuscule, accounting to only few firms investing in such activities. In the Indian scenario, it is mainly the public enterprises that are spending their profits on R&D to stay ahead of the technological advances globally. Although the investments are taking place, India's R&D share stands at a stagnated position of a meager of 2.7 per cent (0.67% of GDP) in the global market as compared to 31.1 per cent in US, Europe 24.5 per cent and China 17.5 per cent as per Battelle forecast for 2014.

Career Prospects

According to a report by UNESCO, North America, the United States and Canada spend 2.7% and 1.6% of GDP on R&D respectively. Latin America and the Caribbean, Brazil reports the highest level of R&D investment (1.3%), followed by Argentina (0.6%), Costa Rica (0.6%) and Mexico (0.5%). A considerable variation in R&D investment (as a percentage of GDP) can be seen across the countries in Central Asia (0.1 - 0.3%), East Asia (0.1 - 4.2%), and South and West Asia (0.1 - 0.6%) with the following countries being the top investors in the respective regions: Georgia (0.3%), the Republic of Korea (4.2%) and India (0.6%) respectively. R&D investment in most of the Arab States remains lower than 0.5%, though there are a few exceptions: Tunisia, Egypt, Morocco, Saudi Arabia and the United Arab Emirates (ranging from 0.6 - 1.0%). However, with the growth of start-ups in the country, R&D activities are set to take a leap in the near future. According to the experts, a career in R&D is predominantly attractive today as these skills are short in supply. While e-commerce giants, technology and internet based companies along with those in life sciences and telecommunication are investing heavily in R&D activities, career prospects do seem brighter for the R&D aspirants in the coming future.

Today there are over 500 MNCs vying for researchers from India, pressing more importance on R&D. With rapid advances in science and technology there is a growing recognition of R&D activities in our nation. Therefore, there is a need of synergetic partnership between institutions and industries to create a dynamic environment for the students to learn the real life problems and prospects of the industries. Various renowned companies are setting up their research and development facilities in metro cities like Bangalore and Mumbai along with well-established R&D labs and organizations encouraging their employees for PhD through affiliation through colleges. Such organizations create a structure in which the employees are encouraged to engage themselves to acquire knowledge in their respective fields, empowering them to adapt to the changing scenarios with an ease.



R&D



Dr Muhammed Majeed
Founder and Chairman,
Sami - Sabinsa Group

FOR FRESHERS**Expectations-**

Sami-Sabinsa expects three key factors

- **Attitude:** Ready to adapt to the environment. Presentation skills are a key factor to asses. Ability to learn new things.

- **Aptitude:** Problem-solving skills (depending upon the recent projects handled)

- **Tech-savvy:** Must have done at least two projects as part of his/her academics. The technical interaction revolves around those projects

Qualifications-

The basic qualifications we seek in freshers include preferably Graduation / Post Graduation students (B. Pharm / M. Pharm / M.S. / Chemical Engineering / Ph. D.)

The package-

Depending upon the institute where the candidate

is hired, Sami offers the best package for freshers in the industry. With a candidate with more than 5 years of experience, approximately 25 to 30 per cent on the existing CTC is offered.

Technical Requirements-

As a fresher, the candidate must know the following

- Basics of Chemistry
- Core research
- Know the practical aspects – reactions etc.

Campus Recruitment-

Yes, we select candidates from campus interviews. Sami approaches the best Institutes in the country for bringing in the right talent onboard. Among few are IIM, SIT, MS Ramayya, Amity University, etc.

Hiring number/ year-

Depending upon the requirement. Maybe 10 to 15 every year.

Research as a profession requires passion driven by innovation to transform tomorrow's technologies and create a platform for an organization to grow. According to a report by World Bank on 'Unleashing India's innovation potential' estimates that there are around three lakh scientists and innovators in the country. Aspirants, wishing to take up research and development as a career choice require a master's degree covering the relevant area of research and specialization along with comprehensive knowledge. Biotechnology, manufacturing, pharma industry or software field are some of the avenues to explore by the aspirants in this field.

The government of India has taken up various steps to promote the R&D sector. With the 'Make in India' campaign launched by Prime Minister Narendra Modi, innovation and research will play a significant role in the coming year. India is set to witness a growth in agricultural, IT and pharmaceutical sectors with government investing huge amounts to build research centres specifically dedicated for R&D in these fields. Also, engineering R&D is set to witness a growth at a CAGR of 14 per cent to reach \$42billion while it stood around \$14.7 billion in 2012 (a study by management consulting firm Zinnov). Apart from these sectors, the food business is investing heavily on R&D activities along with travel and online commerce sites. Therefore, the future seems bright for the aspirants as the research and development opportunities are growing with start-ups escalating across sectors from technology to consumer industry. **NS**