

STATISTICAL HANDBOOK ON RESEARCH AND DEVELOPMENT OF SRI LANKA 2024



NATIONAL
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FOUNDATION

National Science Foundation
47/5, Maitland Place
Colombo 07
Sri Lanka
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Statistical Handbook on Research and Development of Sri Lanka 2024

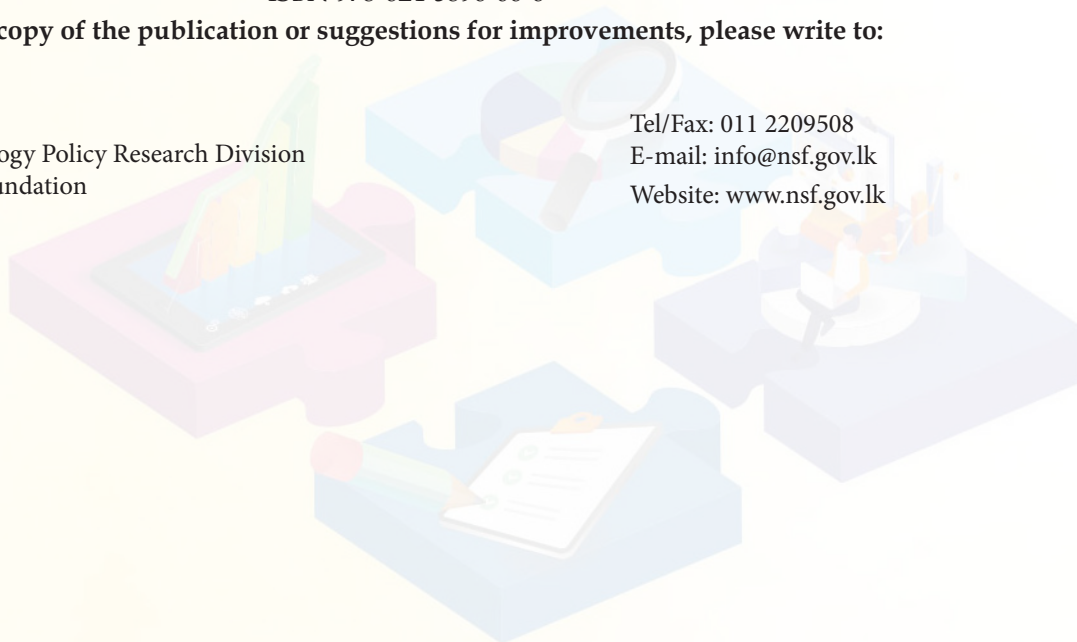
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FORWARD

The National Research & Development (R&D) Survey conducted by the National Science Foundation (NSF) of Sri Lanka measures and reports the status of research and development activities in the country in terms of resource deployment and outputs generated. The Statistical Handbook on Research and Development of Sri Lanka 2024 presents the findings of the National R&D Survey conducted by the NSF for the survey year 2024.

The Handbook provides comprehensive statistical information on key dimensions of R&D activities in Sri Lanka including R&D expenditure, sources of R&D funding, human resources engaged in R&D, fields and types of research, patents, and publications by Sri Lankan scientists in indexed journals, among other important indicators. Accordingly, the indicators presented in the first two chapters primarily cover R&D inputs, while the final chapter focuses on R&D output. For the convenience of users, the Handbook also presents key highlights of the survey findings and the general definitions and terminology used in the R&D Survey.

These indicators provide an overview of Sri Lanka's performance in research and development in 2024 and serve as an important evidence base for monitoring trends and informing policies and strategies for strengthening the country's R&D ecosystem. The relevant indicators are also submitted to the UNESCO Institute for Statistics (UIS) and the Sustainable Development Council (SDC), Sri Lanka, thereby contributing to international and national databases and enhancing the visibility of Sri Lanka's R&D performance.

It is our expectation that this Statistical Handbook will serve as a valuable reference for policymakers, researchers, academics, development partners, and all those interested in understanding, monitoring and strengthening research and development in Sri Lanka. I wish this important publication every success and trust that it will contribute to evidence-informed decision-making and the continued advancement of the country's research and innovation ecosystem.

Dr Sudath Samaraweera
Chairman
National Science Foundation Colombo, Sri Lanka

August 2026

PREFACE

Research and Development (R&D) plays a vital role in strengthening the scientific and technological capabilities in the country. In long run, it supports sustainable socio-economic development through innovation and commercialization. Reliable and timely R&D statistics are therefore essential for evidence-based policymaking, effective resource allocation and monitoring national progress, etc.

The Statistical Handbook on Research and Development of Sri Lanka 2024 presents a comprehensive compilation of statistical information on the country's R&D landscape. The Handbook is prepared based on data collected through the National Research and Development Survey conducted by the National Science Foundation (NSF) of Sri Lanka.

The indicators presented in this publication can assist policymakers, researchers, universities, government institutions, industry, development partners and other stakeholders in formulation and evaluation of policies and programmes aimed at increasing investment in R&D, strengthening the research workforce, improving research infrastructure, promoting industry-academia collaboration, etc.

The NSF is committed to continuously improving the coverage, quality, relevance and timeliness of national R&D statistics in accordance with international standards.

Prof. Shiromi Perera
Director General
National Science Foundation Colombo
Sri Lanka

August 2026

TECHNICAL NOTES

The National R&D survey is conducted biennially by the NSF, Sri Lanka to measure the status of the R&D landscape of the country in terms of resource deployment and outputs generated.

This survey is conducted abiding by the standards stipulated by the Organization for Economic Co-operation and Development (OECD) and UNESCO Institute of Statistics (UIS). Frascati manual (2015) of OECD and Guide to Conducting an R&D Survey: For countries starting to measure research and experimental development (2014) of UIS are the two major guidelines followed in the survey. International standard classifications relevant to Science, Technology and Innovation were followed in questionnaire development, indicator development and presentation.

This survey covered 04 major R&D sectors in the country such as:

- a. Higher Education sector (State and Private) - full coverage
- b. Government R&D institutes– full coverage
- c. Business Enterprises – About 300 institutions were selected for the survey considering the size of the establishment, degree of their R&D activity and proportion of their contribution to national economy. All the major industries that conduct a substantial amount of R&D were included in the sample
- d. Private Non-Profit Institutions – full coverage

The NSF has entered into strategic partnerships with the Department of Census and Statistics (DCS) and the University Grants Commission (UGC) to obtain R&D data relevant to the Business Enterprises Sector and Higher Education Sector respectively. Data gathered from these four sectors were analyzed to generate R&D indicators: R&D input indicators and R&D output indicators.

R&D Input indicators

- Gross Domestic Expenditure on R&D (GERD)
- GERD by Research Type, Research Discipline, Sectors
- Sources of funds for R&D
- Head count of R&D Scientists and Technicians
- Full-Time Equivalents (FTEs) of R&D scientists

R&D Output indicators

- Number of Research Publications
- Information on Patents and Industrial Designs
- Postgraduate Outputs

Accordingly, around 45 R&D indicators have been generated and published in the Statistical Handbook on Research & Development of Sri Lanka for the respective year. These statistics have been disseminated among the relevant stakeholders specially with the UNESCO, UIS and Sustainable Development Council, Sri Lanka.



HIGHLIGHTS - 2024

- Sri Lanka had spent a total of Rs. 30,665.34 million on R&D in 2024. This corresponds to 0.10% of the GDP of the country.
- The highest gross expenditure on Research and Development (GERD) was incurred by Business Enterprises (40.33%) followed by Higher Education Sector (28.42%), Government Research Institutes (27.85%), and Private Non-Profit Organizations (3.40%).
- The highest proportion of funds for R&D was devoted for Applied Research, 47.78% of GERD, while Experimental Developments and Basic accounted 32.38% and 19.84% of GERD respectively.
- The top three fields of Sciences which have highest GERD are Engineering and Technology (30.93%), Agricultural sciences (27.55%) and Natural sciences (17.56%).
- 7169 Researchers (Head Count) were employed in domestic R&D activities and their Full-Time Equivalent value was 2684.
- The total number of Full-time equivalent (FTE) researchers were 122.47 per million of population.
- 184 patent registrations were reported in 2024 and out of them 144 patents were Non-Resident registrations.
- 1550 of articles of Sri Lankan scientists were published in SCI Journals in 2024 and 72% of them have a foreign co-authorship.
- Some higher educational, government R & D institutes, and business enterprises which did not submit data in previous survey years have submitted data for this survey.

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Survey Team of the Science & Technology Policy Research Division (STPRD)

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An isometric illustration in the background featuring various business and research-related items. It includes a laptop, a smartphone, a tablet, a stack of papers, a magnifying glass, a gear, and a lightbulb, all rendered in a soft, pastel color palette of purples, blues, and pinks. The items are arranged in a way that suggests a workflow or a process of discovery.

FINANCIAL RESOURCES FOR RESEARCH AND DEVELOPMENT

1.1. Gross Domestic Expenditure on Research and Development (GERD) 2024

Description		
a)	GERD at Current Market Price (Rs. Million)	30,665.34
b)	GERD as a percentage of GDP (%) ¹	0.10%
c)	GERD per Million Population (Rs. Million) ²	1399.22
d)	GERD (USD Million)	101.50

1- GDP of 2024 at current market price is Rs. 29,899 billion (Annual Economic Review 2024, Central Bank of Sri Lanka)

2- Mid-year population of 2024 is 21,916,000 (Annual Economic Review 2024, Central Bank of Sri Lanka)

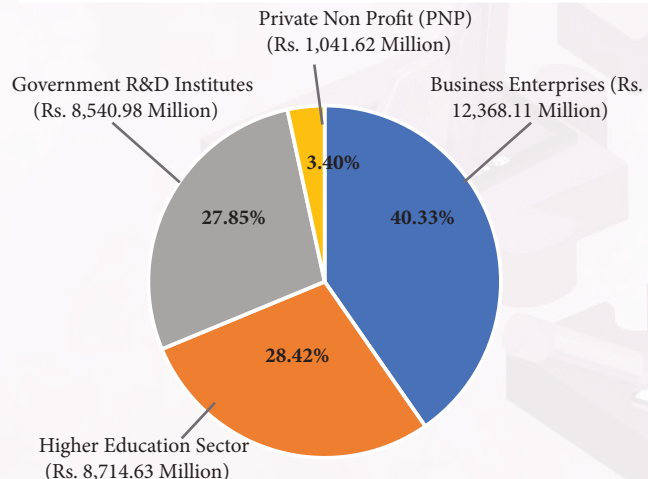


Figure 1.1. GERD by Sectors

Source: National R&D Survey of Sri Lanka, 2024 (NSF)

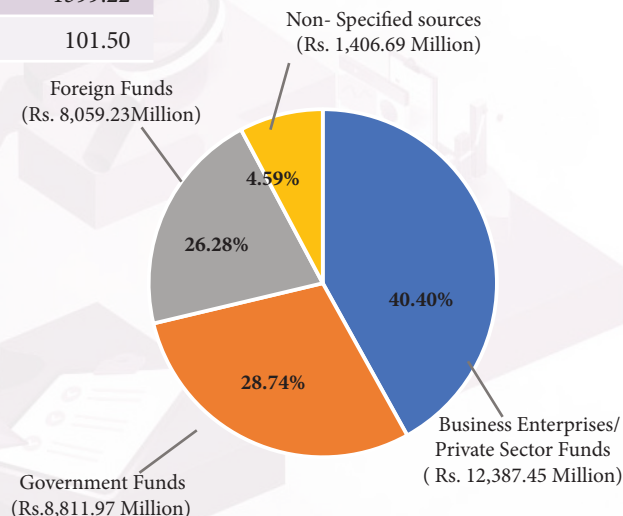
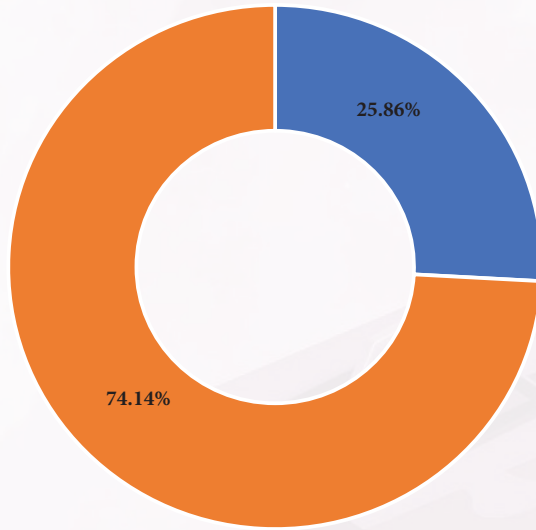


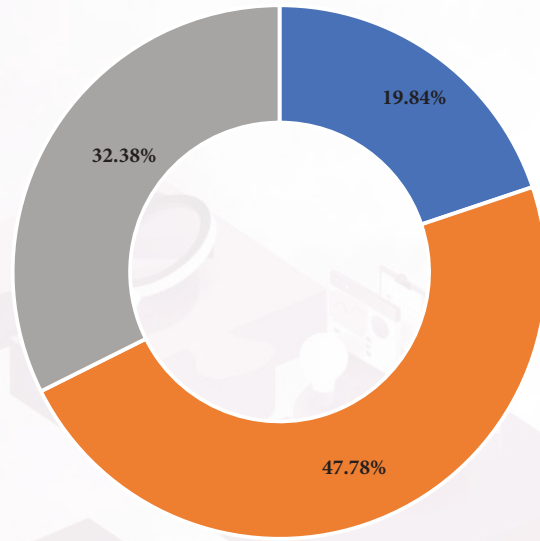
Figure 1.2 R&D Expenditure by Source of Funds



- Capital (Rs. 7,929.40 Million)
- Recurrent (Rs. 22,735.95 Million)

Figure 1.3. Capital and Recurrent Expenditure on R&D

Source: National R&D Survey of Sri Lanka, 2024 (NSF)



- Basic (Rs. 6,085.31 Million)
- Applied (Rs. 14,651.01 Million)
- Experimental Development (Rs. 9,929.02 Million)

Figure 1.4. GERD by Research Activities

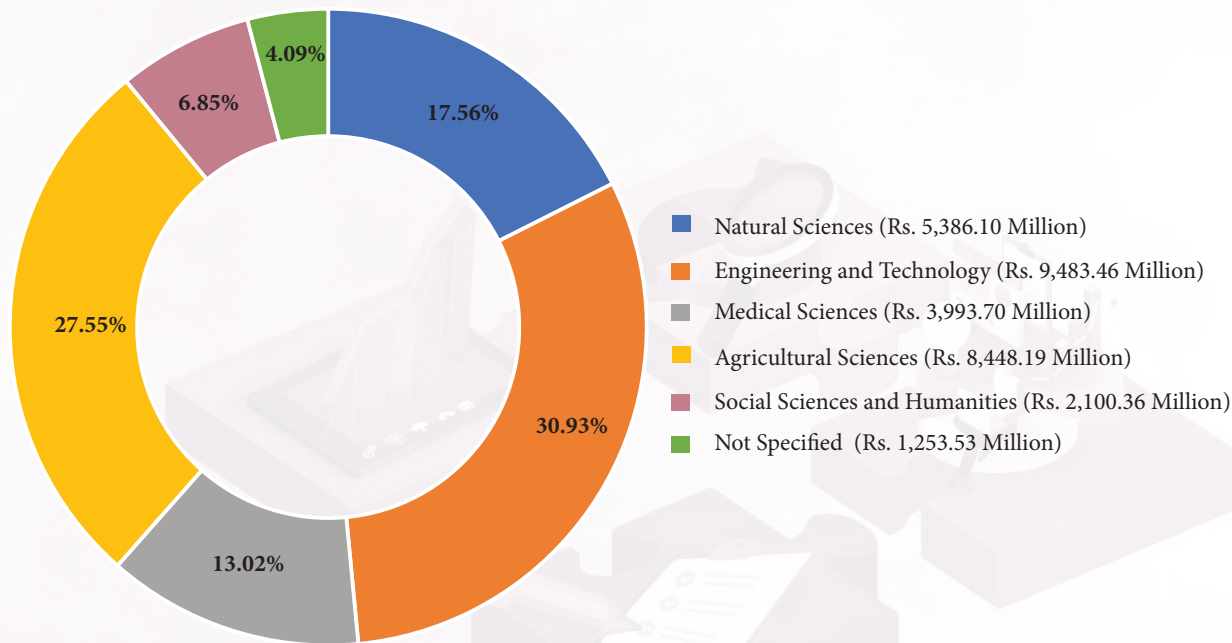


Figure 1.5. GERD by Field of Science

Source: National R&D Survey of Sri Lanka, 2024 (NSF)

1.2. Source of Funds - Sector-wise Disaggregation

Source of Fund	Government R&D Institutes		Higher Education Sector		Business Enterprises		PNP		Total	
	Rs. Million	%	Rs. Million	%	Rs. Million	%	Rs. Million	%	Rs. Million	%
Government	6,741.29	78.93	2,056.55	23.60	11.25	0.09	2.89	0.28	8,811.98	28.74
Business Enterprises/ Private Sector	103.15	1.21	210.37	2.41	12,061.61	97.52	12.32	1.18	12,387.45	40.40
Foreign	871.39	10.20	6,158.86	70.67	5.62	0.05	1,023.35	98.25	8,059.23	26.28
Not-Specified	825.15	9.66	288.85	3.31	289.62	2.34	3.06	0.29	1,406.69	4.59
Total	8,540.98	100.00	8,714.63	100.00	12,368.11	100.00	1,041.62	100.00	30,665.34	100.00

Source: National R&D Survey of Sri Lanka, 2024 (NSF)

1.3. R&D Expenditure - Sector-wise Disaggregation

Expenditure Description	Government R&D Institutes		Higher Education Sector		Business Enterprises		PNP	
	Rs. Million	%	Rs. Million	%	Rs. Million	%	Rs. Million	%
Capital	1,751.35	20.51	1,514.61	17.38	4,654.45	37.63	8.99	0.86
Recurrent	6,789.63	79.49	7,200.03	82.62	7,713.66	62.37	1,032.63	99.14
Basic	2,557.02	29.94	526.58	6.04	2,827.85	22.86	173.86	16.69
Applied	4,571.58	53.53	7,098.85	81.46	2,113.43	17.09	867.14	83.25
Experimental Development	1,412.38	16.54	1,089.19	12.50	7,426.83	60.05	0.62	0.06
Natural Sciences	1,507.96	17.66	448.69	5.15	2,914.97	23.57	514.48	49.39
Engineering and Technology	1,651.00	19.33	2,187.93	25.11	5,644.53	45.64	0.00	0.00
Medical Sciences	930.04	10.89	2,317.86	26.60	715.82	5.79	29.98	2.88
Agricultural Sciences	2,926.94	34.27	2,882.89	33.08	2,468.15	19.96	170.21	16.34
Social Sciences and Humanities	783.64	9.18	852.10	9.78	141.34	1.14	323.28	31.04
Not-Specified	741.41	8.68	25.16	0.29	483.30	3.91	3.67	0.35

Source: National R&D Survey of Sri Lanka, 2024 (NSF)

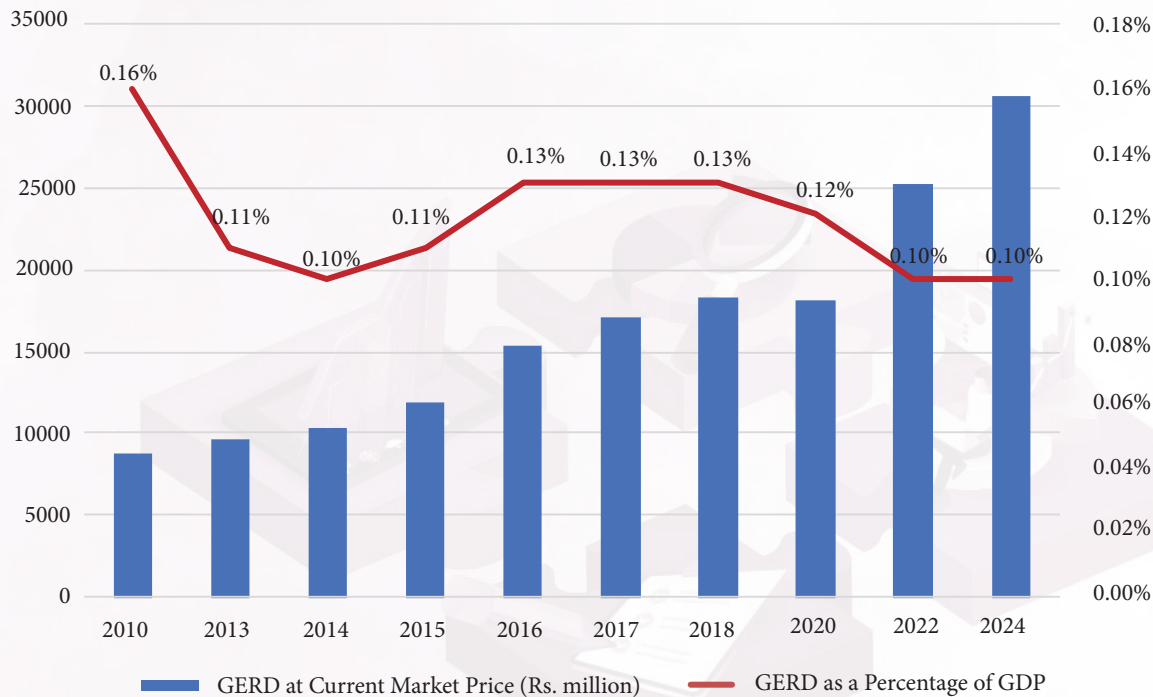


Figure 1.6. Time Trend of GERD (2010-2024)

Source: National R&D Survey of Sri Lanka, 2010,2013, 2014,2015,2016,2017,2018, 2020, 2022 & 2024 (NSF)

1.4. Time Trend - GERD by Sectors

Rs. Million

Sector	2015	2016	2017	2018	2020	2022	2024
Government R&D Institutes	4,062.50	5,391.80	6,310.74	6,497.77	6,200.44	6,882.27	8,540.98
Higher Education Sector	3,795.30	3,147.20	3,774.10	4,302.92	4,851.58	7,144.66	8,714.63
Business Enterprises	4,004.20	6,784.00	6,809.20	7,295.28	6,895.56	10,512.70	12,368.11
Private Non Profit (PNP)	42.10	96.30	109.30	247.95	227.02	741.07	1,041.62
Total	11,904.10	15,419.30	17,003.34	18,343.92	18,174.60	25,280.70	30,665.34

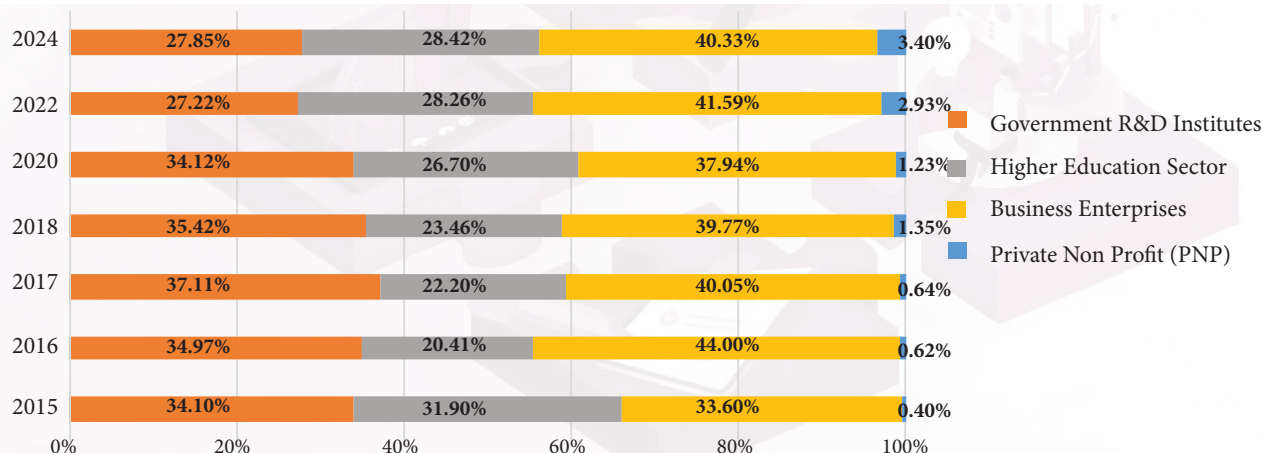


Figure 1.7 Time Trend of GERD by Sectors

Source: National R&D Survey of Sri Lanka, 2015, 2016, 2017, 2018, 2020, 2022 & 2024 (NSF)

1.5. Time Trend - Capital and Recurrent Expenditure on R&D

Rs. Million

Nature of Expenditure	2014	2015	2016	2017	2018	2020	2022	2024
Recurrent	8,851.04	10,453.60	13,290.64	13,854.42	14,191.12	14,854.59	22,233.25	22,735.95
Capital	1,499.04	1,450.50	2,128.66	3,148.92	4,152.81	3,320.01	3,047.45	7,929.40
Total	10,350.08	11,904.10	15,419.30	17,003.34	18,343.93	18,174.60	25,280.70	30,665.34

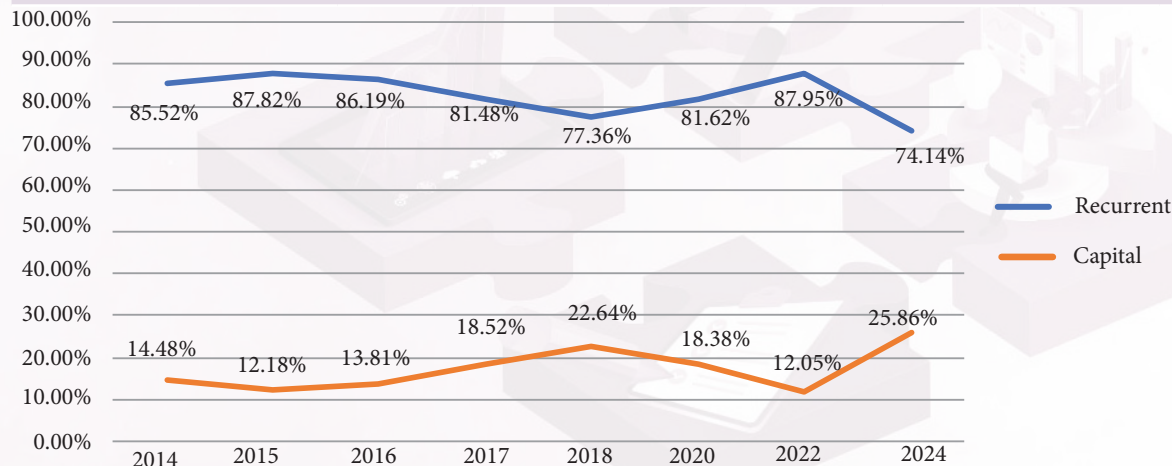


Figure 1.8. Time Trend of Capital and Recurrent R&D Expenditure

Source: National R&D Surveys of Sri Lanka, 2014, 2015, 2016, 2017, 2018, 2020, 2022 & 2024 (NSF)

1.6. Time Trend - GERD by Research Activities

Rs. Million

Research Type	2014	2015	2016	2017	2018	2020	2022	2024
Basic	1,578.47	1,668.80	2,649.30	4,559.02	5,929.48	5,325.76	3,624.30	6,085.31
Applied	5,938.05	6,648.20	7,036.96	8,559.34	4,875.29	8,624.09	13,987.60	14,651.01
Experimental Development	2,833.56	3,587.10	5,733.04	3,884.98	7,539.15	4,224.74	7,668.80	9,929.02
Total	10,350.08	11,904.10	15,419.30	17,003.34	18,343.92	18,174.60	25,280.70	30,665.34

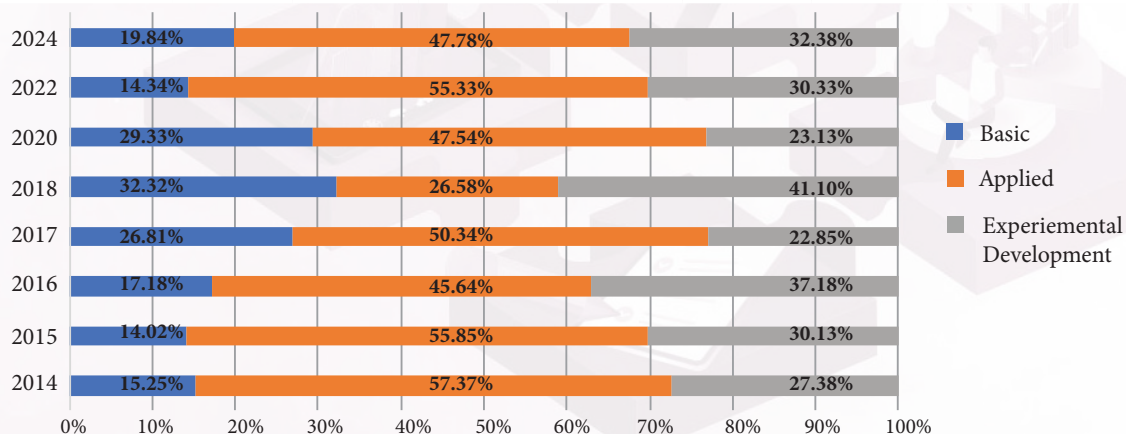


Figure 1.9. Time Trend - GERD by Research Activities

Source: National R&D Surveys of Sri Lanka, 2014, 2015, 2016, 2017, 2018, 2020, 2022 & 2024 (NSF)

1.7. Time Trend - GERD by Field of Science

Rs. Million

Discipline	2014	2015	2016	2017	2018	2020	2022	2024
Natural Sciences	2,666.19	3,170.30	3,020.67	3,060.19	3,350.26	4,081.18	4,475.07	5,386.10
Engineering and Technology	2,447.55	2,991.80	4,913.90	3,432.84	5,986.74	5,025.85	8,618.27	9,483.46
Medical Sciences	371.85	1,019.10	930.77	1,588.50	1,558.03	1,546.87	1,833.00	3,993.70
Agricultural Sciences	4,077.77	3,746.10	4,349.42	6,080.86	4,372.72	4,399.44	7,205.31	8,448.19
Social Sciences and Humanities	603.85	647.80	1,390.84	1,561.81	2,654.96	2,212.95	2,381.73	2,100.36
Not Specified	182.87	329.00	813.70	1,279.14	421.23	908.34	767.32	1,253.53
Total	10,350.08	11,904.10	15,419.30	17,003.34	18,343.92	18,174.63	25,280.70	30,665.34

Source: National RDI Surveys Sri Lanka, 2014, 2015, 2016, 2017, 2018, 2020 , 2022 & 2024 (NSF)

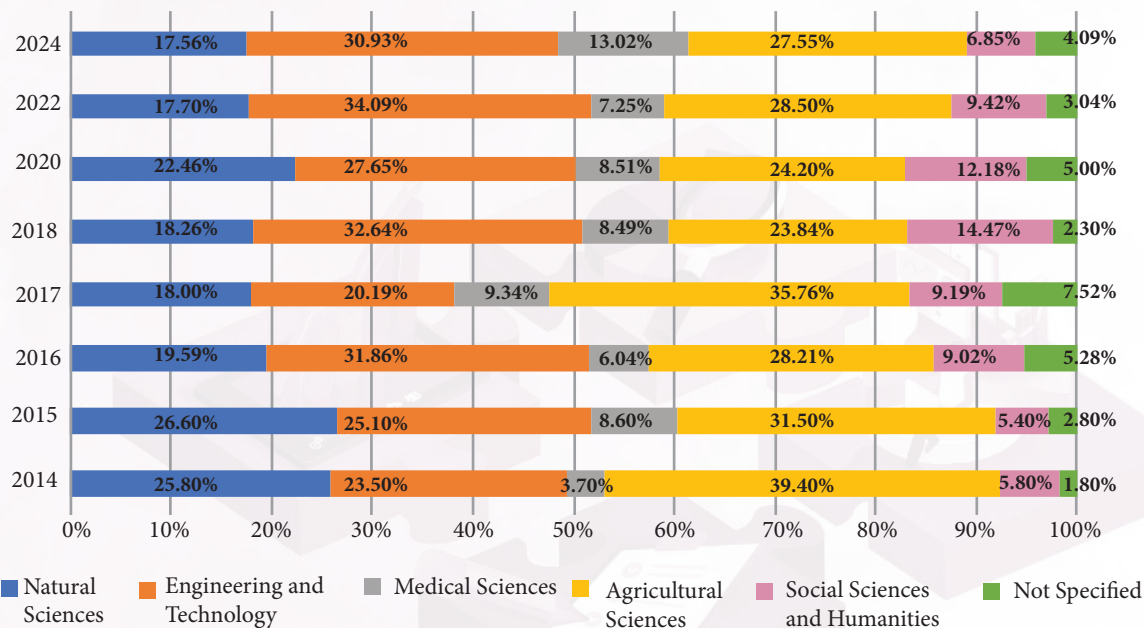


Figure 1.10. Time Trend - GERD by Field of Science

Source: National RDI Surveys Sri Lanka, 2014, 2015, 2016, 2017, 2018, 2020, 2022 & 2024 (NSF)

1.8. Time Trend- R&D Expenditure by Source of Funds

Rs. Million

Source of Funding	2010	2013	2015	2018	2020	2022	2024
Government Funds	4,907.16	5,209.97	7,099.60	9,735.57	8,071.91	7,418.75	8,811.97
Business Enterprises/ Private Sector Funds	3,592.58	3,934.04	4,099.90	7,259.64	6,953.85	10,602.58	12,387.45
Foreign Funds	239.13	486.17	176.40	931.33	1,776.29	5,293.68	8,059.23
Not Specified sources	39.29	39.83	528.20	417.38	1,372.53	1,965.69	1,406.69
Total	8,778.16	9,670.01	11,904.10	18,343.92	18,174.58	25,280.70	30,665.34

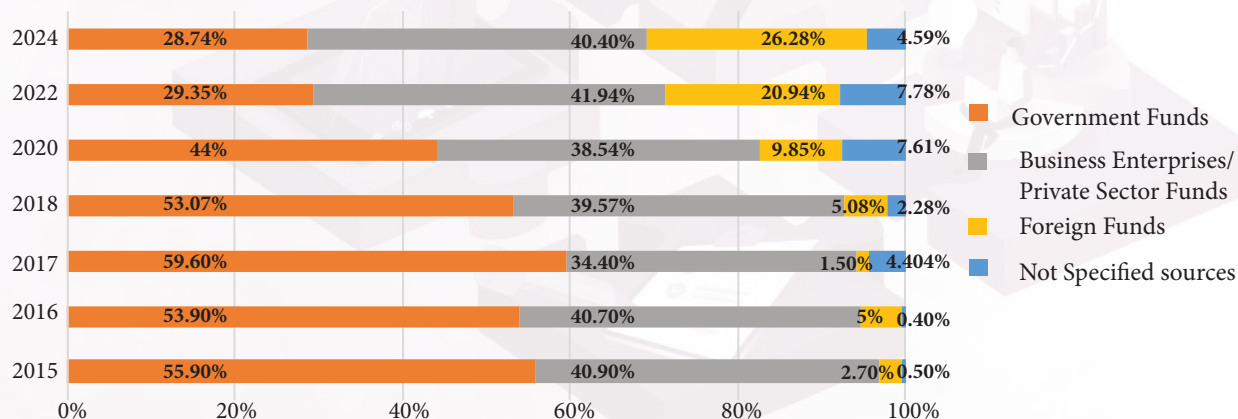


Figure 1.11 Time Trend of R&D Expenditure by Source of Funds

Source: National R&D Survey of Sri Lanka, 2010,2013,2015,2018, 2020, 2022 & 2024 (NSF)

An isometric illustration of a mechanical assembly. It features several interlocking gears of different sizes, a lever with a circular knob, and a clipboard with a document and a pen. The entire scene is rendered in a light green and grey color scheme with soft shadows, giving it a three-dimensional appearance.

HUMAN RESOURCES IN RESEARCH AND DEVELOPMENT

2.1. Researchers and Technicians Employed in Research and Development 2024

Description		
a)	Head Count of Researchers (Number)	7,169.00
b)	Head Count of Technicians (Number)	4,043.00
c)	Human Resources for R&D (Researchers and Technicians)	11,212.00
d)	No of Technicians per Researcher	0.56
e)	Researchers per million population*	327.11
f)	Full time Equivalent Researchers	2,685.00
g)	Researchers per million population (in full-time equivalent - FTE)*	122.47
h)	Number of Research Students	4,155.00

Source: National R&D Survey of Sri Lanka, 2024 (NSF)

* Mid-year population of 2024 is 21,916,000 (Annual Economic Review 2024, Central Bank of Sri Lanka)

Researchers per million inhabitants (FTE)

World- 1486.18 (2023), South Asia- 347.27, South-eastern Asia- 872.97, High-income countries- 4692.01, Lower middle income- 280.84

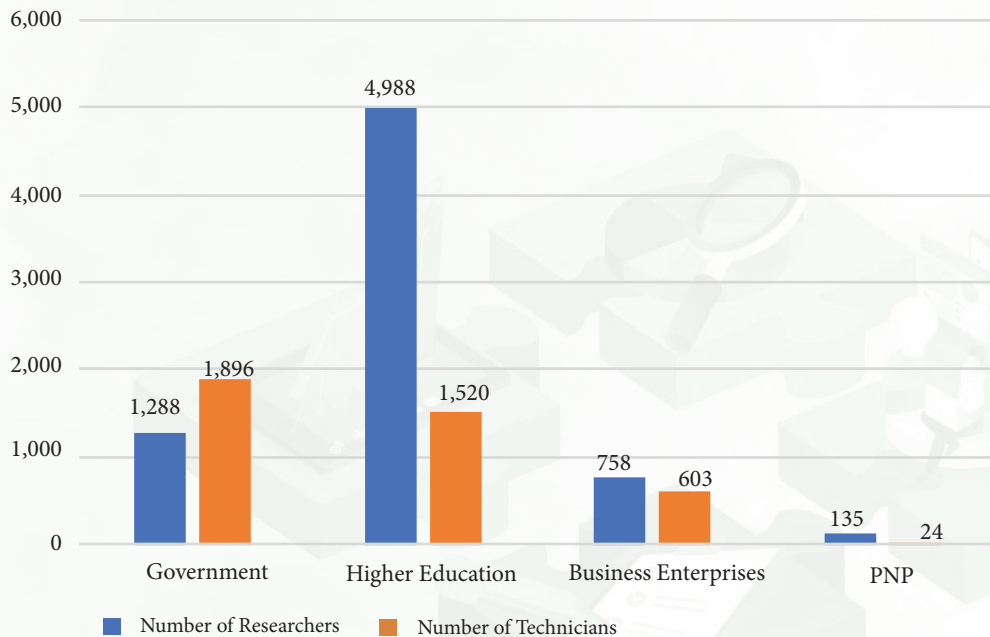


Figure 2.1. Distribution of R&D Persons by Sector

Source: National R&D Survey of Sri Lanka, 2024 (NSF)

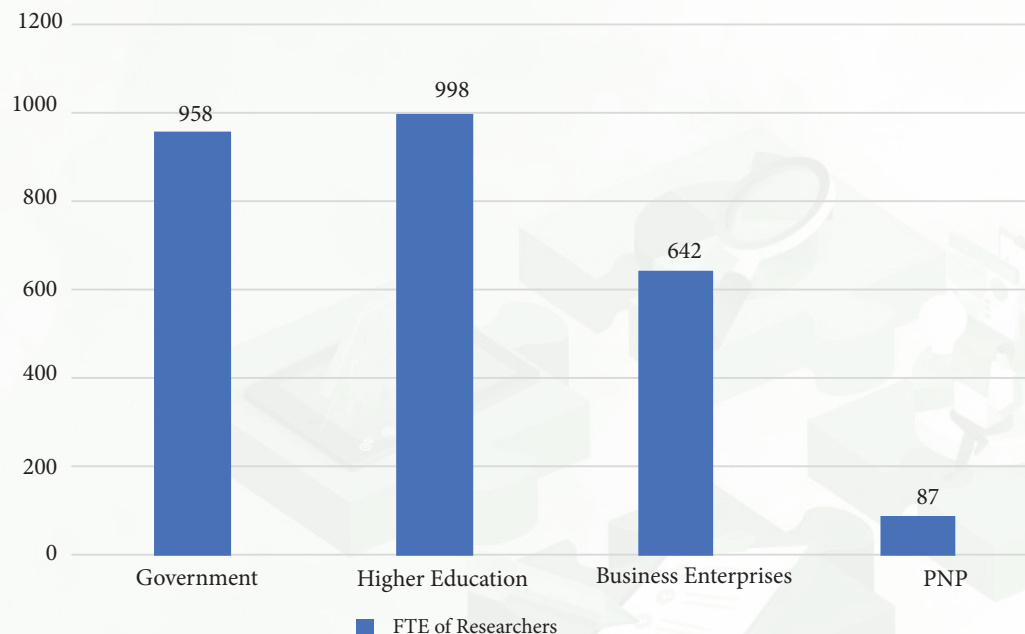


Figure 2.2. Full-time Equivalent (FTE) of Researchers by Sector

Source: National R&D Survey of Sri Lanka, 2024 (NSF)

2.2. Researchers by Different Disciplines

Discipline	Male	Female	Total
Natural Sciences	904	972	1,876
Agricultural Sciences	496	636	1,132
Engineering and Technology	829	808	1,637
Medical Sciences	756	511	1,267
Social Sciences and Humanities	527	533	1,060
Not Specified	89	108	197
Total	3,601	3,568	7,169

Source: National R&D Survey of Sri Lanka, 2024 (NSF)

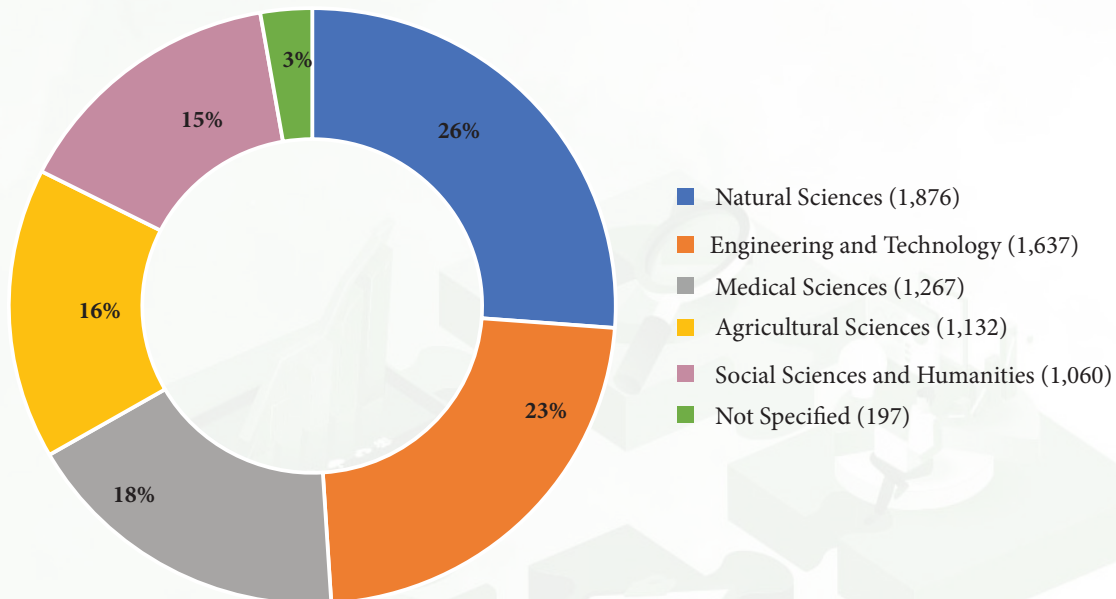


Figure 2.3. Distribution of Researchers by Different Disciplines

Source: National R&D Survey of Sri Lanka, 2024 (NSF)

2.3. Researchers by Educational Qualifications

Educational Qualifications	Male	Female	Total
Doctoral or Equivalent	1,243	1,468	2,711
MPhil	282	247	529
Masters or Equivalent	962	985	1,947
Bachelors or Equivalent	1,087	845	1,932
Other Tertiary Level Diplomas (NVQ level 5&6)	27	23	50
Total	3,601	3,568	7,169

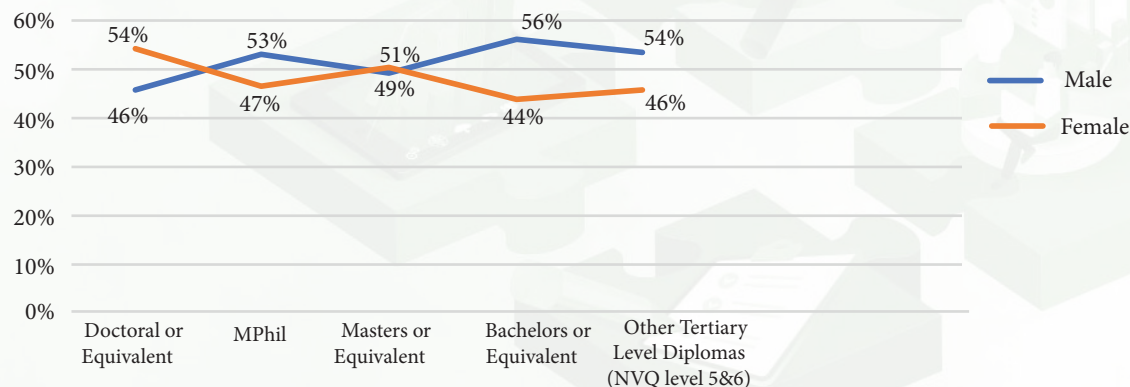
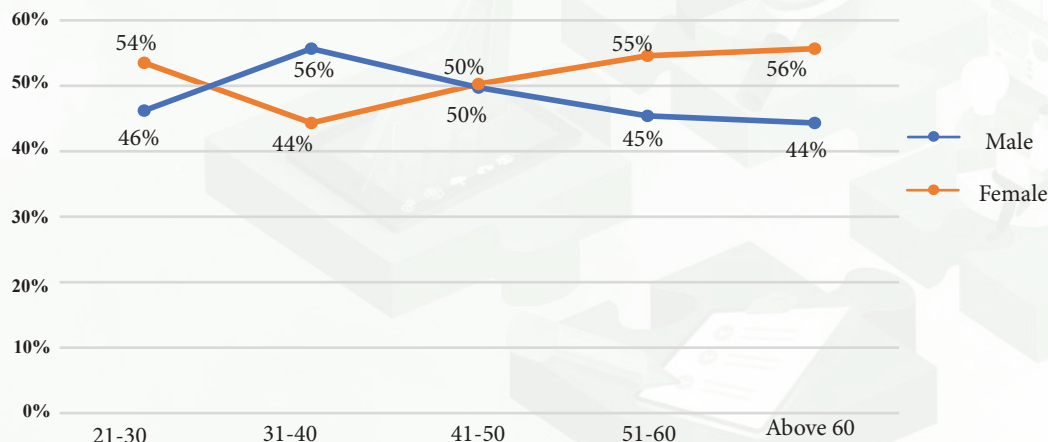


Figure 2.4. Researchers by Educational Qualifications and Gender

Source: National R&D Survey of Sri Lanka, 2024 (NSF)

2.4. Researchers by (Head Count) Age and Gender

Age Group	Male	Female	Total
21 - 30	341	395	736
31 - 40	1,416	1,127	2,543
41 - 50	963	977	1,940
51 - 60	688	827	1,515
Above 60	193	242	435
Total	3,601	3,568	7,169

**Figure 2.5. Age and Gender-wise Proportion of Researchers**

Source: National R&D Survey of Sri Lanka, 2024 (NSF)

2.5. R&D Persons - Sector-wise Disaggregation

Description	Government		Higher Education		Business Enterprises		PNP		Total		Total
	M	F	M	F	M	F	M	F	M	F	
Head Count of researchers	543	745	2,510	2,478	483	275	65	70	3,601	3,568	7,169
Head Count of Technicians	908	988	936	584	414	189	8	16	2,266	1,777	4,043
Head Count of Other Supporting Staff	1,922	951	737	152	325	148	53	41	3,037	1,292	4,329
Full-time Equivalent (FTE) of Researchers	404	554	502	496	411	231	42	45	1,359	1,326	2,685

Source: National R&D Survey of Sri Lanka, 2024 (NSF)

2.6. R&D Persons - Sector-wise Disaggregation by Highest Educational Qualifications and Age Group

Researchers by Highest Educational Qualification	Government		Higher Education		Business Enterprises		PNP		Total		Total
	M	F	M	F	M	F	M	F	M	F	
Doctoral or Equivalent	103	140	1,087	1,284	24	25	29	19	1,243	1,468	2,711
M.Phil	23	51	248	195	8	0	3	1	282	247	529
Masters or Equivalent	189	298	563	579	193	86	17	22	962	985	1,947
Bachelors or Equivalent	204	244	612	419	255	154	16	28	1,087	845	1,932
Other Tertiary- Level Diplomas (NVQ level 5&6)	24	12	0	1	3	10			27	23	50
Total	543	745	2,661	2,695	483	275	65	70	3,601	3,568	7,169
Researchers by Age Group											
21 - 30	39	86	180	145	110	136	12	28	341	395	736
31 - 40	198	310	993	707	213	94	12	16	1,416	1,127	2,543
41 - 50	152	205	708	730	86	28	17	14	963	977	1,940
51 - 60	141	139	480	664	52	17	15	7	688	827	1,515
Above 60	13	5	149	232	22	0	9	5	193	242	435
Total	543	745	2,661	2,695	483	275	65	70	3,601	3,568	7,169

Source: National R&D Survey of Sri Lanka, 2024 (NSF)

2.7. R&D Persons - Sector-wise Disaggregation of Researchers by Field of Science

Researchers by Highest Educational Qualification	Government		Higher Education		Business Enterprises		PNP		Total		Total
	M	F	M	F	M	F	M	F	M	F	
Natural Sciences	88	149	634	657	161	147	21	19	904	972	1,876
Engineering & Technology	160	314	283	271	50	44	3	7	496	636	1,132
Medical Sciences	159	91	437	674	223	39	10	4	829	808	1,637
Agricultural Sciences	7	30	718	474	21	2	10	5	756	511	1,267
Social Sciences & Humanities	71	97	435	402	2	3	19	31	527	533	1,060
Other Fields	58	64	3		26	40	2	4	89	108	197
Total	543	745	2,510	2,478	483	275	65	70	3,601	3,568	7,169

Source: National R&D Survey of Sri Lanka, 2024 (NSF)

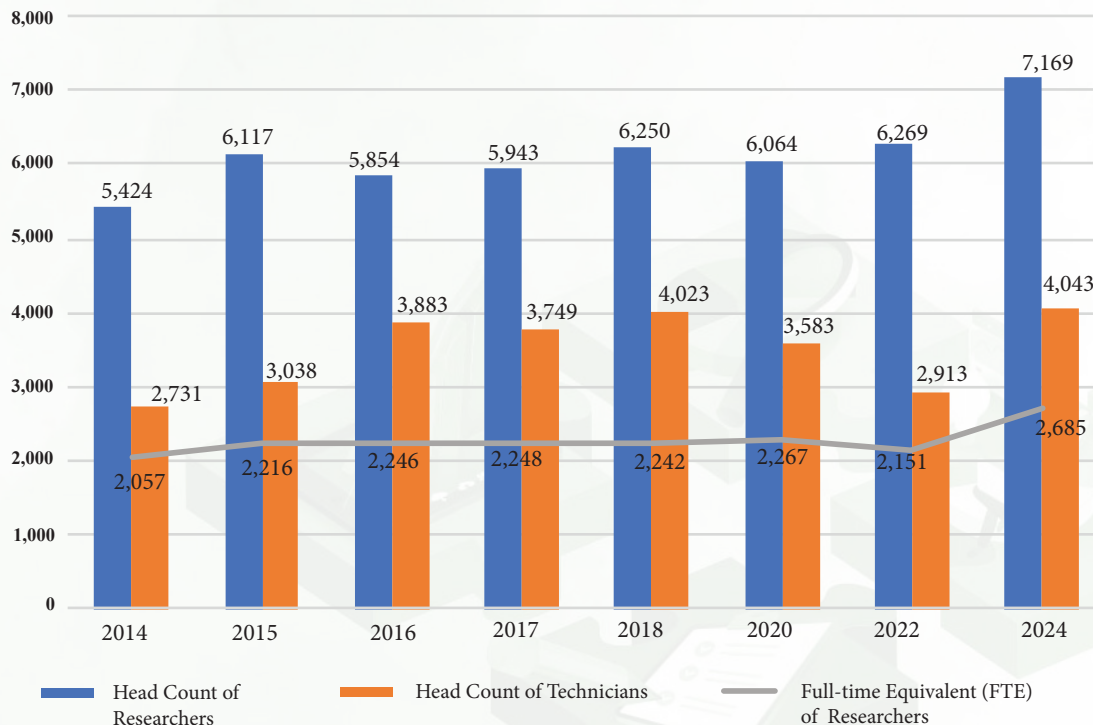


Figure 2.6. Time Trend of R&D Persons

Source: National R&D Survey of Sri Lanka, 2014, 2015, 2016, 2017, 2018, 2020, 2022 & 2024 (NSF)

2.8. Researchers by Different Disciplines (2014-2024)

Field of Science	Head Count of Researchers							
	2014	2015	2016	2017	2018	2020	2022	2024
Natural Sciences	1,629	1,897	1,399	1,385	1,462	1,450	1,603	1,876
Agricultural Sciences	1,289	1,423	1,387	1,239	1,170	910	903	1,132
Engineering and Technology	1,047	1,286	1,115	1,128	1,128	1,543	1,496	1,637
Medical Sciences	794	776	1,175	1,320	1,472	1,238	1,231	1,267
Social Sciences and Humanities	408	471	745	703	858	715	691	1,060
Not Specified	257	264	33	168	160	208	345	197
Total	5,424	6,117	5,854	5,943	6,250	6,064	6,269	7,169

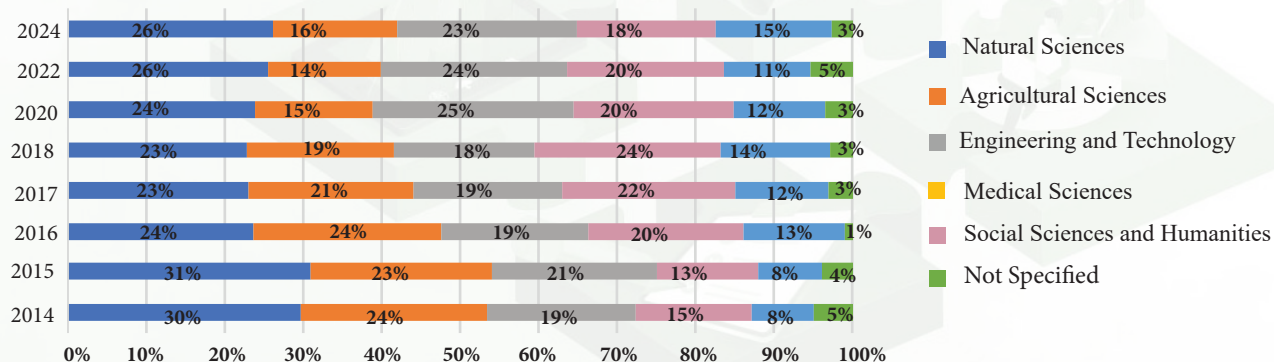


Figure 2.7. Researchers by Different Disciplines - Time Trend

Source: National R&D Survey of Sri Lanka, 2014,2015,2016,2017,2018, 2020, 2022 & 2024(NSF)

2.9. Time Trend of Researchers by Educational Qualifications

Educational Qualifications	Number of Researchers							
	2014	2015	2016	2017	2018	2020	2022	2024
Doctoral or Equivalent	899	944	1,898	1,971	2,082	2,367	2,496	2,711
MPhil	237	266	409	426	470	461	480	529
Masters or Equivalent	863	1,249	1,842	1,955	1,992	1,716	1,712	1,947
Bachelors or Equivalent	3,310	3,383	1,583	1,480	1,556	1,479	1,473	1,932
Not Specified	115	275	122	111	150	41	108	50
Total	5,424	6,117	5,854	5,943	6,250	6,064	6,269	7,169

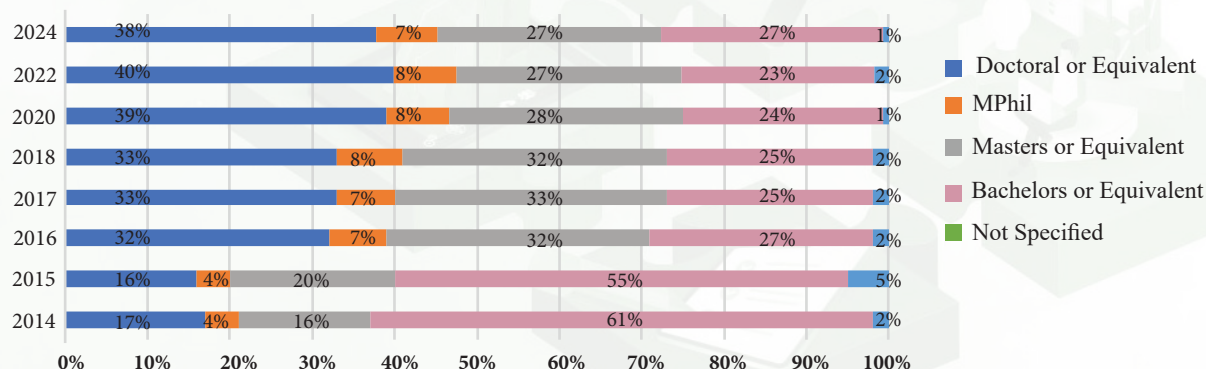


Figure 2.8. Researchers by Educational Qualifications - Time Trend

Source: National R&D Survey of Sri Lanka, 2014, 2015, 2016, 2017, 2018, 2020, 2022 & 2024 (NSF)

2.10. Time Trend of Researchers by Age Groups

Age Groups	Number of Researchers							
	2014	2015	2016	2017	2018	2020	2022	2024
21 - 30	737	903	676	776	844	716	628	736
31 - 40	1,107	1,143	1,871	1,907	2,021	2,087	2,139	2,543
41 - 50	1,170	1,686	1,737	1,734	1,812	1,714	1,824	1,940
51 - 60	606	1,323	1,267	1,266	1,305	1,283	1,387	1,515
Above 60	163	755	303	260	268	264	291	435
Not Specified	1,641	307	-	-	-	-	-	0
Total	5,424	6,117	5,854	5,943	6,250	6,064	6,269	7,169

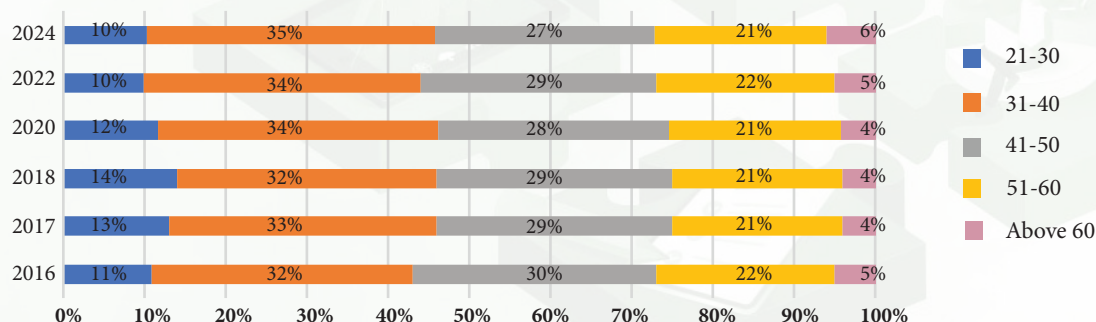
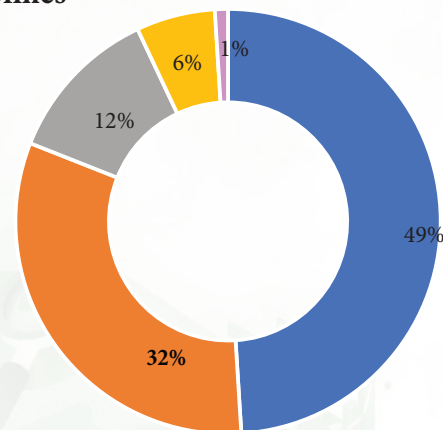


Figure 2.9. Time Trend of Researchers by Age Groups

Source: National R&D Survey of Sri Lanka, 2014,2015,2016,2017,2018, 2020, 2022 & 2024(NSF)

2.11. Research Students in Universities by Different Disciplines

Field of Science	Male	Female	Total
Natural Sciences	578	752	1,330
Agricultural Sciences	103	163	266
Engineering and Technology	274	208	482
Medical Sciences	17	36	53
Social Sciences and Humanities	950	1,074	2,024
Total	1,922	2,233	4,155



- Social Sciences and Humanities
- Natural Sciences
- Engineering and Technology
- Agricultural Sciences
- Medical Sciences

Figure 2.10. Research Students by Different Disciplines

Source: National R&D Survey of Sri Lanka, 2016,2017,2018, 2020, 2022 & 2024 (NSF)

Source: National R&D Survey of Sri Lanka, 2024 (NSF)

2.12. Number of Research Students in Universities 2018, 2020 & 2022

Student Category	2020			2022			2024		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
PhD Research Students	662	501	1,163	871	634	1,505	855	812	1,624
MPhil Research Students	1,385	1,390	2,775	1,732	2,075	3,807	1,067	1,421	2,486
Total Research Students	2,047	1,891	3,938	2,603	2,709	5,312	1,922	2,233	4,155

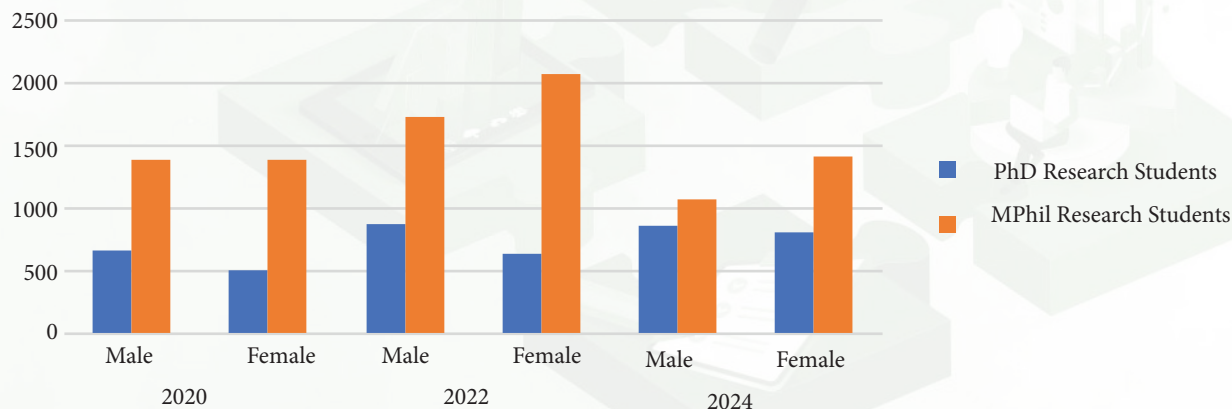


Figure 2.11. Research Students in Universities

Source: National R&D Survey of Sri Lanka, 2018, 2020, 2022 & 2024 (NSF)

An isometric illustration in a light beige and grey color scheme. It features a large, rounded rectangular block in the center with a circular inset on its top surface. To the left of this block is a smaller, rectangular block with a circular feature on its top. In the foreground, there is a clipboard with a document and a pen. To the right, another rectangular block is visible. The background is a light beige color with faint, scattered dots, suggesting a technical or scientific environment.

PERFORMANCE & OUTPUT INDICATORS OF RESEARCH AND DEVELOPMENT

3.1. Patents, Industrial Designs and SCI Journal Publications in 2024

Description		
A)	Number of Patent Registrations (Resident)	40
B)	Number of Patent Registrations (Non- Resident)	144
C)	Total Number of Patent Registrations (A+B)	184
D)	Number of Industrial Designs Awarded (Resident)	48
E)	Number of Industrial Designs Awarded (Non- Resident)	32
F)	Total Number of Industrial Designs Awarded (D+E)	80
G)	Publications by Sri Lankan Scientists in SCI Journals	1,550

Source: National Intellectual Property Office (NIPO), Sri Lanka

**Adopted from the Scopus (Expanded) and Science Citation Index (SCI) Expanded

3.2. Patent Registrations according to International Patent Classification (IPC)

Description		Number
Section	IPC Category	
A	Human Necessities	39
B	Performing Operations, Transporting	21
C	Chemistry, Metallurgy	72
D	Textiles, Paper	12
E	Fixed Constructions	6
F	Mechanical Engineering, Lighting, Heating, Weapons	12
G	Physics	11
H	Electricity	11
Total		184

Source: National Intellectual Property Office (NIPO), Sri Lanka

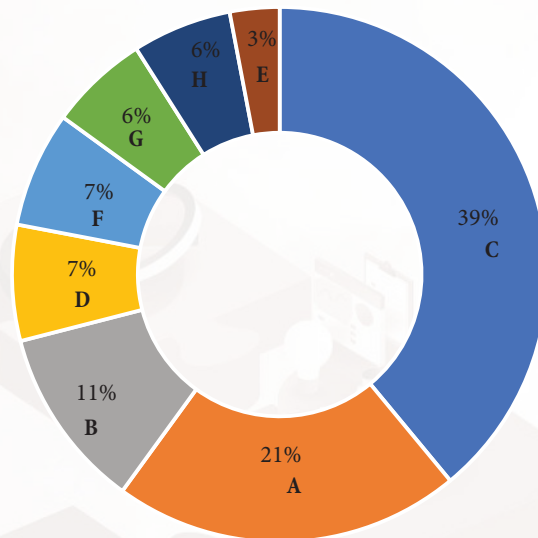


Figure 3.1. Major Patent Types



Figure 3.2. Time Trend of Patent Registrations

Source: National Intellectual Property Office (NIPO), Sri Lanka

3.3. Industrial Designs according to Locarno Classification

Description		Number of Industrial Designs
Class	Category of Locarno Classification	
1	Foodstuffs	1
2	Articles of clothing and haberdashery	1
4	Brushware	2
6	Furnishing	4
8	Tools and hardware	1
9	Packages and containers for the transport or handling of goods	15
10	Clocks and watches and other measuring instruments, checking and signalling instruments	1
12	Means of transport or hoisting	17
13	Equipment for production, distribution or transformation of electricity	2
14	Recording, telecommunication or data processing equipment	16
15	Machines, not elsewhere specified	2
16	Photographic, cinematographic and optical apparatus	2
23	Fluid distribution equipment, sanitary, heating, ventilation and air-conditioning equipment, solid fuel	1
25	Building units and construction elements	1
26	Lighting apparatus	1
29	Devices and equipment against fire hazards, for accident prevention and for rescue	1
30	Articles for the care and handling of animals	1
32	Graphic symbols and logos, surface patterns, ornamentation	11
Total		80

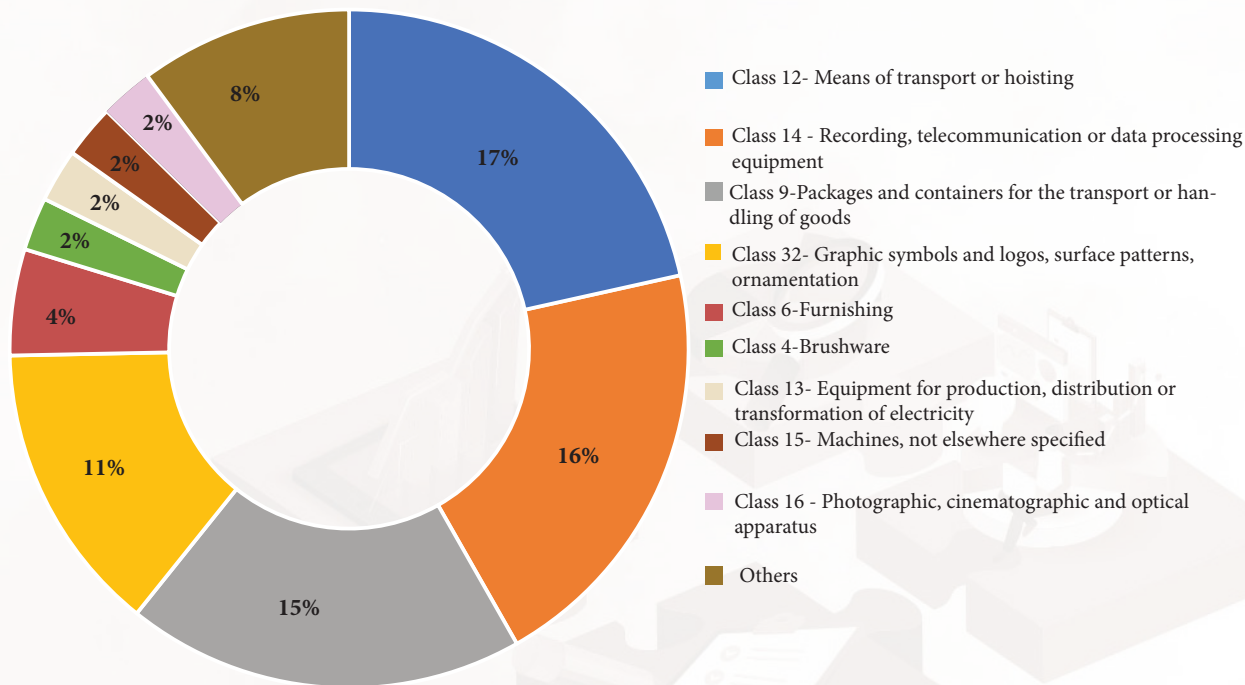


Figure 3.3. Major Industrial Design Types

Source: National Intellectual Property Office (NIPO), Sri Lanka

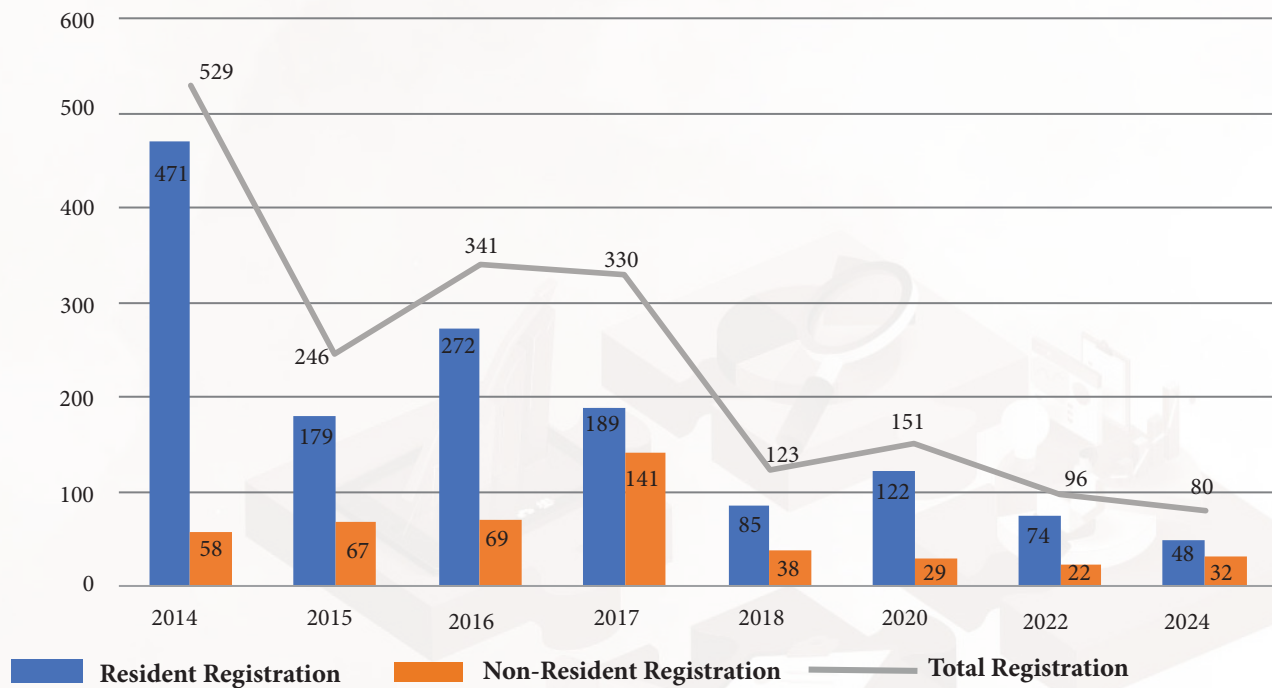


Figure 3.4. Time Trend of Industrial Designs Registration

Source: National Intellectual Property Office (NIPO), Sri Lanka

3.4. Sector-wise Innovations

Innovation Type		Government R&D Institutes	Business Enterprises	Higher Education Sector	Total
a	Development of New Products/Services/Processes	199	2,446	90	2,735
b	Existing Products/Services/Processes Significantly Improved	117	2,369	13	2,499
c	New Plant Varieties/Hybrids Developed	16	100	4	120
d	Import Substitutes Developed	9	53	0	62
e	Designs/Prototypes Developed	39	679	35	753

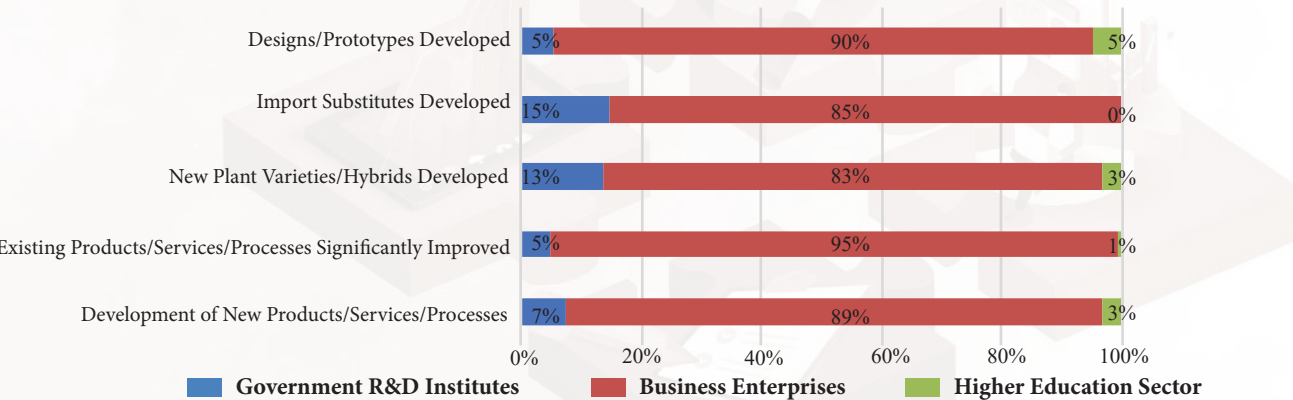


Figure 3.5. Sector-wise Contribution to Innovation

Source: National R&D Survey of Sri Lanka, 2024 (NSF)

3.5. Commercialization of Innovations by Sectors

	Innovation Type	Government R&D Institutes	Business Enterprises	Higher Education Sector	Total
a	Commercialization of New Products/Services/Processes	31	793	30	854
b	Commercialization of Improved Existing Products/Services/Processes	11	1,496	0	1,507
c	Commercialization of New Plant Varieties/Hybrids	15	46	1	62
d	Commercialization of Import Substitutes	1	28	1	30
e	Commercialization of Designs/Prototypes	3	77	9	89

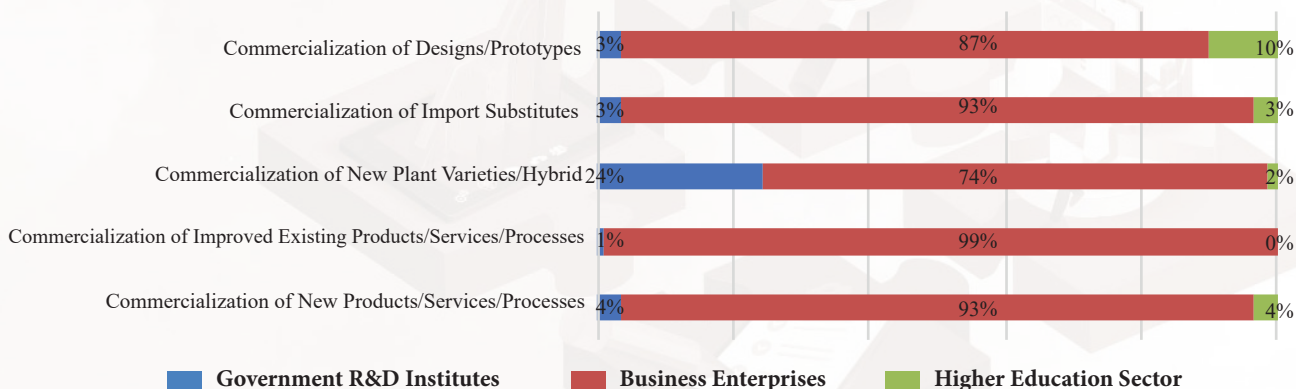


Figure 3.6. Sector-wise Innovation Commercialization

Source: National R&D Survey of Sri Lanka, 2024 (NSF)

3.6. Publications of Sri Lankan Scientists in SCI Journals

Field of Science	Total Number of Publications	With Foreign Co-authorship	
		Number	%
Natural Sciences	582	438	75%
Engineering and Technology	227	159	70%
Medical Sciences	461	313	68%
Agricultural Sciences	237	181	76%
Social Sciences and Humanities	43	29	67%
Total	1,550	1,120	72%

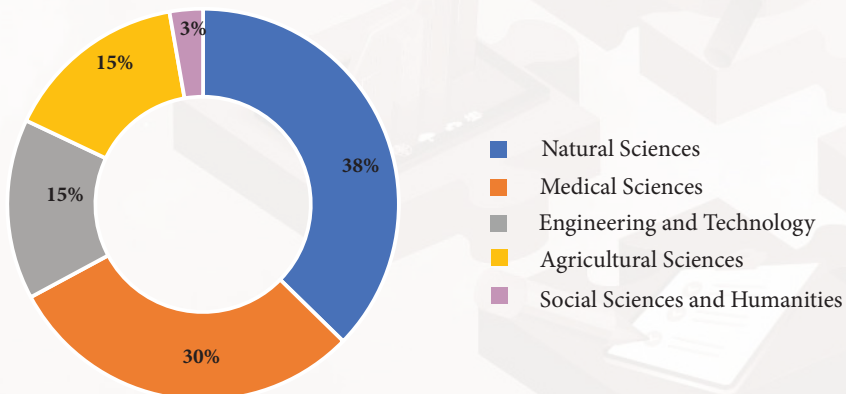


Figure 3.7. SCI Journal Publications of Sri Lankan Authors by Field of Science

Source: Adopted from the Scopus Expanded and Science Citation Index Expanded (SCIE)

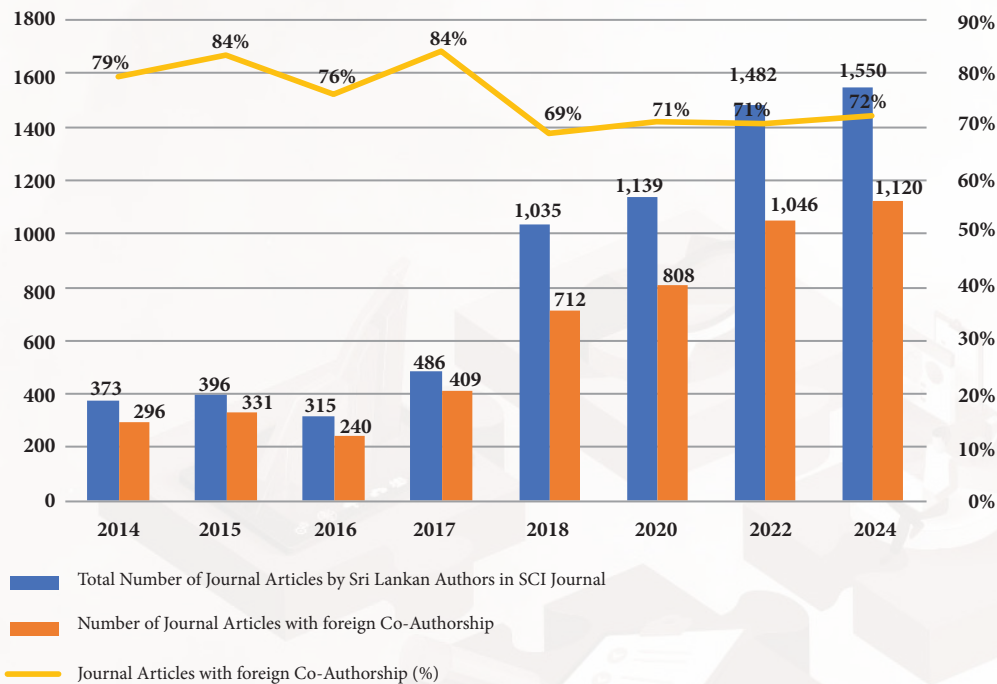


Figure 3.8. SCI Journal Publications - Time Trend

Source: Adopted from the Scopus and Science Citation Index Expanded
Figures of 2014-2020 - Scopus Expanded and Science Citation Index

3.7. Publications of Sri Lankan Scientists in SCI Journals by Field of Science (2015-2024)

Field of Science	2015		2016		2017		2018		2020		2022		2024	
	Total Number	With foreign Co-authorship (%)	Total Number	With foreign Co-authorship (%)	Total Number	With foreign Co-authorship (%)	Total Number	With foreign Co-authorship (%)	Total Number	With foreign Co-authorship (%)	Total Number	With foreign Co-authorship (%)	Total Number	With foreign Co-authorship (%)
Natural Sciences	102	84	120	88	167	92	319	68	462	75	507	67	582	75
Engineering and Technology	76	80	52	71	95	81	227	78	150	71	274	77	227	70
Medical Sciences	126	84	92	71	126	79	319	64	384	66	473	69	461	68
Agricultural Sciences	80	89	46	65	79	76	105	70	115	70	205	72	237	76
Social Sciences and Humanities	12	58	5	40	19	100	65	65	28	75	23	87	43	67
Total	396	84	315	76	486	84	1,035	69	1,139	71	1,482	71	1,550	72

Source: Adopted from the Scopus and Science Citation Index Expanded
 Figures of 2015-2020 - Scopus Expanded and Science Citation Index

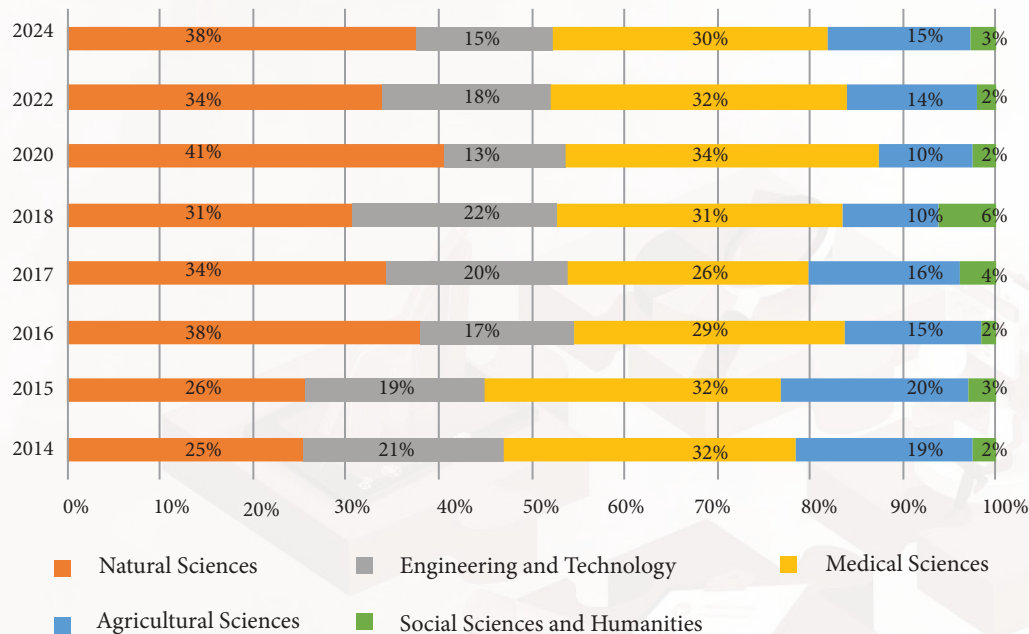


Figure 3.9. Articles in SCI Publications by Field of Science (2014-2024)

Source: Adopted from the Scopus and Science Citation Index Expanded
 Figures of 2014-2024 - Scopus Expanded and Science Citation Index

DEFINITIONS AND TECHNICAL NOTES

The definitions and terminology used in the National R&D Survey 2020 and in this Statistical Hand Book are based on the guidelines provided by Technical paper No II (UNESCO, UIS, 2014) and the Frascati manual (OECD, 2015).

1. Research and Development (R&D)

Research and experimental development (R&D) comprise creative and systematic work undertaken in order to increase the stock of knowledge - including knowledge of humankind, culture and society - and to devise new applications of available knowledge.

The term R&D covers three activities:

- a) Basic research is experimental or theoretical work undertaken primarily to acquire new knowledge of the underlying foundations of phenomena and observable facts, without any particular application or use in view.
- b) Applied research is original investigation undertaken in order to acquire new knowledge. It is, however, directed primarily towards a specific practical aim or objective.
- c) Experimental development is systematic work, drawing on knowledge gained from research and practical experience and producing additional knowledge, which is directed to producing new products or processes or to improving existing products or processes.

2. Sectors

This survey covers four major institutional categories in which the Research & Development are carried out.

- i. Government Organizations that conduct R&D – Full coverage.
- ii. Higher Education Institutes - All higher education institutions/institutes established or deemed to be established under the University Act and major government universities.
- iii. Business Enterprises – 300 institutions were selected for the survey considering the degree of their R&D activity and the proportion of their contribution to the national economy. All major industries that conduct R&D were included in the sample.
- iv. Private Non Profit Institutions (PNP) – All institutions that were involved in the activities related to R&D were covered in the survey.

3. R&D Expenditure

All expenditure for R&D performed within a sector of the economy, including:

- a) Recurrent expenditure (labour cost, non-capital purchases of materials, supplies for R&D equipment, water, fuel, gas, electricity, library materials etc.).
- b) Capital expenditure (reported in full for the period when they took place and should not be registered as an element of depreciation).

4. Human Resources in Research and Development

Researchers : Professionals engaged in the conception or creation of new knowledge or products. They conduct research and improve or develop concepts, theories, models, techniques, instrumentation, software or operational methods (OECD, 2015).

Technicians and equivalent staff : Persons whose main tasks require technical knowledge and experience in one or more fields of engineering, physical and life sciences, or social sciences and humanities and the Arts. They participate in R&D by performing scientific and technical tasks involving the application of concepts and operational methods, and use of research equipment, normally under the supervision of researchers (OECD, 2015).

The headcount (HC) of R&D personnel is defined as the total number of individuals contributing to intramural R&D, at the level of a statistical unit or at an aggregate level, during a specific reference period (usually a calendar year).

Full Time Equivalent (FTE) : The ratio of working hours actually spent on R&D during a specific reference period (usually a calendar year) divided by the total number of hours conventionally worked in the same period by an individual or by a group. (E.g., if a person normally spends 30% of his/her time on R&D and the rest on other activities such as teaching, administration and counseling, the FTE is then counted as 0.3. Similarly, if a full time R&D worker is employed at an R&D unit for only a six month period, the FTE is calculated as 0.5).

Reference:

OECD. 2015. Frascati Manual 2015: Guidelines for collecting and reporting data on research and experimental development. Paris (France) : OECD publishing.

UNESCO. UIS. 2014. Technical paper no II. Guide to Conducting an R&D Survey: For countries starting to measure research and experimental development. Montreal, Quebec, Canada: UNESCO Institute for Statistics.

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