Overlapping inequalities

References

CURRENT SITUATION (latest available data)
- Better situation
- Above average
- Below average
- Worse situation
- Insufficient data

EVOLUTION (since 1990 or closest available year)
- Significant progress
- Slight progress
- Stagnant
- Slight regression
- Significant regression

Complete table at: **www.socialwatch.org/statistics2007**

Summary: CURRENT SITUATION (colour) EVOLUTION (arrow-icon)	**COUNTRIES** (BCI value, 0-100)	**INTERNET USERS** (per 1,000 people)	**PERSONAL COMPUTERS** (per 1,000 people)	**TELEPHONE MAINLINES** (per 1,000 people)	**SCIENTISTS AND ENGINEERS IN RESEARCH AND DEVELOPMENT** (per million people)	**INFORMATION AND COMMUNICATION TECHNOLOGY EXPENDITURE** (% of GDP)	**RESEARCH AND DEVELOPMENT EXPENDITURE** (% of GDP)
—	Afghanistan (—)	1 →		3 =			
→	Albania (95)	60 →	12 →	88 →			
→	Algeria (95)	58 →	11 →	78 →		2.4 =	
—	American Samoa (—)			182			
→	Angola (—)	11 →	2 →	6 =			
—	Antigua and Barbuda (—)	350 →		467 →			
→	Argentina (94)	177 →	83 →	227 →	720 →	7.1 →	0.4 =
→	Armenia (96)	53 →	66 →	192 →			0.3 =
→	Australia (99)	698 →	683 →	564 →	3759 →	6.2 =	1.7 =
→	Austria (99+)	486 →	607 →	450 →	2968 →	5.5 =	2.3 =
→	Azerbaijan (91)	81 →	23	130 →			0.3 =
—	Bahamas (—)	319 →		439 →			
→	Bahrain (99)	213 →	169 →	270 →			
→	Bangladesh (57)	3 →	12 →	8 →		2.4 =	0.6 =
→	Barbados (99)	594 →	148 →	500 →			
→	Belarus (97)	347 →		336 →			0.6 =
→	Belgium (99+)	458 →	348 →	461 →	3065 →	5.8 =	1.9 =
→	Belize (91)	130 →	132 →	114 →			
→	Benin (73)	50 →	4 →	9 →			
→	Bermuda (—)	664 →	543 →	895 →			
→	Bhutan (69)	39 →	20 →	51 →			
→	Bolivia (80)	52 →	23 →	70 →	120 →	5.5 →	0.3 =
—	Bosnia and Herzegovina (—)	206 →		248 →			
→	Botswana (91)	34 →	45 →	75 →			
→	Brazil (89)	195 →	105 →	230 →	344	7.8 →	1 =
→	Brunei Darussalam (97)	277 →	85 →	224 →	274		0
=	Bulgaria (97)	206 →	59 →	321 →	1263 ←	3.8 =	0.5 =
→	Burkina Faso (71)	5 →	2 =	7 →			
→	Burundi (56)	5 →	5 →	4 =			
→	Cambodia (59)	3 →	3 →	3 =			
→	Cameroon (70)	15 →	10 →	6 =		5 →	
→	Canada (99)	520 →	700 →	566 →	3597 →	5.9 =	1.9 =
→	Cape Verde (92)	49 →	97 →	141 →	127 →		
→	Central African Republic (—)	3 →	3 →	2 =			
=	Chad (43)	4 →	2 =	1 =			
→	Chile (99)	172 →	141 →	211 →	444 →	6.1 =	0.6 =
→	China (93)	85 →	41 →	269 →	708 →	5.3 →	1.4 →
→	Colombia (89)	104 →	42 →	168 →	109 →	8.5 =	0.2 =
→	Comoros (72)	33 →	9 →	28 →			
=	Congo, Rep. (80)	13 →	4 →	4 ←	30 ←		
→	Costa Rica (96)	254 →	219 →	321 →		7.7 →	0.4 =
→	Cote d'Ivoire (77)	11 →	15 →	14 →			
→	Croatia (97)	327 →	190 →	425 →	1296 →		1.1 =
→	Cuba (99)	17 →	34 →	75 →			0.6 =

Summary: CURRENT SITUATION (colour) EVOLUTION (arrow-icon)	COUNTRIES (BCI value, 0-100)	INTERNET USERS (per 1,000 people)	PERSONAL COMPUTERS (per 1,000 people)	TELEPHONE MAINLINES (per 1,000 people)	SCIENTISTS AND ENGINEERS IN RESEARCH AND DEVELOPMENT (per million people)	INFORMATION AND COMMUNICATION TECHNOLOGY EXPENDITURE (% of GDP)	RESEARCH AND DEVELOPMENT EXPENDITURE (% of GDP)
→	Cyprus (99+)	430 →	337 →	554 →	630 →		0.4 =
→	Czech Republic (99)	270 →	240 →	314 →	1594 →	7.1 =	1.3 =
→	Denmark (99+)	527 →	656 →	619 →	5016 →	6 =	2.6 →
→	Djibouti (78)	13 →	24 →	14 →			
→	Dominica (94)	361 →	182 →	293 →			
—	Dominican Republic (85)	169 →		101 →			
=	Ecuador (81)	47 →	39 →	129 →	50 ←	3.2 =	0.1 =
→	Egypt (90)	68 →	38 →	140 →		1.5 =	0.2 =
→	El Salvador (80)	93 →	51 →	141 →	47 →		
→	Equatorial Guinea (59)	14 →	14 →	20 →			
→	Eritrea (67)	16 →	8 →	9 →			
→	Estonia (99)	513 →	483 →	328 →	2523 →		0.9 =
→	Ethiopia (50)	2 →	3 →	9 →			
—	Faeroe Islands (—)	646 →		419			
→	Fiji (99)	77 →	52 →	122 →			
→	Finland (99+)	534 →	481 →	404 ←	7832 →	6.9 ←	3.5 →
→	France (99+)	430 →	575 →	586 →	3213 →	6.3 =	2.2 =
→	French Polynesia (—)	214 →	109 →	208 →			
→	Gabon (82)	48 →	33 →	28 →			
→	Gambia (70)	33 →	16 →	29 →			
→	Georgia (95)	39 →	43 →	151 →			0.3 =
→	Germany (99+)	455 →	545 →	667 →	3261 →	6.1 =	2.5 =
→	Ghana (66)	18 →	5 →	15 →			
→	Greece (99+)	180 →	89 →	568 →	1413 →	4.1 =	0.6 =
—	Greenland (—)	668 →		448 →			
→	Grenada (92)	182 →	151 →	309 →			
—	Guam (—)	383 →		506 →			
→	Guatemala (72)	79 →	19 →	99 →			
→	Guinea (68)	5 →	5 →	3 =			
—	Guinea-Bissau (—)	20 →		7 =			
→	Guyana (81)	213 →	39 →	147 →			
—	Haiti (—)	70 →		17 →			
→	Honduras (76)	36 →	16 →	69 →		4.6 =	0 =
→	Hong Kong (—)	508 →	601 →	546 →	1564 →	8.9 →	0.6 =
→	Hungary (97)	297 →	146 →	333 →	1472 →	5.8 ←	0.9 =
→	Iceland (99+)	869 →	479 →	653 →	6807 →		3 →
→	India (71)	55 →	16 →	45 →	119 * ←	5.8 →	0.8 =
→	Indonesia (85)	73 →	14 →	58 →	207	3.4 →	0.1
→	Iran (91)	103 →	109 →	278 →	1279 →	2.5 →	
—	Iraq (79)	1 →	8	37 =			
→	Ireland (99+)	276 →	494 →	489 →	2674 →	4.4 ←	1.2 =
→	Israel (99+)	470 →	740 →	424 →		8.3 =	4.5 →
→	Italy (99)	478 →	367 →	427 →	1213 ←	4.3 =	1.1 =
→	Jamaica (95)	404 →	63 →	129 →		10.6 =	0.1
→	Japan (99+)	668 →	542 →	460 →	5287 →	7.5 ←	3.1 =
→	Jordan (99)	118 →	56 →	119 →	1927 *	8.4 =	
=	Kazakhstan (95)	27 →		167 →	629 ←		0.2 =
→	Kenya (68)	32 →	9 →	8 =		2.8 =	
→	Kiribati (88)	20 →	10 →	47 →			
—	Korea, DR (—)			44 →			
→	Korea, Rep. (99)	684 →	545 →	492 →	3187 →	6.9 =	2.6 =
→	Kuwait (99)	276 →	237 →	201 →		1.4 =	0.2 =
→	Kyrgyzstan (96)	54 →	19 →	85 →			0.2 =
→	Lao, PDR (58)	4 →	17 →	13 →			
→	Latvia (99)	448 →	217 →	318 →	1434 →		0.4 =

Summary: CURRENT SITUATION (colour) EVOLUTION (arrow-icon)	COUNTRIES (BCI value, 0-100)	INTERNET USERS (per 1,000 people)	PERSONAL COMPUTERS (per 1,000 people)	TELEPHONE MAINLINES (per 1,000 people)	SCIENTISTS AND ENGINEERS IN RESEARCH AND DEVELOPMENT (per million people)	INFORMATION AND COMMUNICATION TECHNOLOGY EXPENDITURE (% of GDP)	RESEARCH AND DEVELOPMENT EXPENDITURE (% of GDP)
→	Lebanon (96)	196 →	115 →	277 →			
—	Lesotho (69)	24 →		27 →			0
—	Liberia (—)	0 =		2 =			
—	Libya (—)	36 →	24	133 →	361		
—	Liechtenstein (—)	633 →		574 ←			
→	Lithuania (97)	358 →	155 →	235 →	2136 →		0.8 =
→	Luxembourg (97)	690 →	635 →	535 →	4301 →		1.8 =
→	Macao (—)	369 →	295 →	379 →	41		
→	Macedonia, FYR (97)	79 →	222 →	262 →	504 ←		0.3 =
=	Madagascar (63)	5 →	5 →	4 =	15 =		0.1 =
→	Malawi (63)	4 →	2 =	8 →			
→	Malaysia (98)	435 →	197 →	172 →	299 →	7 =	0.7 =
→	Maldives (86)	59 →	112 →	98 →			
→	Mali (66)	4 →	3 →	6 →			
→	Malta (99+)	315 →	165 →	501 →	681 ←		0.3
→	Marshall Islands (94)	35 →	82 →	76 →			
→	Mauritania (75)	7 →	14 →	13 →			
→	Mauritius (99)	146 →	162 →	289 →			0.4 =
→	Mexico (94)	181 →	136 →	189 →	268 →	3.3 =	0.4 =
—	Micronesia (—)	127 →		113 →			
→	Moldova (96)	96 →	27 →	221 →			
—	Monaco (—)				41		
→	Mongolia (96)	105 →	133 →	61 →			0.3 =
→	Morroco (78)	153 →	25 →	44 →		6.3 →	0.6 =
→	Mozambique (61)	7 →	6 →	4 =			0.6
→	Myanmar (73)	2 →	8 →	9 →	17 =		0.1 =
→	Namibia (86)	37 →	110 →	64 →			
→	Nepal (55)	4 →	4 →	17 →	59		0.7
→	Netherlands (99+)	739 →	682 →	466 =	2482 →	6.3 =	1.8 =
—	Netherlands Antilles (—)	11 * →		461 →			
—	New Caledonia (—)	324 →		236 →			
→	New Zealand (99+)	672 →	474 →	422 ←	3945 →	9.8 ←	1.2 =
→	Nicaragua (74)	27 →	43 →	43 →			0 =
=	Niger (55)	2 →	1 =	2 =			
→	Nigeria (63)	38 →	7 →	9 →		3.5 =	
→	Norway (99+)	735 →	573 →	460 ←	4587 →	5.1 ←	1.7 =
→	Oman (97)	111 →	47 →	103 →			
→	Pakistan (60)	67 →	4 →	34 →		6.9 =	0.2 =
=	Panama (91)	64 →	46 →	136 →	97 ←	8.4 ←	0.3 =
→	Papua New Guinea (73)	23 →	64 →	11 →			
→	Paraguay (85)	34 →	78 →	54 →	79		0.1
→	Peru (86)	165 →	100 →	80 →		6.6 =	0.1 =
→	Philippines (77)	54 →	45 →	41 →	48 ←	7 →	0.1
→	Poland (99+)	262 →	193 →	309 →	1581 →	4.2 =	0.6 =
→	Portugal (99+)	279 →	134 →	401 →	1949 →	4.4 =	0.8 =
—	Puerto Rico (—)	221 →		285 →			
→	Qatar (97)	269 →	171 →	253 →			
→	Romania (96)	208 →	113 →	203 →	976 ←	3.6 =	0.4 =
=	Russian Federation (97)	152 →	122 →	280 →	3319 ←	3.6 =	1.2 =
—	Rwanda (51)	6 →		3 =			
→	Samoa (97)	32 →	7 →	73 →			
—	San Marino (—)	536	857	741			
—	Sao Tomé and Principe (78)	131 →		46 →			
→	Saudi Arabia (95)	70 →	376 →	164 →		2.3 =	
→	Senegal (72)	46 →	21 →	23 →		8.3 →	

Summary: CURRENT SITUATION (colour) EVOLUTION (arrow-icon)	COUNTRIES (BCI value, 0-100)	INTERNET USERS (per 1,000 people)	PERSONAL COMPUTERS (per 1,000 people)	TELEPHONE MAINLINES (per 1,000 people)	SCIENTISTS AND ENGINEERS IN RESEARCH AND DEVELOPMENT (per million people)	INFORMATION AND COMMUNICATION TECHNOLOGY EXPENDITURE (% of GDP)	RESEARCH AND DEVELOPMENT EXPENDITURE (% of GDP)
→	Seychelles (—)	249 →	189 →	253 →	19		0.1
—	Sierra Leone (—)	2 →		5 =			
→	Singapore (—)	571 →	621 →	425 →	4999 →	9.4 =	2.3 →
→	Slovakia (—)	464 →	358 →	222 →	1984 →	5.6 =	0.5 =
→	Slovenia (99)	545 →	404 →	408 →	2543 →	3.1 →	1.6 =
→	Solomon Islands (—)	8 →	46 →	16 =			
→	Somalia (—)	11 →	6 →	12 →			
→	South Africa (87)	109 →	85 →	101 →	307 ←	9.9 →	0.8
→	Spain (99+)	348 →	277 →	422 →	2195 →	3.7 =	1.1 =
→	Sri Lanka (—)	14 →	27 →	63 →	128 ←	5.5 →	0.1 =
→	St. Kitts and Nevis (99)	214 →	234 →	532 →			
→	St. Lucia (96)	339 →	160 →	321 →			0.4
→	St. Vincent and Grenadines (95)	84 →	135 →	189 →			0.2
→	Sudan (81)	77 →	90 →	18 →			0.3 =
—	Suriname (85)	71 →	46	180 →			
→	Swaziland (77)	32 →	32 →	31 →			
→	Sweden (99+)	764 →	763 →	717 →	5416 →	7.4 =	3.7 =
→	Switzerland (99+)	498 →	865 →	689 →	3601 →	7.5 =	2.6 =
→	Syrian Arab Republic (87)	58 →	42 →	152 →			
—	Tajikistan (86)	1 =		39 ←			
→	Tanzania (70)	9 →	7 →	4 =			
→	Thailand (—)	110 →	58 →	110 →	287 →	4.1 →	0.3 =
→	Togo (70)	49 →	30 →	10 →			
→	Tonga (94)	29 →	49 →	111 →			
→	Trinidad and Tobago (98)	123 →	79 →	248 →			0.1 =
→	Tunisia (95)	95 →	57 →	125 →	1013 →	5.8 →	0.6 =
→	Turkey (92)	222 →	52 →	263 →	341 →	7.9 =	0.7 =
—	Turkmenistan (—)	8 →		80 →			
→	Uganda (63)	17 →	9 →	3 =			0.8 =
→	Ukraine (97)	97 →	38 →	256 →		8 =	1.2 =
→	United Arab Emirates (98)	308 →	197 →	273 →		3.6 =	
→	United Kingdom (99)	474 →	600 →	528 →	2706 * →	7.3 ←	1.9 =
→	United States of America (99)	630 →	762 →	606 →	4605 →	8.8 ←	2.7 =
→	Uruguay (95)	193 →	125 →	290 →	366 →	7.9 →	0.3 =
—	Uzbekistan (—)	34 →		67 =			
→	Vanuatu (85)	38 →	15 →	33 →			
→	Venezuela (94)	125 →	82 →	136 →		3.9 =	0.3 =
→	Viet Nam (90)	129 →	13 →	191 →	115 ←	15.1 →	0.2
→	Yemen (64)	9 →	15 →	39 →			
→	Zambia (75)	20 →	10 →	8 =	51 * =		

Notes: (*) Data refers to years or periods other than those specified in the indicator definition.
Figure 0 means a value under 0.5.

Source: World Development Indicators 2006, World Bank (www.worldbank.org).

For more detailed information on the reference years of the data see complete tables at: www.socialwatch.org/statistics2007

DEFINITION OF INDICATORS:

Internet users (per 1,000 people): People with access to the internet, per 1,000 people.
Last available data: 2001-2004; evolution since 1990.

Personal computers (per 1,000 people): Personal computers are self-contained computers designed to be used by a single individual, per 1,000 people.
Last available data: 2001-2005; evolution since 1990.

Telephone mainlines (per 1,000 people): Telephone lines connecting a customer's equipment to the public switched telephone network. Data are presented per 1,000 people for the entire country.
Last available data: 2001-2005; evolution since 1990.

Scientists and engineers in research and development (per million people): People trained to work in any field of science who are engaged in professional R&D (research and development) activity, per million people. Most such jobs require completion of tertiary education.
Last available data: 2004; evolution since 1996.

Information and communication technology expenditure (% of GDP): Includes external spending on information technology ('tangible' spending on information technology products purchased by businesses, households, governments, and education institutions from vendors or organizations outside the purchasing entity), internal spending on information technology ('intangible' spending on internally customized software, capital depreciation, and the like), and spending on telecommunications and other office equipment. Expressed as percentage of gross domestic product (GDP).
Last available data: 2005; evolution since 2000.

Research and development expenditure (% of GDP): Expenditures for research and development are current and capital expenditures (both public and private) on creative work undertaken systematically to increase knowledge, including knowledge of humanity, culture, and society, and the use of knowledge for new applications. R&D covers basic research, applied research, and experimental development.
Last available data: 2000-2005; evolution since 1996.

Overlapping inequalities

The expression 'to close the digital gap' sums up various objectives related to inequalities in access to information, science and technology in the world. The accelerated revolution resulting from new technologies and the growing importance of data management have brought the term 'information society' into our lives.

But this process has generated new inequities which are intertwined with the old. In order to understand inequality and implement policies to reduce it in the modern world, it is essential to have a grasp of how much access countries have to information and how far they participate in scientific and technical progress.

It is possible to take an optimistic view of how things have developed in recent years, and point out, for example, that between 2000 and 2007 internet connectivity in Africa increased by more than 600%. But it is impossible to ignore the gaps between different regions of the world: 7 out of 10 people in North America have access to the internet but in Africa the rate is only 1 in 30.[1]

As was pointed out in *Global Information Society Watch 2007*, "increase in access to ICTs (Information and communication technologies) will not, by itself, reduce poverty or secure freedoms on a sustainable basis. But there is a real danger that lack of access to ICTs, and to the spaces where decisions are made about information and communications infrastructure, content and services, can deepen existing social exclusion and create new forms of exclusion."[2] Therefore it is essential for countries and communities to be able to access and autonomously utilize the new productive and cultural systems that scientific and technical progress have made available.

In 2005, the international community adopted the Tunis Commitment, which reaffirmed its will "to build a people-centred, inclusive and development-oriented Information Society, premised on the purposes and principles of the Charter of the United Nations, international law and multilateralism, and respecting fully and upholding the Universal Declaration of Human Rights, so that people everywhere can create, access, utilize and share information and knowledge, to achieve their full potential."[3] It is important to note that, as this declaration suggests, these processes are closely linked to human rights and to the problems of poverty and gender inequity.

A comparison of the countries in the better situation with those in the worse situation sheds light on the vast gaps that exist, especially in access to personal computers, telephone mainlines and the internet. There are almost 20 times more personal computers per capita in the group of countries in a better relative situation, and the gaps in telephone mainlines and opportunities for internet access are similarly enormous.

The indicators of public expenditure on education are more worrying still, and the same applies to investment in research and development. The inequities in these areas are so vast that they compromise the possibility of closing these gaps in the future since investment is a necessary condition for improvement in scientific and technological development and the possibility to join the information society. Investment in research and development is nearly eight times greater in the countries in the better situation than in those in the worse situation (2.3% and 0.3% of GDP, respectively).

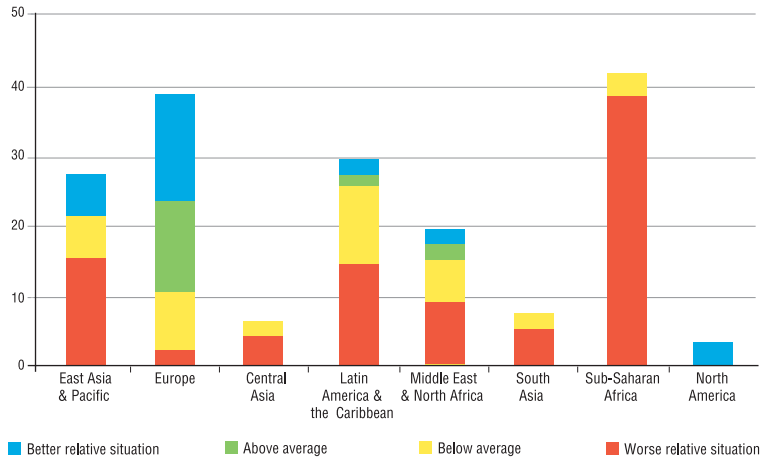
An analysis of the current situation by region shows the gap very clearly indeed. Nearly all the countries in South Asia and Sub-Saharan Africa are in the worse situation. In Europe a good proportion of the countries are in the better relative situation but there are still some quite marked contrasts.

An analysis of recent evolution in this field shows that almost all countries have made progress. This is good news, but it does not necessarily mean that the science and technology gap between the two ends of the spectrum has narrowed, since the relative distance between the two groups may not have changed even though all countries have moved forward. In nine countries evolution in this area is stagnant, which amounts to a slow approach to the global information society. This has happened in Europe (Bulgaria) and also in Africa (Chad, Madagascar, Niger, the Republic of the Congo), in Central Asia (Kazakhstan and the Russian Federation) and in Latin America (Ecuador and Panama). ■

Averages by indicator of countries in better and worse relative situations in information, science and technology

		Internet users (per 1,000 people)	Personal computers (per 1,000 people)	Telephone mainlines (per 1,000 people)	Scientists and engineers in R& D (per million people)	Information and communication technology expenditure (% of GDP)	R & D expenditure (% of GDP)
Worse relative situation	Average	40	30	57	141	6	0.3
	Number of countries	88	86	88	21	23	34
Better relative situation	Average	573	577	545	3,952	7	2.3
	Number of countries	27	27	27	22	19	23
Total	Average	191	162	205	1,719	6	1.0
	Number of countries	170	167	170	76	74	96

Current situation in information, science and technology by region (number of countries)



Current situation and evolution in information, science and technology (number of countries)

	←	←	=	→	→	Total
Countries in worse situation	0	0	7	72	5	84
Countries below average	0	0	2	22	14	38
Countries above average	0	0	0	9	8	17
Countries in better situation	0	0	0	13	13	26
Total	0	0	9	116	40	165

1 < www.internetworldstats.com>.

2 Esterhuysen, A. and Bissio, R. (2007). "Preface" in *Global Information Society Watch 2007. Focus on Participation.* Montevideo: APC / ITeM. Available from: <www.globaliswatch.org/en/preface2007>.

3 World Summit on the Information Society (2005). "Tunis Commitment". Document WSIS-05/TUNIS/DOC/7-E, 18 November 2005. Available from: <www.itu.int/wsis/docs2/tunis/off/7.html>.