

Table 19. Communications, information, and science and technology

Economy	Per 1,000 people						Internet hosts Per 10,000 people July 1997	Scientists and engineers in R&D Per million people 1981-95	High- technology exports % of mfg. exports 1996	No. of patent applications filed ^a 1995	
	Daily newspapers 1994	Radios 1996	Television sets 1996	Telephone main lines 1996	Mobile telephones 1996	Personal computers 1996				Residents	Nonresidents
Albania	54	179	173	19	1	..	0.32	..	..	..	1,564
Algeria	46	..	68	44	0	3.4	0.01	..	15	28	114
Angola	11	58	51	5	0	..	0.02	..	..	..	..
Argentina	138	..	347	174	16	24.6	5.32	350	17	..	..
Armenia	23	..	216	154	0	..	0.88	..	..	..	15,570
Australia	258	..	666	519	208	311.3	382.44	2,477	39	9,325	28,156
Austria	472	345	493	466	74	148.0	108.25	1,604	24	2,419	63,707
Azerbaijan	28	..	212	85	2	..	0.11	..	..	221	31
Bangladesh	6	48	7	3	0	..	0.00	..	..	70	156
Belarus	187	322	292	208	1	..	0.44	3,300	..	626	16,625
Belgium	321	..	464	465	47	167.3	84.64	1,814	..	1,464	52,187
Benin	2	1,461	73	6	0	..	0.02	177	..	..	..
Bolivia	69	..	202	47	4	..	0.69	250	41	17	106
Brazil	45	222	289	96	16	18.4	4.20	165	18	2,757	23,040
Bulgaria	..	350	361	313	3	295.2	6.65	4,240	..	370	16,953
Burkina Faso	0	32	6	3	0	..	0.04	..	..	..	..
Burundi	3	82	2	2	0	..	0.01	32	..	..	1
Cambodia	..	121	9	1	2	..	0.01	..	..	..	..
Cameroon	4	326	75	5	0	..	0.05	..	3	..	..
Canada	189	..	709	602	114	192.5	228.05	2,322	24	3,039	40,565
Central African Republic	1	93	5	3	0	..	0.02	55	0	..	..
Chad	0	620	2	1	..	..	0.00	..	..	..	..
Chile	100	..	280	156	23	45.1	13.12	364	18	181	1,535
China	23	161	252	45	6	3.0	0.21	537	21	10,066	31,707
Hong Kong, China	719	..	388	547	216	150.5	74.84	..	27	23	1,938
Colombia	64	..	188	118	13	23.3	1.81	39	21	141	1,093
Congo, Dem. Rep.	3	102	41	1	0	..	0.00	..	..	3	15
Congo, Rep.	8	318	8	8	..	..	0.02	461	12	..	..
Costa Rica	99	..	220	155	14	..	12.14	539	14	..	..
Côte d'Ivoire	7	..	60	9	1	1.4	0.17	..	..	..	..
Croatia	575	..	251	309	14	20.9	14.08	1,977	17	265	335
Czech Republic	219	..	406	273	19	53.2	47.66	1,285	14	628	19,382
Denmark	365	..	533	618	250	304.1	259.73	2,647	25	2,257	59,810
Dominican Republic	34	..	84	83	8	..	0.03	..	19	..	..
Ecuador	72	..	148	73	5	3.9	0.90	169	11	8	270
Egypt, Arab Rep.	64	..	126	50	0	5.8	0.31	458	9	..	..
El Salvador	50	..	250	56	3	..	0.34	19	17	3	64
Estonia	242	..	449	299	47	6.7	45.35	3,296	19	16	14,751
Ethiopia	2	206	4	3	..	..	0.00	..	..	..	..
Finland	473	1,386	605	549	292	182.1	653.61	3,675	23	2,533	20,192
France	237	..	598	564	42	150.7	49.86	2,537	31	16,140	73,626
Gabon	16	..	76	32	6	6.3	0.00	189	32	..	..
Georgia	..	..	474	105	0	..	0.55	..	..	288	15,660
Germany	317	..	493	538	71	233.2	106.68	3,016	25	51,948	84,667
Ghana	18	..	41	4	1	1.2	0.15	..	..	..	42
Greece	156	..	442	509	53	33.4	18.76	774	13	452	44,697
Guatemala	23	..	122	31	4	2.8	0.79	99	15	5	57
Guinea	..	100	8	2	0	0.3	0.00	264	..	..	..
Guinea-Bissau	6	40	..	7	..	..	0.09	..	..	..	..
Haiti	6	60	5	8	..	..	0.00	..	..	..	..
Honduras	44	108	80	31	0	..	0.94	..	3	7	40
Hungary	228	..	444	261	46	44.1	33.29	1,157	19	1,117	19,770
India	..	105	64	15	0	1.5	0.05	151	10	1,545	5,021
Indonesia	20	..	232	21	3	4.8	0.54	181	18	..	..
Ireland	170	..	469	395	82	145.0	90.89	1,871	62	927	44,660
Israel	281	..	303	446	184	117.6	104.79	4,826	30	1,266	3,159
Italy	105	..	436	440	112	92.3	36.91	1,303	15	1,625	63,330
Jamaica	66	792	326	142	22	4.6	1.36	8	67	7	54
Japan	576	..	700	489	214	128.0	75.80	5,677	39	335,061	53,896
Jordan	48	325	175	60	3	7.2	0.38	106	26	..	..
Kazakhstan	..	..	275	118	0	..	0.70	..	..	1,031	16,368
Kenya	13	..	19	8	0	1.6	0.16	..	..	..	28,728
Korea, Rep.	404	1,208	326	430	70	131.7	28.77	2,636	39	59,249	37,308
Kyrgyz Republic	11	..	238	75	..	..	0.23	..	24	119	15,599
Lao PDR	3	134	10	6	1	1.1	0.00	..	..	..	..
Latvia	228	..	598	298	11	7.9	21.03	1,165	16	210	16,140
Lebanon	172	..	355	149	65	24.3	2.72	67	..	..	..
Lesotho	7	77	13	9	1	..	0.08	..	..	8	2,608
Lithuania	136	583	376	268	14	6.5	7.46	1,278	23	106	15,882
Macedonia, FYR	21	..	170	170	0	..	2.15	1,258	..	100	3,084
Madagascar	4	214	24	3	0	..	0.03	22	3	21	15,802
Malawi	2	902	..	4	0	..	0.00	..	3	5	28,868
Malaysia	124	..	228	183	74	42.8	19.30	87	67	141	3,911
Mali	4	168	11	2	0	..	0.03	..	..	..	..
Mauritania	0	188	82	4	..	5.3	0.00	..	..	..	..

Note: For data comparability and coverage, see the Technical Notes. Figures in italics are for years other than those specified.

STATES AND MARKETS

Economy	Per 1,000 people						Internet hosts Per 10,000 people July 1997	Scientists and engineers in R&D Per million people 1981-95	High- technology exports % of mfg. exports 1996	No. of patent applications filed ^a 1995	
	Daily newspapers 1994	Radios 1996	Television sets 1996	Telephone main lines 1996	Mobile telephones 1996	Personal computers 1996				Residents	Nonresidents
	Mauritius	68	..	219	162	18				31.9	1.84	361	1	3	4
Mexico	113	..	193	95	11	29.0	3.72	95	32	436	23,233
Moldova	24	216	307	140	0	2.6	0.39	..	9	271	15,606
Mongolia	88	78	63	39	0	..	0.07	..	2	130	15,847
Morocco	13	..	145	45	2	1.7	0.32	..	24	89	292
Mozambique	5	46	3	3	..	0.8	0.02	..	5	..	..
Namibia	102	..	29	54	4	12.7	2.16	..	..	..	..
Nepal	8	57	4	5	..	..	0.07	22	0	3	5
Netherlands	334	..	495	543	52	232.0	219.01	2,656	42	4,460	59,279
New Zealand	297	..	517	499	138	266.1	424.34	1,778	11	1,418	19,230
Nicaragua	30	..	170	26	1	..	1.60	214	40	..	35
Niger	1	61	23	2	..	..	0.04	..	..	..	..
Nigeria	18	..	55	4	0	4.1	0.00	15	..	..	..
Norway	607	..	569	555	287	273.0	474.63	3,434	24	1,278	20,398
Oman	30	394	591	86	6	10.9	0.00	..	8	..	..
Pakistan	21	..	24	18	0	1.2	0.07	54	3	21	678
Panama	62	..	229	122	..	..	1.44	..	..	16	62
Papua New Guinea	15	..	4	11	1	..	0.18	..	..	..	..
Paraguay	42	..	144	36	7	..	0.47	..	4	..	..
Peru	86	..	142	60	8	5.9	2.63	273	11	..	..
Philippines	65	168	125	25	13	9.3	0.59	90	62	..	..
Poland	141	533	418	169	6	36.2	11.22	1,083	11	2,598	19,491
Portugal	41	..	367	375	67	60.5	18.26	599	12	96	58,605
Romania	297	..	226	140	1	5.3	2.66	1,382	7	1,811	16,856
Russian Federation	267	341	386	175	2	23.7	5.51	4,358	..	17,611	23,746
Rwanda	0	76	..	3	..	..	0.01	12	..	..	..
Saudi Arabia	54	..	263	106	10	37.2	0.15	..	..	28	718
Senegal	6	..	38	11	0	7.2	0.31	342	55	..	..
Sierra Leone	2	..	17	4	..	..	0.00	..	..	..	5
Singapore	364	..	361	513	141	216.8	196.30	2,512	71	10	11,871
Slovak Republic	256	953	384	232	5	186.1	20.47	1,922	16	273	17,659
Slovenia	185	..	375	333	20	47.8	85.66	2,998	16	318	16,267
South Africa	33	179	123	100	22	37.7	30.67	..	..	5,549	5,501
Spain	104	1,273	509	392	33	94.2	31.00	1,098	17	2,329	68,922
Sri Lanka	25	195	82	14	4	3.3	0.33	173	3	76	15,944
Sweden	483	..	476	682	282	214.9	321.48	3,714	31	6,396	64,165
Switzerland	409	..	493	640	93	408.5	207.98	..	..	5,116	64,626
Syrian Arab Republic	18	..	91	82	..	1.4	0.00	..	..	43	12
Tajikistan	13	196	279	42	0	..	0.00	..	..	33	15,598
Tanzania	8	398	16	3	0	..	0.02	..	..	..	..
Thailand	48	204	167	70	28	16.7	2.11	173	36	..	..
Togo	2	381	14	6	..	..	0.01	..	..	..	..
Trinidad and Tobago	135	..	318	168	11	19.2	3.24	240	33	24	15,515
Tunisia	46	176	156	64	1	6.7	0.02	388	10	31	115
Turkey	44	..	309	224	13	13.8	3.60	209	8	206	1,506
Turkmenistan	..	..	163	74	..	..	0.00	..	..	..	8,420
Uganda	2	123	26	2	0	0.5	0.01	..	..	..	20,840
Ukraine	118	..	341	181	1	5.6	2.09	6,761	..	4,806	17,548
United Arab Emirates	161	..	276	302	79	65.5	7.66	..	..	..	..
United Kingdom	351	..	612	528	122	192.6	149.06	2,417	40	25,355	90,399
United States	228	..	806	640	165	362.4	442.11	3,732	44	127,476	107,964
Uruguay	237	..	305	209	25	22.0	3.18	..	10	..	..
Uzbekistan	7	..	190	76	0	..	0.06	1,760	..	1,039	15,873
Venezuela	215	..	180	117	35	21.1	2.06	208	14	..	..
Vietnam	8	..	180	16	1	3.3	0.00	334	..	23	16,959
Yemen, Rep.	17	45	278	13	1	..	0.00	..	0	..	..
Zambia	8	130	80	9	0	..	0.27	..	..	4	90
Zimbabwe	18	..	29	15	..	6.7	0.24	..	5	56	177
World	98 w	.. w	211 w	133 w	28 w	50.0 w	34.75 w				
Low income	12	..	47	11	0	..	0.06	..	..	..	..
Middle income	62	..	252	78	8	12.1	2.38	..	..	..	..
Lower middle income	54	186	246	62	5	8.2	0.87	..	..	..	..
Upper middle income	96	..	255	140	19	27.7	8.44	..	..	..	..
Low & middle income	49	163	177	52	5	8.7	1.53	..	..	..	..
East Asia & Pacific	28	160	228	41	7	4.5	0.57	..	..	..	..
Europe & Central Asia	171	..	353	185	5	17.1	6.53	..	..	..	..
Latin America & Carib.	83	..	217	102	14	23.2	3.48	..	..	..	..
Middle East & N. Africa	38	..	145	65	3	17.5	0.23	..	..	..	..
South Asia	..	119	53	14	0	1.5	0.06	..	..	..	..
Sub-Saharan Africa	11	..	43	14	..	..	2.03	..	..	..	..
High income	303	..	611	540	131	224.0	203.46	..	..	..	..

a. Other patent applications filed in 1995 include those with the African Intellectual Property Organization (27 by residents, 15,819 by nonresidents), the African Regional Industrial Property Organization (4 by residents, 15,032 by nonresidents), and the European Patent Office (35,390 by residents, 42,869 by nonresidents). Information provided by WIPO. The International Bureau of WIPO assumes no liability or responsibility with regard to the transformation of these data for this table.