

The start-up nation

India must follow three Es model — education, entrepreneurship, employment — to build a robust ecosystem that can sustain economic growth



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IN THE LAST 10 years, the growth of the Indian economy has been fuelled by three once-in-a-generation events. One, from the government's side, the creation and roll-out of UPI expanded access to digital payments for crores of citizens. Two, from the industry side, the telecom revolution made affordable data accessible to crores. Three, the pandemic gave a huge fillip to e-commerce and startups. To sustain this growth, there is a need for solutions to create a long-term roadmap for a robust Indian economy. Integration of certain key sub-systems can play a major role.

Multilateral institutions have projected India as a "bright spot" on the global economic horizon. In 2024, India's estimated nominal GDP is \$3.9 trillion. India took 60 years after Independence to reach the \$1 trillion GDP mark. The second trillion took seven years, and the third, achieved in 2019, took five. In 2022, we surpassed the UK to become the fifth-largest economy.

India is now home to the third largest startup ecosystem with more than 1.4 lakh Department for Promotion of Industry and Internal Trade-registered startups. It adds a greater number of startups per day than any other country and has witnessed the addition of one unicorn every 20 days over the last seven to eight years. This ecosystem has been fed by top-tier higher education institutions (HEIs) like the IITs and IIMs and those in Tier II/III cities.

The government's push towards capital expenditure coupled with telcos-led internet penetration and data accessibility has played a huge role in the development of the startup ecosystem. With one of the cheapest data rates in the world, India is home to over 80 crore internet users and 120 crore cell phone users. Every farmer added to the digital ecosystem presents an opportunity for application of new agri-based solutions, every student added for affordable e-learning, and every rural citizen for financial inclusion. For a startup, this expansion lowers the cost of acquiring customers dramatically. How can we build on this momentum to achieve the exponential growth that India envisages to become *Viksit Bharat* by 2047?

In 2023, India surpassed China to become the most populous country in the world. Estimates indicate that India will remain among the youngest countries till 2070. This has implications for our higher education system. Currently, over 4.3 crore students in India are enrolled in 1,168 universities and 45,473 colleges. As per AISHE reports, around a crore graduates join the workforce annually. This number is estimated to increase to 1.75 crore by 2035 and 2.4 crore by 2050. The rate of growth of employment opportunities based on students seeking jobs after graduation may not be adequate. With the advent of Industry 5.0 based technologies like AI and Machine



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Learning, Robotics and Mechatronics, the rate of recruitment for routine jobs may decrease, and the need for highly-skilled employees will rise.

Can innovation and entrepreneurship present a route through which India may amplify the rate of employment opportunities? India's startup data since 2017 presents a promising picture. DPIIT-recognised startups have created more than 15.5 lakh direct job opportunities. In 2023, these startups generated 3.9 lakh jobs, representing a 46.6 per cent year-on-year increase, and a 217.3 per cent increase over a five-year period. In the US, in 2022, nearly 37 lakh new jobs were created by its startup ecosystem. According to a 2024 CII Report, start-ups and their corporate counterparts injected an impressive \$140 billion into the Indian economy in FY23, that is, nearly 4 per cent of India's GDP. Compare this to the UK where startups annually contribute £196 billion. This amounted to 8.6 per cent of the UK's GDP in FY23. There is significant room for growth in India.

A success driver of the startup economies of the US and UK is the proportion of students opting for entrepreneurship post higher education. A 2021 global survey of 2.67 lakh undergraduate and graduate students from 58 countries revealed that around 11 per cent own and run businesses. In the US, 16 per cent of students plan to start their own businesses; about 5 per cent in the UK and 4 per cent in China choose to pursue an entrepreneurial career.

It is appropriate to benchmark ourselves with the entrepreneurship trends in leading economies. Today, as shown by the August 2024 survey of IIT Bombay graduates, in the best of Indian HEIs, less than 2 per cent of graduating students opt for entrepreneurship. What would be the impact if Indian graduates made choices like their peers in other leading economies?

If 5 per cent of Indian students opted for entrepreneurship, the country would have 5 lakh new entrepreneurs every year. Assuming a 90 per cent failure rate, nearly 50,000 startups would survive. Given the present averages, this would create 5.5 lakh direct jobs and nearly 55 lakh indirect and gig jobs annually. It would mean contributing an additional 1 per cent to the present labour force every year; or adding jobs equivalent to those created by five con-

glomerates of the size of the Tata group every year. This is a simplified perspective to convey the magnitude of the opportunities that can be created by intentionally integrating the three Es of education, entrepreneurship and employment to achieve rapid economic growth.

We need to rethink the success metrics of HEIs. A major metric for any HEI is limited to its ability to place students in high-paying jobs. To catalyse the 3E model, we need to add the creation of students- and researchers-led entrepreneurial ventures as an important metric to measure and rank HEIs. Further, achieving success in this new metric would not be possible without a systematic approach involving academia-industry linkage for nurturing, supporting, mentoring, and funding graduate, postgraduate, doctoral and faculty-level research ideas into successful ventures. The experience of leading economies indicates the potential of this linkage. Over a 20-year period, academic tech transfer in the US contributed over \$1 trillion to industry output, over half a trillion to GDP, and created over 40 lakh jobs. Inextricably linked to the success of such industry-academia osmosis is the US's global leadership in R&D expenditure at 3.4 per cent of the GDP. India's R&D investments stand at 0.7 per cent. Of this, R&D in HEIs is only about 10 per cent.

To compete with leading economies, India will need to transition from looking at higher education as a social sector, to developing it from a strategic perspective. Integrating higher education with entrepreneurship through a systematic approach in pedagogy and research, and building a robust academia-industry interface can have an impressive effect on economic growth while also creating employment. From a linear approach to growth with individual positive outcomes in education, entrepreneurship, and employment, India needs to transition to a synergistic paradigm where education, entrepreneurship and employment are integrated for achieving exponential economic growth during the *Amrit Kaal*.

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