

SECTOR ASSESSMENT (SUMMARY): EDUCATION (TERTIARY)

Sector Road Map

1. Sector Performance, Problems, and Opportunities

1. Sri Lanka is transitioning to an upper middle-income country¹ and increasing efforts to become a knowledge-based economy. While the rate of economic growth has weakened to 4.5% in 2016 and 3.1% in 2017, Sri Lanka achieved annual growth of 6.4% during 2004–2015, and upper middle-income status will be obtained in a few years. Strong human capital is indispensable in avoiding the middle-income trap and sustaining growth.²

2. Sri Lanka has achieved a high level of human development among middle-income countries. Out of 188 countries, Sri Lanka was ranked 73 on the human development index in 2017, outperforming other lower middle-income countries and on par with upper middle-income countries. However, challenges remain in access to higher education, quality of learning (particularly in science, technology, engineering, and mathematics subjects), and relevance of education in meeting the labor market demand.³

3. **Challenges in higher education sector.** While higher education plays an instrumental role in providing graduates equipped with skills that will be needed in future, access to higher education is very limited. There are 15 public universities, 8 postgraduate institutes, and 10 affiliated institutions under the University Grants Commission (UGC) with approximately 87,000 undergraduate and 38,000 postgraduate students enrolled in 2016.⁴ The gross enrollment rate of tertiary education is 18.9% in Sri Lanka,⁵ which is considerably lower than that of upper middle-income countries (average of 50.7%) and is even lower than the lower middle-income average (23.5%). Only 18.7% of qualified candidates who attained minimum requirements at general certificate of education at advanced level are admitted to higher education.

4. Another challenge is the labor market outcomes of university graduates. The job placement rate of state university graduates is 65.5% as per the tracer study conducted in 2017.⁶ The job placement rate of graduates from the arts is quite low (45.6%), and this drives the overall rate of youth unemployment among those with higher education background. The job placement rate for computer science and information technology and engineering is more than 90.0%, but the total number of new admissions in 2016 for these faculties was 5,012, or only 17.2% of total intakes (29,083) in state universities. The underlying constraint is high upfront capital investment requirements for higher education in science, technology, and engineering disciplines.

5. Private higher education institutions should have greater flexibility to provide industry-relevant courses based on demands, but availability of accredited private higher education institutions and the range of disciplines is limited. There are 16 accredited private higher education

¹ As per the World Bank country classification, upper middle-income economies are those with a gross national income (GNI) per capita between \$3,956 and \$12,235. In 2016, Sri Lanka's GNI per capita was \$3,780.

² Asian Development Bank (ADB) and International Labour Organization (ILO). 2017. *Sri Lanka Fostering Workforce Skills Through Education Employment Diagnostic Study*. Manila.

³ Dundar et al. 2017. *Sri Lanka Education Sector Assessment: Achievements, Challenges, and Policy Options. Directions in Development*. Washington, DC: World Bank.

⁴ University Grants Commission of Sri Lanka. 2016. *University Statistics 2016*. Colombo.

⁵ United Nations Educational, Scientific and Cultural Organization (UNESCO) Institute for Statistics. (<http://uis.unesco.org/>, accessed on 20 February 2018).

⁶ University Grants Commission of Sri Lanka. Forthcoming. *Tracer Study of University Graduates in 2017*. Colombo.

institutions, and there many institutions operating without control of the Ministry of Higher Education and Cultural Affairs (MHECA) and the UGC. Around 26,000 students were considered to have entered private higher education institutions in 2014. Private higher education is focusing on management and information technology where capital investment is moderate, and so it cannot fully cater for the increasing demands in technology and engineering.

6. **Challenges and opportunities in technology and engineering degrees.** There is strong industry demand to expand the access, quality, and relevance of the technology and engineering degree programs. For instance, the workforce in the information technology and business process outsourcing industry is growing by 20% per year in Sri Lanka, and the country's global ranking in this area is improving steadily.⁷ The booming construction industry will also need more quality engineers to meet the infrastructure demands in Sri Lanka. The government expects that priority economic development initiatives such as the Colombo–Trincomalee Economic Corridor will generate 580,000 incremental jobs in manufacturing during 2020–2032, and at least 10%–15% of such job opportunities will require advanced skills in various technology areas, especially manufacturing-related technologies. The targeted higher education support is required to address the shortages in information and communication technology and engineering.⁸

7. **Access.** In response to the high demand for a technically oriented workforce, the government introduced the technology stream to secondary education (grades 12 and 13) in 2013. In 2017, more than 28,000 students were enrolled in over 370 schools. Since 2015, around 7,000 technology stream students have become qualified for higher education every year. In 2014, the government selected 11 public universities which would open new technology faculties to offer higher education for technology stream students. For school year (SY)2016, 1,825 students (45% female) were admitted to nine universities, and in SY2017 2,016 students (41%) were admitted to 10 universities. The government also decided to establish an engineering faculty in the University of Sri Jayewardenepura from SY2016, in addition to those at the five existing universities. The University of Sri Jayewardenepura admitted 120 students in SY2016 (18% female) and SY2017 (22% female). However, some of these universities have started new technology and engineering programs in rented space. There is an urgent need to provide infrastructure and laboratory equipment conducive to innovative learning and research.

8. **Quality.** The MHECA and UGC are committed to improving the quality of higher education through international accreditation. They aim to follow international accreditation systems, such as the Sydney Accord for engineering technology academic programs and the Washington Accord for professional engineering academic programs. There are no international accreditation systems for biosystem technology academic programs, but the Coordinating Secretariat for Science Technology and Innovation and National Biotechnology Industry Association in Sri Lanka are developing an accreditation manual for the biosystem technology academic program. The National Biotechnology Industry Association will be responsible for the accreditation of biosystem technology programs in Sri Lanka, and will provide consultative feedback on how the programs compare to global practice.

9. Insufficient qualification and lack of academic staff constrain quality of teaching, learning, and research. There were 5,440 academic staff under the purview of the UGC in 2016, but less than 50% have a doctor of philosophy degree. The recruitment and retention of qualified academic staff is difficult because of the better salaries offered by the private sector and overseas job

⁷ Kearney, A. T., 2017. *2017 A.T.Kearney Global Services Location Index*. Chicago.

⁸ Nedelkoska, L., O'Brien, T., and Stock, D. 2018. *Does Sri Lankan economy need more university graduates?* Cambridge: Center for International Development at Harvard University.

opportunities, and the staff vacancy rate at universities was estimated to be 28% in 2014. The situation is even more challenging for universities located outside Colombo. While trainings on student-centered learning have been provided by inviting international experts, there is a need to provide continuous capacity development opportunities to transform to outcome-based education and student-centered learning which takes advantage of information and communication technology. Because technology faculties are new in Sri Lanka, increasing the number of qualified academic staff in such faculties requires immediate attention through the provision of more overseas opportunities to obtain master's and doctor of philosophy degrees.

10. **Relevance.** The relevance of higher education needs to be improved to address the industry demands and overseas opportunities. Only 32% of employers in Sri Lanka are satisfied with first-time job seekers from higher education institutions.⁹ This low figure might be driven by the graduates from the arts, because 26.9% of employers consider higher education graduates to be poorly prepared as a result of lack of job-specific skills or competencies. However, technology and engineering graduates need to be equipped with interpersonal skills, given that 17.1% of employers point to poor attitude, personality, or lack of motivation. These are also considered important for overseas job opportunities, and measures need to be taken to support educated migrants to come back to Sri Lanka, which is taking place in the knowledge services industry.¹⁰

11. Internship can strengthen university–industry linkages. Currently, 57% of graduates go through internship training during the course of their undergraduate study; 71% of these internships are compulsory with credits. There is a positive correlation between job placement rate and internship programs, and the technology and engineering curricula include internship in the third or fourth year of undergraduate programs. The challenge is to find enough internship opportunities relevant to the academic programs.

12. Industry-relevant academic research is another way to have continuous dialogue with the industry. Currently, only around 200 academic staff are actively engaged in international research. Investment in research and development accounts for only 0.1% of gross domestic product in Sri Lanka, which is considerably lower than 1.3% middle-income country average in 2013. With the support of the World Bank, the MHECA will introduce quality and innovation grants to boost dissemination and commercialization of university research, but special considerations need to be given for new technology faculties which do not have experienced principal investigators to get research funding. It is also important to conduct research in collaboration with world class universities to get exposure and produce international research.

13. **Gender.** Gender actions have room to improve further in engineering and labor market outcomes. While 82.4% of new admissions in the arts are women, 50.4% in computer science and information technology, 45.6% in technology faculties, and only 22.2% in engineering are women. This is higher than the developed-country average, but encouraging more women to take science, technology, engineering, and mathematics, would increase women's employment opportunities, salaries, and labor force participation in Sri Lanka.

14. **Local contexts.** The government requested ADB to support four universities—Rajarata University of Sri Lanka (RUSL), Sabaragamuwa University of Sri Lanka (SUSL), University of Kelaniya, and University of Sri Jayewardenepura—which lack financing to implement new

⁹ Department of Census and Statistics. 2017. *Sri Lanka Labour Demand Survey 2017*. Colombo.

¹⁰ Panagodage Janaka Sampath Fernando. 2015. *Brain Circulation at Industry-Level: Evidence from the Knowledge Services Industry in Sri Lanka*. Madison: Journal of Economics and Development Studies.

technology programs and are not supported by other development partners. RUSL and SUSL are located outside Colombo; the University of Kelaniya and University of Sri Jayewardenepura are located in the suburban area of Colombo. Since the key industry outside Colombo is still agriculture, RUSL and SUSL need to develop industry-relevant degree programs in the local context, such as bio processing and food technology.

2. Government's Sector Strategy

15. **Vision 2025.** The government's medium-term development strategy acknowledges that science and technology have lagged and urges the shift towards innovative and knowledge-based business ventures through exports. More specifically, Vision 2025 aims to increase access to higher education by increasing public university enrollment. The government will also explore public–private partnerships to have international universities in Sri Lanka, which will strengthen research and development at universities and promote university–industry linkages for practical training.

16. **Higher Education Development Strategy.** The MHECA prepared the Higher Education Development Strategy 2017–2025. This strategy aims to upgrade public universities, strengthen the links between universities and industries, and expand degree programs that meet the demands of job markets, especially science, technology, engineering, and mathematics programs. The strategy also highlights the development of a sound and independent quality assurance and accreditation system for both state and nonstate higher education institutions, the introduction of performance-based budgeting, and commercialization of research and innovations.

17. Improved access to universities includes ambitious targets which aim for 50,000 student admissions by 2020. The aim is for the composition of university graduates to change from the current 3:2:5 ratio of arts, management, and science to 2:2:5:1 ratio of arts, management, science, and technology. The MHECA also aims to enhance private sector participation in higher education.

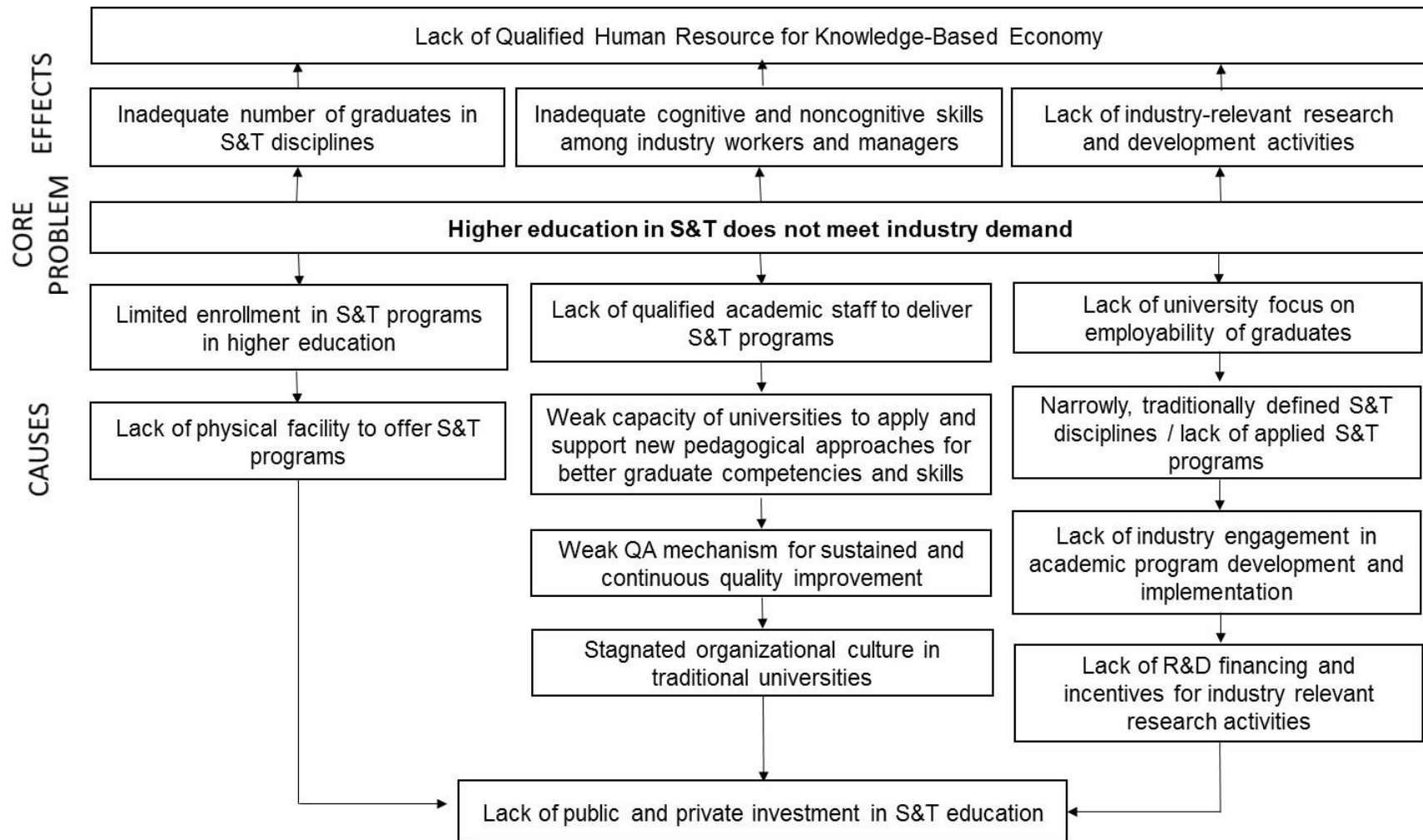
3. ADB Sector Experience and Assistance Program

18. The ADB country partnership strategy for Sri Lanka, 2018–2022 supports transition to upper middle-income country status. Strengthening the drivers of growth by promoting diversification of economic activities and productivity enhancement is one of the two pillars, and upgrading human capital will contribute to the strategic focus. The proposed project is included in the 2018 pipeline of the country operations business plan, 2018–2020, and the Technology University Project, a proposed public–private partnership, is included in the 2020 pipeline.

19. ADB currently does not have a higher education project but does have the ongoing Education Sector Development Program (\$200 million) and Skills Sector Enhancement Program (\$200 million including additional financing). In addition, during 2003–2010, ADB supported the Distance Education Modernization Project (\$45 million), which included capacity expansion of the Open University of Sri Lanka. The current project was designed by learning from lessons learnt from these past and ongoing projects in Sri Lanka.

20. ADB will closely work with development partners. In 2017, the World Bank approved the Accelerating Higher Education Expansion and Development Operation (\$100 million) in Sri Lanka. The World Bank operation uses two financing instruments of program for results and investment project, and supports policy reforms in higher education. Other development partners, such as Austria, Canada, India, Japan, Kuwait, Norway, and Saudi Arabia support higher education in Sri Lanka, and ADB will ensure there are no overlaps and that synergetic effects are generated.

Problem Tree for Higher Education



QA = quality assurance, R&D = research and development, S&T = science and technology.