

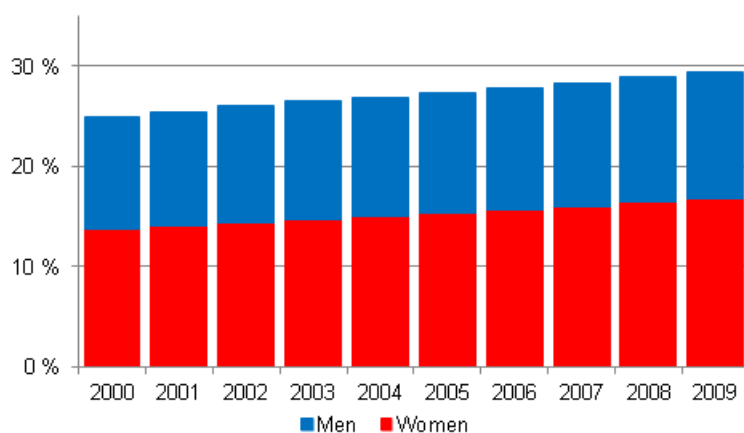
# Human resources of science and technology in 2010

## Growing number of people in Finland are highly educated

**Corrected** on 26 March 2012. The correction is indicated in red. Was previously non-tertiary.

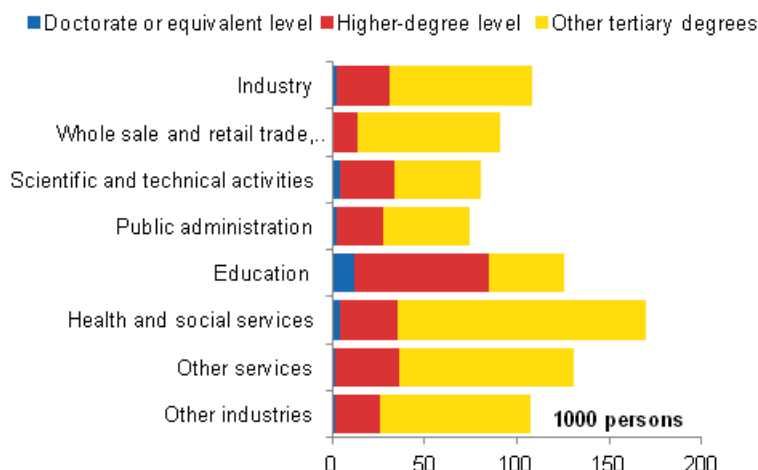
According to Statistics Finland, 1,166,000 persons in Finland had tertiary level educational qualifications in 2009, which is nearly 30 per cent of the country's population aged 16 to 74. Throughout the 2000s, the share has been growing at the annual rate of half-a-percentage point. Women's share in the highly educated population was 57 per cent. This share, too, has been growing steadily by some two percentage points in a decade. A person with at least post-secondary, *non-higher* vocational qualification is classified as highly educated.

### Share of population aged 16 to 74 with tertiary level degrees in 2000-2009



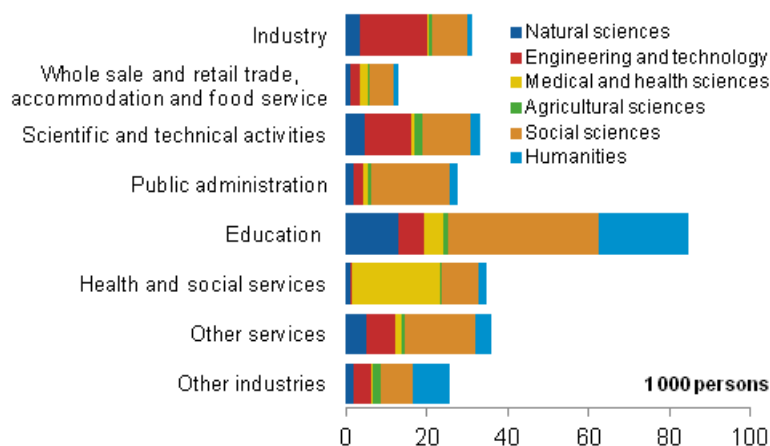
Of the population with tertiary level degrees, one-fifth - 87 per cent of them women - worked in human health and social work activities. Education employed 14 per cent (67% women), manufacturing 12 per cent (33% women) and trade, and hotel and restaurant activities one in ten (56% women) of the persons with high education.

## Persons with tertiary level degrees by industry in 2009



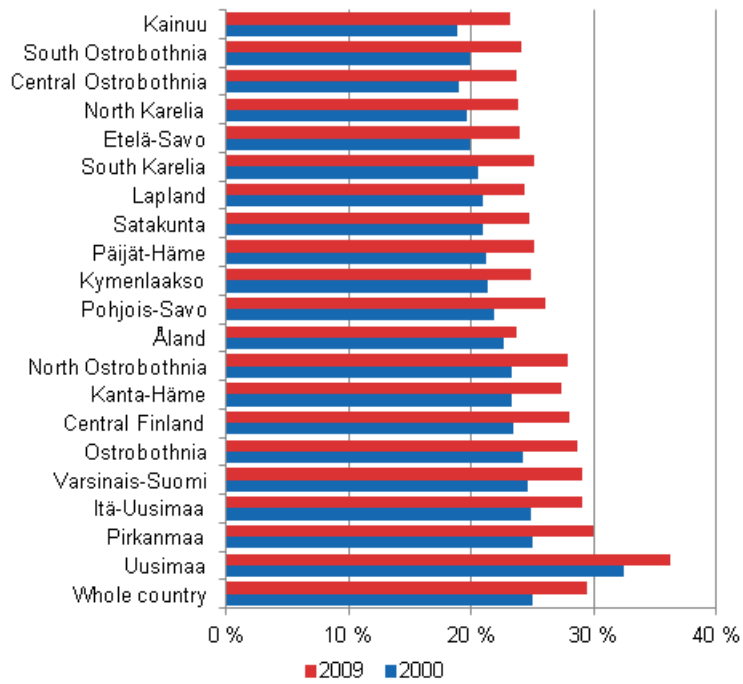
Forty-one per cent of those with higher university or doctorate level degrees had attained their degree in the field of social sciences. One-third of them worked in education. Those with degrees in the field of technology found jobs best in manufacturing, which employed one-third of them, and in professional, scientific and technical activities, which provided jobs for one-fifth of the most highly educated in the field of technology. Fifteen per cent held degrees in humanities and arts and one in two of them worked in education. Likewise, a large share, or 40 per cent, of degree holders in natural sciences were employed in education. Two out of three of the holders of degrees in medical and health sciences were employed by human health and social work activities.

## Holders of higher university or doctorate level degrees by economic activity and field of science in 2009



Thirty-four per cent of the highly educated population lived in the region of Uusimaa, nine per cent in both Varsinais-Suomi and Pirkanmaa and seven per cent in North Ostrobothnia. From the year 2000, the share of the highly education population grew by an average of 4.4 percentage points in the whole country. Differences between the regions were mainly minor. The biggest growths in the share were seen in the regions of Pirkanmaa and Central Ostrobothnia. The share of highly education population grew by least in the regions of Kymenlaakso, Lapland and Åland.

**Share of population aged 16 to 74 with tertiary level degrees by region in 2000 and 2009**



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## Appendix tables

**Appendix table 1. Tertiary degrees by the field of science in 1991, 2000 and 2010**

Tertiary degree	Fields of science	Year (completion of degree)		
		1991	2000	2010
Tertiary degrees total	Fields of science total	38 134	37 225	51 104
Doctorate	Fields of science total	542	1 142	1 520
	Natural sciences	121	245	315
	Engineering and technology	78	152	289
	Medical and health sciences	187	330	330
	Agricultural sciences	13	43	41
	Social sciences	80	234	370
	Humanities	63	138	175
Licentiate	Fields of science total	615	746	232
	Natural sciences	136	177	40
	Engineering and technology	154	145	46
	Medical and health sciences	22	27	4
	Agricultural sciences	18	9	0
	Social sciences	167	269	109
	Humanities	118	119	33
Higher-level tertiary degree	Fields of science total	10 161	12 404	16 194
	Natural sciences	877	1 377	1 367
	Engineering and technology	1 538	2 009	4 597
	Medical and health sciences	1 626	1 661	2 220
	Agricultural sciences	213	219	381
	Social sciences	4 241	4 980	5 363
	Humanities	1 666	2 158	2 266
Other tertiary degrees	Fields of science total	26 816	22 933	33 158

**Appendix table 2. Population with a tertiary degree in 2000 and 2009**

Tertiary degree	Fields of science	2000		2009	
		Total	of which women	Total	of which women
Tertiary degrees total	Fields of science total	959 363	527 502	1 166 432	663 741
Doctorate	Fields of science total	14 111	4 375	24 371	9 879
	Natural sciences	3 226	874	5 386	1 913
	Engineering and technology	1 813	205	3 717	714
	Medical and health sciences	4 564	1 741	6 900	3 443
	Agricultural sciences	619	237	911	392
	Social sciences	2 390	785	4 878	2 218
	Humanities	1 499	533	2 579	1 199

Tertiary degree	Fields of science	2000		2009	
		Total	of which women	Total	of which women
Licentiate	Fields of science total	8 466	2 951	9 083	3 737
	Natural sciences	1 801	596	1 793	684
	Engineering and technology	2 203	337	2 394	450
	Medical and health sciences	226	175	249	194
	Agricultural sciences	202	86	160	65
	Social sciences	2 619	1 073	3 053	1 562
	Humanities	1 415	684	1 434	782
Higher-level tertiary degree	Fields of science total	223 751	111 838	319 713	173 853
	Natural sciences	23 628	11 194	34 213	16 676
	Engineering and technology	38 267	6 043	55 274	11 163
	Medical and health sciences	25 133	15 784	32 408	21 835
	Agricultural sciences	9 009	4 036	9 135	4 478
	Social sciences	89 321	47 120	133 611	78 713
	Humanities	38 393	27 661	55 072	40 988
Other tertiary degrees	Field of science undefined	713 035	408 338	813 265	476 272

**Appendix table 3. Population with a tertiary degree by principal activity in 2009**

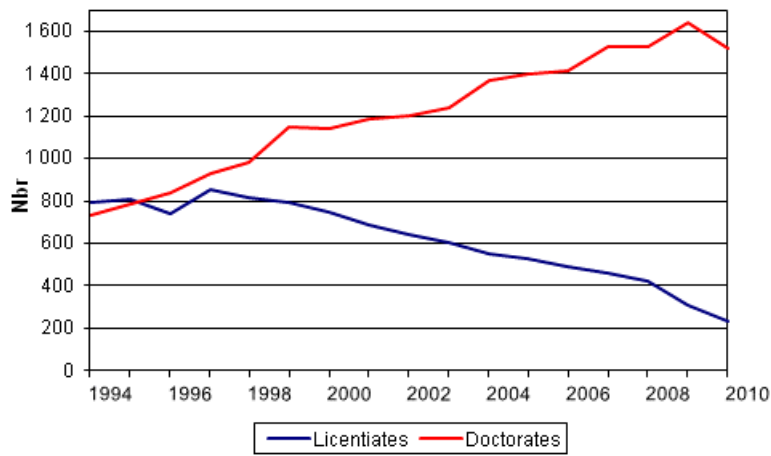
Tertiary degree	Field of science	Principal activity				
		16–74 year old population	In labour force	Employed	Unemployed	Not in labour force
Tertiary degrees total	Fields of science total	1 166 432	944 123	888 451	55 672	222 309
Doctorate	Fields of science total	24 371	20 584	20 039	545	3 787
	Natural sciences	5 386	4 470	4 298	172	916
	Engineering and technology	3 717	3 302	3 214	88	415
	Medical and health sciences	6 900	5 855	5 798	57	1 045
	Agricultural sciences	911	753	732	21	158
	Social sciences	4 878	4 135	4 021	114	743
	Humanities	2 579	2 069	1 976	93	510
Licentiate	Fields of science total	9 083	7 050	6 711	339	2 033
	Natural sciences	1 793	1 315	1 233	82	478
	Engineering and technology	2 394	1 967	1 881	86	427
	Medical and health sciences	249	193	192	1	56
	Agricultural sciences	160	119	112	7	41
	Social sciences	3 053	2 415	2 330	85	638
	Humanities	1 434	1 041	963	78	393
Higher-level tertiary degree	Fields of science total	319 713	272 643	259 941	12 702	47 070
	Natural sciences	34 213	28 775	27 097	1 678	5 438
	Engineering and technology	55 274	48 073	45 498	2 575	7 201
	Medical and health sciences	32 408	27 985	27 651	334	4 423
	Agricultural sciences	9 135	7 345	7 052	293	1 790
	Social sciences	133 611	115 897	111 157	4 740	17 714
	Humanities	55 072	44 568	41 486	3 082	10 504
Other tertiary degrees	Field of science undefined	813 265	643 846	601 760	42 086	169 419

**Appendix table 4. Employed population with tertiary level education in 2009 by Industry and Tertiary degree**

Industrial activity 2008	Tertiary degree total	Doctorate	Licensiate	Higher tertiary degree	Other tertiary degree
Toimialat yhteensä	888 451	20 039	6 711	259 941	601 760
Agriculture, forestry and fishing	16 254	69	33	2 188	13 964
Mining and quarrying	1 184	13	8	288	875
Manufacture of food, beverages and tobacco	7 005	46	9	1 400	5 550
Manufacture of textiles and leather	2 073	1	4	297	1 771
Manufacture of wood and paper, printing	13 514	53	41	2 644	10 776
Manufacture of coke and petroleum, rubber and plastic products	4 163	23	28	938	3 174
Manufacture of chemicals and pharmaceutical products	7 208	322	98	2 624	4 164
Manufacture of basic metals and metal products	11 782	49	65	2 294	9 374
Manufacture of computer, electronic and optical products, electrical equipment	28 715	528	291	11 408	16 488
Other machinery and equipment	18 248	116	71	5 068	12 993
Motor vehicles	3 705	14	13	675	3 003
Other manufacturing	12 012	69	52	1 998	9 893
Electricity, gas and water supply and waste management	8 794	54	40	1 997	6 703
Construction	26 267	19	35	2 496	23 717
Whole sale and retail trade, accommodation and food service	91 143	289	155	12 687	78 012
Transportation and storage	23 544	35	32	2 973	20 504
Computer programming and consultancy	26 537	255	154	10 098	16 030
Other information and communication	24 234	147	109	7 918	16 060
Financial and insurance activities	30 496	145	118	8 531	21 702
Research institutes in public sector	8 924	1 711	411	4 294	2 508
Other research and development	2 733	400	87	1 271	975
Professional and technical activities	68 631	703	489	23 938	43 501
Administrative and support service activities	26 070	115	55	5 286	20 614
Public administration	74 580	1 304	780	25 697	46 799
Universities	25 443	7 374	1 202	12 008	4 859
Other tertiary level education	11 700	919	770	6 313	3 698
Other education	88 553	627	666	54 839	32 421
Health and social services	170 215	3 858	495	30 507	135 355
Other industries	48 062	620	322	15 213	31 907
Industry unknown	6 662	161	78	2 053	4 370

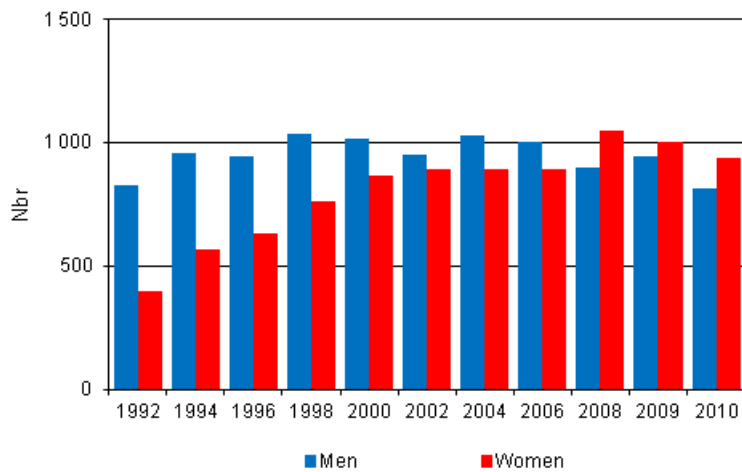
# Appendix figures

**Appendix figure 1. Doctorate and licentiate degrees in 1994 – 2010**



Doctorate degrees attained in 2010 numbered 1,520, which is 124 fewer than in the previous year. The popularity of licentiate's degree continued to decline. Only 232 licentiate's degrees were completed in 2010.

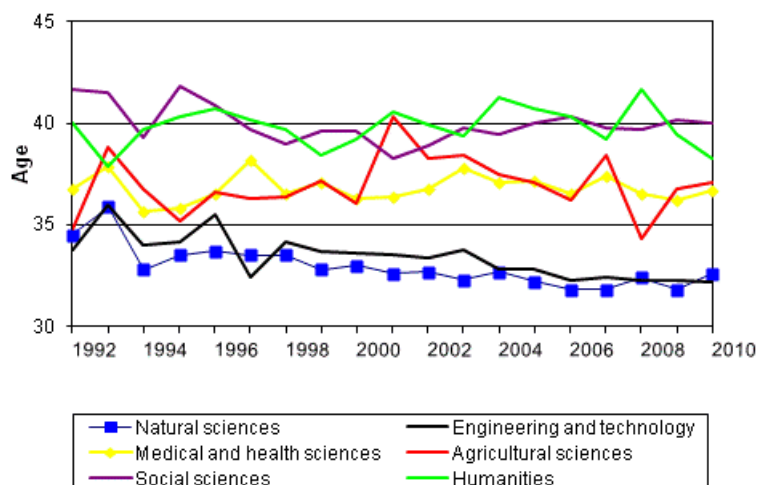
**Appendix figure 2. Doctorate level degrees by gender 1992 - 2010**



In 2010, slightly more than one-half of those having completed doctorate degrees were women. As recently as in the early 1990s, less than one-third of the completers of doctorate degrees were women.

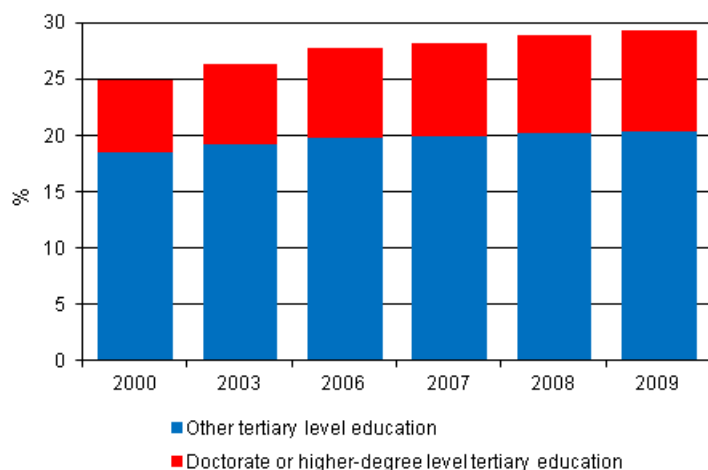


**Appendix figure 3. Persons with doctorate degree, median ages by the field of science in 1992 - 2010**



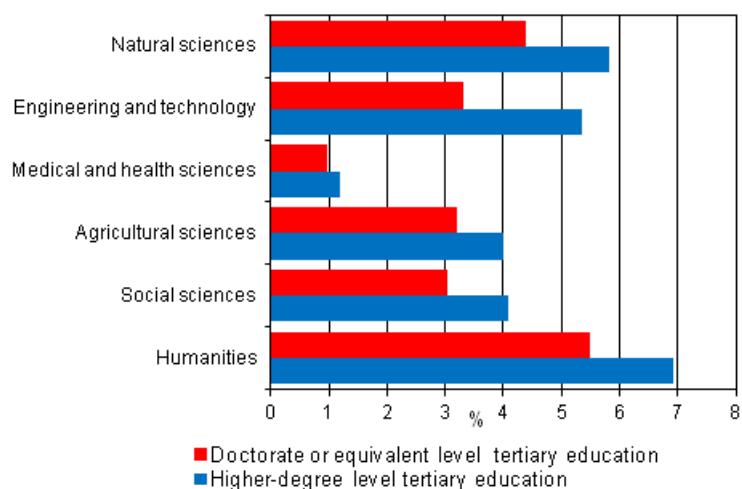
The youngest doctorate degree holders are found in the fields of natural sciences and technology. Their median age is a little over 30 years. The completers of doctorate degrees in the fields of social sciences, and humanities and arts are about eight years older.

**Appendix figure 4. Persons with tertiary degrees as a proportion of the population aged 16 to 74 in 2000 - 2009**



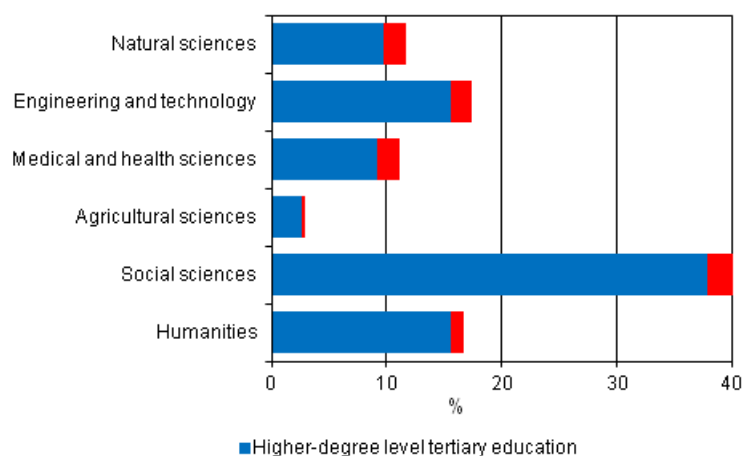
The share of the population with tertiary level degrees has grown steadily at the annual rate of 0.5 per cent throughout the 2000s. In 2009, 29.4 per cent of the population were highly educated. Nearly nine per cent of the population had completed doctorate or higher university level degrees.

**Appendix figure 5. Unemployment rates of persons with doctorate level and higher-degree level tertiary education by the field of science in 2009**



The unemployment rate among the highly educated population was nearly six percentage points lower than for the whole population. In 2009, 5.9 per cent of them were unemployed. At that time, the unemployment rate for the whole population was 11.6 per cent. The unemployment rate for those with higher level university degrees was 4.7 per cent and for those with doctorate level degrees 3.2 per cent. The employment situation among the persons with the highest level of education was the best for those with degrees in medical and health sciences. Only one per cent of them were unemployed. The holders of degrees in humanities and arts, in turn, found it most difficult to become employed. Their unemployment rate was six per cent.

**Appendix figure 6. Persons with doctorate level and higher-degree level tertiary education as a percentage by the field of science in 2009**



Forty per cent of the completers of higher university or doctorate level education had degrees in social sciences. The large proportion of social sciences is explained by the fact that in addition to actual social sciences, this main group also includes education, law and business. The next largest groups, or some 17 per cent, of the highly educated population were found in both humanities and arts, and technology. Those with doctorate level degrees distribute more evenly across the fields of science. The fields of social, medical and health, and natural sciences each had around one-fifth of the persons with doctorate level degrees.

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Source: Human resources of science and technology 2010. Statistics Finland