Moving the education needle for the greater good

Education is a critical lever to boost the nation's economic growth. Now is the time to study the investment areas and outline a framework for both public and private investments in specific areas to drive transformation in the education sector

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Sustainable Development Goal (SDG) 4 aims not only to ensure inclusive education for all, but also to promote quality education and lifelong learning opportunities for all.³⁵ Today, as a resilient India shifts gears with the aim of becoming a USD 5 trillion-dollar economy, the realisation of this SDG is of prime importance. India's transformation and growth has a direct correlation with the knowledge, skills and talent of its 1.4 billion citizens. That in turn is dependent on public and private investments made in the spheres of education, healthcare and relevant skill-building. Given that the Union Budget will be presented in a few months, it is time now to examine why public investment in education is as imperative as earmarking specific investment areas that have provisions for supplementary private investments.

The human capital theory, which posits that human beings can increase their productivity through higher education and skills training, has driven public and private investments in education and skilling for more than six decades and it continues to remain relevant. The World Bank report on Returns to Investment in Education (A Decennial Review of the Global Literature) concludes that the private average global rate of return for one additional year of schooling is about 9% a year. Further, the cost of investing in education and benefits to society remain above 10% at the secondary and higher education levels. The private return on investment in higher education is much higher at around 15% over the last six decades.³⁶

³⁵ United Nations Sustainable Development

³⁶ Returns to Investment in Education - A Decennial Review of the Global Literature by George Psacharopoulos and Harry Antony Patrinos (2018)

Public investment in education: Allocation and objectives

In India, public investment (including Central and state budgets) in education has historically been in the range of 3 to 4% of the GDP in the last decade. The National Education Policy (NEP) outlines an ambition to increase public investments in education to 6% of the GDP at the earliest.³⁷ For the first time, the Central Government's annual allocation for education has crossed INR 1 lakh crore for FY 2022–23. This has to be nearly doubled over the next two years to achieve the public investment target by 2030.

It took more than six decades after independence to achieve universal enrolment in schools with a legislative push through the Right to Education (RTE) Act, 2009. Today, prioritising investments in each of the education sub-systems is a compulsion, not a choice to make up, to some extent for the lost time. The challenges in secondary, vocational and higher education need to be addressed simultaneously while addressing the inherent challenges in early childhood care and education (ECCE) and quality of education in schools.

• ECCE – Different playing and learning environments equipped with requisite teaching tools, demarcated areas for different activities, facilities for arts and crafts are prerequisites for pre-schools and pre-primary classrooms. This is because the period from birth to six years is considered critical by experts for early brain development of children, and ECCE plays a critical role in this. Trained teachers cognisant of developmental aspects of children are needed to provide equal opportunities to every child. If one were to consider an estimate of INR 3 lakh per Anganwadi Centre (AWC), the total cost for upgrading all AWCs (around INR 14 lakh) would amount to INR 0.42 lakh crore (nearly half of the current annual education allocation).

The average allocation required every year for upgrading the AWCs and for achieving ECCE universalisation by 2030 would be INR 6,000 crore. Given the amount needed for upgrade and also the expertise to manage the infrastructure. private sector players active in ECCE, in partnership with the Government, could play a critical role in bridging this infrastructure and human resources gap, and boosting the social and economic growth of women and children.



• Primary, secondary and higher secondary

education – After achieving the universal enrolment target at the primary level, the secondary school system has attracted greater attention from policy makers and educationists. Access to secondary school, learning and teaching infrastructure, quality of education, teacher training and learning outcomes are critical challenges currently being addressed. STEAM, (i.e. science, technology, engineering, arts and mathematics) is emerging as the new paradigm globally for transforming the school education system to make children future fit. The school education ecosystem would need significant investments to address these challenges.

The Unified District Information System for Education Plus (UDISE+)³⁸ report for FY 2020– 21 prepared by the Ministry of Education reveals that nearly 75% of schools lack internet facilities and around 60% lack computers.

As per UNESCO's 2021 State of the Education Report for India: 'No Teacher, No Class'³⁹, India has nearly 1,20,000 schools with only one teacher each and 89% of these single-teacher schools are in rural areas. Nearly 1.2 million additional teachers are needed to plug the current shortfall. Besides, many of these schools lack other basic infrastructure facilities such as electricity, drinking water and libraries.

37 Ministry of Education

- 38 https://udiseplus.gov.in/#/home
- 39 https://unesdoc.unesco.org/ark:/48223/pf0000379115

At a conservative estimate of an average INR 10 lakh per school for upgrade, the onetime investment required for upgrading all 15 lakh schools would be INR 1,50,000 crore. Besides, infrastructure facilities such as libraries, electricity, drinking water and teaching aids, support needs to be provided to these schools to train the teachers and improve the quality of learning outcomes.

 Higher education – The NEP envisages broad-based, multi-disciplinary and holistic under-graduate education with different subject combinations, vocational education, a flexible curriculum with many entry and exit points and relevant certification. This compelling NEP vision could usher in a radical shift in the higher education landscape of the country to address an evolving global workforce transformation. The latest report of the All India Survey on Higher Education (AISHE) 2020⁴⁰ indicates that we have 1.043 universities. 42,343 colleges and 11,779 standalone institutions listed on the AISHE web portal. Further, the total enrolment in higher education has been estimated to be 38.5 million with 19.6 million boys and 18.9 million girls⁴¹. To achieve the 50% Gross Enrolment Ratio (GER) target set in the NEP by 2035, the enrollment needs to grow to nearly 70 million assuming that the number of youths in the 18-23 age group remains constant.

An annual investment of INR 25,000 crore would be needed as infrastructural cost to build 60 new universities and 3,000 colleges every year over the next 15 years to address the proposed increase in enrolment. Also, the total number of teachers (currently 15 lakh) will need to be increased to around 33 lakh for an ideal pupil-teacher ratio of 15.

The NEP lays out an ambitious plan to transform the higher education system and make it multidisciplinary and holistic. This would bring in muchneeded flexibility for the youth to opt for subjects of their choice rather than get slotted into current degree and postgraduation degree programmes. While the increase in the number of seats, colleges and universities is addressed, the use of digital technology could help overcome the challenges of physical infrastructure, availability of teachers and quality of education. Therefore, governments (both state and Central) need to work on policy and regulatory changes to facilitate the use of digital technology in higher education.

Professional higher education - Professional education covers education to land a job that needs special training or skill, and includes streams such as engineering, management, medicine, dentistry and pharmacy. The nineties saw an exponential rise in the number of engineering colleges and this growth continued till the end of the decade. While the burgeoning supply of engineers in the last three decades has helped us to meet the global demand for information technology talent, the quality of engineers and their employability has become a critical challenge to address. The other professional education areas, especially medical education, are still to meet the growing demand. While we claim to have achieved a 1:1000 doctorpatient population ratio, there is unequal distribution across our vast country with rural areas being unserved or underserved. Like engineering, the quality of education is also an area of

40 Conducted by the Department of Higher Education, Ministry of Education, Government of India. Survey data for FY 2020-21 is yet to be updated

41 India's gross enrolment

concern in medical education. As per a study conducted by the All India Institute of Medical Science (AIIMS), it costs INR 1.7 crore to produce a single MBBS doctor at AIIMS.⁴² Various studies and reports indicate the need for 6 lakh more doctors to address this shortfall.

To help address the need for 6 lakh more doctors and serve rural areas that are largely underserved or unserved, INR 10 lakh crore would need to be earmarked. The professional education institutions would also have to embed digital technologies and adopt a blended learning approach to address the 'quality and access' issues currently faced by them.

One of the critical aspects to ponder upon and plan in the professional education landscape is quality of education and ensuring relevance of graduates/postgraduates for the job market. The advent of digital technology is transforming experiential learning and is capable of addressing the dearth of competent, qualified faculty faced by the professional education segment. Vocational education and skills - India with its young demography aspires to become the Skill Capital of the world. It can realise its demographic dividend through a workforce trained in industry-led and future-ready courses. According to the Ministry of Skill Development and Entrepreneurship (MSDE) Annual report 2021-22⁴³, there are 1,484 training centres under the Pradhan Mantri Kaushal Vikas Yojana (PMKVY) (including Pradhan Mantri Kaushal Kendra [PMKK]), 309 Jan Shikshan Sansthan (JSS) and 14,716 Government Industrial Training Institutes (ITIs) that are providing skills training to the youth to equip them for various job profiles. There are also around 10.000 All India **Council for Technical Education** approved polytechnics offering three-year diploma courses. At present, under the PMKVY, JSS and ITIs, a total of about 22.4 million candidates have been enrolled through the network of skill development training centers across the country to fulfill skilled manpower⁴⁴ requirements. Under Samagra Shiksha⁴⁵, 14,435 schools have been given the go-ahead for implementing vocational education in schools until 2021-22.

The recent skilling and training initiatives have largely focused on entry and mid-level job roles in sectors where the skilling investment required has been low and the training duration has been less than a year in most cases. One of the disadvantages of this approach has been an excess supply of trained youth in certain sectors and job roles, leading to the lack of skill premium in wages as the entry level labour market is still transitioning from an informal to formal ecosystem.

Various labour market research studies indicate that approximately 12 million enter the labour market annually⁴⁶. There has been a dip in this number due to lower female workforce participation in the last couple of years especially after the COVID-19 pandemic. Most of these new entrants into the labour market are not formally trained for the jobs they take up. At a conservative estimate, a 30-day training for new entrants requires an incremental cost of INR 10,000 per trainee, therefore the annual training cost for new entrants itself would require INR 12,000 crore annually. A shift to the higher National Skills Qualifications Framework⁴⁷ level job roles would demand significant one-time investment in training infrastructure, training cost (consumables and training aids) and development of training faculties along with longer duration courses. Another aspect which needs focus is continuous upskilling to stay relevant in an Industry 4.0 led economy for the current workforce which is currently more than INR 40 crore.

42 AIIMS spends INR 1.7 Cr on producing one doctor

- 45 https://loksabhaph.nic.in/Questions/QResult15.aspx?gref=33184&lsno=17
- 46 Economic Survey

47 In 2013, Government of India introduced the National Skills Qualification Framework (NSQF), a competency-based framework that organises all qualifications based on a series of levels of skills, aptitude and knowledge. It can be accessed at https://ncvet.gov.in/ nsqf-notification

⁴³ https://www.msde.gov.in/sites/default/files/2022-06/Annual%20Report%202021-22%20Eng.pdf

⁴⁴ https://pib.gov.in/Pressreleaseshare.aspx?PRID=1783494

A 30-day training for new entrants requires an incremental cost of INR 10,000 per trainee, while the annual training cost for new entrants itself would require INR 12,000 crore annually. Also, diversification of skilling and training needs to be factored in for more advanced job roles and significant skill premium for trained youth.

Private investments in education: Adopt-a-school approach

Private investment in education funded by the fees paid by private citizens is a significant part of the overall investment in education. Rise in incomes and realisation of the importance of education have led Indian families to spend a significant portion of their income on the education of their children. The limited number of seats in reputed and recognised HEIs and professional education colleges has led to an additional spend on tests and entrance preparation as after school learning - over and above the formal academic fee.

Apart from citizens, another source of private investment in education has been from the non-governmental organisations (NGOs) often supported by Corporates through their CSR funds. As per CSR data from MInistry of Corporate Affairs, Corporates have spent INR 7,024 crore in FY 21 on education and vocational education including INR 202 crore on special education for the differently abled through their CSR spends.

 School education – A thriving private school ecosystem covering 50% of enrolments at the school level – with less than 50% of the number of government schools - indicates that despite the 'not for profit' tag, private investment has flowed into this sector. The private un-aided schools account for a major proportion of the schools being accessed by large lower-middle class and middle-class families to admit their wards into aspirational 'English Medium' schools. The quality of education in such schools has been found wanting, and needs monitoring to address the falling learning outcome levels across the schooling system.

The large established private players both in the ECCE and school system could play a critical role in bridging this quality and access gap by investing in building and equipping classrooms and play areas for pre-primary schools in partnership with government schools. They could also partner with governments to train and equip teachers with adequate skills to impart age appropriate education to the children.

Additionally, private sector expertise and investments could transform the muchneeded STEAM focus in school education, while governments could unveil policies and incentives to encourage these engagements through initiatives such as the 'adopt a school' approach.

Vocational education and skills – The unregulated vocational education and training sub-sector has a prolific presence of private providers be it in industrial training institutes, polytechnics, skill development centres or standalone skilling institutions. The increasing propensity of parents to spend on job-oriented courses has led



to growing private investment in this space. However, these investments are concentrated around specific sectors and job-profiles that require low to medium investments.

Financing schemes for students to access more expensive courses and specific incentives to build training infrastructure requiring substantial investments from governments could boost private investment in the vocational education and training spaces.

 Higher education and professional education - The private sector is also making significant investments to establish new universities and institutes of eminence. The huge need for investments in the latest technology and applied research calls for the private sector to play an active role alongside higher education academia to create an environment for innovation and research. The private sector has started playing this role with eminent institutions such as the Indian Institutes of Technology (IITs). However, private higher education has become increasingly unaffordable for a large section of society and is taking away opportunities from students who cannot access or pay for them.

The private sector could play a significant role in making higher education more holistic, job oriented and aligned with the growing needs of the market and society at large.

For the highest returns

Public investments in education even at 6% of the GDP would take it to INR 2,00,000 crores in a phased manner over the next few years. This would be grossly inadequate to meet the investments required in every sub-sector of education. The Government could therefore consider altering policies and regulations, especially the ones linked to the 'not for profit' tag applicable to the K-12 sector, to attract private sector investments and expertise to the large network of public schools, without diluting the 'access and equity' elements enshrined in the Constitution and RTE.

Similarly, enabling provisions such as amendment in common norms⁴⁸ used to decide the fee and duration of the vocational courses could attract more investments into job roles and sectors that currently do not draw any private investments. Therefore, governments could identify specific areas within education in which they can encourage higher investments to complement and supplement public investments. Further, specific policy and regulation level changes could be made to attract private investments and expertise to transform the education ecosystem at pace and scale. After all, investment in knowledge often pays the best and highest returns.



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48 Common norms initially notified by the Ministry of Skill Development and Entrepreneurship in 2017 and subsequently amended a few times specify the input standards, outcomes, funding norms, fund flow mechanism, mechanism for monitoring & tracking, and empanelment of training providers & assessors for Government Funded training programs.