HUMAN CAPITAL VALUATION AND DEVELOPMENT: PROSPECTS AND CHALLENGES IN SRI LANKA

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Abstract

Human Capital plays a prominent role as the major factor in the development of individuals, organisations and countries as a whole. Sri Lanka is experiencing a challenging economic and social environment and moving towards changes in economic growth and human capital mobility. The government and all employers need to rethink recognising and providing appropriate value for the human capital in Sri Lanka. This concept paper aims to provide an overview of human capital valuation and development in Sri Lanka and find out the prospects and challenges. Data was collected through secondary data sources using different reports available in Sri Lanka and at the international level and presented using explanations and descriptions. Based on the information, the review revealed several important areas that would directly impact human capital enhancement in the country. More focus should be given to tertiary and vocational education, labour force participation, unemployment, high-skills employment, talent shortage, middle-skills employment, long-term unemployment, public spending on education, employment gender gap, developing more human capital in the areas of health, service and welfare sector to meet the future global job market. At the same time, Sri Lankan organisations should consider valuing their human capital and calculating the Return on Investment (ROI) at the organisational level. Sri Lanka should focus more on catering to the international labour demand related to the professional, skilled, and semi-skilled categories in light of the decline in demand for low-skilled labour in the international labour market.

Keywords: Education, Employment, Valuation, Human Capital Development, Return on Investment

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Introduction

Human capital is a central determinant of economic well-being and social advancement in the modern world economy (Aturupane et. al, 2021). Human capital is defined in the Oxford English Dictionary as "*the skills the labour force possessed and is regarded as resource or assets*". Random House Dictionary defines human capital as "*the collective skills, knowledge, or other intangible assets of individuals that can be used to create economic value for the individuals, their employers, or their community*". Human capital is also described as human resources (Brummett *et al.*, 1968; Heckmian & Jones, 1967), human assets (Likert, 1967), cultural capital (Thompson, 1998), and the worth of employees (Roslender & Dyson, 1992). The Term 'human capital' refers to any store of value (International Integrated Reporting Council, 2013). We also can observe several definitions and approaches to understanding human capital. Ideas about the importance of human capital and investment in human capital were directly or indirectly associated with the importance of education as early as the beginnings of economic theory in the work of Petty and Smith (1940, 1956). Sri Lanka is experiencing a challenging economic and social environment and moving towards economic growth and human capital mobility changes. The government and all employers need to rethink recognising and providing appropriate value for the human capital in this country. In this paper, the author concisely reviews the status of human capital valuation and development indicators in Sri Lanka and other countries and points out the challenges in Sri Lanka. The paper first discusses the literature on human capital, followed by the evidence-based information review and compares it with selected countries.

Review of Literature

Human capital is a multi-dimensional concept. It can mean different things to different stakeholders. For employers and the business world, human capital is the economic value of an employee's skills valuable to an organisation. At an individual level, it may include tacit knowledge acquired informally through experience, non-cognitive skills such as interpersonal skills and the physical, emotional and mental health of individuals (The Human Capital Report, 2015). To a policymaker or at the country level, human capital (Nation's Human Capital) is the collection of skills and capacities of the population to drive economic growth. In an organisational context, human capital is the most valuable capital compared with other resources such as physical, financial and informational assets. Peter (1999) said, "*The most valuable assets of a 20th-century company were its production equipment. The most valuable asset of a 21st-century institution, whether business or non-business, will be its workers' knowledge and their productivity*".

The earliest known attempt to value human population dates back to 1681 when Sir William Petty estimated the monetary value of the population of England. He considered labour the father of wealth and stressed the need to include the value of labour in estimating total national wealth (cited in Blaug and Lekhi, 2009). Schultz and Becker are the founders of the modern theory of human capital, and they were the Nobel Prize winners in 1979 and 1992 (Khaykin et al., 2020).

The following table (Table 1) illustrates the several definitions of human capital identified in the literature (Martı´n-de-Castro *et al.* (2011).

Table 1: Definitions of Human Capital

Human Capital Concept
Human-centred assets are the collective expertise, creative and problem-solving capability, leadership, and entrepreneurial and managerial skills embodied by the employees of the organisation.
The combined knowledge, skill, innovativeness and ability of the company's employees to meet the task at hand
Represents the value of knowledge and talent embedded in the employees, and it includes values and attitudes, personal knowledge, skills and behaviours.
The knowledge, skills, and abilities reside with and are utilised by individuals.
The knowledge, skills, etc. of individuals
Embraces all of the skills and capabilities of the people working in an organisation
Denotes the tacit knowledge embedded in the minds of employees
The intangible elements that the human capital includes refer, basically, to the knowledge acquired by a person, besides other individual qualities such as loyalty, polyvalence or flexibility, which determine the productivity and the value of the contribution of the individual to the company
Comprises all business capital embedded in employees and not owned by the organisation. Employees may take this capital away and, including employees' and managers' competence, experience, knowledge, skills, attitude, commitment and wisdom

Source: Cited from Martı´n-de-Castro *et al.* (2011) extracted from Jayendrika (2022) unpublished thesis

The credit for recognising the value of human resources as an asset goes to Paton, and he commented, "In a business, a well-organised and loyal personnel may be a more important asset than a stock of merchandise"(cited in Blaug and Lekhi, 2009). Recognising that employees are valuable assets will mean that different assumptions about managing people will have to be made. A necessary foundation for this change will be the ability of a firm to identify and codify the contribution of human capital (Abeysekera & Guthrie, 2004; Abeysekera, 2008).

Human capital development includes many competencies such as creativity, flexibility, leadership ability, problem-solving ability, constructive relationships with others, entrepreneurship, and skills like "the knowledge of how to learn". Kim *et al.* (2011) define human capital as individual work experience, education, knowledge, skills, abilities, training and commitment, motivation, and satisfaction, which are essential to developing human capital.

Methodology

Data was collected through secondary sources using different reports available in Sri Lanka and at the international level related to human capital valuation and development and presented using explanations tables, graphical presentations and descriptions. The paper covered the areas of Index Rank Analysis of Human Capital Development, Investment in Education and Human Capital Development, Tertiary Level Education and the Future, Employment and Human Capital Valuation and reporting at the Organizational Level.

Review and Discussion

Index Rank-Based Analysis of Human Capital Development

A nation's human capital endowment—the skills and capacities that reside in people and are put to productive use—can be a more critical determinant of its long-term economic success than virtually

any other resource. This resource must be invested in and leveraged efficiently to generate returns—for the individuals involved and the economy as a whole (Human Capital Report., 2015).

The Human Capital Index (HCI) in the year 2015 contains two horizontal themes—learning and employment—running across five vertical pillars on age groups: under 15, 15–24, 25–54, 55–64, and 65 and over. This index quantifies how countries are developing and deploying their human capital. It takes a life-course approach to human capital, evaluating the levels of education, skills and employment available to people in those five distinct age groups. These two cross-cutting themes (learning and employment) assess each country's success in developing people's skills and competencies through learning and deploying the acquired knowledge through productive employment. The index alternatively assesses the size of a country's human capital investment and deployment gaps. The index covers 124 countries in the year 2015, representing between them 92% of the world's people and 98% of its GDP (Human Capital Report, 2015). Sri Lanka is ranked 60 out of 124 countries in the Human Capital Index – 2015, with a score of 68.19. Table 2 details HCI, score and rank in each age group for 2015 in Sri Lanka for Learning indicators.

Table 2: Human Capital Index score and rank in Leaning Indicators in Sri Lanka

Overall Score =68.19			World Rank (out of 122 countries) =60 **(**Rank)		Eg. Score
Regional Rank =10			Income Group Rank -Lower Middle Income =07		
Learning	**Under 15 Age Group**	**15–24 Age Group**	**25-54 Age Group**	**55-64 Age Group**	**65 and over Age Group**
	87.32 (43)	69.63(57)	59.21(73)	68.3(64)	49.34(78)
	Enrolment in education			**Educational attainment**	
	Primary enrolment rate 93.94 (77)	**Tertiary enrolment rate 16.97 (88)**	Primary education attainment rate 97.01 (65)	Primary education attainment rate 92.5 (63)	Primary education attainment rate 88.68(52)
	Secondary enrolment rate 85.41 (44)	**Vocational enrolment rate11.64(80)**	Secondary education attainment rate 77.48 (51)	Secondary education attainment rate 56 (55)	Secondary education attainment rate 44.01(44)
	Basic education survival rate 93.17 (48)	**Educational attainment**	Tertiary education attainment rate 22.67(37)	Tertiary education attainment rate 12.9 (53)	Tertiary education attainment rate 8.37(53)
	Secondary enrolment gender gap, female-over-male ratio 100(1)	Primary education attainment rate 99.53 (54)			
		Secondary education attainment rate 89.7 (32)			
	Quality of Education		**Workplace learning**		

	Quality of Primary Schools 64.12(28)	Quality of education system 60.74(21) Youth literacy rate 98.76(67)	Staff training services 52.25(50) **Economic complexity 45.16(77)**

Source: Compiled by the author using information from the Human Capital Report 2015

Based on this information in Table 2, we need to think about several important areas that would directly impact human capital enhancement in the country. These areas are (see also rank identified in bold in Table 2).

- Students' enrolment in vocational education
- Students' enrolment in tertiary education
- Economic complexity

Table 3 presents details on HCI, score and rank in each age group for the year 2015 in Sri Lanka for employment indicators.

Table 3: Human Capital Index score and rank in Employment Indicators in Sri Lanka

Overall Score =68.19		World Rank (out of 122 countries) =60 Eg. Score **(**Rank)			
Regional rank (out of)=10		Income Group Rank -Lower Middle Income =07			
Employment	**Under 15 Age Group**	**15–24 Age Group**	**25-54 Age Group**	**55-64 Age Group**	**65 and over Age Group**
	Vulnerability	**Economic participation**			
	Incidence of child labour N/Av	**Labour force participation rate 37.6(91)** **Unemployment rate 80.9(77)** Underemployment rate 96(19) Not in employment, education or training rate 99.5(1) Long-term unemployment rate 64.93(56)	**Labour force participation rate 69.21(110)** Unemployment rate N/Av Underemployment rate 97.3(15) **Employment gender gap, female-over-male ratio 43.35(76)**	**Labour force participation rate 51.3 (91)** Unemployment rate N/Av Underemployment rate 96.9(33) Healthy life expectancy at birth 100(1)	**Labour force participation rate 20.1(60)** Unemployment rate N/Av Underemployment rate N/Av Healthy life years beyond age 65 85.53(57)
		Skills			
		Incidence of over-education N/Av	**High-skilled employment share16.1(84)**		

	Incidence of under-education N/Av	**Medium-skilled employment share 77.5(102)**
	Skill diversity 79.29(35)	Ease of finding skilled employees53.32(45)

Source: Compiled by the author using information from the Human Capital Report 2015

Based on this information in Table 3, we also need to think about several important areas that would directly impact human capital enhancement in the country. These areas are (see also rank identified in bold in Table 3).

- Labor force participation rate in each age category
- Unemployment rate
- High-skills employment share
- Middle-skills employment share
- Employment gender gap, female-over-male ratio

The Global Human Capital Index 2017 ranks 130 countries on how well they are developing their human capital on a scale from 0 (worst) to 100 (best) across four thematic dimensions—capacity, deployment, development and know-how—and five distinct age groups or generations—0–14 years; 15–24 years; 25–54 years; 55–64 years; and 65 years and over—to capture the entire human capital potential profile of a country. It can assess progress within countries and point to cross-country learning and exchange opportunities. The HCI 2017 data showed that Sri Lankan Rank 70 (out of 130 countries) scored 61.19. However, from South Asia, Sri Lanka (70) is the top performer, while Nepal (98), India (103), Bangladesh (111) and Pakistan (125).

In the year 2018, the HD Index identified indicators based on survival, school and health as follows (World Bank, 2018) and year 2019 world bank launched Human Capital Index (Aturupane et al , 2021) and this can used to compare the cross country measures.

Survival - Percentage of children surviving past the age of 5

School - Quantity of education (Expected years of schooling by age 18)

Quality of education (Harmonised test scores)

Health - Adult survival rates (Percentage of 15-year-olds who survive until age 60)

Healthy growth among children (Stunting rates of children under 5)

For example, the average number of years of schooling in a population is based only on quantity. As recent research shows, students in different countries who have completed the same number of years of school often have vastly different learning outcomes. Then, we need to think of schooling quality. Learning-Adjusted Years of Schooling (LAYS) combines the quantity and quality of schooling into a single, easy-to-understand metric of progress (Filmer et al.,2018). Table 4 presents the comparative analysis of Sri Lanka and the scores of selected countries based on the quantity and quality of education. In Sri Lanka, the learning-adjusted years of schooling are 8.5 years.

Table 4: Quantity of Education (Expected years of schooling by age 18)

Level	Country/Economy	HC Index Rank in 2015	Expected year of school	Learning adjusted years of schooling	HCI 2018	HCI 2020
Asia Pacific Region	Japan	5	13.6	11.7	.84	.80
	New Zealand	9	13.7	11.4	.77	0.78
	Australia	13	13.6	11.2	.78	.77
	Singapore	24	13.9	12.8	0.89	0.88
	Malaysia	52	12.5	8.9	.63	.61
	Sri Lanka	60	13.2	8.5	0.59	0.60
	Bangladesh	99	10.2	6.0	0.46	0.46
	India	100	11.1	7.1	0.48	0.49
	Nepal	106	12.3	7.2	.50	.50
	Pakistan	113	9.4	5.1	0.40	0.41
Highest HC	Finland	1	13.7	11.7	.81	.80
	Canada	4	13.7	11.7	0.80	0,80
	USA	17	12.9	10.6	.71	.70
	UK	19	13.9	11.5	0.78	.78

Source:*: Compiled by the author using Human Capital Report 2015/ Human Development Reports (2018/2020)-world bank.org*

Human Capital Development: Investment in Education

Investment in education contributes to higher productivity of human capital in any country. This influences the development of national and organisational level human capital. Table 5 presents the comparative analysis of public spending on education (% of GDP) in Sri Lankan and selected countries in the Asia Pacific region. This information clearly shows that public spending on education (% of GDP) in Sri Lanka is deficient when compared with other countries in the region and countries with higher HC values. Sri Lanka's position is the lowest based on this information.

Table 6 presents historical information on public spending on education in Sri Lanka as a percentage of GDP. In 1973, government expenditure on education was reported as 3.32%, and then there was a continuous decrease in public spending on education (% of GDP) in Sri Lanka from 1973 to 2014 (1.93). Then 2015, data was reported as 2.23% and 3.495% in 2017. However, it has decreased since 2017 and reported the lowest percentage in 2022.

Table 5: Public Spending on Education

Level	HC Index Rank	Country	Public spending on education (% of GDP)	Level	HC Index Rank	Country	Public spending on education (% of GDP)
Asia Pacific Region	5	Japan	3.86	Highest HC Countries	1	Finland	6.76
	9	New Zealand	7.38		2	Norway	6.87
	13	Australia	5.12		3	Switzerland	5.28
	24	Singapore	3.05		4	Canada	5.40
	30	Korea, Rep.	5.25		6	Sweden	6.98
	46	Philippines	2.65		7	Denmark	8.74
	51	Mongolia	5.48		8	Netherlands	5.93

52	Malaysia	5.94	10	Belgium	6.56
57	Thailand	7.57	17	USA	5.42
59	Vietnam	6.29	19	UK	6.23
60	Sri Lanka	**1.72**			
69	Indonesia	3.56			
80	Iran	3.61			
87	Bhutan	4.65			
99	Bangladesh	2.23			
100	India	3.35			
106	Nepal	4.72			
113	Pakistan	2.14			

Source: ***Compiled by the author using 2015 HCI Report Data***

Table 6: Public spending on education (% of GDP) in Sri Lanka

Year	**1973**	1975	1979	1980	1981	1982	1983	1984	1985	1986
(% of GDP)	**3.32**	2.74	2.57	2.70	2.44	2.56	2.39	2.17	2.58	2.81
Year	1988	1989	1990	1994	1995	1996	2009	2010	2011	2012
(% of GDP)	2.83	2.76	2.41	3.11	2.96	3.34	2.06	1.72	1.81	1.50
Year	2013	2014	2015	**2016**	2017	2018	2019	2020	2021	2022
(% of GDP)	1.62	1.93	2.23	**3.45**	2.80	2.14	1.93	1.9	1.8	1.5

Source: Compiled by the author using World Bank-reported information.

It can be observed from Figure 1 that the Sri Lankan government's behaviour changes accordingly with different governance conditions in the country related to concern about investment in education. In 1973, the government spent 3.32%, the 1996 government spent 3.34%, and the 2016 government spent 3.45% (highest).

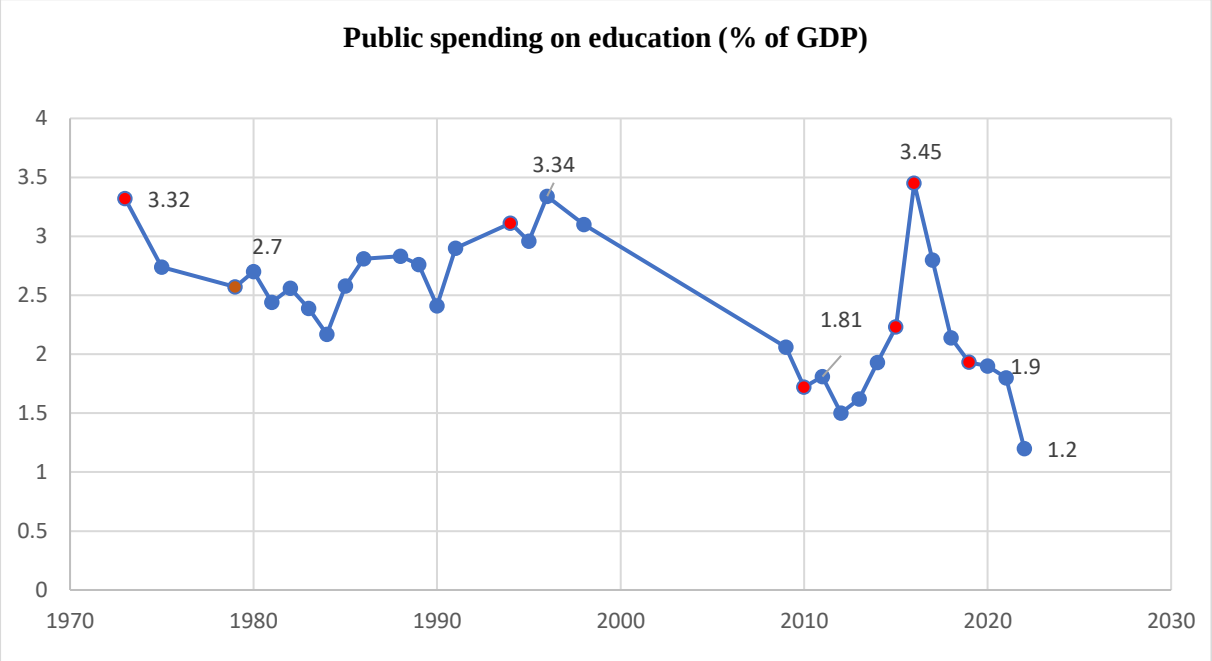


Figure 1: Public spending on education (% of GDP)
Source: Author created using https://data.worldbank.org

In 2015, HCI provided generic guidance on areas where human capital investment is needed. These areas include tertiary education, vocational education, training and development, and creating more job

opportunities to increase the labour force participation rate in each category. In 2015, the new government had the idea of increasing the percentage of public spending on education to 3.4%. In 2016, the government realised this would generate direct and indirect investments in enhancing human capital development in Sri Lanka starting from 2016. However, the government failed to continue this % after 2016, continually decreasing the spending %. Then again, there is a lack of attention given to improvement-required areas. This directly affects the quality of education and employment.

At the same time, public spending on education (% of GDP) is also one of the leading indicators (SDG 17: Partnership for the Goal) of the sustainable development target in 2015- 2023. Though Sri Lanka kept the step towards reaching the target starting from year 2016 onwards, they failed to sustain that decision. Table 7 shows how other countries move towards achieving this goal. How can we achieve this indicator by 2030? The Sri Lankan government should rethink on this situation.

Table 7: Sustainable Development Goals achievement: Indicator Government expenditure on education as a percentage of GDP (%)Country Comparison

Indicator	Government expenditure on education as a percentage of GDP (%)						
Country	2014	**2015**	2016	2017	2018	2019	2020
Time							
Afghanistan	3.7	**3.2558**	3.51198	3.37331	3.19979	3.21378	N/A
Australia	5.2	**5.31584**	5.28623	5.13681	5.12345	N/A	N/A
Austria	5.4	**5.45658**	5.47962	5.37159	5.22452	N/A	N/A
Bangladesh	2.1	**N/A.**	1.53554	N/A	N/A	1.32632	N/A
China	3.6	**3.82487**	3.79362	3.66745	3.54249	3.54	3.57
Finland	7.1	**7.03208**	6.85153	6.36311	6.27542	N/A..	N/A..
India	N/A	**4.11457**	4.25408	4.30545	4.36374	4.40723	4.47423
Japan	3.6	**N/A..**	3.14643	3.13058	3.07782	N/A..	N/A..
Malaysi	5.0	**4.89487**	4.75192	4.67531	4.47865	4.15661	3.91697
Nepal	N/A	**3.25902**	3.90321	4.76722	4.43445	4.24	4.39
New Zealand	5.8	**6.32506**	6.41179	6.25974	6.0485	N/A..	N/A..
Sri Lanka	**1.9**	**2.22875**	**3.4492**	**2.79925**	**2.13539**	**1.93**	**1.90..**
United Kingdom	5.6	**5.51411**	5.37533	5.38499	5.16799	N/A.	N/A
USA	6.1	**4.95341**	4.79815	5.10922	4.91233	N/A.	N/A.

Source: worldbank.org

Human Capital Development: Tertiary Level Education and the Future

Table 8 below includes GDP in US $ terms, Global Competitiveness Ranking and Tertiary School Enrollment for Sri Lanka and some selected economies in the Asian region. Sri Lanka has the lowest GDP in US terms, ranks only above Bangladesh in the Global Competitiveness Ranking, and has the lowest tertiary-level enrollment. Sri Lanka's tertiary-level enrollment is below the average for South Asia and is almost half of the world average. It is observable that some countries mentioned in Table 8, such as South Korea and Singapore, have a very high rate of tertiary-level enrollment and have continued to experience economic upturn over the last five decades. Similarly, Asian economies that rank high on the Global Competitiveness Ranking also have a higher tertiary enrollment. Increasing tertiary-level enrollment requires policy-driven initiatives and investment. However, the government of

Sri Lanka (GoSL) must invest in human resource development as the economy needs a quality workforce, increasing Sri Lanka's attractiveness among global investors.

Table 8: GDP, Global Competitiveness Ranking & Tertiary Enrollment of Sri Lanka and selected Asian economies

Country	GDP – 2019 US$ Billion	Global Competitiveness Ranking 2019	Tertiary School Enrollment %
Bangladesh	302.6	105	20.15% (2016 - 2019)
Indonesia	1,119	50	30.72% (2009 - 2018)
Malaysia	364.7	27	41.36% (2010 - 2019)
Singapore	372.1	1	85.87% (2016 - 2018)
South Korea	1,647	13	97.43% (2009 - 2018)
Thailand	543.5	40	49.45% (2006 - 2016)
Sri Lanka	84.01	84	18.51% (2010 - 2019)
Vietnam	261.9	67	24.43% (2007- 2016)
South Asia		-	21.74% (2010 - 2019)
World		-	35.22% (2010 - 2019)

Source: Compiled by the author using World Bank.org information

The analysis in Table 9 below shows that the Science stream holds the highest percentage of intake, which is closer to 45%, followed by the Art stream (30%).

Table 9: Percentage of Admission – Stream Wise

Year of GCE(A/L)	Year of Admission	Subject Stream							
		Arts		Commerce		Science		Technology	
		No.Adm.	%	No.Adm.	%	No.Adm.	%	No.Adm.	%
2009	2009/2010	5,841	28%	4,583	22%	10,123	49%		
2010	2010/2011	7,064	32%	4,876	22%	10,076	46%		
2011	2011/2012	10,297	36%	5,742	20%	12,825	44%		
2012	2012/2013	7,995	33%	4,966	21%	11,172	46%		
2015	2015/2016	9,891	37%	5,441	20%	11,662	43%		
2016	2016/2017	9,418	31%	5,793	19%	15,451	50%		
2017	2017/2018	9,923	34%	6,179	21%	12,676	44%		
2018	2018/2019	10,400	33%	6,020	19%	12,721	40%	2,355	7%
2019	2019/2020	12,009	29%	7807	19%	17,679	43%	3,601	9%
2020	2020/2021	12829	30%	7904	18%	18,632	43%	3,842	9%
2021	2021/2022	12825	30%	7899	18%	18,283	43%	3,844	9%

Source: Author compiled using UGC Statistics (2009- 2021)

Compared to those two streams, the lowest number of admissions to the university is coming from the Commerce stream (18%) and technology (9%), which requires special attention to develop professional managers and technology professionals for the future. A comparison of the GCE (A/L) Performance of all candidates (2018-2022) is presented in Table 10.

Table 10: GCE (A/L) Performance of all candidates (2018-2022)

Stream	Number sat		Passed in all three subjects (%)		Obtained 3 As (%)		Failed in All Subjects (%)	
	2018	2022	2018	2022	2018	2022	2018	2022
BioScience	34890	32397	57.98	56.59	1.57	2.22	14.59	16.84
Physical Science	27310	31,730	56.80	56.82	2.60	3.27	16.22	17.08
Commerce	48712	54,692	69.40	69.36	3.66	7.47	6.75	8.90
Arts	83230	86,580	69.24	66.47	2.17	3.92	4.11	6.36
Engineering Technology	12264	14,985	58.42	66.19	0.29	0.60	8.61	5.25
BioSystems Technology	8311	7,408	64.28	74.26	0.31	0.97	7.76	5.48
other	3474	5005	42.86	44.34	0.17	0.70	7.74	6.97
Total	218191	232797	64.70	64.21	2.25	4.05	8.34	9.79

Source – Author compiled using Department of Examination (2018- 2022)

When comparing the A/L high performance of the students, the commerce stream shows (Obtained 3 As) the highest performance among all subject streams available for GCE (A/L). We need to pay careful attention to those who fail in 3 subjects, and the 2022 performance reflects that the highest % comes from the Science Stream (16% in the Bio Stream and 17% in the Physical Science stream). Therefore, careful attention should be given to developing them for future work and employment.

Human Capital Development: Employment

Over 200 million people are unemployed globally, and most are youth (Human Capital Report, 2015). The report highlighted the weakness in considering unemployment rates alone as an indicator of utilising its human capital endowment. It proposed that a more inclusive metric of human capital outcomes covering youth, women, and older workers would need to be considered. These groups possess the desire and potential to contribute to economic growth using their capabilities, skills and experience. Employment contributes to their own well-being and that of the economy and society. The report also indicated the need to assess and compare the education and skills of the active and inactive population. Table 11 presents employment indicators for 19 selected countries (order given based on the highest to lowest labour force participation rate in 2021) in 2015, 2019, 2021, and 2022.

Table 11: Employment Status information for selected countries 2015- 2022

		Labour force participation rate (%)			Unemployment rate (%)		
#	Country	2015	2019	2021	2015	2021	2022
1	Switzerland	83.2	84.1	83.6	4.8	5.1	4.2
2	Sweden	81.7	82.9	82.8	7.4	8	7.5
3	New Zealand	79.1	81.3	81.9	5.4	3.8	3.3
4	Japan	76.5	80.2	80.6	3.3	2.7	2.5
5	Canada	78.2	79.1	79.4	7.2	6	5
6	Finland	75.7	78.2	78.7	9.7	7.2	7.3
7	Australia	76.9	78.4	78.8	5.7	4.2	3.5
8	Singapore	76.3	77.1	78.6	3.8	3.5	2.8
9	Vietnam	81.9	81.4	78	1.9	2.4	1.9

10	UK	77.1	78.4	77.4	5.1	4	3.7
11	Thailand	75.9	74.9	75.5	0.6	1	0.9
12	China	76.1	75.4	75.8	4.7	4.5	4.9
13	USA	71.4	72.9	72.1	5	3.9	3.5
14	Malaysia	67.9	69.4	69.5	3.1	4	3.7
15	Bangladesh	57.9	60.9	60.7	4.4	5.1	4.7
16	**Sri Lanka**	**57.9**	**56.9**	**56.7**	**4.5**	**5.2**	**6.7**
17	Pakistan	53.7	53.6	55	3.6	6.3	6.4
18	India	52.8	52.1	51.3	7.9	7.7	7.3
19	Nepal	41.8	42.6	42.1	10.5	12.2	11.1

Source: author complied based on Human Capital Report 2015, World Bank.org

Even though Sri Lanka provides free primary and secondary education for every child, tertiary and other higher education opportunities in the country are inadequate to address the knowledge and skill gaps in the labour force. Consequently, statistics from the UGC confirm that only around 20 per cent of GCE A/L qualified students get the opportunity to enter universities and other higher educational institutions. The rest, who are unable to connect with other tertiary and vocational education institutes due to lack of awareness, affordability, and uneven distribution of those institutes, are left behind and pushed towards easy short-term earnings and informal employment. Given this situation, it is essential to improve human capital utilisation in Sri Lanka by directing the potential labour force towards available opportunities while widening the capacity of the tertiary and vocational education system.

As per the report of the Central Bank of Sri Lanka 2023 (From January to June 2023), the Middle East region remained the main foreign employment destination for Sri Lanka, accounting for around 76% of the total departures for foreign employment. Most were employed in Saudi Arabia, Qatar, Kuwait, UAE, Romania, Maldives and South Korea. Table 12 presents the yearly comparison of departure for foreign employment by Manpower Level from 2108 to 2023 Jan- March).

Table 12: Departure for foreign employment by Manpower Level

Employment- Manpower Level	2018	2019	2020	2022 Jan-Dec	2023 Jan-March
Professional	4.3	4.9	5.5	4,6	4.6
Middle level	3.1	2.8	2.8	2.6	2.9
Clerical and Related	4.5	4.5	4.6	3.9	4.6
Skilled Labor	32.7	30.9	31.0	29.8	27.9
Semi-skilled labour (including Domestic Housekeeping Attendance)	31.9	31.7	29.9	25.2	29.8
Low skilled Labor	24.5	25.2	26.0	33.9	31.4

Source: CBSL Report, SLBFE 2018, 2022,

When comparing the 2022 data, there is a slight improvement in the level of foreign employment departure for other categories and only low-skilled labour departure increases. However, Sri Lanka should focus more on catering to the international labour demand related to the professional, skilled, and semi-skilled categories in light of the decline in demand for low-skilled labour in the international labour market.

Human Capital Development: Staff Development and Training Requirement

Human Capital Report for 2015 pointed out that "Talents, not capital, will be the key factor linking innovation, competitiveness and growth in the 21st Century". This report also provides insight into talent shortage. More than a third of employers globally reported facing difficulties in finding talent, and nearly half expected talent shortages to have a negative impact on their business results. This is similar to the situation in Sri Lanka. Human capital development/ training are investments in human capital that contribute to higher productivity. Table 13 presents the indicators for measuring the quality of education and training and investment information extracted through a review of different HC reports (HCI, 2015; HCI, 2017; The Global Talent Competitiveness Index, 2023)

Table 13: Quality of education and training (Scale 1-7)

Level	Country	HC Index Rank	Quality of math/science education	Quality of business schools	Specialised training services	**Capacity to attract talent**	**Capacity to retain talent**	**University-business R&D**	Staff training services
Asia Pacific Region	Japan	5	5.09	4.23	5.64	3.31	4.41	5.00	5.41
	New Zealand	9	5.33	5.18	4.91	4.64	3.69	4.91	4.93
	Australia	13	4.61	5.05	5.21	4.79	4.24	4.84	4.52
	Singapore	24	6.32	5.83	5.46	6.01	5.22	5.58	5.25
	Philippines	46	4.13	4.74	4.44	3.28	3.52	3.79	4.61
	Malaysia	52	5.20	5.13	5.44	5.03	5.07	5.33	5.35
	Thailand	57	3.89	4.13	4.17	3.95	4.15	3.95	4.41
	Vietnam	59	3.89	3.42	3.34	3.37	3.18	3.27	3.88
	Sri Lanka	**60**	**4.76**	**4.81**	**4.39**	**2.50**	**2.89**	**3.08**	**4.14**
	Bangladesh	99	3.36	3.72	3.11	2.40	2.71	2.56	3.21
	India	100	4.23	4.43	4.21	3.82	3.93	3.87	3.94
	Nepal	106	3.85	3.85	3.10	2.28	2.70	2.64	3.34
	Pakistan	113	3.40	4.28	3.59	2.71	3.18	3.21	3.38
Highest HC Countries	Finland	1	6.26	5.58	5.90	3.67	5.58	5.97	5.32
	Norway	2	4.55	5.26	5.52	4.84	5.58	5.02	5.16
	Switzerland	3	5.40	6.16	6.50	6.07	5.78	5.79	5.69
	Canada	4	5.10	5.77	5.29	5.24	4.80	4.90	5.40
	Sweden	6	4.42	5.16	5.42	4.29	4.75	5.33	5.10
	Denmark	7	4.54	5.21	5.32	3.76	3.95	4.90	4.94
	Netherlands	8	5.44	5.70	6.13	4.83	4.85	5.38	5.03
	Belgium	10	6.01	6.01	6.00	4.03	4.50	5.58	5.11
	USA	17	4.39	5.58	5.64	5.78	5.73	5.96	5.00
	UK	19	4.29	5.83	5.67	5.87	5.03	5.67	4.67

Source: Compiled by the author using information in the Human Capital Report 2015

The above data shows that Sri Lanka is at the lowest level in attracting talent, retaining talent, and university-industry. R& D. Improvement in Education areas and training needs is also evidenced by comparing the annual graduate output percentage of Sri Lanka and selected countries. Table 14 shows the percentage shares of different subject disciplines in the annual output of graduates.

Table 14: Annual percentage of graduate output of Sri Lanka and selected countries

			Percentage share by sector							
Country		Total Number of Graduates	Agriculture	Education	Engineering, Manufacturing,	Health and Welfare	Humanities and Arts	Sciences	Services	Social Sciences, Business. Law
Selected non-Asian Countries	Finland	53,296	2%	7%	20%	20%	13%	7%	5%	25 %
	Norway	40,346	1%	17 %	9%	23%	9%	8%	6%	27 %
	Switzerland	78,918	2%	10 %	13%	14%	9%	8%	8%	37 %
	Sweden	69,140	1%	11 %	19%	24%	6%	8%	3%	28 %
	Denmark	58,667	2%	7%	13%	20%	12%	8%	2%	36 %
	Netherlands	152,049	1%	12 %	8%	17%	10%	6%	5%	40 %
	Belgium	110,419	2%	15 %	11%	21%	11%	5%	2%	30 %
	USA	3,308,494	1%	10 %	7%	17%	12%	9%	8%	36 %
	UK	780,606	1%	10 %	9%	16%	16%	13%	2%	32 %
Selected Countries Asia Pacific Region	Japan	980,902	3%	7%	17%	13%	15%	3%	8%	27 %
	New Zealand	71,931	1%	12 %	7%	15%	14%	12%	5%	32 %
	Australia	386,625	1%	8%	8%	17%	10%	8%	3%	45 %
	Korea, Rep.	618,281	1%	7%	24%	14%	18%	7%	7%	22 %
	Malaysia	261,819	2%	14 %	21%	12%	12%	10%	5%	25 %
		27,050	**4%**	**17 %**	**6%**	**6%**	**27 %**	**11 %**	**0%**	**29 %**
	Sri Lanka		Agriculture	Education	Engineering, Manufacturing,	Health and Welfare	Arts	Sciences	Technology	Business, Law
	Year 2015	**29,545**	**2%**	**1%**	**5%**	**6%**	**55 %**	**13 %**	**N/A**	19 %
	Year 2022	**30,329**	**4%**	**1%**	**6%**	**6%**	**35 %**	**18 %**	**5%**	**25 %**

Source: Calculated and complied by author using data from HCI 2015 and UGC Data 2015, 2022

Information provided in the above table for selected countries is based on standard disciplines identified in the Human Capital Index in 2015 and UGC data in 2022. According to the HCI data, 17% of the Education sector graduate outputs data in the year 2015. However, the actual situation in the country is that only 1% of graduates are in the education sector. Compared with global data, Sri Lanka is required to develop this area and produce more graduates in the field of education. At the same time, it is required to develop the areas of the health sector.

These also come under the social jobs category and are defined as key occupations within three foundational social institutions – education, healthcare, and care- crucial for building inclusion and enhancing social mobility. This report also highlighted that unmet needs are most significant in the healthcare sector, which will require an additional 33 million jobs in 2030. However, the education (21 million) and care (10 million) sectors also have significant unmet needs. The report also highlighted that occupations with the greatest unmet need are personal care workers in health services (18 million), childcare workers, teacher aides and early childhood teachers (12 million) and primary and secondary education teachers (9 million). Table 15 shows the social jobs by the economy and sector of selected countries in the year 2030, as presented in this report, and these data also reflect the need to develop skills and expand training in identified areas.

Table 15: Social jobs unmet need by economy and sector in 2030 (Employment (in 000s)

Country	Australia	Brazil	China	Germany	India	Japan	South Africa	Spain	UK	USA
Current Employment	2319	10214	69215	9583	38437	7895	1254	2963	6043	26350
Employment needed by 2030	2971	19282	83093	11831	60515	9334	6350	5360	7501	32318
Unmet need in 2023	650	9066	13880	2247	22076	1437	5095	2397	1458	5970
% change required	28%	**89%**	20%	23%	57%	18%	**406%**	**81%**	24%	23%
By selected Profession										
University and Higher education Teachers	9%	**139%**	16%	0%	49%	20%	**735%**	29%	16%	2%
Medical Doctors	0%	34%	25%	0%	45%	13%	151%	4%	2%	112%
Personal Care Workers in Health Services/Childcare	**211%**	**448%**	**185%**	**284%**	**214%**	**237%**	**1205%**	**355%**	**90%**	**103%**

Medical and Pharmaceutical technicians	33%	75%	37%	18%	47%	5%	140%	52%	0%	2%
Nursing	18%	76%	54%	27%	62%	10%	268%	80%	23 %	16%
Professional Services Managers	4%	**149 %**	73%	84%	**102** %	25%	0%	**230 %**	3%	7%

Source: Author compiled using data from Future of Jobs, 2022

Based on the above information, we need to think about the following areas which directly impact human capital enhancement in the country.

- There is a need to develop more human capital in the health and welfare sector.
- Services sector human capital development potentials
- Education Sector expansion potential
- The country's assessment and training of humanities and arts graduates is required.
- Though Sri Lanka provided the required number of business and law graduates and output matches with other countries, Sri Lanka needs to focus on the human capital development of professional managers to meet the international market.

Human capital development areas and indicators are also highlighted and evidenced through the World Economic Forum, Global Competitiveness Report 2022. Table 16 shows the areas suggested for improvement, and Sri Lanka also needs to focus on these areas.

Table 16: Reviving and transforming human capital

Trends and Crisis Impact From the financial crisis to the pandemic crisis	Revival Priorities for the next 1-2 years	Transformation Priorities for the next 3-5 year
Talent shortages have become more pronounced, underpinned by outdated education systems. There is a particular shortfall in the new economy's digital and other skills as technology disrupts labour markets.	Scale up reskilling and upskilling in **emerging skills,** combined with active labour market policies.	**Update education curricula** and **expand investment in the skills** needed for jobs and "markets of tomorrow".
There are misaligned incentives and rewards for workers	Manage a gradual transition from furlough schemes to new labour market opportunities	**Rethink labour laws** and social protection for the new economy and the new needs of the workforce
Health services, infrastructure, and talent need to catch up with two dominant demographic trends: increasing population in the developing	Expand health system capacity to manage the burden of the current pandemic and	**Expand eldercare, childcare and healthcare infrastructure**, access and innovation to benefit people and the economy.

world and ageing populations in the developed world.	future healthcare needs.

Source: World Economic Forum: Global Competitiveness Report 2022

Human Capital Valuation And Reporting At the Organisational Level

Human Resource Accounting (HRA) or Human Capital Accounting (HCA) is not new in economics and accountancy. The value of human assets has been recognised for at least 70 years. HCA means identifying and measuring the value of human resources and communicating the information to interested parties. The main objective of HCA is to improve the quality of financial decisions taken in the organisation at both internal and external levels (American Accounting Association, 1974). Investment in professional training is often treated as an industrial relation activity rather than an essential investment decision similar to a plant or technology. When we consider human assets accounting, the underlying idea is that the human inventory stock of a company is available to the organisation to perform the activities (Hosseini, 2012). According to Flamholtz (1974), one of the fundamental objectives of the HCA is to develop methods of measuring human resource cost and value. Previous researchers have developed several models to quantify intangible human values (Brummet/Flamholtz/Pyle,1968; Flamholtz/Likert, 1973 Lev/Schwartz,1971: Hekimian/Jones,1967: Ogan, 1976: Jaggi/Lau, 1974:Hermanson's, 1964: Morse 1973 Andrade and Sotomayor 2011;2013).

Modis is a member of the Adecco Group, a global leader in human resource services, and with the corporate philosophy of "Maximise the well-being and potential of people and society through the creation and production of human resources." (Modis Human Capital Report, 2022). They consider people in the world as human capital and conduct business activities to maximise the potential of this human capital (table 17). They have identified human capital management indicators, and those management indicators are divided into three categories (vision realisation, team collaboration, and challenge culture) and nine items (diversity, productivity, succession planning, leadership, skills and capabilities, recruitment, mobility, and turnover, organisational culture, health, safety, and well-being, and compliance and ethics), and activities are promoted based on ISO30414-compliant evaluation criteria. Human Capital ROI is used as a measure in international organisations. For example, Modis used the human capital ROI formula to show their human capital and continuously monitored ROI as Human Capital ROI= (salary + benefits) /operating profit.

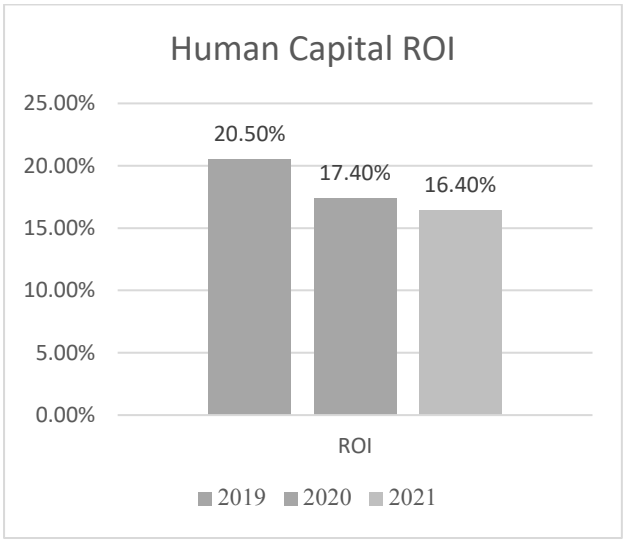
Table 17: Modis Human Capital Management Indicators

Category	Items
Vision Realisation	**Workforce diversity:** Creating higher results through creating and producing a workforce by taking advantage of the characteristics of diverse human resources.
	Productivity: Human Capital investments are linked to business growth
	Recruitment, Mobility and Turnover: To improve performance, recruitment and transfers of human resources are strategically implemented
Team Collaboration	**Leadership:** Continued development of leaders to advance a diverse group of engineers.
	Skills and Capabilities: To achieve our vision, training is provided to enhance the skills and abilities of our engineers.

	Succession Planning: Organisational turnover is functioning for business continuity and development.
Challenge Culture	**Organisational Culture:** Motivated employees are encouraged to take on challenges and work toward realising the company's vision.
	Health, Safety, and Well-being: Employees have a high degree of flexibility in their work style and feel healthy, safe, and well-being in their workplaces
	Compliance and Ethics: Compliance and ethics are observed to be a leader in social implementation

Source: Modis Human Capital Management Report, 2022

Based on the report of Link and Motivation Group (Link and Motivation Group Human Capital Report, 2022), calculate human capital ROI as Human capital ROI = Adjusted operating income ÷ Human capital costs (Human capital costs are calculated as total personnel expenses, including salaries, bonuses and benefits expenses, as well as executive compensation, etc.). Figure 2 presents the calculated human capital ROI for both organisations, reflecting the importance of human capital value. This can be used in Sri Lankan companies to calculate their human capital value.



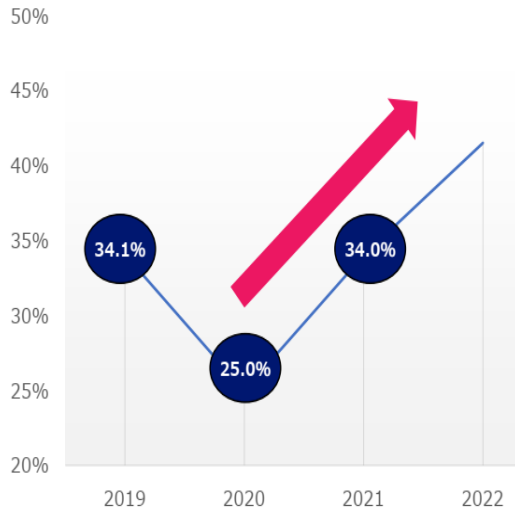


Figure 2: Human Capital ROI

Source: Created using Modis data **Source: Link and Motivation Group HR Report 2021**

Improved human capital reporting comes from the International Integrated Reporting Framework, which defines human capital (Integrated reporting.org) as People's competencies, capabilities and experiences, and their motivations to innovate include:

- Their alignment with and support for an organisation's governance framework, risk management approach, and ethical values
- Ability to understand, develop and implement an organisation's strategy
- Loyalties and motivations for improving processes, goods and services, including their ability to lead, manage and collaborate

The international IR Framework encourages organisations to understand their business model and the role of human capital by reference to inputs, business activities, outputs and outcomes (Integrated reporting.org), as presented in Table 18. Further review of evidence from Sri Lanka showed that

Commercial Bank of Ceylon PLC have reported human capital valuation information in their annual report for many years using the Lev & Schwartz Model. They consider their knowledge capital (human and structural capital) to be a key driver of their corporate success over the years (Bank Annual Report, 2002 to 2014). Giving priority to people, Commercial Bank continues to maintain the leading position in terms of people productivity. However, the 2022 annual report data indicated that the bank used different information for reporting as in Table 19.

Table 18: Human Capital Inputs and Outputs in the International IR Framework

Human Capital	
Inputs and activities relevant to an understanding of human capital	Outputs and outcomes associated with human capital
Employee numbers, the composition of the workforce (e.g. analysis by gender, age, full-time or part-time, contingent labour), staff compensation, employee benefits entitlement, recruitment costs, training and development spend(including on health and safety), average hours training per employee category, numbers of courses taken, reward schemes to align employee behaviours with strategic goals.	Employee motivation and engagement (e.g. by reference to surveys), the stability of the workforce (e.g. voluntary and regrettable turnover rates), retention rates after parental leave, internal hire rate, absence rates, accident rates, days lost to injury, work-related fatalities, industrial relations issues, revenue per headcount, any productivity gains made

Source: The author complied using Integrated Reporting. org Report

Table 19: Human Capital at Commercial Bank

Indicator of value derived	The value derived at January 01, 2022	Activities undertaken to create Financial Capital (*)	The value derived at December 31, 2022	Growth in value created
Number of employees	5,072	*Improved quality of recruits	5121	49
Number of recruits	226		369	143
Retention ratio (%)	95.89	*Conducted employee surveys	94.82	Drop by -107bps
Return to work from maternity (%)	100	*Invested in training and development	100	Maintained a 100% return ratio in both years
Profit per employee (Rs. Mn.)	4654	*Enriched career development	4485	-3.63%
Average service period	13.16	*Re-enforced performance management and appraisals	138	4.6%
Total training hours	79928		151448	89.48%
Staff welfare cost per employee (Rs. Mn.)	0.065		0.100	53.67%

Source: Commercial Bank Annual Report-2022

Other companies in Sri Lanka also can use these reporting practices. Then, we can even compare the best companies with their human capital value.

Conclusion

Human capital must be valued and invested efficiently to generate returns for individuals, organisations and nations. The human capital index and nations' human capital values provide measures at the macro level (at the national level). They should be given to the tertiary and vocational education, labour force participation rate in each age category, unemployment rate, high skills employment share, middle-skills employment share, long-term unemployment rate, public spending on education (% of GDP), employment gender gap, and female-over-male ratio. Sri Lanka can also identify and apply the key points (Schultz, 1960,1961) to develop Human Capital in the country.

- Human capital should be treated as an additional source of income created with the help of a person's knowledge, skills, and abilities and value enhancement for the time being.
- Education is one of the forms of capital and the most crucial factor contributing to the country's individual, organisational, and economic growth.
- The capital of education is human capital because it is inseparable from a person.
- Education as capital is a source of future satisfaction and (or) earnings.
- Additional investments in education are needed to improve the quality characteristics of the workforce.
- Investing in education is one of the investments in production factors that create a surplus product.

At the same time, Sri Lankan organisations have placed meagre attention on valuing and reporting at the micro level of human resources, which is widely considered an organisation's most valuable asset. HC valuation and reporting at the micro level (organisational and individual level) should be considered by adopting other countries' practices.

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