

Table SPBS-2

## S&amp;E articles in all S&amp;E fields, fractional count, by region, country, or economy: 1996–2020

(Number)

Region, country, or economy	Income level	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
World		992,538.00	1,021,319.00	1,026,965.00	1,029,278.00	1,076,635.00	1,113,462.00	1,161,725.00	1,223,864.00	1,334,488.00	1,497,326.00	1,587,879.00	1,657,902.00	1,751,394.00	1,850,488.00	1,938,121.00	2,036,090.00	2,090,551.00	2,153,533.00	2,223,983.00	2,275,565.00	2,357,663.00	2,432,385.00	2,567,468.00	2,739,272.00	2,940,807.00
North America		352,171.75	349,770.54	340,384.26	334,312.73	345,763.97	345,830.97	363,378.49	375,588.63	404,270.59	441,220.58	449,280.75	453,514.16	458,933.66	465,849.28	477,247.72	492,512.71	497,093.82	499,445.15	502,435.62	503,320.29	503,936.68	506,787.37	514,049.36	519,286.90	541,779.08
Canada	High	34,829.82	34,295.03	33,117.69	32,493.50	34,252.57	33,653.44	36,459.85	38,304.38	42,219.28	47,311.56	50,105.47	51,515.11	53,341.54	55,418.16	56,445.35	57,416.69	59,356.98	59,601.41	60,186.35	60,544.98	60,405.13	60,547.79	62,057.65	62,742.71	65,821.57
Greenland	High	5.27	7.88	9.75	4.68	11.91	9.11	11.86	11.81	28.53	15.56	14.22	15.91	15.94	11.79	21.35	17.55	25.44	31.74	23.34	29.02	24.84	24.79	30.95	27.91	27.70
Mexico	Upper-middle	3,945.12	4,350.81	4,656.51	4,873.62	5,026.99	5,434.53	5,962.27	6,729.90	7,285.40	8,316.07	9,432.71	9,634.49	10,418.35	10,662.07	11,269.39	11,856.04	12,579.93	13,215.34	14,085.34	14,542.51	15,030.26	16,016.63	16,926.89	18,495.83	20,074.24
United States	High	313,391.54	311,116.82	302,600.31	296,940.93	306,472.50	306,733.89	320,944.51	330,542.54	354,737.37	385,577.39	389,728.34	392,348.65	395,157.82	399,757.26	409,511.63	423,222.43	425,131.48	426,596.66	428,140.59	428,203.78	428,476.45	430,198.17	435,033.88	438,020.45	455,855.57
Central America and Caribbean		1,542.62	1,669.83	1,827.19	1,831.47	1,809.24	2,028.52	1,982.00	1,954.23	2,052.08	2,325.95	2,722.62	2,654.86	2,821.61	3,092.00	3,025.95	3,197.51	3,325.59	3,269.63	3,410.00	3,129.46	3,073.24	3,187.99	3,279.67	3,396.05	3,864.70
Antigua and Barbuda	High	0.00	1.14	0.13	1.20	0.25	1.00	2.08	1.83	0.67	1.67	1.58	5.25	5.29	3.78	2.19	0.85	2.08	2.72	3,410.00	3,129.46	3,073.24	3,187.99	3,279.67	3,396.05	3,864.70
Bahamas, The	High	2.90	3.08	4.10	2.70	1.70	5.19	5.13	3.66	3.03	7.37	6.12	11.14	6.05	9.83	9.20	10.78	8.01	18.89	15.89	12.15	13.91	20.78	20.64	19.68	22.73
Barbados	High	19.25	24.50	29.19	28.87	27.79	43.08	38.00	45.11	54.09	37.07	49.70	49.82	44.99	36.63	29.06	36.23	47.49	41.83	44.89	54.38	54.32	50.16	41.69	49.47	67.79
Belize	Upper-middle	1.96	3.28	3.95	2.23	0.62	2.00	1.91	4.76	4.92	5.83	4.83	2.23	3.64	8.51	10.82	2.26	8.28	7.81	5.16	7.64	5.72	11.38	9.74	10.89	14.00
Costa Rica	Upper-middle	158.45	166.95	157.79	127.05	121.83	169.10	162.07	153.49	219.15	217.13	222.90	226.94	248.32	251.22	266.59	264.83	308.69	270.87	357.66	361.36	412.40	454.87	526.51	573.49	666.28
Cuba	Upper-middle	576.43	698.71	888.57	949.40	956.50	1,003.81	953.97	792.51	788.00	961.50	1,226.33	1,099.80	1,159.75	1,421.47	1,298.38	1,514.66	1,518.44	1,564.12	1,466.39	1,339.17	1,142.94	1,127.54	1,149.62	1,094.27	1,287.89
Dominica	Upper-middle	1.65	0.64	3.81	0.00	0.00	4.26	2.00	4.58	2.16	5.27	4.19	3.94	5.22	4.22	8.78	6.94	11.84	12.08	9.21	10.28	10.55	11.34	11.67	6.15	6.42
Dominican Republic	Upper-middle	21.24	12.84	9.98	10.66	13.30	8.14	8.46	11.53	13.74	13.88	18.10	21.12	17.08	15.46	17.26	19.34	25.65	39.39	41.42	34.83	36.63	46.61	53.31	70.52	84.65
El Salvador	Lower-middle	4.23	4.04	2.14	4.79	2.95	8.39	13.78	6.68	18.14	14.77	19.24	14.88	20.19	15.24	20.07	17.51	19.87	15.39	18.89	24.12	29.68	26.67	40.45	23.90	16.97
Grenada	Upper-middle	2.19	1.80	1.75	1.20	1.04	2.79	1.92	5.40	4.18	4.69	12.48	21.24	23.41	17.53	17.49	23.02	29.85	34.50	55.26	33.62	34.97	55.14	45.86	57.54	56.11
Guatemala	Upper-middle	42.21	30.84	29.89	29.73	24.13	23.84	23.92	26.71	28.55	45.75	36.47	32.06	36.57	55.78	52.00	44.80	66.74	73.08	63.89	84.89	88.15	102.51	101.39	95.73	125.69
Haiti	Low	2.01	3.53	5.93	0.81	5.46	4.69	6.03	4.93	6.32	8.33	14.05	10.85	7.02	11.67	14.55	18.08	16.87	29.38	36.71	33.84	32.00	41.81	31.45	33.91	40.20
Honduras	Lower-middle	9.21	13.97	11.60	19.06	12.87	7.70	10.26	10.25	13.44	13.95	11.30	12.07	17.67	16.52	21.96	19.10	25.41	19.54	24.36	30.78	31.61	41.18	43.27	74.00	104.70
Jamaica	Upper-middle	125.32	107.26	95.74	113.34	107.05	151.66	147.92	140.52	168.78	141.55	143.86	171.29	218.42	205.93	171.98	199.30	207.25	201.42	207.32	152.82	160.44	161.71	192.72	154.66	201.10
Nicaragua	Lower-middle	15.86	19.79	13.59	8.78	14.14	10.86	7.63	13.66	17.20	21.36	33.28	22.34	27.14	27.96	30.29	30.27	31.51	28.30	32.81	25.92	37.54	40.21	33.40	34.48	37.67
Panama	High	65.89	46.94	49.16	50.56	42.75	59.24	50.59	64.62	65.36	79.85	84.53	100.07	118.15	116.80	120.33	130.28	155.23	155.73	164.86	163.95	151.05	175.02	171.52	255.68	258.87
Puerto Rico	High	416.61	451.09	429.68	397.75	384.14	412.04	431.70	541.02	512.99	566.63	699.01	677.15	695.15	655.49	712.87	630.25	628.19	577.45	609.13	586.23	596.93	566.52	549.24	561.80	584.60
Saint Kitts and Nevis	High	0.25	1.33	1.46	3.24	1.50	1.00	0.34	0.00	0.23	1.96	1.94	1.17	4.16	2.82	4.41	4.63	8.85	12.97	15.20	16.63	20.64	28.03	26.05	33.88	33.69
Saint Lucia	Upper-middle	2.53	0.96	2.39	0.25	2.00	2.63	2.17	0.09	1.33	2.35	2.35	2.38	2.67	2.00	3.28	4.99	0.75	3.70	0.16	3.11	4.90	2.42	3.59	4.82	3.26
Saint Vincent and the Grenadines	Upper-middle	1.40	0.67	0.25	0.50	0.42	0.00	0.12	1.83	0.13	1.00	0.70	1.26	0.00	1.13	1.02	0.05	0.92	2.20	1.51	0.46	2.42	4.25	1.22	6.53	7.40
Trinidad and Tobago	High	73.03	76.46	86.10	79.34	88.81	107.09	111.99	121.05	129.67	174.05	129.66	167.88	160.74	212.02	213.42	219.34	203.67	158.26	237.56	149.99	203.10	214.38	221.69	228.69	237.39
South America		13,846.46	16,308.87	17,340.00	18,846.37	20,694.10	22,037.47	25,260.48	26,783.08	29,362.82	32,865.40	41,027.59	44,016.23	50,462.74	54,710.45	58,777.73	62,319.32	67,600.15	70,310.04	74,026.58	75,981.07	80,399.89	84,888.32	91,374.30	96,014.70	105,808.93
Argentina	Upper-middle	3,385.12	3,768.19	3,724.97	4,017.86	4,231.85	4,356.17	4,681.53	4,478.15	4,602.28	4,861.52	5,552.90	5,659.69	6,217.93	6,802.37	7,135.90	7,624.35	7,753.63	7,895.61	8,218.57	8,305.92	8,485.48	8,624.13	9,090.82	8,984.76	9,729.75
Bolivia	Lower-middle	28.73	39.32	39.05	53.82	37.82	42.27	46.61	50.47	44.60	63.43	68.72	85.95	92.85	85.25	78.76	81.52	84.43	89.80	87.51	87.18	91.58	90.47	103.47	109.83	152.33
Brazil	Upper-middle	7,645.85	9,303.48	10,498.24	11,423.81	12,800.36	13,914.70	16,156.58	17,622.42	19,845.26	22,310.98	28,458.07	31,032.13	35,400.27	38,335.13	41,501.01	43,983.61	47,867.35	50,027.41	51,802.81	52,882.71	55,010.17	58,114.05	61,796.95	64,376.69	70,291.66
Chile	High	1,293.65	1,422.85	1,366.28	1,498.84	1,552.28	1,646.31	2,060.22	2,097.28	2,238.49	2,533.11	3,136.05	3,285.42	3,964.76	4,121.66	4,442.92	4,966.91	5,004.13	5,746.21	6,052.08	6,636.60	6,759.96	7,437.65	7,875.81	8,979.79	
Colombia	Upper-middle	362.45	406.22	394.84	463.17	535.48	533.64	680.85	709.28	849.59	983.57	1,447.51	1,566.45	2,363.72	2,705.07	3,167.93	3,523.18	4,082.94	4,502.77	4,993.91	5,349.40	6,179.73	6,608.45	7,483.06	8,423.92	9,296.64
Ecuador	Upper-middle	56.78	99.62	94.52	66.82	73.70	60.41	91.30	98.81	93.53	131.53	131.33	143.23	150.80	178.88	191.29	169.82	244.80	259.38	393.39	638.14	1,125.33	1,586.96	2,100.33	2,308.59	2,847.83
Guyana	Upper-middle	3.95	11.68	5.18	8.78	10.27	8.31	7.86	7.29	11.30	20.19	9.64	12.11	10.07	9.98	20.13	10.65	13.39	13.74	12.11	9.85	13.58	16.49	14.25	14.63	19.58

Table SPBS-2

## S&amp;E articles in all S&amp;E fields, fractional count, by region, country, or economy: 1996–2020

(Number)

Region, country, or economy	Income level	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Paraguay	Upper-middle	15.60	14.84	17.24	15.93	13.35	17.91	12.65	15.83	25.27	22.23	26.82	27.93	30.99	29.67	34.25	48.65	55.51	57.56	62.16	91.14	96.88	132.44	99.85	163.71	153.54
Peru	Upper-middle	121.87	117.75	93.70	160.92	172.38	196.66	191.96	265.05	263.63	299.49	439.65	400.36	401.19	488.18	550.49	591.16	636.00	661.46	737.52	884.93	1,050.04	1,334.00	1,648.11	2,192.52	2,701.50
Suriname	Upper-middle	2.29	1.96	1.56	2.85	2.62	4.27	3.47	3.40	4.58	4.82	5.22	9.35	4.37	5.53	4.66	4.21	9.51	15.37	7.17	13.20	21.64	16.41	17.48	19.46	19.52
Uruguay	High	166.03	199.77	216.66	202.75	224.92	234.78	274.53	282.40	306.70	348.92	362.95	381.29	438.47	469.42	496.41	575.59	574.73	584.69	724.15	689.10	828.56	774.67	894.82	942.34	959.51
Venezuela	Upper-middle	764.15	923.20	887.79	930.82	1,039.07	1,022.04	1,052.92	1,152.69	1,077.59	1,285.60	1,388.74	1,412.32	1,616.91	1,636.19	1,475.25	1,263.67	1,310.94	1,198.12	1,241.07	977.41	860.30	830.28	687.51	602.42	657.27
Europe		400,263.93	416,171.28	420,304.26	415,739.30	434,551.91	447,014.95	459,732.24	474,440.54	503,021.42	547,712.90	568,476.96	593,609.50	619,072.63	645,542.31	662,161.07	688,365.33	713,530.12	729,154.81	746,954.32	760,737.64	775,265.88	784,158.51	797,502.64	828,316.29	870,292.39
EU-27 and UK <sup>a</sup>		335,223.49	350,158.07	352,801.39	350,803.59	368,426.96	374,196.37	385,094.75	398,290.85	422,167.77	462,392.92	485,145.27	505,629.60	527,758.89	548,333.28	561,070.64	581,386.87	602,576.72	613,088.22	624,269.13	628,719.17	630,274.06	631,706.68	634,525.00	647,817.16	679,329.66
UK	High	72,332.42	74,151.07	74,207.66	73,334.16	77,969.06	74,398.12	75,375.88	76,341.42	80,185.02	85,438.73	89,062.42	91,538.02	91,581.47	94,038.52	94,081.01	95,498.19	97,564.17	98,589.76	98,439.22	99,434.66	99,716.51	99,990.59	100,600.79	101,343.03	105,564.47
EU-27 <sup>b</sup>		262,891.07	276,007.00	278,593.72	277,469.43	290,457.90	299,798.25	309,718.87	321,949.43	341,982.75	376,954.19	396,082.85	414,091.58	436,177.42	454,294.76	466,989.63	485,888.67	505,012.55	514,498.46	525,829.91	529,284.51	530,557.55	531,716.10	533,924.20	546,474.13	573,765.18
Austria	High	5,949.63	6,304.13	6,222.30	6,264.67	6,614.60	7,073.06	7,505.60	7,854.83	8,060.20	8,921.33	9,110.60	9,799.94	10,300.65	10,837.18	11,058.41	11,683.33	12,050.36	12,201.98	12,408.16	12,840.55	12,668.55	12,756.54	12,713.75	13,162.53	13,700.08
Belgium	High	8,826.61	9,009.03	9,409.54	9,244.92	9,593.02	9,951.02	10,242.87	10,826.98	11,463.48	12,642.34	12,916.17	13,561.83	14,232.84	14,702.07	14,984.64	15,533.91	16,204.15	16,428.55	16,694.78	16,448.59	16,513.99	16,037.22	16,172.65	16,218.32	17,015.55
Bulgaria	Upper-middle	1,909.71	1,753.32	1,764.70	1,800.04	1,676.87	1,657.78	1,680.94	1,706.37	1,841.32	2,029.68	1,917.22	2,465.08	2,342.77	2,679.13	2,576.55	2,436.75	2,632.57	2,654.65	2,627.73	2,523.38	2,494.79	2,898.18	3,287.76	4,051.05	4,118.23
Croatia	High	1,469.22	1,403.30	1,495.50	1,547.68	1,828.44	1,878.80	2,124.29	2,379.73	2,523.44	2,996.18	2,968.51	3,473.85	3,718.57	4,131.55	3,970.63	4,529.57	4,432.34	4,239.71	4,021.73	4,079.08	4,029.84	4,359.05	4,619.34	4,594.80	4,800.05
Cyprus	High	94.99	118.96	111.63	118.22	158.13	134.94	196.94	178.93	253.94	316.17	350.60	427.00	503.25	650.21	694.54	745.11	782.33	945.53	888.54	926.12	1,045.73	1,205.27	1,247.91	1,321.39	1,485.23
Czechia	High	4,361.86	4,616.99	4,599.59	4,929.16	5,330.30	5,742.18	6,038.75	6,364.93	6,965.16	7,800.00	8,717.82	9,913.27	10,620.63	10,891.11	12,315.27	13,210.79	13,563.95	13,580.63	14,923.01	16,283.19	16,133.14	16,186.38	15,581.15	16,118.82	14,994.00
Denmark	High	6,360.30	7,107.29	6,822.62	6,717.74	7,180.91	7,158.33	7,190.23	7,483.65	7,880.22	8,399.92	8,612.30	8,966.09	9,264.81	9,711.66	10,233.42	11,366.19	12,269.14	12,804.85	14,024.94	14,105.29	14,186.10	14,405.93	14,500.93	14,532.28	15,318.52
Estonia	High	417.38	404.39	459.91	484.81	464.97	516.30	509.77	568.93	631.83	716.74	891.83	1,024.40	1,138.56	1,150.71	1,407.66	1,384.92	1,493.05	1,449.46	1,678.33	1,542.15	1,555.26	1,563.46	1,476.89	1,622.86	1,747.64
Finland	High	6,576.37	6,940.03	6,928.39	6,932.89	7,504.80	7,767.57	7,849.93	8,022.86	8,726.82	9,122.68	9,363.27	9,322.12	9,545.18	9,892.75	9,896.47	10,202.90	10,425.90	10,657.92	11,068.94	10,903.86	11,111.14	10,769.60	10,848.80	11,036.74	11,328.41
France	High	46,610.69	49,416.52	49,672.35	49,210.64	50,006.98	50,801.94	51,494.97	52,659.44	54,976.70	59,436.01	62,294.75	63,247.30	66,278.10	67,841.08	68,299.86	70,130.47	71,646.01	72,641.06	72,165.90	71,454.24	70,742.15	69,328.55	67,682.67	65,758.26	66,478.55
Germany	High	64,230.05	68,275.18	69,447.96	67,533.92	69,738.56	71,531.01	71,994.35	73,156.37	76,137.67	84,243.62	85,981.08	88,887.79	92,026.37	95,032.60	97,255.35	99,987.37	104,122.44	104,648.18	106,365.98	106,343.65	107,804.05	107,880.17	107,580.88	108,725.20	109,378.75
Greece	High	4,063.96	4,411.82	4,572.31	4,573.08	5,285.59	5,720.28	6,408.11	6,750.01	7,964.63	9,194.86	10,567.48	11,053.49	11,721.47	11,977.04	11,836.24	11,776.04	11,695.40	11,418.51	11,100.49	11,006.77	11,002.78	10,952.68	11,490.71	12,538.66	
Hungary	High	3,514.48	3,905.61	4,342.56	3,982.13	4,411.53	4,347.95	4,628.75	4,636.83	4,857.73	5,572.92	5,566.75	5,841.51	6,432.62	5,998.04	5,891.47	6,395.73	6,445.62	6,211.44	6,418.54	6,524.89	6,425.46	6,646.45	6,684.52	7,129.81	7,478.17
Ireland	High	2,121.52	2,188.73	2,314.16	2,289.87	2,607.75	2,776.33	3,039.39	3,113.93	3,822.38	4,707.66	4,863.72	5,447.33	5,669.76	6,268.89	6,860.36	7,161.05	6,947.46	7,003.61	7,044.36	6,777.56	6,984.30	7,117.53	7,282.42	7,747.07	8,562.78
Italy	High	34,243.84	35,158.03	34,127.60	34,282.20	36,209.65	37,419.90	39,094.52	42,367.06	44,356.03	47,710.76	50,570.46	53,844.63	55,877.79	57,994.37	58,251.79	60,076.57	63,708.57	66,897.05	68,401.09	70,157.62	70,082.26	71,357.77	72,822.40	76,301.91	85,419.29
Latvia	High	339.74	411.93	328.14	332.08	292.69	355.23	371.27	292.97	301.25	441.93	386.82	468.24	640.09	701.59	792.29	1,242.74	1,140.12	1,177.49	1,148.74	1,370.70	1,337.34	1,518.82	1,401.28	1,525.75	1,469.35
Lithuania	High	426.08	471.62	537.70	574.27	598.97	638.61	998.87	961.95	1,263.89	1,517.30	1,762.55	1,685.79	2,487.45	2,278.05	2,334.40	2,432.70	2,253.21	2,234.77	2,451.02	2,432.61	2,280.75	2,353.67	2,299.87	2,443.94	2,738.88
Luxembourg	High	46.91	50.48	56.21	53.72	65.28	67.06	83.08	87.93	152.56	162.21	193.21	217.90	311.95	381.33	444.03	569.20	574.18	741.34	844.09	789.25	842.39	790.95	881.62	908.61	946.94
Malta	High	40.61	50.58	53.68	57.01	45.34	55.48	56.47	80.70	60.88	78.90	91.30	104.77	176.68	163.70	193.13	194.95	247.62	286.27	280.63	311.19	345.77	396.20	430.22	416.42	526.85
Netherlands	High	18,565.62	18,654.85	18,778.35	17,751.63	18,865.25	18,769.03	19,627.11	20,111.59	21,555.51	24,179.86	24,828.84	25,555.34	26,521.22	28,385.45	29,127.43	29,981.55	30,713.33	31,251.17	31,512.23	31,178.38	30,962.18	31,126.28	31,333.40	31,458.37	33,376.81
Poland	High	11,065.53	11,075.57	11,369.23	11,933.10	12,984.35	14,359.62	15,613.41	16,722.41	18,877.97	20,341.91	22,113.06	21,937.95	23,784.03	23,693.13	24,675.84	25,560.97	27,660.19	29,438.53	30,848.34	32,470.81	33,912.65	33,576.35	34,972.82	34,816.33	36,766.63
Portugal	High	2,210.65	2,619.11	2,840.16	3,129.07	3,328.54	3,822.28	4,058.67	4,641.14	5,231.43	5,912.99	7,157.81	7,580.42	8,628.54	9,439.35	10,470.81	11,783.01	12,791.52	13,616.20	14,118.17	14,418.37	14,061.16	14,028.18	14,475.86	15,928.35	17,098.90
Romania	High	1,763.94	2,040.62	2,138.49	2,070.08	2,269.76	2,281.16	2,320.07	2,500.86	2,674.90	3,291.96	3,603.66	4,915.44	6,901.54	8,704.87	9,888.59	9,617.03	9,857.45	9,697.94	9,634.52	10,259.22	9,386.93	9,607.92	9,093.22	10,157.95	9,710.46
Slovakia	High	2,064.93	1,811.65	2,038.94	2,028.39	2,108.08	2																			

Table SPBS-2

## S&amp;E articles in all S&amp;E fields, fractional count, by region, country, or economy: 1996–2020

(Number)

Region, country, or economy	Income level	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	
Sweden	High	13,385.05	13,803.62	14,004.00	14,202.82	14,569.85	14,742.17	14,576.20	14,858.19	15,323.94	16,494.16	16,796.09	16,690.04	16,646.70	17,467.59	17,762.17	18,276.99	19,207.32	19,812.61	20,741.10	20,851.10	20,820.51	20,754.74	20,825.36	20,969.01	21,880.49	
Other Europe		65,040.44	66,013.21	67,502.87	64,935.71	66,124.94	72,818.58	74,637.49	76,149.69	80,853.66	85,319.98	83,331.69	87,979.90	91,313.74	97,209.02	101,090.43	106,978.47	110,953.41	116,066.59	122,685.19	132,018.48	144,991.82	152,451.83	162,977.64	180,499.13	190,962.74	
Other Europe, 2020 <sup>b</sup>		137,372.86	140,164.28	141,710.53	138,269.87	144,094.00	147,216.70	150,013.37	152,491.11	161,038.67	170,758.71	172,394.11	179,517.92	182,895.21	191,247.55	195,171.44	202,476.66	208,517.57	214,656.35	221,124.41	231,453.14	244,708.34	252,442.41	263,578.43	281,842.15	296,527.21	
Albania	Upper-middle	36.82	26.52	31.89	23.84	22.34	18.38	24.53	22.82	17.91	25.77	26.47	41.65	52.48	68.39	124.82	141.38	155.25	150.40	156.68	167.07	170.85	135.30	168.55	191.03	167.16	
Andorra	High	2.00	0.87	2.08	0.00	0.00	2.64	0.50	4.70	1.31	4.93	5.02	6.23	1.68	2.55	1.20	0.88	4.53	5.26	4.18	7.96	7.91	1.67	3.29	7.44	9.70	
Belarus	Upper-middle	1,285.54	1,352.75	1,312.38	1,133.60	1,203.02	1,330.16	1,325.49	1,268.25	1,268.85	1,329.79	1,200.60	1,300.85	1,059.23	1,156.45	1,050.50	1,082.13	1,038.01	1,093.63	1,052.95	974.00	989.55	1,067.67	1,195.57	1,341.81	1,352.11	
Bosnia and Herzegovina	Upper-middle	33.17	43.07	42.43	107.02	76.59	68.64	113.91	152.74	207.84	254.37	298.46	324.70	401.13	457.25	493.60	548.44	548.95	490.08	487.68	566.59	557.79	723.36	723.95	767.50	932.51	
Holy See (Vatican City)	na	0.01	2.10	0.00	0.00	1.00	0.00	0.25	0.00	4.42	1.00	0.00	0.38	0.50	0.13	1.95	1.76	2.75	2.12	4.12	4.12	557.79	723.36	723.95	767.50	932.51	
Iceland	High	205.42	224.04	234.29	228.50	220.10	239.09	306.40	258.65	304.27	363.38	381.82	380.85	421.89	472.91	560.82	548.88	632.65	582.00	587.02	598.66	664.72	625.78	706.71	663.46	683.91	
Kosovo	Upper-middle	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	56.50	101.58	111.79	107.33	113.43	120.76	115.81	135.96	182.41	220.08	257.40	270.45	263.25	
Liechtenstein	High	12.08	17.51	4.50	18.12	15.87	8.22	7.65	16.02	20.79	34.57	35.42	23.75	39.45	23.71	37.20	38.72	30.59	31.48	39.31	32.33	41.84	34.17	30.24	26.18	35.65	
Moldova	Lower-middle	212.33	168.80	161.36	155.44	191.46	152.90	154.36	159.94	134.16	206.59	147.83	143.90	163.74	181.93	173.94	188.17	205.90	211.96	205.59	188.77	284.00	234.68	202.36	251.87	271.60	
Monaco	High	19.70	24.52	27.79	20.94	13.79	25.93	23.94	26.67	38.93	37.54	33.41	32.12	34.99	43.34	43.25	48.33	30.16	37.22	38.62	42.59	42.06	50.30	46.21	45.45	49.05	
Montenegro <sup>c</sup>	Upper-middle	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	65.14	66.69	73.23	108.51	139.48	159.67	190.26	194.48	226.38	240.71	284.05	254.05	278.72	309.32	
North Macedonia	Upper-middle	80.17	118.79	93.16	93.02	124.53	141.39	127.16	132.85	134.89	176.01	193.89	259.41	292.41	323.40	354.53	460.60	475.94	460.99	505.97	472.58	478.99	447.14	422.87	427.34		
Norway	High	4,790.04	5,158.20	5,207.28	4,792.49	5,063.27	5,159.27	5,168.99	5,297.91	5,774.19	6,751.28	7,173.66	7,691.47	7,904.71	8,733.72	8,949.95	9,597.54	10,156.04	10,212.45	10,449.72	10,363.98	11,133.87	11,672.12	12,044.24	12,407.49	13,262.07	
Russia	Upper-middle	34,671.81	33,775.49	34,621.11	32,578.24	32,706.64	36,554.80	36,335.60	34,728.30	34,981.20	34,438.71	29,943.51	30,758.30	32,400.51	33,282.58	33,855.30	36,008.12	35,792.09	38,294.90	43,836.32	51,084.54	60,205.09	67,396.98	76,145.53	87,168.13	89,967.04	
San Marino	High	3.03	0.46	2.84	0.08	1.50	1.09	0.00	0.17	1.58	1.33	0.67	2.42	3.76	1.21	1.30	2.33	3.66	6.53	4.90	7.25	6.96	14.31	11.95	12.12	11.28	
Serbia <sup>c</sup>	Upper-middle	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3,003.02	3,122.95	3,712.68	4,076.88	4,820.99	5,903.93	5,276.19	5,044.17	4,894.18	4,980.44	4,852.28	4,744.90	4,939.18	4,741.34	
Serbia and Montenegro <sup>d</sup>	na	1,501.98	1,776.66	1,666.39	1,500.75	1,520.56	1,424.31	1,558.44	1,561.91	1,874.37	2,336.45	2,477.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Switzerland	High	11,499.01	11,877.96	11,985.86	11,964.40	12,621.43	12,297.66	12,478.85	13,163.19	14,175.81	15,462.68	16,469.77	16,882.92	17,350.51	17,905.64	18,709.05	19,755.56	20,769.07	21,302.67	21,788.24	21,848.15	21,982.57	22,442.37	22,189.21	22,336.94	23,075.04	
Turkey	Upper-middle	5,040.70	5,389.78	5,770.40	6,742.31	6,815.40	8,591.94	10,971.39	13,463.11	16,025.99	17,794.68	19,561.21	21,637.21	22,022.16	25,022.23	26,424.46	27,180.38	28,322.28	30,326.35	31,004.71	32,968.60	35,162.50	33,239.62	33,686.23	37,430.02	42,623.31	
Ukraine	Lower-middle	5,646.64	6,055.68	6,339.12	5,576.98	5,527.45	6,802.16	6,040.03	5,892.46	5,887.15	6,100.90	5,382.51	5,425.61	5,918.43	5,646.11	6,011.37	6,307.43	6,608.52	7,270.75	7,199.47	7,401.39	7,864.24	8,973.70	10,116.13	11,930.65	12,776.85	
Middle East		13,253.07	13,931.61	13,996.84	14,030.78	15,673.04	16,146.59	17,512.84	19,385.50	21,579.50	24,200.64	28,309.19	31,860.75	36,841.90	41,482.85	46,948.87	55,778.88	58,019.24	60,428.63	65,346.34	68,539.08	75,780.84	81,484.37	88,155.92	101,858.34	117,646.85	
Armenia	Upper-middle	333.15	262.14	277.22	266.47	348.04	323.20	319.06	321.88	345.96	393.28	356.51	409.88	378.42	434.36	492.32	585.84	547.65	536.58	539.99	530.90	537.58	503.14	511.55	606.36	599.38	
Azerbaijan	Upper-middle	220.90	210.93	172.07	165.60	158.76	168.62	255.89	287.37	371.53	360.53	284.11	416.36	472.58	630.74	602.97	637.21	679.62	474.14	389.81	452.30	585.09	724.53	803.23	860.37	993.56	
Bahrain	High	92.81	71.24	90.92	89.99	85.53	83.76	71.00	127.15	142.48	162.53	181.09	175.91	160.23	187.38	206.42	179.59	157.60	235.41	208.62	175.81	222.28	237.99	334.45	391.41	492.66	
Gaza Strip <sup>e</sup>	Lower-middle	9.92	10.72	11.52	22.46	21.45	19.80	45.37	37.06	48.24	43.85	50.44	70.06	61.17	66.94	61.81	78.92	79.58	90.02	92.92	78.90	71.47	76.23	89.01	108.33	147.21	
Georgia	Upper-middle	216.91	258.71	243.60	247.35	262.72	231.08	258.71	252.65	303.37	424.68	439.44	357.46	405.60	441.52	340.13	482.11	452.22	470.86	463.56	490.57	594.17	538.25	558.59	609.74	620.67	
Iran	Upper-middle	649.35	860.98	969.12	1,181.40	1,559.17	1,910.45	2,753.06	3,840.43	5,099.62	7,035.73	9,906.51	12,923.27	16,824.95	20,366.24	24,693.52	31,211.35	31,500.82	32,428.55	35,482.17	37,042.25	41,908.22	45,596.40	48,128.18	52,885.10	57,755.27	
Iraq	Upper-middle	72.92	79.67	67.98	60.65	91.98	89.11	103.31	120.69	91.74	140.51	247.95	240.83	305.79	359.45	529.94	592.74	820.00	816.34	819.79	850.83	1,206.86	1,926.61	3,368.59	6,776.40	9,814.39	
Israel	High	8,390.48	8,740.54	8,511.28	8,493.43	9,345.74	9,369.95	9,681.29	9,869.05	10,407.28	10,496.29	11,141.79	11,168.62	11,351.67	11,158.39	10,885.13	11,245.00	11,528.17	11,289.65	11,986.41	12,046.16	12,252.68	12,322.35	12,459.05	13,090.78	13,955.40	
Jordan	Upper-middle	348.08	403.39	457.61	476.60	536.58	539.78	589.94	656.22	743.08	778.15	917.39	1,040.39	1,217.59	1,271.68	1,412.51	1,405.26	1,376.41	1,401.29	1,374.03	1,436.70	1,662.20	1,963.95	2,451.68	2,974.18	3,533.42	
Kuwait	High	475.08	489.87	544.42	562.61	505.73	526.06	512.71	526.51	565.54	620.50	646.42	723.74	756.40	778.34	729.81	775.71	810.69	854.58	765.38	812.67	785.87	828.68	987.49	1,124.13	1,149.84	
Lebanon	Upper-middle	222.34	258.00	276.74	310.32	414.71	435.09	395.95	472.93	496.57	571.36	644.80	658.62	730.89	778.13	790.71	862.73	1,008.31	1,097.96	1,188.35	1,259.31	1,453.71	1,528.73	1,825.45			

Table SPBS-2

## S&amp;E articles in all S&amp;E fields, fractional count, by region, country, or economy: 1996–2020

(Number)

Region, country, or economy	Income level	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Oman	High	118.37	123.50	157.74	148.20	208.80	236.03	247.47	301.33	307.75	319.95	349.79	412.66	440.25	484.39	523.19	587.10	593.29	654.62	670.43	742.38	768.34	751.89	818.10	949.02	1,083.30
Qatar	High	45.52	44.04	54.33	44.13	44.06	75.39	89.35	105.16	134.67	159.81	187.70	217.88	292.95	320.47	396.47	449.72	596.55	784.06	1,075.86	1,137.33	1,395.84	1,367.22	1,508.57	1,785.11	2,346.63
Saudi Arabia	High	1,660.42	1,697.16	1,709.29	1,554.64	1,595.72	1,584.38	1,640.28	1,740.42	1,742.43	1,744.68	1,886.82	2,004.81	2,200.13	2,831.08	3,574.13	4,794.82	5,758.20	7,075.23	8,006.17	8,730.33	9,265.82	9,740.96	10,585.40	12,743.60	17,321.16
Syria	Low	57.89	71.69	70.26	84.71	100.09	94.91	83.03	104.24	135.80	146.50	134.43	153.62	199.88	158.35	231.98	268.35	297.45	248.28	237.93	268.49	275.48	262.88	312.09	336.85	453.27
United Arab Emirates	High	294.31	282.44	320.66	247.78	324.89	376.47	393.49	538.88	548.13	693.83	814.81	765.15	892.89	1,023.77	1,247.55	1,391.56	1,580.13	1,727.03	1,766.44	2,234.70	2,508.37	2,772.91	2,996.80	4,053.25	4,443.22
West Bank <sup>e</sup>	Lower-middle	24.89	35.53	34.08	45.53	46.23	39.01	45.81	50.68	53.15	59.65	64.50	74.83	88.56	108.47	128.22	126.94	126.05	126.62	142.39	140.74	169.46	219.30	281.04	331.22	386.42
Yemen	Low	19.72	31.06	28.02	28.91	22.83	43.49	27.13	32.84	42.15	48.82	54.68	46.66	61.96	83.16	102.08	103.92	106.49	117.43	136.08	108.70	117.41	122.36	136.64	204.91	282.60
Africa		10,491.30	10,899.35	11,212.81	11,588.95	11,927.78	12,829.29	13,709.53	14,444.38	15,921.09	17,206.34	19,364.63	21,148.81	23,241.55	27,194.14	29,434.04	32,206.94	34,968.05	37,371.77	40,294.40	43,088.00	48,869.40	52,765.75	58,298.21	66,018.43	75,609.85
Algeria	Lower-middle	224.92	258.62	300.80	311.00	381.80	447.43	488.66	624.40	844.82	889.58	1,269.15	1,385.81	1,730.93	2,086.28	2,073.64	2,394.55	2,976.28	3,369.99	3,521.08	4,019.83	4,458.62	5,120.48	5,216.34	6,058.88	5,689.02
Angola	Lower-middle	5.95	7.33	4.11	3.93	6.08	9.58	16.13	5.89	9.73	10.04	12.07	10.16	11.85	13.78	13.18	16.78	20.63	23.85	32.02	31.32	37.06	43.47	28.88	33.81	45.41
Benin	Lower-middle	28.51	45.95	40.30	42.50	45.48	42.87	44.73	46.42	58.84	60.94	72.67	93.97	93.43	117.13	105.59	127.92	143.30	178.71	179.98	179.25	171.36	205.58	229.56	264.53	290.50
Botswana	Upper-middle	74.49	73.06	87.79	88.82	111.88	102.48	121.09	124.09	133.42	123.28	181.31	151.12	164.51	161.66	151.72	164.28	150.69	166.82	193.63	163.74	207.65	232.26	289.75	304.12	329.26
Burkina Faso	Low	36.72	52.20	84.78	61.62	48.50	63.92	71.81	76.54	70.98	72.52	99.37	105.16	119.40	129.96	124.71	150.19	189.00	164.88	169.34	189.65	203.55	205.50	244.18	250.26	246.26
Burundi	Low	9.82	13.35	3.81	6.10	1.65	3.58	0.93	4.42	5.02	4.30	5.63	4.48	2.54	3.33	12.37	10.02	10.65	14.28	12.41	12.50	11.72	13.19	20.58	24.12	33.27
Cabo Verde	Lower-middle	0.53	0.50	0.20	1.48	0.25	0.67	0.17	1.39	1.63	0.37	4.14	3.67	2.47	5.04	3.05	2.70	3.88	7.60	8.77	10.85	8.34	14.24	8.94	13.25	21.50
Cameroon	Lower-middle	117.49	130.21	129.96	122.21	118.07	152.21	191.66	211.67	209.46	282.86	313.83	317.67	326.04	350.01	357.40	400.98	410.77	473.08	566.45	593.41	669.64	789.61	869.43	922.96	1,130.50
Central African Republic	Low	8.37	10.34	13.89	9.82	6.13	6.87	3.72	10.41	10.40	8.36	13.25	8.41	10.14	11.05	14.24	14.10	10.58	12.59	17.22	12.31	27.42	18.62	21.88	16.99	17.32
Chad	Low	1.01	3.25	1.50	3.58	2.79	4.51	4.42	4.54	11.37	9.04	9.91	4.32	6.21	9.25	3.84	7.06	4.56	5.18	8.66	9.36	10.84	14.91	15.81	14.12	14.07
Comoros	Lower-middle	0.90	1.29	0.13	1.25	0.98	0.20	0.20	0.33	1.17	2.40	1.17	3.59	0.74	0.76	2.15	3.95	1.20	8.93	1.51	1.74	4.84	3.73	3.07	3.79	3.40
Congo, Democratic Republic of the	Low	14.55	19.80	18.03	16.27	15.01	9.05	11.52	15.24	13.80	23.05	24.58	31.47	39.97	44.55	52.94	45.72	70.06	67.49	86.91	100.02	97.14	123.35	140.58	133.03	171.76
Congo, Republic of the	Lower-middle	24.29	11.29	20.67	23.01	17.35	15.80	23.93	32.59	40.04	45.62	43.74	47.38	48.67	40.40	41.36	46.01	53.73	50.62	70.67	78.31	75.85	66.45	62.02	73.99	72.62
Côte d'Ivoire	Lower-middle	79.05	114.90	99.19	108.10	75.76	81.14	78.97	98.37	106.46	102.07	98.60	119.18	164.66	150.72	156.06	179.43	185.37	158.68	181.06	175.74	172.82	198.18	246.41	235.97	241.01
Djibouti	Lower-middle	3.11	5.00	1.93	0.17	2.00	0.64	1.28	1.33	1.88	3.71	2.71	3.28	2.82	8.12	6.87	4.24	7.42	6.45	7.01	5.71	4.19	5.24	6.16	5.68	8.84
Egypt	Lower-middle	2,351.45	2,342.28	2,402.36	2,404.74	2,682.75	2,953.45	3,020.31	3,419.01	3,536.40	3,583.01	3,909.76	4,412.85	4,834.30	5,971.34	6,527.11	7,172.97	8,206.60	8,436.29	8,878.42	9,620.87	10,948.46	11,000.53	12,944.42	15,216.46	18,469.18
Equatorial Guinea	Upper-middle	0.83	1.27	0.00	2.19	0.00	1.67	0.46	0.82	4.10	0.74	3.22	3.40	1.23	2.35	2.86	2.21	2.32	2.31	2.36	4.28	4.99	3.13	3.60	4.07	1.70
Eritrea	Low	3.99	0.98	10.34	3.99	4.58	6.68	11.83	14.30	11.69	11.76	20.62	17.15	9.50	5.96	10.47	11.93	4.25	10.52	8.45	10.34	8.86	13.52	22.72	27.18	37.51
Eswatini	Lower-middle	8.67	12.38	16.33	12.53	7.75	5.64	12.32	6.60	11.85	12.70	10.26	6.96	10.36	13.44	23.67	21.15	16.29	17.84	12.60	17.45	18.91	30.72	30.93	35.00	32.94
Ethiopia	Low	170.12	161.04	154.66	186.89	165.79	171.82	201.74	209.77	211.33	222.58	276.32	330.68	360.85	397.45	444.15	489.87	645.05	766.52	983.31	1,017.58	1,161.10	1,624.68	2,055.59	2,586.84	3,967.54
Gabon	Upper-middle	21.65	29.50	33.26	36.50	23.61	28.73	29.88	26.90	32.45	48.89	42.17	33.15	41.38	51.45	42.93	57.18	50.02	54.08	60.10	61.03	59.25	59.69	61.04	70.99	60.98
Gambia, The	Low	37.61	32.73	33.33	34.27	27.90	35.31	25.78	31.24	36.92	36.85	44.00	36.46	43.22	38.47	45.39	33.81	36.58	45.69	46.24	41.96	47.93	46.42	35.52	49.94	58.19
Ghana	Lower-middle	124.99	135.69	130.02	129.11	139.15	117.26	148.88	150.16	172.23	186.29	188.67	232.14	255.85	303.03	351.28	405.70	511.65	582.17	622.95	774.04	985.93	1,085.32	1,318.29	1,559.81	2,106.28
Guinea	Low	8.02	4.23	5.14	3.85	3.11	14.28	10.40	5.66	10.91	6.90	16.78	14.11	12.04	11.83	11.55	10.50	11.65	10.51	20.67	27.36	37.99	37.07	25.91	33.88	40.70
Guinea-Bissau	Low	2.29	4.42	2.40	7.48	1.48	2.23	5.09	8.01	10.64	9.39	5.74	12.14	6.29	8.29	5.80	10.38	12.80	12.09	17.74	9.68	10.36	16.33	14.69	14.05	14.40
Kenya	Lower-middle	392.39	409.19	360.51	362.13	360.08	404.90	441.14	423.62	449.69	457.17	478.73	544.75	590.89	699.14	747.14	827.56	786.89	853.29	926.75	994.46	1,093.03	1,178.07	1,306.44	1,427.56	1,753.08
Lesotho	Lower-middle	9.50	9.75	2.25	8.39	8.17	12.25	12.58	6.43	5.38	7.03	11.92	9.75	10.92	11.45	12.18	12.64	21.26	14.94	11.63	16.34	20.34	21.01	20.78	34.71	35.94



Table SPBS-2

## S&amp;E articles in all S&amp;E fields, fractional count, by region, country, or economy: 1996–2020

(Number)

Region, country, or economy	Income level	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Liberia	Low	1.14	0.00	0.63	0.00	1.00	0.00	0.69	1.00	1.42	1.08	3.55	3.15	2.14	2.33	4.36	9.22	7.60	3.57	8.45	11.35	16.07	20.74	25.96	21.81	12.07
Libya	Upper-middle	36.86	41.98	54.13	39.42	61.41	45.89	41.14	53.05	65.62	71.96	90.67	113.79	129.28	232.76	291.10	125.66	150.31	200.83	185.96	172.40	140.98	166.48	156.84	174.07	247.41
Madagascar	Low	51.93	34.39	37.06	58.99	60.66	61.80	41.20	65.45	49.41	57.11	61.00	108.79	82.64	84.76	79.98	91.29	92.11	112.70	110.63	105.88	100.33	131.96	124.28	114.54	163.25
Malawi	Low	60.08	55.62	49.86	53.95	65.37	75.35	78.31	75.29	81.78	85.61	87.43	127.64	112.38	105.74	126.67	140.81	154.50	135.58	169.54	176.65	193.61	230.66	238.94	246.25	292.24
Mali	Low	31.72	21.45	40.47	22.48	16.01	28.39	32.91	35.36	33.89	40.93	64.61	68.10	66.07	68.05	74.37	86.95	84.82	61.61	70.27	66.55	76.88	98.80	86.42	90.19	98.90
Mauritania	Lower-middle	4.98	6.79	4.95	6.81	6.33	7.27	6.90	4.95	6.39	10.96	7.28	9.21	3.94	7.30	5.23	13.44	12.99	14.67	12.19	13.80	14.10	11.15	16.72	20.55	20.90
Mauritius	High	14.00	17.17	22.47	47.21	53.71	45.79	63.47	46.90	57.18	72.47	59.03	52.09	69.14	78.60	85.80	62.84	112.62	120.92	121.76	120.65	154.48	162.80	132.35	225.48	198.76
Morocco	Lower-middle	505.62	607.37	678.90	812.79	870.34	968.97	950.81	925.29	969.02	908.68	967.37	1,028.28	1,204.67	1,448.45	1,569.60	1,865.59	2,073.10	2,138.76	2,411.19	2,441.25	3,623.58	4,033.58	4,698.58	5,528.30	6,452.54
Mozambique	Low	13.02	20.66	26.12	21.68	22.54	32.12	23.80	26.25	32.25	38.87	45.06	41.63	48.70	57.37	45.82	74.34	63.02	69.25	86.20	105.22	109.20	130.18	146.92	147.89	173.37
Namibia	Upper-middle	18.50	30.79	46.00	29.23	20.76	45.23	36.39	45.11	32.31	52.28	35.45	40.10	32.90	30.89	36.81	49.14	64.47	84.99	91.97	100.97	100.94	117.04	158.35	150.83	198.74
Niger	Low	19.32	37.30	35.46	27.63	24.98	25.78	20.16	23.92	22.46	21.18	29.42	29.41	28.05	53.24	66.79	31.39	30.93	31.32	47.31	52.53	50.63	57.09	64.14	63.16	63.65
Nigeria	Lower-middle	908.53	924.25	884.83	962.82	1,036.35	1,058.73	1,208.14	1,293.45	1,432.85	1,735.85	1,941.49	2,116.06	2,278.81	2,839.74	3,149.77	3,393.05	3,102.85	3,141.03	3,532.77	3,467.53	3,852.50	4,335.11	5,345.23	6,476.73	7,899.95
Rwanda	Low	7.88	8.40	9.42	2.40	3.19	4.14	3.73	7.16	8.63	6.78	19.01	20.51	29.22	33.95	44.95	47.07	54.42	88.02	95.71	102.74	126.28	125.95	172.24	189.37	263.99
São Tomé and Príncipe	Lower-middle	1.67	1.00	0.05	0.00	0.37	0.83	0.78	1.77	0.58	0.25	0.97	1.31	0.00	1.78	2.23	0.00	0.52	0.16	1.24	1.42	1.12	0.88	0.86	2.37	2.09
Senegal	Lower-middle	154.33	154.89	171.65	183.89	145.79	149.31	164.22	205.41	170.41	206.56	170.43	209.64	209.10	178.93	189.60	261.11	258.27	276.36	289.48	323.15	323.93	332.99	373.64	363.09	395.73
Seychelles	High	2.50	2.28	5.03	0.68	4.45	3.90	5.92	9.60	5.04	4.91	8.76	12.34	10.65	6.56	12.83	9.70	10.00	16.91	9.64	19.11	12.20	11.66	12.40	11.17	32.82
Sierra Leone	Low	10.91	16.51	12.89	4.12	4.51	4.83	2.46	2.81	5.42	4.01	5.46	4.72	7.71	8.96	12.08	10.62	14.65	15.58	21.18	33.10	46.29	42.24	40.55	48.72	65.14
Somalia	Low	1.32	1.90	0.48	0.83	0.30	0.00	1.71	1.83	1.14	0.00	1.03	0.00	1.58	2.75	2.74	2.89	1.43	6.31	3.82	4.45	3.34	10.32	7.74	15.96	32.73
South Africa	Upper-middle	3,925.39	3,924.31	4,004.70	4,045.03	3,964.55	4,156.78	4,460.97	4,344.07	4,891.31	5,198.35	5,785.60	5,918.42	6,317.38	7,086.92	7,575.50	8,266.46	8,930.94	9,547.56	10,192.54	10,914.22	11,924.93	12,851.91	13,422.23	14,999.24	15,884.53
South Sudan	Low	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.62	2.42	8.96	5.62	5.51	2.11	5.73	9.62	8.92	14.27
Sudan	Low	68.87	71.10	88.03	61.99	69.06	63.18	71.94	86.49	100.90	104.82	100.71	134.57	146.70	189.14	235.62	276.12	246.97	323.49	222.80	250.01	366.88	317.03	387.92	381.11	378.39
Tanzania	Lower-middle	126.74	140.72	125.04	138.93	150.68	131.48	152.33	168.04	191.25	217.47	276.02	307.72	299.44	312.61	361.62	392.14	390.52	396.29	532.32	531.83	552.90	605.03	618.78	775.64	896.70
Togo	Low	22.66	21.68	39.17	41.43	30.61	26.48	20.22	26.00	24.10	24.98	28.75	29.95	43.83	42.12	48.88	49.55	44.02	56.57	74.41	68.33	66.07	66.12	83.48	85.01	86.33
Tunisia	Lower-middle	382.19	476.27	555.52	602.81	656.70	800.09	981.44	1,067.05	1,350.12	1,697.72	1,965.95	2,298.00	2,747.07	3,176.31	3,427.52	3,665.48	3,770.80	4,195.96	4,444.29	4,788.87	5,366.04	5,546.54	5,434.41	5,029.45	5,164.88
Uganda	Low	83.40	74.57	99.55	117.57	130.85	135.69	130.89	138.04	191.62	219.03	209.73	277.74	249.81	305.51	404.84	414.14	444.93	470.21	507.19	604.13	595.05	642.79	676.08	794.85	934.01
Zambia	Lower-middle	50.89	67.53	56.66	60.22	33.60	52.96	59.67	47.64	42.84	61.04	68.62	68.02	91.91	76.75	87.23	99.99	106.27	118.44	128.98	157.32	173.75	204.95	213.07	206.11	263.09
Zimbabwe	Lower-middle	225.67	249.91	206.05	254.14	235.57	209.14	169.70	182.29	140.52	142.00	170.90	184.40	127.24	116.35	148.45	142.49	199.11	220.33	269.02	269.92	316.99	334.71	406.23	431.62	480.16
Asia		166,999.26	178,845.74	187,661.24	196,079.91	210,791.01	233,149.33	245,409.30	269,464.87	316,508.59	384,722.68	428,976.20	457,844.11	505,253.81	558,775.44	600,984.49	638,312.69	652,207.62	688,709.45	727,609.77	756,617.15	803,469.11	851,502.30	945,882.94	1,050,568.80	1,144,029.88
Afghanistan	Low	0.13	0.00	2.73	0.67	4.00	1.00	5.50	7.34	6.75	9.15	14.86	13.23	12.50	26.14	27.68	41.87	34.65	27.24	35.01	21.19	60.99	73.28	87.70	133.29	119.74
Bangladesh	Lower-middle	368.49	396.28	389.76	407.26	444.19	434.28	420.78	566.83	527.30	587.03	726.06	861.73	1,054.16	1,163.91	1,426.83	1,385.91	1,913.43	1,786.71	2,227.10	2,150.99	2,567.09	3,059.56	3,039.88	5,012.04	4,927.32
Bhutan	Lower-middle	2.46	3.17	2.60	0.96	1.08	1.00	6.23	3.66	9.36	5.98	17.38	8.58	6.64	11.55	18.79	17.09	16.22	27.20	28.36	25.15	40.99	46.05	52.33	53.63	79.66
Brunei	High	34.91	26.68	41.61	37.16	38.26	32.00	24.27	36.66	36.67	34.48	41.16	43.31	50.09	50.68	56.82	79.94	114.89	121.77	182.85	171.32	218.41	198.45	288.21	221.81	286.84
Burma	Lower-middle	5.70	12.44	11.41	12.98	14.82	11.31	11.62	11.68	16.84	50.80	29.36	35.23	60.76	87.80	50.98	95.42	38.85	34.57	46.86	69.16	86.59	143.63	220.55	281.53	418.50
Cambodia	Lower-middle	4.94	6.79	8.79	10.18	12.15	13.24	24.24	23.91	36.55	35.52	44.33	51.31	50.51	63.69	55.85	70.69	77.26	85.19	93.43	111.19	124.23	123.88	143.87	140.82	166.15
China	Upper-middle	33,621.11	37,424.80	43,775.33	45,192.17	53,284.78	70,675.54	75,171.18	87,849.66	120,946.86	165,403.81	192,392.77	213,167.91	247,545.45	285,495.89	308,768.95	323,135.69	328,127.24	356,356.43	385,178.30	405,811.76	436,078.81	468,045.33	531,109.87	610,458.55	669,744.30
India	Lower-middle	18,904.78	19,348.50	19,717.89	20,837.67	21,408.98	22,532.95	24,313.44	26,819.84	28,779.55	32,885.07	38,130.93	42,576.20	48,135.46	53,556.94	60,555.03	71,809.31	77,746.24	82,779.36	91,336.65	97,787.68	107,193.04	112,504.97	127,527.46	129,549.92	149,212.62

Table SPBS-2

## S&amp;E articles in all S&amp;E fields, fractional count, by region, country, or economy: 1996–2020

(Number)

Region, country, or economy	Income level	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Indonesia	Upper-middle	304.04	317.04	327.98	335.51	398.08	330.10	386.00	376.32	449.91	578.19	711.40	644.00	738.96	1,063.84	1,404.72	1,880.34	2,042.72	2,751.39	3,043.58	4,380.25	6,734.17	12,432.41	21,263.52	30,446.15	32,553.79
Japan	High	88,807.36	91,890.26	92,245.79	94,194.57	96,607.21	96,102.98	98,144.51	100,494.81	103,153.97	111,835.95	113,061.46	108,877.11	107,263.61	108,810.96	108,533.79	110,349.36	108,729.18	107,888.80	104,434.12	101,064.80	101,385.80	100,971.06	101,933.57	101,039.83	101,014.27
Kazakhstan	Upper-middle	229.71	166.55	211.91	163.63	192.97	204.41	230.31	255.34	239.49	249.15	230.93	225.01	237.87	272.18	317.01	368.18	439.46	625.14	885.78	1,109.20	1,447.46	1,709.31	2,020.81	2,404.79	2,970.60
Kyrgyzstan	Lower-middle	26.37	25.89	31.64	30.98	28.88	30.72	29.46	21.70	33.97	44.83	52.37	38.24	49.32	32.54	34.82	48.58	51.95	60.04	52.16	50.49	104.86	111.51	126.98	166.02	193.64
Laos	Lower-middle	4.43	4.06	8.15	6.17	8.57	7.01	12.29	17.72	37.96	24.14	41.42	28.22	34.68	41.96	40.50	49.51	62.81	71.86	56.61	71.37	88.92	77.83	87.87	89.30	89.36
Malaysia	Upper-middle	800.64	887.13	921.20	993.41	1,327.34	1,170.75	1,484.43	1,759.80	2,065.65	2,502.17	3,216.27	3,764.02	5,842.35	7,840.99	10,847.21	13,559.29	14,283.43	15,166.24	16,338.89	17,971.81	18,605.51	19,654.17	19,611.66	21,280.39	21,884.84
Maldives	Upper-middle	7.08	1.00	2.14	2.00	0.50	5.08	1.00	2.42	1.67	3.71	4.63	4.83	0.92	2.95	3.26	7.40	8.08	7.04	5.87	7.08	6.80	7.06	7.25	9.72	23.42
Mongolia	Lower-middle	20.58	17.64	22.14	21.37	26.82	26.94	27.45	38.34	35.14	39.99	53.23	112.66	95.32	98.08	89.87	101.33	127.24	162.96	115.13	99.09	115.86	146.13	146.69	186.61	209.71
Nepal	Lower-middle	55.62	65.65	85.87	85.08	100.36	114.36	121.98	232.79	225.60	297.24	362.99	389.93	353.36	383.90	381.26	392.74	398.46	457.37	500.32	532.27	607.67	677.47	827.87	1,003.82	1,464.10
North Korea	Low	1.15	1.38	1.20	0.56	1.60	0.17	1.33	1.33	1.89	4.31	2.18	6.40	9.96	6.74	8.31	7.52	17.88	9.23	17.23	38.91	42.31	56.77	89.90	146.09	176.64
Pakistan	Lower-middle	727.91	801.83	954.57	989.48	1,036.55	1,233.34	1,350.92	1,457.76	1,718.19	2,345.55	2,787.39	3,310.28	4,055.52	4,815.90	5,449.63	6,065.69	6,441.91	7,094.02	7,257.34	8,115.73	9,250.87	10,985.15	12,061.58	14,627.74	17,038.18
Papua New Guinea	Lower-middle	86.16	73.82	73.97	69.88	64.24	76.27	51.99	54.18	42.64	37.11	48.87	60.65	60.00	41.18	50.73	41.10	62.17	53.22	63.60	57.02	58.44	61.03	62.96	76.17	59.61
Philippines	Lower-middle	264.21	298.25	302.08	281.43	345.72	304.03	407.82	374.02	385.09	451.82	443.74	487.38	543.80	593.86	672.48	872.00	814.38	910.28	1,004.35	1,340.01	1,644.81	1,938.59	2,105.76	3,457.15	3,071.81
Singapore	High	2,440.02	3,168.89	3,211.31	4,040.11	4,812.54	4,917.06	5,494.59	6,134.13	7,460.22	8,026.66	8,337.40	8,128.59	8,657.21	8,950.62	9,878.21	10,144.48	10,726.75	10,946.21	11,163.71	11,366.41	11,796.30	11,951.76	11,768.55	11,678.08	12,221.19
South Korea	High	8,866.52	11,237.92	12,158.34	14,682.76	15,875.05	18,435.81	20,023.41	23,666.41	27,597.05	31,957.31	37,079.26	41,212.59	43,771.58	45,865.76	50,224.21	53,441.41	56,031.50	57,348.43	60,042.57	62,506.07	62,559.51	63,701.87	66,408.77	68,934.36	72,490.44
Sri Lanka	Lower-middle	167.89	212.17	199.01	208.12	209.36	215.68	245.50	263.19	264.94	335.10	387.51	425.62	510.61	480.68	483.08	545.68	606.52	722.62	676.42	740.94	1,116.44	1,136.75	1,344.09	1,600.97	1,779.47
Taiwan	High	9,772.65	10,791.32	11,194.09	11,567.64	12,273.72	13,779.25	14,620.02	16,006.32	18,938.27	22,572.88	25,527.93	27,782.18	29,544.01	31,753.74	33,324.18	34,940.22	33,791.00	33,386.73	32,377.75	29,962.62	28,575.62	27,162.30	26,425.50	27,428.42	28,153.10
Tajikistan	Low	57.66	43.94	33.31	51.54	34.22	33.09	42.62	32.72	40.65	33.19	30.33	32.13	32.79	23.55	41.34	40.86	47.19	63.34	37.48	58.96	49.13	56.90	58.53	84.25	111.68
Thailand	Upper-middle	848.00	995.07	1,179.17	1,306.66	1,667.73	1,791.16	2,144.38	2,332.50	2,744.93	3,612.98	4,419.72	4,717.46	5,457.17	6,010.38	6,751.11	7,223.06	7,553.29	7,545.89	8,125.58	8,509.88	9,542.97	10,924.71	12,604.82	13,467.89	13,963.09
Timor-Leste	Lower-middle	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.67	1.00	2.03	3.87	3.29	1.28	2.63	1.10	3.06	6.00	6.29	11.84	9.07	8.56	14.24	15.79	14.09	11.87
Turkmenistan	Upper-middle	10.30	7.58	5.67	1.77	5.90	5.60	5.61	3.95	4.50	3.18	3.84	4.87	1.58	4.01	6.88	12.23	12.67	6.85	18.89	6.20	2.98	7.93	3.94	2.72	5.50
Uzbekistan	Lower-middle	380.02	417.37	372.05	348.26	363.31	423.13	372.27	319.67	373.04	351.61	316.62	325.42	303.83	341.02	391.01	380.43	327.97	351.35	335.27	294.17	375.62	338.15	347.73	760.01	1,375.29
Vietnam	Lower-middle	178.40	202.34	169.51	199.92	202.08	241.05	234.14	298.21	332.95	401.73	456.02	505.73	772.48	881.38	1,088.83	1,202.29	1,556.26	1,855.67	1,916.75	2,176.37	2,978.33	3,184.06	4,088.91	5,812.63	8,213.16
Australia and Oceania		24,579.23	25,800.18	26,137.51	26,619.46	27,875.31	28,444.62	28,932.88	30,203.49	32,835.76	37,152.84	39,754.20	42,119.71	43,878.06	45,469.91	48,657.22	52,707.02	54,093.18	58,245.91	60,232.73	61,285.02	62,627.26	62,571.99	63,962.80	65,918.66	70,130.09
Australia	High	20,800.25	21,727.72	21,981.46	22,207.00	23,495.94	23,969.95	24,502.31	25,655.32	27,836.59	31,638.87	33,906.33	35,919.95	37,411.04	38,773.68	41,661.36	45,001.84	46,312.47	50,402.05	52,195.34	53,365.90	54,348.39	54,340.32	55,556.27	57,258.26	60,890.77
Cook Islands	na	0.00	0.50	0.92	0.00	0.70	0.00	0.33	0.00	0.00	0.29	0.67	0.38	0.00	0.65	0.47	1.76	2.29	1.17	1.91	2.19	1.64	1.72	1.63	1.63	0.50
Fiji	Upper-middle	17.36	20.76	22.28	22.84	27.07	39.60	37.81	44.48	61.34	58.83	85.76	85.67	69.03	63.74	67.88	64.93	64.66	81.72	116.00	99.27	164.18	136.65	159.49	154.94	175.92
Kiribati	Lower-middle	0.17	0.33	0.00	0.00	0.00	0.50	0.00	0.11	0.00	0.00	0.36	2.12	0.00	0.33	0.33	0.00	1.00	1.05	1.94	1.48	2.17	2.54	0.62	3.13	3.69
Marshall Islands	Upper-middle	0.75	2.46	0.70	1.00	2.13	2.08	1.00	3.83	0.83	4.83	3.78	1.54	0.56	1.72	3.00	1.48	1.49	1.33	1.19	3.59	1.39	0.72	2.51	3.02	1.58
Micronesia, Federated States of	Lower-middle	2.08	1.00	5.27	2.92	4.29	1.08	0.00	2.26	2.40	7.96	2.00	7.69	4.31	4.04	14.38	4.94	4.63	4.85	3.33	6.75	3.81	6.58	4.37	2.32	7.57
Nauru	High	0.00	0.25	0.14	0.00	0.00	0.33	0.00	0.00	0.23	0.50	0.27	0.00	0.00	0.67	0.00	0.74	0.50	0.34	0.37	0.33	0.47	0.00	0.00	0.33	0.90
New Zealand	High	3,749.47	4,027.97	4,110.31	4,361.20	4,324.72	4,412.78	4,373.95	4,478.24	4,910.44	5,408.19	5,718.15	6,077.84	6,377.96	6,604.65	6,881.36	7,606.65	7,688.62	7,730.93	7,879.36	7,761.63	8,063.58	8,038.37	8,193.22	8,454.51	8,983.48
Niue	na	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.08	1.00	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.11	0.12	0.22	0.32	0.00
Palau	High	1.29	0.92	1.50	0.00	2.33	3.09	1.83	1.83	2.88	10.48	4.79	7.97	3.71	2.73	5.17	1.85	2.25	4.20	4.71	5.61	3.30	5.96	6.51	6.10	5.69
Samoa	Upper-middle	2.67	4.45	4.50	6.47	6.67	7.84	7.28	4.82	4.85	4.59	12.88	5.61	3.63	5.38	5.65	5.65	2.51	4.42	10.10	10.17	7.37	10.42	10.80	8.26	22.15
Solomon Islands	Lower-middle	3.83	8.89	8.03	9.71	5.31	2.44	1.04	3.86	2.64	3.06	6.59	4.57	2.86	3.78	9.27	7.30	4.37	4.01	8.02	13.51	14.96	10.75	14.31	13.18	15.80

Table SPBS-2

**S&E articles in all S&E fields, fractional count, by region, country, or economy: 1996–2020**

(Number)

Region, country, or economy	Income level	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Tonga	Upper-middle	0.00	1.23	1.25	1.33	2.33	0.75	1.83	1.59	3.13	0.68	4.66	1.76	0.46	2.39	1.28	1.95	1.83	1.63	0.81	2.88	2.34	6.73	5.82	2.62	9.24
Tuvalu	Upper-middle	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.60	0.61	0.00	1.27	0.37	0.33	0.25	0.00	0.00	0.04	0.33	1.13	1.09	0.41	0.65	0.48	0.12	0.39
Vanuatu	Lower-middle	1.37	3.69	1.15	6.99	3.82	3.17	5.48	6.53	9.81	13.48	5.68	2.61	4.15	5.89	7.08	7.94	6.51	7.85	8.33	10.63	13.13	10.47	6.45	9.90	12.43
Unassigned		9,390.38	7,921.61	8,100.88	10,229.03	7,548.65	5,980.26	5,807.24	11,599.29	8,936.15	9,918.68	9,966.86	11,133.87	10,888.05	8,371.63	10,883.92	10,689.60	9,713.23	6,597.61	3,673.25	2,867.29	4,240.69	5,038.40	4,962.18	7,893.86	11,645.23

na = not applicable; country data do not exist.

EU = European Union; UK = United Kingdom.

<sup>a</sup> The UK was a part of the EU for data purposes from 1973 to 2019.<sup>b</sup> Beginning in 2020, the UK was no longer a member of the EU.<sup>c</sup> Beginning in 2006, Serbia and Montenegro represented individual countries.<sup>d</sup> Serbia and Montenegro represented a single country for data purposes from 1992 to 2006.<sup>e</sup> West Bank and Gaza Strip are separate entities in this list but are grouped in the World Bank Lending Groups classification list. Here, the economic status of the group is applied to both individual regions.**Note(s):**

Article counts refer to publications from a selection of conference proceedings and peer-reviewed journals in S&E fields from Scopus. Articles are classified by their year of publication and are assigned to a region, country, or economy on the basis of the institutional address(es) of the author(s) listed in the article. Articles are credited on a fractional count basis (i.e., for articles produced by authors from different countries, each country receives fractional credit on the basis of the proportion of its participating authors). Data are not directly comparable to *Science and Engineering Indicators 2020*; see the Technical Appendix for information on data filters. The sum of the fractional count for regions, countries, and economies may not add to the world total because of rounding. Some publications have incomplete address information for coauthored publications in the Scopus database. The Unassigned category count is the sum of fractional counts for publications that cannot be assigned to a region, country, or economy. Income levels are based on the World Bank Atlas Method, World Bank Country and Lending Groups, for the 2021 fiscal year. For more information on the 2021 World Bank Country and Lending Groups classification of income groups, see <https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups>. Cook Islands, Holy See (Vatican City), Niue, and Unassigned are not part of the income grouping computation.

**Source(s):**

Science-Metrix; Elsevier, Scopus abstract and citation database, accessed May 2021; World Bank Country and Lending Groups, accessed March 2021.

*Science and Engineering Indicators*