



Science & Technology
Statistical Hand Book 1996

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Compiled by :

Science & Technology Indicators Unit
National Science Foundation
Sept.1998.



Preface

The S & T Indicators Unit of the National Science Foundation conducted a survey on Research and Development in Sri Lanka in 1996. The Survey covered areas such as R & D Expenditure, Science & Technology Personnel, International publications, University education, Technical & Vocational education from the perspective of national development. The report on the National Survey on R&D in Sri Lanka was published in 1998.

As it was noted that there was a keen interest in S & T indicators among the scientific community, the unit felt the need of a statistical handbook that gives a summary of the S & T Indicators in the country. More data is being collected to address a wide range of S & T activities. Among them telecommunications and computer sciences are being given priority. This data will be included in future publications of the statistical handbook.

As this is first attempt to publish such information, constructive criticism on improving the publication is most welcome.

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Table 1 R & D Expenditure (GERD) in Sri Lanka

Year	GDP current Prices (Rs. m)	GERD Rs.m (US\$)	GERD at Constant Prices (Rs.m) (1975=1)	GERD as per cent of GDP	Total population.(mil lions)	GERD Per million population
1966	7,529	19.8		0.3	11.5	1.7
1975	11,100	45.1 (6.4)	45.1	0.2	13.5	3.3
1984	142,700	257.0 (9.7)	75.5	0.18	15.6	16.5
1993	499,800	649.0 (13.1)	85.1	0.13	17.6	36.8
1996	769,900	1,410 (23)	139.1	0.18	18.3	77

Source: Central Bank Annual Reports, Department of Census & Statistics & NARESA

Table 2 International Comparisons of GERD/GDP

Country	GERD/GDP	Year	Real Growth in GERD	Period
Australia	1.35	1990	n.a.	
Bangladesh	0.2	1993	n.a.	
China	0.5	1995	n.a.	
India	0.8	1995	n.a.	
Japan	2.72	1993	4.0	1989 - 93
Korea	2.10	1993	12.0	1989 - 93
Malaysia	0.34	1994	5.5	1992 - 94
Pakistan	0.5	1993	n.a.	
Singapore	1.12	1994	26.0	1988 - 92
Sri Lanka	0.18	1996	5.2	1984 - 96
Taiwan	1.82	1994	16.5	1989 - 93
U.K.	2.3	1992	-2.3	1989 - 93
U.S.A	2.8	1992	0.3	1989 - 93

Source: National Survey of R&D-Malaysia (1994)

n.a. not available

Table 3**R & D Resources in some South Asian Countries**

Country	Total Population	Adult Illiteracy Rates (1995)			R&D personnel per 1,000	Tertiary Enrolment in Science	Tertiary Students abroad
	(1995) Millions	Male	Female	Total Adult	population (1988-95)	per cent of Total Enrolment (1992)	per cent at home (1988-93)
Bangladesh	118.229	50.6	73.9	61.9	0.02	25	1.3
Bhutan	1.770	43.8	71.9	57.8			20.0
India	929.005	34.5	62.3	48.0	0.10	26	1.0
Nepal	21.457	59.1	86.0	72.5	0.04	14	3.2
Pakistan	136.257	50.0	75.6	62.2	0.10		3.9
Sri Lanka	17.928	6.6	12.8	9.8	0.20	34	10.0
Ave. least developed countries				52.0	0.30	33	
Aver. industrialized countries				1.0	3.30	30	

Source: World Science Report 1998

Table 4. a R&D Expenditure - by Sources of Funding and Type

Year	1984 (Rs. m)			1996 (Rs. m)		
	Recurrent	Capital	Total	Recurrent	Capital	Total
State	161.5 (62.9%)	77.9 (30.3%)	239.4 (93.2%)	780.7 (55.4%)	200.3 (14.2%)	981.0 (69.6%)
Foreign				266.5 (18.9%)	58.0 (4.1%)	324.5 (23.0%)
Private	12.8 (5.0%)	4.6 (1.8%)	17.4 (6.8%)	3.0 (0.2%)	18.5 (1.3%)	21.5 (1.5%)
Other				79.3 (5.6%)	3.3 (0.3%)	82.6 (5.9%)
Total	174.3 (67.9%)	82.5 (32.1%)	256.8 (100.0%)	1129.5 (80.1%)	280.1 (19.9%)	1409.6 (100.0%)

Table 4 b.**R & D Expenditure - by Nature of Research Activity**

Year	1975(Recurrent only)		1984		1996	
	Amount Rs. m	Per cent	Amount Rs. m	Per cent	Amount Rs. m	Per cent
Basic Research	1.23	4.0	24.75	10.0	446.3	32.0
Applied Research	25.32	77.0	185.16	72.0	867.3	61.0
Experimental Development	6.12	19.0	46.89	18.0	96.0	7.0
TOTAL	32.67	100.0	256.80	100.0	1409.6	100.0

Table 4.c**R & D Expenditure - by Sector of Performance**

Year	1984 (Rs m)			1996 (Rs m)		
Sector	Recurrent	Capital	Total	Recurrent	Capital	Total
General Services	143.8 (56.0 %)	72.5 (28.3 %)	216.3 (84.3 %)	827.2 (58.7 %)	203.2 (14.4 %)	1030.4 (73.1 %)
Productive	15.9 (6.2 %)	8.3 (3.2 %)	24.2 (9.4 %)	3.0 (0.2 %)	18.5 (1.3 %)	21.5 (1.5 %)
Higher Education	14.6 (5.7 %)	1.6 (0.6 %)	16.2 (6.3 %)	299.3 (21.2 %)	58.4 (4.2 %)	357.7 (25.4 %)
TOTAL	174.3 (67.9 %)	82.4 (32.1 %)	256.7 (100.0%)	1129.5 (80.1%)	280.1 (19.9%)	1409.6 (100.0%)

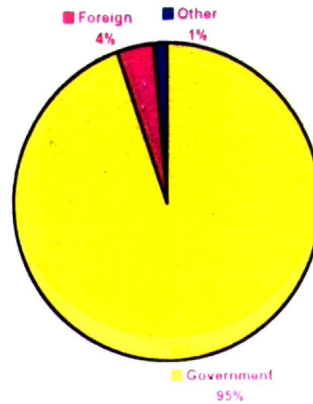
Table 4.d R & D Expenditure - by Discipline and Type

Discipline	1984			1996		
	Recurrent	Capital	Total	Recurrent	Capital	Total
Natural Sciences	20.3 (7.9 %)	10.4 (4.1 %)	30.7 (12.0 %)	239.9 (17.1 %)	78.4 (5.5 %)	318.3 (22.6 %)
Agriculture	107.7 (42.0 %)	45.7 (17.8 %)	153.4 (59.8 %)	535.2 (37.9 %)	134.0 (9.5 %)	669.2 (47.4 %)
Engineering	13.8 (5.4 %)	19.0 (7.4 %)	32.8 (12.8 %)	129.6 (9.2 %)	34.7 (2.4 %)	164.3 (11.6 %)
Medical Sciences	9.4 (3.7 %)	3.9 (1.5 %)	13.3 (5.2 %)	118.8 (8.4 %)	17.8 (1.2 %)	136.6 (9.7 %)
Social Sciences	23.1 (9.0 %)	3.4 (1.2 %)	26.5 (10.2 %)	106.0 (7.5 %)	15.2 (1.1 %)	121.2 (8.6 %)
TOTAL	174.3 (67.9 %)	82.4 (32.1 %)	256.7 (100.0 %)	1129.5 (80.1 %)	280.1 (19.9 %)	1409.6 (100.0 %)

Table 4.e**R&D Expenditure and S&T Personnel at Research Institutes**

Institution	S&T Personnel	R&D Expenditure Rs. million
Department of Export Agriculture	25	13
Rubber Research Institute	24	50
Coconut Research Institute	32	60
Tea Research Institute	43	38
Veterinary Research Institute	38	16
Sugar Research Institute	20	44
Medical Research Institute	65	50
National Aquatic Resources & Development Agency	59	95
Rice Research & Development Institute	20	27
National Building Research Organization	62	13
National Engineering Research & Development Centre	28	43
Bandaranaike Memorial Ayurvedic Research Institute	25	14
Ceylon Institute for Scientific & Industrial Research	45	72
Institute of Fundamental Studies	46	35
Horticulture Research & Development Institute	41	75
Field Crops Research & Development Institute	36	56
Department of Agriculture (excluding IORDI, RRD1 and FCRDI)	147	46

Fig.1 Expenditure in R&D Institutions - by Sources



Total Rs 979 m

(Includes S&T Services)

Fig. 2

Expenditure in R&D Institutions - by Type

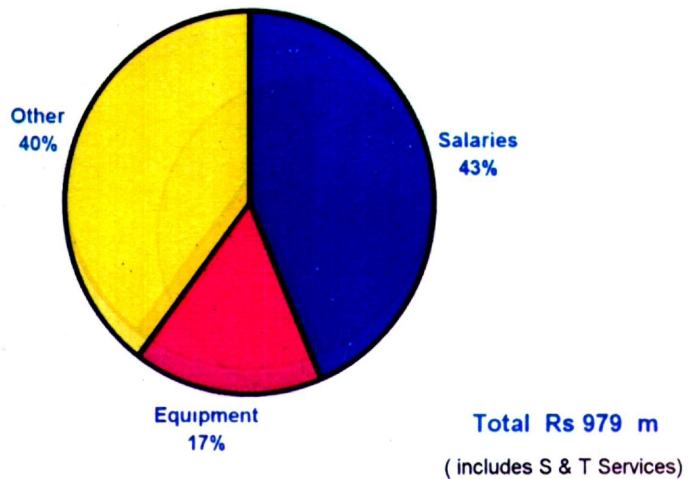
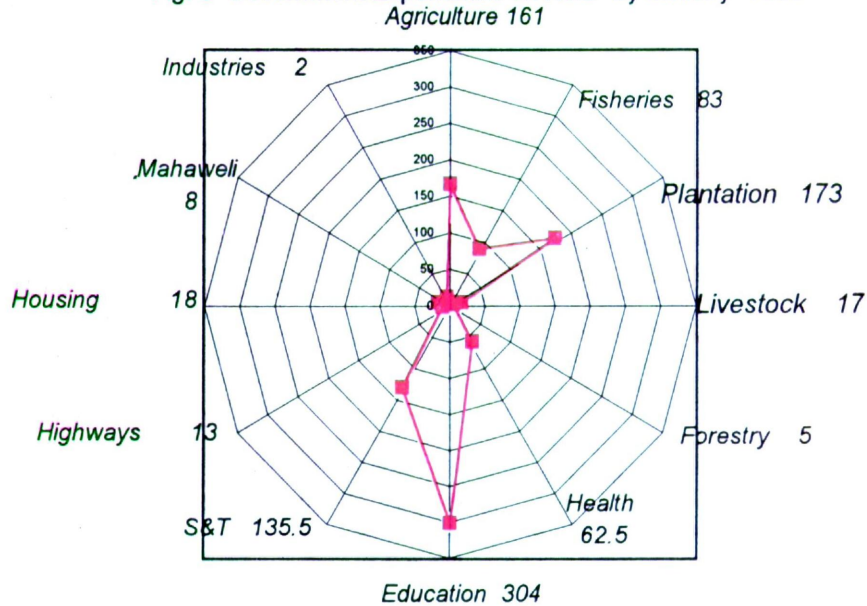
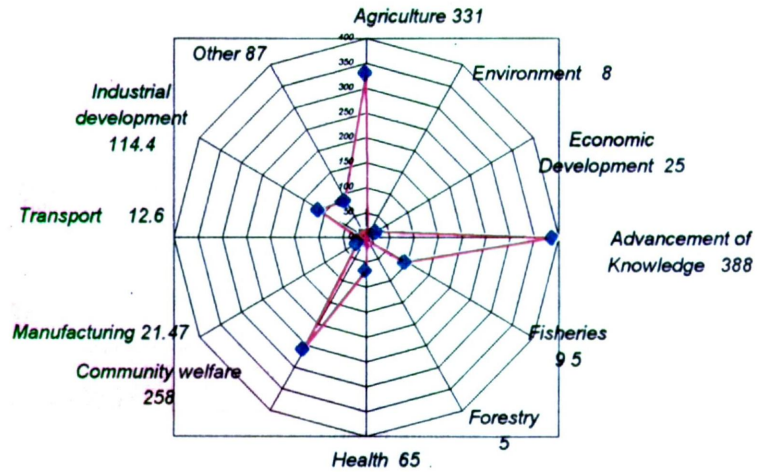


Fig. 3 Government Expenditure on R&D by Ministry -1996



in Rs. m

Fig. 4 Total Expenditure on R&D by Social Objectives -1996



Categorised according to the major functional objectives of institutions

Table 5.a Distribution of Science & Technology Personnel - by Discipline

Year	1984		1996	
Discipline	STP		STP	
	No.	Per cent	No.	Per cent
Natural sciences	2,914	20.1	6,705	24.1
Agriculture	3,234	22.3	3,239	11.7
Engineering	6,569	45.4	12,631	45.4
Medical sciences	190	1.3	2,991	10.8
Social sciences	1,580	10.9	2,234	8.0
TOTAL	14,487	100.0	27,800	100.0

Table 5.b Distribution of Science & Technology Personnel - by Sector.

Sector	STP -1984		STP -1996	
	No.	Per cent	No.	Per cent
General Services	8,620	59.5	18,645	67.1
Productive	3,603	24.9	5,165	18.6
Higher Education	2,264	15.6	3,990	14.3
TOTAL	14,487	100.0	27,800	100.0

Table 5.c Distribution of Science & Technology Personnel - by Sex and Discipline

Discipline	Male	Female	Total	Per cent Female
Natural Sciences	1,801	1,064	2,865	37.1
Agriculture	614	274	888	30.9
Engineering	4,402	714	5,116	14.0
Medical Sciences	1,278	905	2,183	41.5
Social Sciences	1,612	622	2,234	27.8
TOTAL	9,707	3,579	13,286	26.9

Table 5.d **Distribution of Science & Technology Personnel - by Sex and Sector**

Sector	Male	Female	Total	% F
General Services	4,178	1,719	5,897	29.1
Productive	3,476	623	4,099	15.2
Higher Education	2,053	1,237	3,290	37.5
TOTAL	9,707	3,579	13,286	26.9

Table 6.a **Technical Support Index** - **by Sector**

Sector	Scientists	Technicians	Technical Support Index
General Services	5,897	12,748	2.17
Productive	4,099	1,076	0.26
Higher Education	3,290	700	0.21
TOTAL	13,286	14,514	1.09

Table 6.b Technical Support Index - by Discipline

Discipline	Scientists	Technicians	Technical Support Index
Natural Sciences and Agriculture	3,753	6,191	1.65
Engineering	5,116	7,515	1.47
Medical Sciences	2,183	808	0.37
Social Sciences	2,234	-	
TOTAL	13,286	14,514	1.09

Table 7 **Distribution of R&D Scientists (Head Count) by Sector**

Year	1984				1996			
	Scientists		Technicians		Scientists		Technicians	
	No.	%	No.	%	No.	%	No.	%
General Services	1,344	48.2	462	66.7	1,916	32.2	533	53.4
Productive	204	7.3	43	6.2	56	0.9	64	6.4
Higher Education	1,242	44.5	188	27.1	3,993	66.9	402	40.2
TOTAL	2,790	100.0	693	100.0	5,965	100.0	999	100.0

Table 8 **Distribution of R&D Scientists (Head Count) by Discipline and Sex**

Discipline	Head Count of R&D Scientists (1984)						Head Count of R&D Scientists (1996)					
	Male		Female		Total		Male		Female		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Natural Sciences	1,225	48	447	56	1,672	50	923	23	564	29	1,487	25
Agriculture*							547	14	119	6	666	11
Engineering	381	15	39	5	420	13	344	9	69	3	413	7
Medical Sciences	147	6	88	11	235	7	939	23	524	27	1,463	24
Social Sciences	775	31	218	28	993	30	1,251	31	685	35	1,936	33

Table 9**Research Intensity by Sex**

Discipline	R&D Scientists (Full Time Equivalent)				S&T Scientists				Research Intensity FTE		
	Male	Female	Total	%	Male	Female	Total	%	Male	Female	Total
	M	F		F	M	F		F			
Natural Sciences	532	325	857	37.9	1,801	1,064	2,865	37.1	29.5	30.5	29.9
Agriculture	489	106	595	17.8	614	274	888	30.9	79.6	38.7	67.0
Engineering	170	34	204	16.7	4,402	714	5,116	14.0	3.9	4.8	4.0
Medical Sciences	528	295	823	35.8	1,278	905	2,183	41.5	41.3	32.6	37.7
Social Sciences	626	343	969	35.3	1,612	622	2,234	27.8	38.8	53.4	43.4

Table 10**Research Intensity by Educational Qualifications**

Discipline	R&D Scientists (Full Time Equivalent)			S&T Scientists			Research Intensity FTE / S&T		
	Bachelors	Masters	Doctoral	Bachelors	Masters	Doctoral	Bachelors	Masters	Doctoral
Natural Science & Agriculture	807	390	255	2,144	847	614	36.8	46.0	41.5
Engineering	109	52	43	3,048	453	127	3.6	11.5	33.9
Medical Sciences	693	48	82	886	206	442	78.2	23.3	18.6
Social Sciences	585	324	60	888	610	290	65.9	53.1	20.7
TOTAL	2,194	814	440	6,966	2,116	1,473	31.4	38.5	29.9

Table 11**Comparative Statistics on Educational Qualifications.**

Country	India		Sri Lanka	
	No.	Per cent	No.	Per cent
Doctoral	15,243	18.2	1,473	11.1
Masters and other Postgraduate	26,004	31.0	2,116	15.9
Bachelors	25,469	30.3	6,966	52.4
Diploma/Other	17,176	20.5	2,731	20.6
TOTAL	83,89.	100.0	12,544	100.0

Table 12 Performances of NARESA Research Grants Scheme (1972-1996) by Major Disciplines.

	Agriculture Sciences	Engineering *	Medical Sciences	Social Sciences	Natural Sciences
No. of Completed Grants	104	49	188	136	309
Total Expenditure (in Rs '000)	5,753	5,048	11,366	2,652	29,662
Masters Degrees	12	17	37	59	192
Doctoral Degrees	01	04	15	03	14
Publications in International Journals	08	40	23	23	107
Publication in Local Journals	20	17	70	41	91
Communications	24	23	59	09	277

Source: NARESA

* Includes Physical Sciences

Table 13

No. of abstracts presented at the proceedings of annual sessions
of SLAAS and No. of Scientists involved (1994-96)

Section	No. of Abstracts			No. of Scientists involved			Average No. of Abstracts	No. of Abstracts per researcher	Percentage of members publishing
	1994	1995	1996	1994	1995	1996	1994-96	1994-96	1996
A	30	35	30	84	106	93	32	0.34	25.4
B	99	80	73	162	130	109	84	0.63	16.0
C	15	20	3	20	23	3	13	0.28	-
D	81	46	56	127	80	91	61	0.61	15.0
E1	27	21	21	51	47	51	23	0.46	18.9
E2	56	40	51	116	82	108	49	0.48	26.0
F	20	7	23	31	9	34	17	0.69	5.9
Total	328	249	257	591	477	489	279	0.53	14.0

Source : SLAAS

Table 14 **Number of International Publications by Research Institute**

Research Institute	1994	1995	1996 *	1997 (up to Sept.)	Total
IFS	14	14	9	8	45
RRI	2	1	2	3	8
CRI	1	1	0	0	2
SRI	0	0	0	1	1
TRI	1	0	0	0	1
CISIR	3	1	2	1	7
DEA	0	1	0	2	3
HORDI	1	1	0	1	3
PGRC	1	0	0	0	1
CARP	0	1	0	0	1
VRI	1	1	1	0	3
NARA	0	0	7	1	8
MRI	3	6	1	0	10
BMARI	0	1	0	0	1

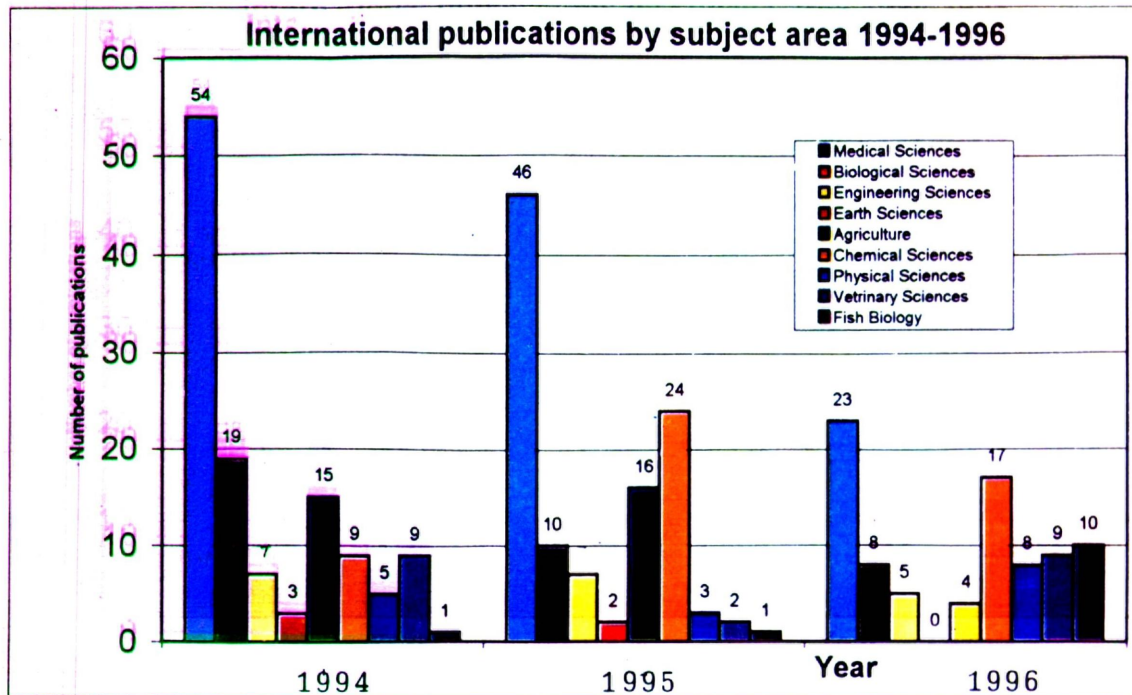
Source : Science Citation Index

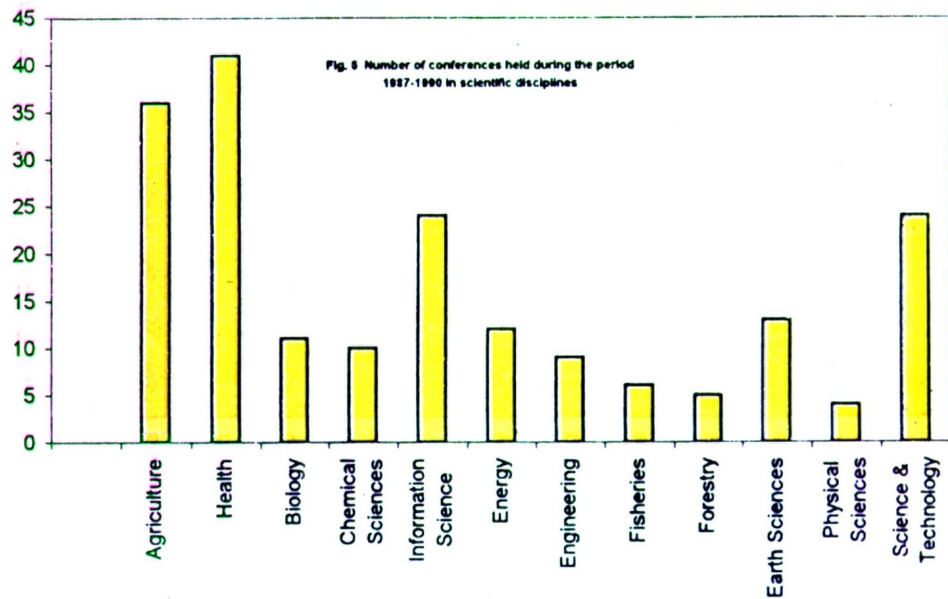
*** Excluding Oct- Dec 1996**

Table 15 **Research Collaborations with Foreign Organizations (1991-95)**

Collaborative Country	No. of Publications	Percent
U.K.	125	21.8
USA	74	12.9
Sweden	26	4.5
Australia	25	4.4
Canada	17	2.9
Japan	32	5.6
India	8	1.4
Thailand	5	0.9
Total International Publications	57	100

Source : Science Citation Index





Source: Conference Index, National Library

Key Indicators on Science Education

Table 16 Summary Indicators of Government Expenditure on Education (Rs.Mn)

Year		1984	1989	1992	1995
1.GNP at current factor cost		136,638	222,399	379,179	591,245
2.Government Expenditure	Recurrent	31,842	56,014	90,215	142,869
	Capital	21,750	35,374	63,292	99,587
	Total	53,592	91,388	153,507	242,456
3.Expenditure on Education	Recurrent	2,746.7	6,389.4	11,367.1 (5,536.1)	16,972.3 (11,567.3)
	Capital	582.7	550.5	1,813.9 (338.9)	3,445.1 (427.9)
	Total	3,329.4	6,939.9	13,181.0 (5,875.0)	20,417.4 (11,995.2)
4.Expenditure on Higher Education	Recurrent	298.1	768.1	1,385.4	2,283.7
	Capital	393.5	420.6	965.7	630.3
	Total	691.6	1,188.7	2,351.1	2,914.0
5.Expenditure on University Education	Recurrent	249.8	634.2	1,229.6	2,213.8
	Capital	320.5	240.1	563.8	624.8
	Total	570.3	874.3	1,793.4	2,838.6

Source: Statistical Hand Book 1996 (UGC)

*Figures within brackets indicate the Expenditure allocated under Provincial Councils.

Table 17 Statistics on Secondary Education.

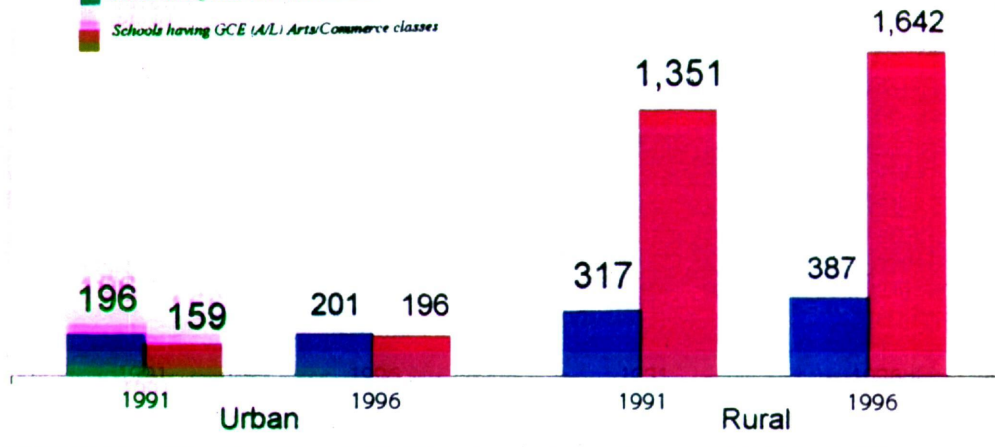
Indicator	1989	1991	1994	1996
Total No. of Schools	10,296	10,520	10,780	10,936
No. of schools with classes up to A/L	1,864	2,023	2,331	2,426
No. of schools with Science up to A/L	492	513	576	588
Per cent of A/L schools with Science	26.4	25.4	24.7	41.25
Total No. of students (in millions)	4.179	4.259	4.338	4.251
Total No. of teachers	150,057	173,811	190,957	193,431
Student/teacher Ratio	27.8	24.5	22.7	22
Total No. of graduate teachers	40,392	40,336	48,302	48,395*
Graduate teachers/total teachers	26.9	23.2	25.3	25.0
No. of Science graduate teachers(1)	3,528	3,502	4,730	n.a.
Science graduates/total grad. teachers	8.7	8.7	9.8	
Certificated science/math teachers(2)	15,641	17,207	19,633	n.a.
Uncertificated Science teachers (3)	2,824	4,529	1,146	n.a.
All Science teachers - (1), (2), & (3)	21,993	21,736	20,779	

Source: Statistical Abstract of Sri Lanka 1996 (* from Ministry of Education)

n.a. not available

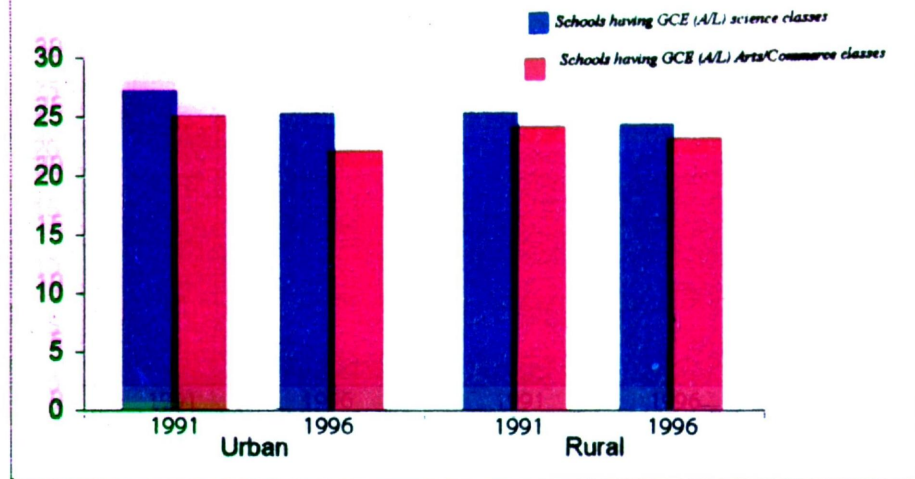
Fig. 7 Schools in Urban and Rural areas

■ Schools having GCE (A/L) science classes
■ Schools having GCE (A/L) Arts/Commerce classes



Source: Central Bank, 1997

Fig. 8 Pupils per teacher in Urban and Rural areas



Source: Central Bank 1997

Table 18**Statistics of University Entrants***

Academic Year	No. of students satisfying minimum entry requirements	No. selected	Percent selected %
1993/94	55,126	8,851	16.1
1994/95	59,292	9,460	15.9
1995/96	56,740	9,787	17.2
1996/97	70,111	11,200	16.0

Source : UGC

Table 19**Statistics of Financial Assistance to University Students***

Type of Assistance	No. of Students		
	1994	1995	Increase
Mahapola scholarships	15,661	16,796	+1135
Government Bursaries	14,601	15,700	+1101
TOTAL Assisted	30,261	32,496	+2236

* Source; Statistical Hand Book 1996 (UGC)

Table 20**University Undergraduate Admissions for year 1995/96**

Discipline University	Arts/ Law	Commerce/ Managem ent	Scien ce	Medici ne & Allied	Agricul ture	Engine ring	Total No. %	
Peradeniya	606		347	323	228	320	1,824	18.6
Colombo	679	250	373	184			1,486	15.2
Sri J'pura	500	794	226	140			1,660	17.0
Kelaniya	543	200	359	188			1,290	13.2
Moratuwa*						529	529	5.4
Jaffna	311	281	222	95	41		950	9.7
Ruhuna	358	205	313	117	134		1,127	11.5
Eastern	80	47	76		12		215	2.2
S. Eastern	70	39					109	1.1
Special admissions	525	16	20	17	4	15	597	6.1
TOTAL	3,672	1,832	1,936	1,064	419	864	9,787	100.0
Per Cent	37.5	18.6	19.8	10.9	4.3	8.9	100.0	

Source: Sri Lanka Universities Year Book 1996

Table 21 Output of Graduates (internal) by Discipline and Sex in the year 1995

Discipline University	Arts/Law		Commerce/ Manage.		Science		Medicine & Allied		Agriculture		Engineering		Total	
	T	F	T	F	T	F	T	F	T	F	T	F	T	F
Peradeniya	532	283	16	4	179	74	216	107	163	78	220	27	1,326	573
Colombo	580	376	126	57	251	113	154	58					1,111	604
Sri J'pura	459	263	620	283	98	59							1,177	605
Kelaniya	527	252	110	44	173	80							810	376
Moratuwa											294	54	294	54
Jaffna	n.a.	n.a.	n.a.	n.a.	167	79	60	27	n.a.	n.a.			227	106
Ruhuna	75	18	111	56	167	79	115	50	57	24			525	227
Eastern					74	28			6	2			80	30
TOTAL	2,173	1192	983	444	1,109	512	545	242	226	104	514	81	5,550	2,575
Per Cent	39.2		17.7		19.9		9.8		4.1		9.3		100.0	
% Female		54.9		45.2		46.2		44.4		46.0		15.8		46.4

Source: Statistical Handbook 1996 (UGC)

n.a not available

*Engineering includes Architecture & Quantity surveying

Table 22 Total Enrolment in Postgraduate Science and Engineering Courses

Year	1991				1995			
	Total No.	%	Female	% F	Total No.	%	Female	% F
Natural Sciences	281	23.1	108	38.4	87	5.0	38	43.7
Mathematics & Computing	151	12.4	57	37.7	128	7.4	29	22.7
Health related courses	504	41.4	38	7.5	828	47.9	330	39.9
Agricultural sciences	70	5.8	32	45.7	430	24.8	150	34.9
Engineering	136	11.2	29	21.3	185	10.7	20	10.8
Architecture and Town Planning	74	6.1	27	36.5	72	4.2	29	40.3
TOTAL	1,216	100.0	191	15.7	1,730	100.0	596	34.5

Source: World Science Report 1996

Table 23 **Distribution of Academic Staff by University and Faculty (1996)**

Faculty University	Science	Agriculture	Engineering	Architecture	Medicine	Dental	Veterinary	Arts	Law	Education	Com./Mgt.	Total
Peradeniya	164	160	242		102	54	43	289				1,054
Colombo	192				119			143	36	27	38	555
Sri J'pura	61				51			112			100	324
Kelaniya	147				62			146			18	373
Moratuwa			275	34								309
Jaffna	130	24	1		37			93				285
Ruhuna	154	45			101			76				376
Eastern	47	33						27			13	120
Rajarata	23							12			15	50
S'gamuwa												7
South Eastern								11			6	17
Open Univ.	114		85					76				275
TOTAL	1,032	262	603	34	472	54	43	985	36	27	197	3,745
Per Cent	27.6	7.0	16.1	0.9	12.6	1.4	1.1	26.3	1.0	0.7	5.3	100.0

Table 24**Distribution of Academic Staff by Category and University.**

Universt y Category	Perad -enya	Colo- mbo	Sri J'pur a	Kela- niya	Mora -tuwa	Jaff- na	Ruh- una	East - ern	Raja - rata	S'ga muwa	S.E	Ope n	Total
Professor	70	35	20	17	15	18	15	2				8	198
Associate Professor	41	20	16	15	12	9	5					1	119
Senior Lecturer	265	167	128	131	91	58	86	23	6		1	66	1,022
Lecturer	407	222	126	124	92	136	140	81	24	7	15	67	1,441
Other	271	111	34	86	101	64	130	14	20		1	133	965
TOTAL	1,054	555	324	373	309	285	376	120	50	7	17	275	3,745
Per Cent	28.1	14.8	8.7	10.0	8.3	7.6	10.0	3.2	1.3	0.2	0.5	7.3	100.0

Table 25 Statistics on Technical Training

ITEM	1986	1991	1994
Total No. of Technical Colleges	27	30	31
a) Grade 1	10	13	16
b) Grade 2	13	11	11
c) Grade 3	4	6	4
No. of Staff	1,101	1,320	1,575
a) Teaching Staff	529	686	778
b) Other Staff	572	634	802
New Admissions	14,467	12,852	14,483
Total Enrolment	20,938	18,971	20,914
a) Higher National Diploma	3,250	3,112	3,879
b) National Diploma	1,127	1,219	1,568
c) National Certificate	9,270	9,974	11,235
d) National Craft (Trade)	1,787	2,271	3,556
e) Other	5,504	2,395	676
Total Govt. Expenditure on Technical Education Rs. m	289.8	221.8	659
a) Recurrent " Rs. m	47.0	94.0	159
b) Capital " Rs. m	242.8	127.8	500

Source: Statistical Abstract of Sri Lanka 1995

Table 26 Enrolment in Technical Colleges by Sex

Year	Total Enrolment		
	Total	Female	% Female
1965	1,294	34	2.6
1975	4,670	577	12.4
1984	18,041	6,704	37.2
1992	18,068	7,355	40.7
1994	17,069	7,357	43.1

Source: Women and Men in Sri Lanka (Department of Census and Statistics)

Table 27 Total Enrolment in Vocational Training Programmes

Training Area	Total Enrolment	Percentage Female
Business Studies	5,636	57.1
Agriculture	563	18.8
Automobile Industry	2,960	0.2
Construction Industry	902	- 3.8
Draughtsmen, Quantity Surveying, etc.	3,977	27.6
Electrical/Electronic Technicians	1,550	3.9
Technicians	205	25.4
Shoe Industry	122	74.6
Jewellery	406	38.9
Handicrafts	2,678	97.6
Food & related	644	22.7
Printing & related	575	36.9
Secretarial	2,837	87.0
Textiles & Garments	8,363	92.6
Beauty Culture etc.	1,036	87.5
English etc.	1,791	65.2
TOTAL	34,245	58.6

Source: Women and Men - Department of Census and Statistics

Key Indicators on Health & Nutrition

Indicators on Health and Nutrition , Sri Lanka - 1996

Infant mortality rate	18.2
Under five mortality (per 1000 live birth)	20 - 39(50% due to malnutrition)
Maternal mortality (per 100,000 birth)	30 - 149
Life expectancy	72 years
Sex ratio	1:1
Protein energy malnutrition	less than 39%
Vitamin A deficiency	5 - 24%
Iodine deficiency disorders	less than 20%
Iron deficiency	severe
Children born with low birth weight	less than 25%
Coverage of measles vaccine	70 - 100%
Reported annual incidence of whooping cough (per 100,000)	less than 1
Reported annual incidence of measles (per 100,000)	less than 2
Reported tuberculosis cases (per 100,000)	30 - 149
Confined cases of malaria	13 - 35
AIDS cases reported	50 - 199
Children breast feed at 24 months	less than 50%
Average intervals between births	35 - 40 months

Contraceptive prevalence rate	40 - 49%
Food as a percent of total household expenditure	40 - 49%
Calories available per capita per day	2000 calories
House hold access to latrines	50 - 74%
House hold access to man-made water resources	50 - 74%
Doctors for every 10,000 people	12
Nurses for every 10,000 people	48
Hospital beds for every 10,000 people	29
Health centers for every 10,000 people	5
Percent of population with access to local health services	> 90%
Births attendance by a trained midwife, nurse or doctor	75 - 100%
Crop production per capita	less than 0.14 tones
Gender Development Index	greater than 0.6
Human Development Index	0.71
Expenditure on Health Services as a percent of GDP (Including Indigenous Medicine)	1.35% (12,028 Million Rs.)

**Sources : Atlas Of South Asian Children & Women
UNICEF -1996**

HEALTH SERVICES (1986 - 1995)

Item	1986	1995	Item	1986	1995
Western Medicine			Indigenous Medicine		
Hospitals	497	530	Hospitals	22	42
Central Dispensaries	341	386	Central Dispensaries	33	114
Doctors	3,264	5,310	Hospita Beds	1,586	2,205
Hospital Beds	46,005	52,528	Doctors	173	555
Nurses	8,019	13,310	Registered Physicians	13,184	13,310
Attendants	4,937	5,579	Nurses	126	121
In Patients Treated '000	2,590	2953	Attendants	250	184
Out Patients' Visits '000	32,561	32084	In Patients Treated, '000	23	21
			Out patients Treated, '000	1514	2143
			Total Expenditure	Rs.m.66352	Rs.m.102875

Family Planning

New Acceptors	34,107	184186
Loops	12,759	27815
Oral Pills	39,939	43258
Sterilization	53,133	33625
Injectables	37,803	78982
Norplant	45	506
Govt. Expenditure on Health Rs. Mn.	2,249	10,952
Current Expenditure Rs. Mn.	1,841	8,818
Capital Expenditure Rs. Mn.	408	2,134

Source : Central Bank, 1997

Key Socio – Economic Indicators

Table 28**Growth of GDP at Constant (1982) Prices - 1985 to 1996**

Year	Gross Domestic Product		Contribution of Agriculture			Contribution of Manufacturing		
	Value(Rs. m.)	Annual Rate of Growth %	Value (Rs. m.)	Percent of GDP	Annual Rate of Growth %	Value (Rs. m.)	Percent of GDP	Annual Rate of Growth %
1985	169,570	5.0	24,504	22.4	9.4	16,193	14.8	5.2
1986	114,261	4.3	25,037	21.9	2.2	17,558	15.4	8.4
1987	115,922	1.5	23,003	19.8	8.1	18,748	16.2	6.8
1988	119,050	2.7	23,762	19.9	3.3	19,622	16.5	4.7
1989	121,729	2.3	23,311	19.2	1.9	20,488	16.8	4.4
1990	129,256	6.2	25,818	19.9	10.8	22,427	17.4	9.5
1991	135,389	4.8	30,869	22.8	2.9	23,979	17.7	6.9
1992	140,990	4.3	30,090	21.3	-1.6	26,059	18.5	8.8
1993	150,783	6.9	31,554	20.9	4.9	28,806	19.1	10.5
1994	159,269	5.6	32,593	20.5	3.3	31,418	19.7	9.1
1995	167,953	5.5	33,659	20.0	3.3	34,294	20.4	9.2
1996	174,261	5.8	32,109	18.4	-4.6	36,539	21.0	6.5

Source: Central Bank Annual Reports.

KEY SOCIO-ECONOMIC INDICATORS (1996)

<p>Total Land Area (Sq.Km)</p> <p style="margin-left: 20px;">Gross : 65,610</p> <p style="margin-left: 20px;">Excluding Inland Waters : 62,705</p> <p>Forest Cover (Ha.'000)</p> <p style="margin-left: 20px;">Natural : 1,515</p> <p style="margin-left: 20px;">Man made : 135</p> <p>Temperature : C (F)</p> <p style="margin-left: 20px;">Low Country : Min.23.8 (74.8) Max. 31.6 (88.9)</p> <p style="margin-left: 20px;">Hill Country : Min.16.9 (62.4) Max. 25.8 (78.4)</p> <p>Annual Rainfall (Average) : 1,861 mm</p>	<p>Total Population, '000 : 18,552</p> <p>Composition of Population by Broad Age Groups</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 80%;"></th> <th style="width: 20%; text-align: right;">%</th> </tr> </thead> <tbody> <tr> <td style="padding-left: 20px;">0 - 14</td> <td style="text-align: right;">: 35.2</td> </tr> <tr> <td style="padding-left: 20px;">15 - 54</td> <td style="text-align: right;">: 60.5</td> </tr> <tr> <td style="padding-left: 20px;">55 & above</td> <td style="text-align: right;">: 4.3</td> </tr> </tbody> </table> <p>Density of Population (Persons per Sq.Km) : 292</p> <p>Population Growth Rate % : 1.3</p> <p>Crude Birth Rate per 1000 Population : 19.3</p> <p>Crude Death Rate per 1000 Population : 5.8</p>		%	0 - 14	: 35.2	15 - 54	: 60.5	55 & above	: 4.3
	%								
0 - 14	: 35.2								
15 - 54	: 60.5								
55 & above	: 4.3								

In Migration per 1000 Population	: 861	Sectoral Composition of GDP (1996)	%
		Agriculture	: 18.4
Out Migration per 1000 Population	: 855	Mining & Quarrying	: 2.5
		Manufacturing	: 21.0
Net Migration Rate per 1000 Population	: 0.4	Construction	: 6.9
		Services	: 51.2
Life Expectancy	: 72 years (M : 69.5 yrs. F : 74.2 yrs)	Rate of Inflation (1996) (Based on CCPI)	: 16.7
		Domestic Savings as a % of GDP	: 15.5
Literacy Rate	: 88.6% (M : 92.2% F : 86.2%)	Investment as a % of GDP	: 26.0
		Total Exports Rs Million	: 226,801
Per capita GNP	: Rs.47,837 US \$ 812	Agricultural Exports	: 23.5 %
		Industrial Exports	: 73.5 %
Rate of Growth of Real GDP (1996)	: 6.0%	Mineral / Other	: 3.0 %
		Total Imports: Rs. Million	: 301,076
		Food Imports	: 14.7%
		Other Consumer Goods	: 8.0%
		Intermediate Goods	: 50.9%
		Investment Goods	: 22.1%
		Other	: 4.3%

Labor Force (Million)	: 6.2
Male	: 4.2
Female	: 2.0

Labor Force Participation Rate	: 48.7
Male	: 65.4
Female	: 31.6

Employment as a percent by Sector	
Private Sector	: 75.5%
Public Sector	: 24.5%

Unemployment Rate	: 11.4%
Male	: 8.2%
Female	: 17.8%

Unemployed by Level of Education (1994)	
No Schooling	: 2%
Primary	: 4%
Secondary	: 49%
G.C.E. O/L	: 30%
G.C.E. A/L & above	: 15%

**Source : Economic and Social Statistics of Sri Lanka , 1997.
Central Bank Annual Reprt, 1997.**

Sub-sectoral shares in Agriculture sector GDP.

Period	1981-1985	1986-1990	1991-1995
Agriculture	100.0	100.0	100.0
Plantation crops (Tea, Rubber, Coconut)	17.6	17.6	25.3
Paddy	33.2	31.7	19.3
Livestock	4.1	5.3	4.2
Fisheries	5.6	5.1	9.1
Other Agriculture	39.5	40.3	42.2

Source: Central Bank, 1997

Sub-sectoral shares in Manufacturing sector Output.

Period	1981-1985	1986-1990	1991-1995
Manufacturing	100.0	100.0	100.0
Export Processing (mainly Tea, Rubber & Coconut)	35.9	28.4	20.5
Factory Industries (mainly Garments)	54.4	63.6	72.5
Cottage Industries	9.7	8.0	7.0

Source: Central Bank, 1997

Table 29**Agricultural Production (Major Crops)**

Crop	Quantity			Value (Rs.million)		Exports			Earnings (Rs.million)	
	Unit	1986	1996	1986	1996	Unit	1986	1996	1986	1996
Tea	Kg Mn	211	258	6,483	26,801	Kg Mn.	228	244	9,533	34,068
Rubber	Kg Mn.	138	113	2,674	8,935	Kg. Mn.	110	72	2,622	5,753
Coconut	Nuts Mn.	3,039	2,546	2,888	16,651	Nuts Mn.	1,105	476	2,389	6,091
Paddy	MT '000	2,588	2,061	10,249	21,069					

Source :Central Bank ,1997

Table 30**Agricultural Land Use ('000 Hectares)**

Crop	1986	1996
Major Agricultural Crops		
Tea	223	188
Rubber	203	162
Coconut	416	412
Paddy	895	749
Minor Export Crops		
Cocoa	8.3	8.8
Cinnamon	20.7	16.0
Cardamom	5.2	5.4
Cloves	5.1	7.8
Pepper	13.8	12.6
Selected Other Crops		
Manioc	27.6	30.9
Maize	36.3	31.0
Chillies	39.8	26.1
Red Onions	8.6	6.5
Potatoes	7.8	6.1
Gingelly	11.5	7.6
Sugar Cane	10.7	8.5
Coffee	12.8	11.0

Source : Central Bank, 1997

INDUSTRIAL PRODUCTION

Industrial Category	1986	1996	1986	1996
	<i>Value of Industrial Production (at current Prices)</i>		<i>Value added in Industry (at current Prices)</i>	
	41,453	260,247	16,019	95,421
Food Beverages & Tobacco	12,129	68,209	6,850	32,891
Textile, Wearing Apparel & Leather products	12,088	101,627	3,104	31,184
Wood & Wood Products (including Furniture)	632	2,171	393	1,250
Paper & Paper Products	1,289	5,069	626	2,850
Chemicals, Petroleum, Coal Rubber & Plastic Products	11,088	46,936	2,705	8,957
Non Metallic Mineral Products (except Petroleum and Coal)	2,053	18,997	1,117	10,537
Basic metal products	281	2,248	37	450
Fabricated Metal Products, Machinery & Transport Equipment	1757	8,807	1,116	4,809
Manufactured Products (n.e.s.)	16,019	6,183	71	2,763