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Unemployment and demographic dividend

Youth participation in the labour market is on a declining trend, mainly due to greater participation in education

HT ARCHIVE

The unemployment problem in India is becoming centred around educated youth, a longer-term trend evident for some decades

India remains poised to take advantage of its demographic dividend with strong improvements in education levels, which are a key determinant of accessing better quality jobs. At the same time, youths' aspirations are evolving, which need to be matched with the type of employment available in the labour market. These are among the key findings of the "India Employment Report 2024: Youth education, employment and skills" by the Institute for Human Development (IHD) and International Labour Organization (ILO), which examine the challenge of youth employment in the context of the emerging economic, labour market, educational, and skills scenarios in India, and the changes over the past two decades. It is primarily based on data from the National Sample Surveys and the Periodic Labour Force Surveys.

With a large proportion of the working-age population, India is expected to be in the potential demographic dividend zone for at least another decade. Although the youth population, at 27% of the total population in 2021, is expected to decline to 23% by 2036, around seven to eight million youths are added to the labour force each year. Youth participation in the labour market is on a declining trend, mainly due to greater participation in education. Education levels have improved among the youth, and this is indeed a welcome development as education is a key determinant of accessing better jobs.

With higher levels of education, youths are much more likely to be employed in formal and regular salaried jobs and tend to more actively engage in the high productivity sectors, primarily the tertiary sector, such as business, telecom, finance and information technology, compared to the less educated. The latter are more likely to be employed in the primary (agriculture) and secondary sectors (manufacturing and construction). Youth with technical degrees and graduate diplomas are involved more in the tertiary sector. While the report points out that although access to education had increased significantly between 2000 and 2023, differences persist across socio-economic classes, with implications for access to better quality jobs.

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The rate of employment diversification, access to regular jobs and shift towards medium/high-skill jobs were higher among the youth, though the shift towards skilled jobs did not fully meet the growing demand for such jobs. Technological change and digitalisation are having a profound impact on the demand for skills and certain types of employment. Young people are also better represented in the gig economy, although this has led to new challenges in terms of job quality and security.

Overall, the youth unemployment rate declined after 2017-18 dropping to 12.4% in 2021-22 and further to 10% in 2022-23. The rates of unemployment rose with levels of education, and since more and more youth were accessing education, the percentage of unemployed youth with secondary and above education among the total unemployed has increased from 54.2% in 1999-00 to 65.7% in 2021-22. It is evident that the nature of the unemployment problem becoming centred around educated youth. It should be noted that this is a longer-term trend evident for some decades, reflecting the rising level of education amongst youth.

Beyond a narrow view of the unemployed, there is a large proportion of youth, particularly young women, "not in employment, education or training (NEET)", which has also fallen since 2018-19 but remains significantly higher for young women (48.4% versus 9.8% for young men). As highlighted in the report, it is important to distinguish the two main types of NEET categories, those unemployed and those out of the labour force, for both analytical and policy purposes. The second group, young people out of the labour force, is a much larger majority group and dominated by females (accounting for 95% of this group).

While focusing on the challenges of youth employment, the report also highlights broader trends in the Indian labour market, which indicate improvements in outcomes along with persisting and new challenges, including those generated by the Covid-19 pandemic. The labour force participation rate, especially for women, and the unemployment rate registered improvement post-2019. The share of agriculture in employment increased from 42.4% in 2019 to 46.4% in 2021, as agriculture and self-employment emerged as the employer of last resort during the pandemic. However, this reversal of structural transformation appears to have slowed down between 2022 and 2023. Concomitantly, employment in the manufacturing sector is now increasing. The significance of the manufacturing sector becomes evident when considering that most of the additional employment generated in this sector was regular and self-employment types, with much higher earnings and productivity compared to construction, agriculture and some services, like trade.

The Make in India and Production Linked Incentive schemes can play a critical role in making India a manufacturing hub, thus inserting the country into global value chains and fostering industrial growth, which will support the creation of jobs for young people. With rapid technological change, there are many opportunities for young people. However, harnessing these opportunities requires rapid uptake of new skills.

The skills landscape in India has also undergone a transformation with the impetus of filling supply-demand gaps and skill mismatches. The Indian skills training scenario has changed significantly over the past 25 years with the setting up of a national skills mission and formulation of two national skills policies to guide skills development. To increase the proportion of youth with technical skills, the next-generation skills and apprenticeship ecosystem needs to be based on a stronger partnership with the private sector.

To realise the demographic dividend that India stands ready to seize, five key policy areas, which apply more generally and specifically for youth in India, must remain the focus: One, promoting job creation/making production and growth more employment-intensive; two, improving employment quality; three, addressing labour market inequalities; four, strengthening skills and active labour market policies; and five, bridging the knowledge deficits in the labour market patterns and youth employment.

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Need more women representation in science

BIJU DHARAMAPALAN

Women aspiring to pursue scientific research often encounter barriers in the form of stereotypes and inadequate mentorship opportunities

The underrepresentation of women in science, technology, engineering, and mathematics (STEM) fields is a complex issue with multiple contributing factors. Apart from societal bias towards women opting for careers in Science and technology, lack of support from the peer professional group in their workplace is also a severe issue. It is challenging for women to venture into scientific research without the support of the peer community dominated by their male counterparts. In such a scenario, special schemes or initiatives targeting women in scientific research can be beneficial in addressing systemic barriers and inequalities that women may face in STEM fields. These schemes can provide targeted support to increase the participation and advancement of women in these fields.

The Department of Science and Technology (DST),Govt of India recognises the importance of inclusivity and diversity in driving scientific innovation and progress. To address the underrepresentation of women in the

field of Science and Technology (S&T), DST has initiated the 'Women in Science and Engineering-KIRAN (WISE-KIRAN)' scheme. This programme aims to empower women from various backgrounds and walks of life, providing them with opportunities to participate and excel actively in S&T domains. WISE-KIRAN is designed to be a holistic initiative addressing a wide range of challenges women encounter in their scientific journeys. These challenges may include societal stereotypes and biases, limited access to resources and opportunities, lack of mentorship and networking, and work-life balance issues. The scheme offers diverse programmes and interventions to support women at different stages of their scientific careers. These programmes may include:

1. Educational and training initiatives to encourage girls and young women to pursue S&T subjects and careers.
2. Scholarships, fellowships, and research grants to support women in higher education and research; e.g., WISE-PhD and WISE-PDF.
3. Mentorship programmes to connect aspiring female scientists with established professionals in their field.
4. Capacity-building workshops and skill development programmes to enhance women's scientific expertise and leadership abilities; e.g., WISE Internship in Intellectual Property Rights (WISE-IPR) .
5. Networking events and conferences to facilitate collaboration, knowledge-sharing, and career advancement opportunities for women in S&T, e.g., Women International Grant Support (WINGS). Women's Instinct for Developing and Ushering in Scientific Heights & Innovations (WIDUSHI) is a unique initiative from the Government of India to support women scientists on the verge of retirement and also the women scientists who are not in permanent positions but are active researchers and continuously excelling in the research field.

Through the Consolidation of University Research for Innovation and Excellence (CURIE) programme, the DST also supports infrastructure development in Women's Institutions, especially women's universities and post-graduate colleges. It assists women's institutions in setting up cutting-edge research infrastructure to enhance their research capabilities and elevate their research and development (R&D) efforts, ultimately striving for excellence in the Science & Technology (S&T) domain. The DST also supports young girls in igniting interest in STEM disciplines. The Vigyan Jyoti programme presents a crucial avenue for young girls to explore and excel in Science and technology.

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Designing science curriculum aligned with NEP

DR BIJU DHARMAPALAN AND DR SHIVAPRASAD

Science is so dynamic that whatever one learns during university education becomes obsolete within a few years. So is the case of science education. Until and unless we equip our youngsters to take up the challenges the present generation faces, there is no meaning in imparting education. Even when the government has developed progressive steps by implementing NEP 2020 across the country, many universities have failed to understand the essence of the new education policy. In many universities, especially in science subjects, the syllabus is put forth to satisfy the requirements of the 4-year undergraduate programme—just a few additions and deletions to satisfy the policymakers. The concept of a transdisciplinary mode of education is not well-received by academicians. Many still doubt how studying humanities or arts subjects can help science students. They have followed the old philosophy of compartmentalisation and the rote learning approach. This is reflected in the new syllabus formulated for the 4-year undergraduate programme in science subjects offered in many universities. Until and unless teachers realise the need to integrate various subjects, it will not be effectively communicated to the students. Even in science subjects, our universities still follow the traditional compartmentalised system of departments, where even people from closely related areas rarely interact. The unhealthy competition between various science departments continues to this day. The vision of NEP 2020 to create aethically and culturally strong workforce for the country's future.

Education has seen tremendous change in its delivery and purpose after the covid-19 pandemic. Earlier generations considered education as a means of gathering knowledge and acquiring a job through it. However, for the present generation, the sole motive is to get a job or rise to the level of a job generator as early as possible; gaining knowledge is never their priority. Science students usually aspire to pursue a career in academics, research and development, science administration, industry or media houses. The requirements of each category of students are entirely different, and education should be designed in such a manner that the needs of every category of students are addressed. Academicians should prioritise these while designing the syllabus for science courses. They should foresee the potential application of the contents of the syllabus and convey it to the students.

Designing science education for the next century requires a forward-thinking approach that equips learners with the skills and knowledge necessary to navigate an increasingly complex and rapidly evolving world. Academicians should focus on the following points while designing a science curriculum,

FOUNDATIONAL KNOWLEDGE:

Start with a solid foundation in core scientific principles across disciplines such as physics, chemistry, biology, mathematics, earth sciences, arts and humanities. Even fundamentals of engineering and management should be included. The syllabus should emphasise understanding the scientific method, critical thinking, and problem-solving skills. Science communication should be included as a mandatory subject for all science streams.

TECHNOLOGY INTEGRATION:

Integrate technology into science education to reflect its pervasive role in modern research and innovation. This includes teaching coding, data analysis, simulation modelling, and utilising virtual and augmented reality tools for immersive learning experiences. Every science student should be taught with a strong foundation in programming languages like R, Phyton, PEARL etc.

EXPERIENTIAL LEARNING:

Prioritise hands-on, inquiry-based learning experiences that allow students to engage with scientific concepts actively. This could involve laboratory experiments, field trips, project-based learning, and collaborations with local research institutions or industries.Design a curriculum that integrates research experiences into coursework. Incorporate inquiry-based learning activities, laboratory experiments, and research projects into core science courses to provide hands-on research experience and develop critical thinking and problem-solving skills. Even for practical sessions each student should be given freedom to come out with their own procedures and solutions rather than copying from their senior's practical record book or whatever their teachers give. In many colleges, for biochemistry practicals, teachers do the practical sessions parallelly during the examination, and a student is made to pass or fail based on the value the teacher gets as a standard. This destroys the very essence of science teaching.

INITIATIVE START-UP CULTURE:

The culture of innovation and entrepreneurship should be initiated from the first year of studies itself. Students should be taught how to register a new company, start a bank account, find angel investors, etc., through real-life experience by mentoring them to register a company during their first year of study. Every student should be made part of a company registered from their campus and this should be given due credit in the final evaluation.

ETHICAL AND SOCIETAL IMPLICATIONS:

Teach students to evaluate scientific advancements' ethical and societal implications critically. This includes discussions on topics such as genetic engineering, artificial intelligence, biotechnology, climate change, environmental issues and the responsible use of scientific knowledge to benefit society.

RESTRUCTURE THE EXAMINATION PATTERN:

The present examination pattern that supports only students who are trained in rote learning should be abolished. In many universities, marks are given based on the number of pages a student writes rather than its content. Instead, the questions should be made into an application format that can assess a student's creativity and rational thinking. Even if a student writes the answer in a single sentence, they should be given full credit if the answer is appropriate.

GLOBAL PERSPECTIVES:

Provide opportunities for students to explore science from a global perspective, recognising cultural diversity and the interconnectedness of scientific issues across borders. This could involve studying international research collaborations, science diplomacy, science policy ,global health challenges, geopolitics of space and cross-cultural approaches to scientific inquiry. This will enhance their global outlook while addressing scientific solutions.

PARTNERSHIPS AND COMMUNITY ENGAGEMENT:

Foster partnerships with local communities, businesses, universities, and research institutions to enrich science education through mentorship programs, internships, guest lectures, and collaborative projects. Encourage collaborative research projects between industry and research institutions. These projects can involve interdisciplinary teams of scientists working together to address complex scientific questions or tackle real-world problems.For example, universities should include issues affecting the local community in the syllabus and integrate with the research institutions in the region to find a solution. Such trained students can even be given priority in scientific jobs in these research institutions. This helps students see the real-world applications of science and fosters a sense of belonging within the broader scientific community.

By implementing these strategies, our new four-year undergraduate science programs will equip our students to lead self-reliant lives. It will also help us develop a robust scientific community capable of addressing the challenges faced by the country and taking us to the Viksit Bharat by 2047.

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कार्यक्रम सुभारती विश्वविद्यालय में एलुमनाई अवार्ड समारोह

भौतिक संसाधनों का करें अधिकतम उपयोग

ग्रीन इंडिया

मेरठ। स्वामी विवेकानंद सुभारती विश्वविद्यालय में एलुमनाई अवार्ड समारोह का आयोजन किया गया। कार्यक्रम का आयोजन मांगल्य प्रेक्षागृह में किया गया। मुख्य अतिथि देश के जाने माने पत्रकार व प्रबंधन विशेषज्ञ एन. रघुरामन ने शिरकत की।

कार्यक्रम का शुभारंभ मुख्य अतिथि एन. रघुरामन, कुलपति मेजर जनरल डॉ.जी.के.थपलियाल, प्रशिक्षक निर्मल भटनागर, कार्यक्रम संयोजक डॉ.आर.के. घई, सह संयोजक डॉ.सुमित गोयल, प्रतिकुलपति डॉ.अभय शंकरगौड़ा ने मां सरस्वती के समक्ष दीप प्रज्वलित कर किया। इस दौरान फाइन आर्ट कॉलेज के विद्यार्थियों ने सरस्वती वंदना प्रस्तुत की। कार्यक्रम संयोजक डीन एवं डायरेक्टर फैकल्टी ऑफ मैनेजमेंट एण्ड कॉमर्स डॉ. आर.के. घई ने स्वागत भाषण प्रस्तुत किया। उन्होंने कहा कि एलुमनाई अवार्ड का उद्देश्य विश्वविद्यालय से पास होकर विभिन्न क्षेत्रों में सेवाएं दे रहे पूर्व छात्रों को प्रोत्साहित करना है। उन्होंने बताया कि विश्वविद्यालय के 9 पुरातन छात्र-छात्राओं को पुरस्कार प्रदान कर सम्मानित किया गया। जिसमें डेंटल कॉलेज के डॉ. विवेक गौरव, फिजिकल एजुकेशन के डॉ. नमन कुमार सारस्वत, फार्मेसी कॉलेज के डॉ. सोमकेतु त्यागी, फिजियोथैरेपी कॉलेज के डॉ. सचिन गोयल, परफॉर्मिंग आर्ट से डॉ. रक्षा सिंह डेविड, नर्सिंग कॉलेज से डॉ. जुबेर, नर्सिंग कॉलेज से ही डॉ. रजनी इमानवेल, लॉ कॉलेज से मि रमिस्ठधर द्विवेदी एवं लॉ कॉलेज से ही मिस दिव्या चिनदेलिया को सम्मानित किया गया। कुलपति मेजर जनरल डॉ. जी. के. थपलियाल ने कहा कि एलुमनाई विद्यार्थी विश्वविद्यालय का प्रतिनिधि होता है, जो अपनी योग्यता से कार्य कर अपना व विश्वविद्यालय का नाम रोशन करता है। उन्होंने कहा कि सुभारती विश्वविद्यालय अपने विद्यार्थियों के साथ एक परिवार के रूप में हमेशा रिश्ता रखता है ताकि कोर्स पूर्ण होने के बाद विद्यार्थी को अगर किसी मार्ग दर्शन की आवश्यकता पड़े तो विश्वविद्यालय के शिक्षक उसे सही परामर्श दे सके।

उन्होंने बताया कि सुभारती विश्वविद्यालय अपने विद्यार्थियों में कौशल विकास के गुण स्थापित कर रहा है। मुख्य कार्यकारी अधिकारी डॉ.शल्या राज ने कार्यक्रम की सफलता हेतु अपनी शुभकामनाएं प्रेषित की।