



APPENDIX TABLE 5-48

Share of S&E articles, by field, citation percentile, and country or economy of institutional author: 2004 and 2014

(Percent share)

Field and citation percentile	United States		EU		China		Japan	
	2004	2014	2004	2014	2004	2014	2004	2014
All fields								
99th (top 1%)	1.79	1.90	1.05	1.28	0.49	1.01	0.65	0.78
95th (top 5%)	8.04	8.27	5.33	6.15	2.75	4.96	3.56	3.75
90th (top 10%)	15.01	15.36	10.79	12.14	5.76	9.72	7.51	7.68
75th (top 25%)	33.59	33.90	27.10	29.20	15.69	23.64	20.98	20.96
50th (top 50%)	59.74	59.72	53.01	55.18	36.44	47.23	46.43	46.02
< 50th (bottom 50%)	40.26	40.28	46.99	44.82	63.56	52.77	53.57	53.98
Engineering								
99th (top 1%)	1.93	1.79	1.26	1.15	0.42	1.09	0.63	0.65
95th (top 5%)	8.11	7.63	6.26	5.65	2.47	5.23	3.54	3.20
90th (top 10%)	14.50	14.03	12.57	11.49	5.44	10.17	7.74	6.55
75th (top 25%)	31.56	30.66	30.52	28.50	16.32	24.53	21.87	18.59
50th (top 50%)	55.54	53.84	56.94	54.65	41.15	48.85	47.76	42.93
< 50th (bottom 50%)	44.46	46.16	43.06	45.35	58.85	51.15	52.24	57.07
Astronomy								



Field and citation percentile	United States		EU		China		Japan	
	2004	2014	2004	2014	2004	2014	2004	2014
99th (top 1%)	1.79	2.18	1.18	1.25	0.23	1.08	1.12	1.89
95th (top 5%)	8.03	9.44	5.47	6.08	2.32	3.46	5.03	9.11
90th (top 10%)	15.35	17.72	10.74	12.08	5.51	6.82	10.00	15.19
75th (top 25%)	36.12	39.04	26.05	29.36	17.68	20.69	23.49	33.48
50th (top 50%)	65.48	66.84	50.32	54.71	43.66	48.92	49.37	61.11
< 50th (bottom 50%)	34.52	33.16	49.68	45.29	56.34	51.08	50.63	38.89
Chemistry								
99th (top 1%)	1.87	1.47	1.03	0.97	0.69	1.36	0.87	0.68
95th (top 5%)	8.23	7.36	5.29	4.69	4.06	6.84	4.94	3.91
90th (top 10%)	15.22	13.98	10.76	10.12	8.28	12.76	9.98	7.95
75th (top 25%)	34.03	32.58	28.68	27.27	19.16	28.34	26.13	21.74
50th (top 50%)	58.22	58.53	57.71	56.00	38.67	51.98	54.28	47.78
< 50th (bottom 50%)	41.78	41.47	42.29	44.00	61.33	48.02	45.72	52.22
Physics								
99th (top 1%)	1.89	2.07	1.10	1.41	0.67	0.88	0.76	1.03
95th (top 5%)	8.18	8.22	5.69	6.45	3.47	4.85	4.05	4.79
90th (top 10%)	15.01	14.69	11.57	12.55	7.48	9.95	8.66	9.45
75th (top 25%)	32.82	31.80	28.72	29.24	20.55	25.44	23.29	23.80



Field and citation percentile	United States		EU		China		Japan	
	2004	2014	2004	2014	2004	2014	2004	2014
50th (top 50%)	57.47	55.86	55.09	54.06	45.84	52.00	49.31	48.56
< 50th (bottom 50%)	42.53	44.14	44.91	45.94	54.16	48.00	50.69	51.44
Geosciences								
99th (top 1%)	1.47	1.92	1.30	1.46	0.62	1.07	0.68	1.13
95th (top 5%)	7.00	8.43	6.14	6.99	3.17	4.86	4.61	4.38
90th (top 10%)	13.26	15.81	12.59	13.84	5.80	9.41	8.79	8.53
75th (top 25%)	30.40	35.14	31.50	32.84	13.60	22.44	24.60	23.07
50th (top 50%)	54.53	60.18	60.44	59.78	32.24	46.48	53.94	49.37
< 50th (bottom 50%)	45.47	39.82	39.56	40.22	67.76	53.52	46.06	50.63
Mathematics								
99th (top 1%)	1.78	1.40	1.01	1.25	1.28	1.30	0.73	1.04
95th (top 5%)	7.96	6.51	5.11	5.95	6.48	5.84	4.66	4.78
90th (top 10%)	15.08	13.15	10.27	12.01	12.44	10.90	8.38	9.95
75th (top 25%)	33.39	30.95	26.64	29.34	29.03	25.24	21.88	24.01
50th (top 50%)	59.25	56.62	53.77	56.03	54.38	48.99	45.59	48.59
< 50th (bottom 50%)	40.75	43.38	46.23	43.97	45.62	51.01	54.41	51.41
Computer sciences								
99th (top 1%)	2.10	2.21	0.77	0.96	0.46	1.45	0.36	0.36



Field and citation percentile	United States		EU		China		Japan	
	2004	2014	2004	2014	2004	2014	2004	2014
95th (top 5%)	9.07	9.90	4.35	5.39	2.26	5.63	2.39	2.10
90th (top 10%)	16.53	18.50	9.40	11.35	4.86	9.95	5.70	5.29
75th (top 25%)	35.07	38.32	25.72	29.40	14.22	21.92	17.94	17.75
50th (top 50%)	59.40	63.23	53.05	56.30	36.15	43.66	43.08	43.93
< 50th (bottom 50%)	40.60	36.77	46.95	43.70	63.85	56.34	56.92	56.07
Agricultural sciences								
99th (top 1%)	1.51	1.91	1.32	1.53	0.70	1.03	0.49	0.21
95th (top 5%)	6.47	7.37	6.51	7.65	3.53	5.73	2.61	2.63
90th (top 10%)	12.29	14.79	13.50	14.58	6.38	11.31	4.89	5.51
75th (top 25%)	29.55	33.69	31.78	34.71	16.00	26.10	16.14	18.40
50th (top 50%)	56.70	61.25	58.17	62.32	36.90	50.06	39.86	46.61
< 50th (bottom 50%)	43.30	38.75	41.83	37.68	63.10	49.94	60.14	53.39
Biological sciences								
99th (top 1%)	1.67	2.00	1.09	1.38	0.21	0.63	0.80	0.98
95th (top 5%)	7.85	8.69	5.45	6.78	1.70	3.61	3.97	4.60
90th (top 10%)	14.90	15.97	11.02	13.10	3.43	7.62	8.31	9.32
75th (top 25%)	33.97	35.08	27.69	30.79	9.65	20.40	22.47	24.12
50th (top 50%)	61.72	61.80	54.27	57.53	22.63	42.21	48.42	51.07



Field and citation percentile	United States		EU		China		Japan	
	2004	2014	2004	2014	2004	2014	2004	2014
< 50th (bottom 50%)	38.28	38.20	45.73	42.47	77.37	57.79	51.58	48.93
Medical sciences								
99th (top 1%)	1.93	2.10	0.97	1.44	0.33	0.56	0.49	0.70
95th (top 5%)	8.71	8.98	4.95	6.58	1.58	3.23	2.57	3.23
90th (top 10%)	16.35	16.51	9.91	12.58	3.57	7.14	5.55	6.70
75th (top 25%)	36.51	35.97	24.52	28.99	10.61	19.89	16.65	18.88
50th (top 50%)	64.04	62.89	48.43	53.82	25.11	42.17	39.98	42.29
< 50th (bottom 50%)	35.96	37.11	51.57	46.18	74.89	57.83	60.02	57.71
Other life sciences								
99th (top 1%)	1.05	1.10	1.08	1.17	0.37	1.81	0.61	0.00
95th (top 5%)	5.21	5.36	5.41	5.36	4.03	7.91	4.57	2.47
90th (top 10%)	10.21	10.73	11.08	10.67	7.83	13.37	5.69	6.56
75th (top 25%)	25.16	26.82	26.33	25.30	26.94	31.41	11.88	20.62
50th (top 50%)	51.27	52.59	49.58	49.13	54.45	59.18	33.62	46.40
< 50th (bottom 50%)	48.73	47.41	50.42	50.87	45.55	40.82	66.38	53.60
Psychology								
99th (top 1%)	1.34	1.26	0.97	1.12	0.64	0.85	0.22	0.15
95th (top 5%)	6.32	6.39	4.47	5.27	3.70	4.97	1.16	1.72



Field and citation percentile	United States		EU		China		Japan	
	2004	2014	2004	2014	2004	2014	2004	2014
90th (top 10%)	12.32	12.22	8.95	10.52	9.47	9.37	2.90	4.23
75th (top 25%)	29.31	28.56	23.13	26.04	20.93	24.00	11.28	13.86
50th (top 50%)	55.72	54.25	46.57	50.85	47.15	51.39	29.80	36.84
< 50th (bottom 50%)	44.28	45.75	53.43	49.15	52.85	48.61	70.20	63.16
Social sciences								
99th (top 1%)	1.56	1.56	0.82	1.15	1.63	1.86	0.26	0.84
95th (top 5%)	7.16	6.82	4.39	5.56	6.61	9.12	3.11	3.64
90th (top 10%)	13.73	13.21	8.77	10.86	12.00	17.10	5.54	8.50
75th (top 25%)	31.31	31.00	22.67	26.33	30.70	34.15	19.50	25.04
50th (top 50%)	58.04	57.36	45.94	51.28	58.03	58.16	44.51	51.99
< 50th (bottom 50%)	41.96	42.64	54.06	48.72	41.97	41.84	55.49	48.01

EU = European Union.

**Note(s)**

The citation percentile is the share of publications that are in the top 1% of the world's citations, relative to all the country's or economy's publications in that period and field. It is computed as follows:  $Sx = HCPx/Px$ , where  $Sx$  is the share of output from country or economy  $x$  in the top 1% most-cited articles,  $HCPx$  is the number of articles from country or economy  $x$  that are among the top 1% most-cited articles in the world, and  $Px$  is the total number of papers from country or economy  $x$  in the database that were published in 2014 or earlier. Citations are presented for the year of publication, showing the counts of subsequent citations from peer-reviewed literature. At least 2 years of data after publication are needed for a meaningful measure. Publications that cannot be classified by country or economy or by field are excluded. Articles are classified by the publication year and are assigned to a country or economy on the basis of the institutional address(es) listed in the article. See Appendix Table 5-26 for countries and economies included in the EU. The world average stands at 1.00% for each period and field.



**Source(s)**

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National Science Foundation, National Center for Science and Engineering Statistics; SRI International; Science-Metrix; Elsevier, Scopus abstract and citation database, accessed July 2017.

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