



|                          | Daily newspapers | Households with television <sup>b</sup> | Personal computers and the Internet |                             |   |   |   |                         |  | Information and communications technology trade |                                  |   |
|--------------------------|------------------|---|-------------------------------------|-----------------------------|---|---|---|-------------------------|--|---|----------------------------------|---|
|                          |                  |   | Access and use                      |                             | Quality   |   | Affordability                                       | Application             |  | Exports % of total goods exports                | Imports % of total goods imports | Services Exports % of total service exports |
|                          |                  |   |                                     |                             | Fixed broadband Internet subscribers <sup>b</sup> | International Internet bandwidth <sup>b</sup> | Fixed broadband Internet access tariff <sup>b</sup> | Secure Internet servers | Information and communications technology expenditures |   |                                  |   |
|                          |                  |   | per 100 people                      | per 100 people              | bits per second per capita                        | per million people                            | % of GDP  |                         |  |   |                                  |   |
|                          |                  |   | Personal computers <sup>b</sup>     | Internet users <sup>b</sup> |   |   |   |                         |  |   |                                  |   |
|                          |                  |   | per 1,000 people                    | %                           | 2007  | 2007  | 2007  | 2007                    | 2008   | December 2008                                   | 2007                             | 2007  |
| 2000–07 <sup>a</sup>     | 2006             | 2007                                    | 2007                                | 2007                        | 2007  | 2008  | December 2008                                       | 2007                    | 2007   | 2007  |                                  |   |
| Afghanistan              | ..               | 62                                      | ..                                  | ..                          | ..  | ..  | ..  | ..                      | ..   | ..  | ..                               | ..  |
| Albania                  | 24               | 90                                      | 3.8                                 | 14.9                        | 0.31  | 216   | 31  | 5                       | ..   | 1.0   | 3.5                              | 3.6   |
| Algeria                  | ..               | 91                                      | 1.1                                 | 10.3                        | 0.85  | 89  | 17  | 1                       | 2.5  | 0.0   | 6.9                              | ..  |
| Angola                   | 2                | 9                                       | 0.7                                 | 2.9                         | 0.07  | 17  | 164   | 1                       | ..   | ..  | ..                               | ..  |
| Argentina                | 36               | 95                                      | 9.0                                 | 25.9                        | 6.58  | 2,320   | 38  | 18                      | 6.0  | 0.6   | 13.1                             | 7.9   |
| Armenia                  | 8                | 91                                      | 31.9                                | 5.7                         | 0.07  | ..  | 39  | 5                       | ..   | 0.6   | 5.8                              | 14.6  |
| Australia                | 155              | 99 <sup>c</sup>                         | ..                                  | 68.1                        | 22.98   | 5,472   | 28  | 993                     | 6.6  | 1.8   | 12.8                             | 4.6   |
| Austria                  | 311              | 98                                      | 60.7                                | 67.4                        | 19.51   | 20,288  | 61  | 481                     | 5.6  | 6.3   | 8.2                              | 6.3   |
| Azerbaijan               | 16               | 99                                      | 2.4                                 | 10.8                        | 0.07  | 701   | 85  | 2                       | ..   | 0.1   | 6.1                              | 3.1   |
| Bangladesh               | ..               | 48                                      | 2.2                                 | 0.3                         | 0.00  | 4   | 54  | 0                       | 8.0  | ..  | ..                               | 5.7   |
| Belarus                  | 81               | 97                                      | 0.8                                 | 29.0                        | 0.12  | 264   | ..  | 2                       | ..   | 0.8   | 3.0                              | 6.8   |
| Belgium                  | 165              | 99                                      | 41.7                                | 65.9                        | 25.55   | 24,945  | 31  | 251                     | 5.8  | 3.7   | 4.8                              | 8.7   |
| Benin                    | 0                | 13                                      | 0.7                                 | 1.7                         | 0.02  | 17  | 105   | 0                       | ..   | 0.0   | 3.3                              | 5.4   |
| Bolivia                  | ..               | 63                                      | 2.4                                 | 10.5                        | 0.36  | 42  | 34  | 4                       | 5.8  | 0.1   | 4.9                              | 12.5  |
| Bosnia and Herzegovina   | ..               | 96                                      | 6.4                                 | 28.0                        | 2.24  | 530   | 15  | 7                       | ..   | 0.5   | 3.8                              | ..  |
| Botswana                 | 41               | 9                                       | 4.8                                 | 5.3                         | 0.19  | 43  | 30  | 2                       | ..   | 0.2   | 5.5                              | 6.8   |
| Brazil                   | 36               | 91                                      | 16.1                                | 35.2                        | 3.54  | 1,041   | 47  | 24                      | 5.8  | 3.2   | 14.5                             | 1.8   |
| Bulgaria                 | 79               | 92                                      | 8.9                                 | 30.9                        | 8.21  | 4,909   | 16  | 26                      | 7.7  | 1.8   | 6.0                              | 4.4   |
| Burkina Faso             | ..               | 12                                      | 0.6                                 | 0.6                         | 0.01  | 15  | 1,861   | 0                       | ..   | ..  | ..                               | ..  |
| Burundi                  | ..               | 15                                      | 0.8                                 | 0.7                         | 0.00  | 1   | ..  | 0                       | ..   | 0.5   | 2.5                              | 0.0   |
| Cambodia                 | ..               | 43                                      | 0.4                                 | 0.5                         | 0.06  | 17  | 91  | 1                       | ..   | ..  | ..                               | 3.1   |
| Cameroon                 | ..               | 25                                      | 1.1                                 | 2.0                         | 0.00  | 11  | 184   | 0                       | 5.0  | 0.0   | 3.2                              | 13.0  |
| Canada                   | 175              | 99                                      | 94.3                                | 72.8                        | 27.52   | 16,193  | 20  | 907                     | 6.4  | 4.7   | 10.1                             | 11.1  |
| Central African Republic | ..               | 5                                       | 0.3                                 | 0.3                         | 0.00  | 0   | 1,396   | 0                       | ..   | ..  | ..                               | ..  |
| Chad                     | ..               | 4                                       | 0.2                                 | 0.6                         | 0.00  | 1   | ..  | ..                      | ..   | ..  | ..                               | ..  |
| Chile                    | 51               | 97                                      | 14.1                                | 31.1                        | 7.90  | 4,086   | 53  | 35                      | 4.2  | 0.1   | 9.0                              | 2.7   |
| China                    | 74               | 89                                      | 5.7                                 | 16.1                        | 5.04  | 280   | 19  | 1                       | 7.9  | 30.9  | 28.6                             | 4.5   |
| Hong Kong, China         | 222              | 100                                     | 68.6                                | 57.2                        | 27.42   | 15,892  | 25  | 287                     | 4.7  | 42.1  | 41.8                             | 1.6   |
| Colombia                 | 23               | 84                                      | 8.0                                 | 27.5                        | 2.74  | 971   | 36  | 11                      | 4.4  | 0.3   | 13.3                             | 7.9   |
| Congo, Dem. Rep.         | ..               | 4                                       | 0.0                                 | 0.4                         | 0.00  | 0   | ..  | 0                       | ..   | ..  | ..                               | ..  |
| Congo, Rep.              | ..               | 27                                      | 0.5                                 | 1.9                         | 0.00  | 0   | ..  | 0                       | ..   | ..  | ..                               | ..  |
| Costa Rica               | 65               | 94                                      | 23.1                                | 33.6                        | 2.83  | 820   | 17  | 99                      | 3.9  | 29.4  | 25.3                             | 16.4  |
| Côte d'Ivoire            | ..               | 35                                      | 1.7                                 | 1.6                         | 0.05  | 16  | 47  | 1                       | ..   | 0.4   | 4.2                              | 11.0  |
| Croatia                  | ..               | 94                                      | ..                                  | 44.7                        | 8.73  | 3,380   | 21  | 92                      | ..   | 5.3   | 7.5                              | 4.2   |
| Cuba                     | 65               | 70                                      | 3.6                                 | 11.6                        | 0.02  | 19  | 1,630   | 0                       | ..   | 1.9   | 2.9                              | ..  |
| Czech Republic           | 183              | 83                                      | 27.4                                | 48.3                        | 12.72   | 7,075   | 29  | 151                     | 7.1  | 14.2  | 15.0                             | 8.0   |
| Denmark                  | 353              | 96                                      | 54.9                                | 80.7                        | 35.87   | 34,506  | 30  | 1,041                   | 5.8  | 7.1   | 11.9                             | ..  |
| Dominican Republic       | 39               | 78                                      | 3.5                                 | 17.2                        | 1.58  | 154   | 28  | 13                      | ..   | ..  | ..                               | 3.7   |
| Ecuador                  | 99               | 87                                      | 13.0                                | 13.2                        | 2.39  | 324   | 40  | 10                      | 6.1  | 0.3   | 7.7                              | 6.2   |
| Egypt, Arab Rep.         | ..               | 96 <sup>c</sup>                         | 4.9                                 | 14.0                        | 0.63  | 143   | 8   | 1                       | 5.8  | ..  | ..                               | 4.2   |
| El Salvador              | 38               | 83                                      | 5.2                                 | 11.1                        | 1.31  | 18  | 18  | 10                      | ..   | 0.6   | 8.4                              | 9.6   |
| Eritrea                  | ..               | 18                                      | 0.8                                 | 2.5                         | 0.00  | 2   | ..  | ..                      | ..   | ..  | ..                               | ..  |
| Estonia                  | 191              | ..                                      | 52.2                                | 63.7                        | 20.70   | 11,925  | 39  | 280                     | ..   | 14.2  | 11.1                             | 6.1   |
| Ethiopia                 | 5                | 5                                       | 0.7                                 | 0.4                         | 0.00  | 3   | 644   | 0                       | ..   | 0.3   | 7.1                              | 6.3   |
| Finland                  | 431              | 87                                      | 50.0                                | 78.8                        | 30.57   | 17,221  | 38  | 686                     | 5.2  | 18.9  | 14.4                             | 8.4   |
| France                   | 164              | 97                                      | 65.2                                | 51.2                        | 25.20   | 29,466  | 38  | 172                     | 5.7  | 8.0   | 9.8                              | 4.1   |
| Gabon                    | ..               | 58                                      | 3.6                                 | 6.2                         | 0.15  | 150   | ..  | 4                       | ..   | 0.1   | 6.6                              | ..  |
| Gambia, The              | ..               | 12                                      | 3.3                                 | 5.9                         | 0.02  | 36  | 384   | 2                       | ..   | 0.2   | 4.6                              | ..  |
| Georgia                  | 4                | 89                                      | 5.4                                 | 8.2                         | 1.06  | 745   | 48  | 6                       | ..   | 0.4   | 7.1                              | 1.5   |
| Germany                  | 267              | 94                                      | 65.6                                | 72.3                        | 23.82   | 25,654  | 38  | 549                     | 6.2  | 9.6   | 12.3                             | 7.8   |
| Ghana                    | ..               | 26 <sup>c</sup>                         | 0.6                                 | 3.8                         | 0.07  | 21  | 64  | 1                       | ..   | 0.0   | 6.3                              | 0.0   |
| Greece                   | ..               | 100                                     | 9.4                                 | 32.9                        | 9.09  | 4,537   | 25  | 61                      | 5.4  | 3.3   | 6.0                              | 1.6   |
| Guatemala                | ..               | 50                                      | 2.1                                 | 10.1                        | 0.21  | 187   | 34  | 8                       | ..   | 0.5   | 9.1                              | 14.8  |
| Guinea                   | ..               | 10                                      | 0.5                                 | 0.5                         | 0.00  | 0   | 800   | 0                       | ..   | ..  | ..                               | ..  |
| Guinea-Bissau            | ..               | 31                                      | 0.2                                 | 2.2                         | 0.00  | 1   | ..  | ..                      | ..   | ..  | ..                               | ..  |
| Haiti                    | ..               | 27                                      | 5.2                                 | 10.4                        | 0.00  | 17  | ..  | 1                       | ..   | ..  | ..                               | 4.9   |

|                      | Daily newspapers | Households with television <sup>b</sup> | Personal computers and the Internet |      |   |  |  |  |   | Information and communications technology trade |                                  |   |
|----------------------|------------------|---|-------------------------------------|------|---|--|--|--|---|---|----------------------------------|---|
|                      |                  |   | Access and use                      |      | Quality   |  | Affordability  | Application                                |   | Exports % of total goods exports                | Imports % of total goods imports | Services Exports % of total service exports |
|                      |                  |   |                                     |      | Fixed broadband Internet subscribers <sup>b</sup> | International Internet bandwidth <sup>b</sup> bits per second per capita | Fixed broadband Internet access tariff <sup>b</sup> \$ per month | Secure Internet servers per million people | Information and communications technology expenditures % of GDP |   |                                  |   |
|                      |                  |   |                                     |      |   |  |  |  |   |   |                                  |   |
|                      |                  |   | per 1,000 people                    | %    | Personal computers <sup>b</sup>                   | Internet users <sup>b</sup>  |  |  |   |   |                                  |   |
| 2000–07 <sup>a</sup> | 2006             | 2007                                    | 2007                                | 2007 | 2007  | 2007   | 2008   | December 2008                              | 2007  | 2007  | 2007                             | 2007  |
| Honduras             | ..               | 61                                      | 2.0                                 | 6.0  | 0.00  | 244  | ..   | 6  | 11.2  | 0.3   | 6.9                              | 11.5  |
| Hungary              | 217              | 101                                     | 25.6                                | 51.9 | 14.21   | 4,773  | 25   | 83   | 5.9   | 26.1  | 19.9                             | 6.8   |
| India                | 71               | 53                                      | 3.3                                 | 7.2  | 0.28  | 32   | 6  | 1  | 5.6   | 1.3   | 8.3                              | 41.6  |
| Indonesia            | ..               | 65                                      | 2.0                                 | 5.8  | 0.11  | 53   | 22   | 1  | 3.9   | 5.3   | 5.4                              | 11.9  |
| Iran, Islamic Rep.   | ..               | ..                                      | 10.6                                | 32.4 | ..  | 153  | 43   | 0  | 3.5   | 0.1   | 1.9                              | ..  |
| Iraq                 | ..               | ..                                      | ..                                  | ..   | ..  | ..   | ..   | ..   | ..  | ..  | ..                               | 1.9   |
| Ireland              | 182              | 119                                     | 58.2                                | 56.1 | 18.46   | 15,229   | 38   | 679  | 5.9   | 22.4  | 24.1                             | 30.1  |
| Israel               | ..               | 92                                      | ..                                  | 27.9 | 21.29   | 2,003  | ..   | 273  | 6.5   | 10.9  | 11.4                             | 28.5  |
| Italy                | 137              | 98                                      | 36.7                                | 53.9 | 18.29   | 10,302   | 26   | 93   | 5.8   | 3.7   | 7.0                              | 3.5   |
| Jamaica              | ..               | 70                                      | 6.8                                 | 56.1 | 3.47  | 19,151   | 30   | 32   | 6.6   | 0.2   | 3.6                              | 6.8   |
| Japan                | 551              | 99 <sup>c</sup>                         | ..                                  | 69.0 | 22.14   | 3,734  | 32   | 472  | 7.2   | 19.3  | 13.7                             | 1.2   |
| Jordan               | ..               | 96                                      | 6.7                                 | 19.7 | 1.50  | 164  | 31   | 9  | 9.3   | 4.8   | 7.0                              | 0.0   |
| Kazakhstan           | ..               | ..                                      | ..                                  | 12.3 | 1.75  | 129  | ..   | 2  | ..  | 0.1   | 5.2                              | 2.5   |
| Kenya                | ..               | 32 <sup>c</sup>                         | 1.4                                 | 8.0  | 0.05  | 9  | 168  | 1  | 8.2   | 1.0   | 5.6                              | 4.1   |
| Korea, Dem. Rep.     | ..               | ..                                      | ..                                  | 0.0  | 0.00  | ..   | ..   | ..   | ..  | ..  | ..                               | ..  |
| Korea, Rep.          | ..               | 100                                     | 57.6                                | 75.9 | 30.36   | 1,027  | 20   | 696  | 7.1   | 27.2  | 16.5                             | 1.4   |
| Kuwait               | ..               | 95                                      | 23.7                                | 33.8 | 0.99  | 871  | 46   | 65   | 4.5   | ..  | ..                               | 48.4  |
| Kyrgyz Republic      | 1                | ..                                      | 1.9                                 | 14.3 | 0.06  | 114  | ..   | 1  | ..  | 0.8   | 5.1                              | 1.9   |
| Lao PDR              | 3                | 30                                      | 1.8                                 | 1.7  | 0.06  | 32   | 268  | 0  | ..  | ..  | ..                               | ..  |
| Latvia               | 154              | ..                                      | 32.7                                | 55.0 | 6.42  | 3,537  | 26   | 98   | ..  | 3.4   | 6.9                              | 4.9   |
| Lebanon              | 54               | 95                                      | 10.4                                | 38.3 | 4.88  | 227  | 23   | 13   | ..  | ..  | ..                               | 2.2   |
| Lesotho              | ..               | 13                                      | 0.3                                 | 3.5  | 0.00  | 2  | 49   | 0  | ..  | ..  | ..                               | ..  |
| Liberia              | ..               | ..                                      | ..                                  | 0.5  | ..  | ..   | ..   | ..   | ..  | ..  | ..                               | ..  |
| Libya                | ..               | 50                                      | 2.2                                 | 4.3  | 0.16  | 50   | ..   | 0  | ..  | ..  | ..                               | 2.5   |
| Lithuania            | 108              | 98                                      | 18.3                                | 49.2 | 15.04   | 4,656  | 16   | 83   | ..  | 4.8   | 6.4                              | 3.1   |
| Macedonia, FYR       | 89               | 98                                      | 36.8                                | 27.3 | 4.93  | 17   | 15   | 12   | ..  | 0.4   | 4.4                              | 14.1  |
| Madagascar           | ..               | 18                                      | 0.5                                 | 0.6  | 0.01  | 8  | 120  | 0  | ..  | 0.5   | 4.7                              | 0.5   |
| Malawi               | ..               | 5                                       | 0.2                                 | 1.0  | 0.01  | 5  | 900  | 0  | ..  | 0.4   | 3.8                              | ..  |
| Malaysia             | 109              | 95                                      | 23.1                                | 55.7 | 3.81  | 998  | 20   | 27   | 6.8   | 41.5  | 36.0                             | 4.9   |
| Mali                 | ..               | 15                                      | 0.8                                 | 0.8  | 0.03  | 17   | 58   | 1  | ..  | 0.2   | 4.2                              | ..  |
| Mauritania           | ..               | 25                                      | 4.6                                 | 1.0  | 0.13  | 70   | 62   | 2  | ..  | ..  | 2.1                              | ..  |
| Mauritius            | 77               | 96 <sup>c</sup>                         | 17.6                                | 27.0 | 4.88  | 226  | 51   | 60   | ..  | 4.7   | 6.1                              | 2.8   |
| Mexico               | 93               | 98                                      | 14.4                                | 22.7 | 4.32  | 178  | 37   | 16   | 4.0   | 19.6  | 14.9                             | 2.3   |
| Moldova              | ..               | 74                                      | 11.1                                | 18.4 | 1.24  | 931  | 23   | 7  | ..  | 2.6   | 4.3                              | 15.4  |
| Mongolia             | 20               | 33                                      | 13.9                                | 12.3 | 0.28  | 116  | ..   | 9  | ..  | 0.1   | 5.9                              | 3.7   |
| Morocco              | 12               | 78                                      | 3.6                                 | 21.4 | 1.55  | 814  | 20   | 1  | 8.3   | 5.7   | 6.7                              | 3.3   |
| Mozambique           | 3                | 9                                       | 1.4                                 | 0.9  | 0.00  | 3  | 100  | 0  | ..  | 0.1   | 5.1                              | 5.0   |
| Myanmar              | ..               | 3                                       | 0.9                                 | 0.1  | 0.00  | 2  | ..   | 0  | ..  | ..  | ..                               | ..  |
| Namibia              | 28               | 41                                      | 24.0                                | 4.9  | 0.01  | 27   | 46   | 9  | ..  | 0.5   | 7.3                              | 2.7   |
| Nepal                | ..               | 13                                      | 0.5                                 | 1.4  | 0.04  | 5  | 23   | 1  | ..  | ..  | ..                               | ..  |
| Netherlands          | 307              | 99                                      | 91.2                                | 84.2 | 33.62   | 78,159   | 38   | 1,108                                      | 6.6   | 18.9  | 19.8                             | 11.0  |
| New Zealand          | 182              | 99                                      | 52.6                                | 69.2 | 20.17   | 4,544  | 31   | 980  | 5.7   | 2.3   | 9.7                              | 5.4   |
| Nicaragua            | ..               | 60                                      | 4.0                                 | 2.8  | 0.34  | 144  | 30   | 7  | ..  | 0.2   | 7.3                              | 8.2   |
| Niger                | 0                | 7                                       | 0.1                                 | 0.3  | 0.00  | 2  | 58   | 0  | ..  | 0.4   | 4.4                              | 32.8  |
| Nigeria              | ..               | 26                                      | 0.8                                 | 6.8  | 0.00  | 5  | 690  | 1  | 3.4   | 0.0   | 6.9                              | ..  |
| Norway               | 516              | 97                                      | 62.9                                | 84.8 | 30.57   | 26,904   | 57   | 851  | 4.4   | 1.8   | 9.7                              | 4.2   |
| Oman                 | ..               | 79                                      | 7.1                                 | 13.1 | 0.78  | 142  | 31   | 12   | ..  | 0.8   | 3.8                              | ..  |
| Pakistan             | 50               | ..                                      | ..                                  | 10.8 | 0.03  | 44   | 18   | 1  | 5.6   | 0.5   | 7.2                              | 6.8   |
| Panama               | 65               | 87                                      | 4.6                                 | 22.3 | 4.31  | 15,977   | 15   | 87   | 5.9   | 0.0   | 6.7                              | 4.6   |
| Papua New Guinea     | 9                | 10                                      | 6.4                                 | 1.8  | 0.00  | 1  | 144  | 1  | ..  | ..  | ..                               | 2.2   |
| Paraguay             | ..               | 79                                      | 7.8                                 | 8.7  | 0.84  | 163  | 35   | 6  | ..  | 0.4   | 28.6                             | 2.2   |
| Peru                 | ..               | 73                                      | 10.3                                | 27.4 | 2.04  | 2,704  | 36   | 10   | 3.9   | 0.1   | 8.0                              | 2.6   |
| Philippines          | 79               | 63                                      | 7.3                                 | 6.0  | 0.56  | 114  | 23   | 5  | 5.7   | 29.1  | 20.6                             | 7.0   |
| Poland               | 114              | 89                                      | 16.9                                | 44.0 | 8.99  | 2,748  | 27   | 85   | 6.0   | 5.6   | 9.6                              | 4.0   |
| Portugal             | ..               | 99                                      | 17.2                                | 40.1 | 14.37   | 4,790  | 30   | 115  | 5.7   | 9.0   | 9.3                              | 4.8   |
| Puerto Rico          | ..               | 97                                      | 0.8                                 | 25.4 | 3.02  | 511  | ..   | 54   | ..  | ..  | ..                               | ..  |



|                         | Daily newspapers | Households with television <sup>b</sup> | Personal computers and the Internet |        |   |  |  |  |   | Information and communications technology trade |                                  |   |
|-------------------------|------------------|---|-------------------------------------|--------|---|--|--|--|---|---|----------------------------------|---|
|                         |                  |   | Access and use                      |        | Quality   |  | Affordability  | Application                                |   | Exports % of total goods exports                | Imports % of total goods imports | Services Exports % of total service exports |
|                         |                  |   |                                     |        | Fixed broadband Internet subscribers <sup>b</sup> | International Internet bandwidth <sup>b</sup> bits per second per capita | Fixed broadband Internet access tariff <sup>b</sup> \$ per month | Secure Internet servers per million people | Information and communications technology expenditures % of GDP |   |                                  |   |
|                         |                  |   |                                     |        |   |  |  |  |   |   |                                  |   |
|                         |                  |   | per 1,000 people                    | %      | Personal computers <sup>b</sup>                   | Internet users <sup>b</sup>  | per 100 people   | per 100 people                             | per 100 people  |   |                                  |   |
| 2000–07 <sup>a</sup>    | 2006             | 2007                                    | 2007                                | 2007   | 2007  | 2007   | 2008   | December 2008                              | 2007  | 2007  | 2007                             | 2007  |
| Romania                 | 70               | 90                                      | 19.2                                | 23.9   | 9.05  | 2,945  | 23   | 16   | 5.3   | 3.1   | 7.6                              | 16.3  |
| Russian Federation      | 92               | 98                                      | 13.3                                | 21.1   | 2.81  | 573  | 14   | 7  | 4.1   | 0.5   | 10.1                             | 6.0   |
| Rwanda                  | ..               | 2                                       | 0.3                                 | 1.1    | 0.03  | 16   | 92   | 0  | ..  | 0.8   | 8.0                              | 1.9   |
| Saudi Arabia            | ..               | 99                                      | 14.8                                | 26.4   | 2.58  | 510  | 40   | 8  | 4.7   | 0.3   | 7.8                              | ..  |
| Senegal                 | 9                | 41                                      | 2.1                                 | 6.6    | 0.31  | 137  | 29   | 1  | 10.9  | 0.5   | 4.0                              | 18.0  |
| Serbia                  | ..               | 80                                      | 24.4                                | 20.3   | 4.41  | 2,861  | 9  | 2  | ..  | ..  | ..                               | ..  |
| Sierra Leone            | ..               | ..                                      | ..                                  | 0.2    | ..  | ..   | ..   | 1  | ..  | ..  | ..                               | 0.2   |
| Singapore               | 361              | 98                                      | 74.3                                | 65.7   | 19.51   | 22,783   | 22   | 390  | 6.5   | 45.6  | 38.3                             | 3.1   |
| Slovak Republic         | 126              | 78                                      | 51.4                                | 55.9   | 8.75  | 5,555  | 28   | 58   | 6.0   | 13.2  | 10.3                             | 6.6   |
| Slovenia                | 173              | 97                                      | 42.5                                | 52.6   | 17.09   | 6,720  | 27   | 171  | 4.7   | 3.0   | 5.3                              | 5.2   |
| Somalia                 | ..               | 8                                       | 0.9                                 | 1.1    | 0.00  | 0  | ..   | 0  | ..  | ..  | ..                               | ..  |
| South Africa            | 30               | 59                                      | 8.5                                 | 8.3    | 0.79  | 71   | 26   | 37   | 9.7   | 1.8   | 11.3                             | 3.9   |
| Spain                   | 144              | 96                                      | 39.3                                | 51.3   | 17.98   | 11,008   | 29   | 171  | 5.5   | 4.0   | 7.9                              | 5.4   |
| Sri Lanka               | 26               | 32                                      | 3.7                                 | 3.9    | 0.32  | 118  | 21   | 3  | 6.0   | 1.7   | 4.9                              | 10.6  |
| Sudan                   | ..               | 16                                      | 11.2                                | 9.1    | 0.11  | 345  | 29   | 0  | ..  | 0.0   | 7.5                              | 5.4   |
| Swaziland               | 24               | 18                                      | 3.7                                 | 3.7    | 0.00  | 1  | 1,877  | 5  | ..  | 0.0   | 3.8                              | 1.4   |
| Sweden                  | 481              | 94                                      | 88.1                                | 79.7   | 35.85   | 49,828   | 32   | 775  | 6.4   | 11.2  | 12.2                             | 13.1  |
| Switzerland             | 420              | 86                                      | 91.8                                | 76.3   | 31.52   | 29,417   | 32   | 982  | 8.0   | 3.7   | 7.4                              | ..  |
| Syrian Arab Republic    | ..               | 105                                     | 9.0                                 | 17.4   | 0.03  | 53   | 51   | 0  | ..  | 0.1   | 2.5                              | 5.8   |
| Tajikistan              | ..               | 79                                      | 1.3                                 | 7.2    | 0.00  | 0  | ..   | ..   | ..  | ..  | ..                               | 12.6  |
| Tanzania                | 2                | 7 <sup>c</sup>                          | 0.9                                 | 1.0    | 0.00  | 3  | 68   | 0  | ..  | 0.4   | 6.2                              | 2.5   |
| Thailand                | ..               | 92                                      | 7.0                                 | 21.0   | 1.43  | 346  | 18   | 10   | 6.1   | 24.2  | 20.0                             | ..  |
| Timor-Leste             | ..               | ..                                      | ..                                  | 0.1    | 0.00  | 9  | ..   | ..   | ..  | ..  | ..                               | ..  |
| Togo                    | 2                | 14                                      | 3.0                                 | 5.0    | 0.00  | 4  | 106  | 1  | ..  | 0.1   | 4.2                              | 6.9   |
| Trinidad and Tobago     | 149              | 88                                      | 13.2                                | 16.0   | 2.66  | 675  | 13   | 46   | ..  | 0.2   | 5.9                              | ..  |
| Tunisia                 | 23               | 93                                      | 7.5                                 | 16.8   | 1.12  | 303  | 13   | 11   | 6.0   | 4.2   | 5.9                              | 1.2   |
| Turkey                  | ..               | 112                                     | 6.0                                 | 16.5   | 6.16  | 1,381  | ..   | 57   | 5.5   | 2.0   | 4.0                              | 1.8   |
| Turkmenistan            | 9                | ..                                      | 7.2                                 | 1.4    | ..  | 16   | ..   | ..   | ..  | ..  | ..                               | ..  |
| Uganda                  | ..               | 10                                      | 1.7                                 | 2.5    | 0.01  | 11   | 170  | 0  | ..  | 6.9   | 10.0                             | 7.6   |
| Ukraine                 | 131              | 97                                      | 4.5                                 | 21.5   | 1.72  | 206  | 21   | 4  | 7.1   | 1.5   | 3.3                              | 3.6   |
| United Arab Emirates    | ..               | 86                                      | 33.0                                | 51.8   | 8.70  | 2,785  | 22   | 126  | 5.1   | 4.3   | 8.6                              | ..  |
| United Kingdom          | 290              | 98                                      | 80.2                                | 71.7   | 25.58   | 39,650   | 29   | 908  | 6.7   | 20.5  | 13.6                             | 7.8   |
| United States           | 193              | 95                                      | 80.5                                | 73.5   | 24.27   | 11,277   | 15   | 1,174                                      | 7.5   | 16.3  | 14.6                             | 4.3   |
| Uruguay                 | ..               | 92                                      | 13.6                                | 29.1   | 4.96  | 903  | 24   | 43   | 6.0   | 0.1   | 6.5                              | 8.8   |
| Uzbekistan              | ..               | 99                                      | 3.1                                 | 4.5    | 0.03  | 9  | ..   | 0  | ..  | ..  | ..                               | ..  |
| Venezuela, RB           | 93               | 90                                      | 9.3                                 | 20.8   | 3.12  | 628  | 31   | 7  | 3.9   | 0.0   | 12.1                             | 11.1  |
| Vietnam                 | ..               | 89                                      | 9.6                                 | 21.0   | 1.52  | 148  | 17   | 1  | 6.1   | 5.1   | 7.6                              | ..  |
| West Bank and Gaza      | 10               | 93                                      | 5.6                                 | 9.6    | 1.50  | 324  | ..   | 1  | ..  | ..  | ..                               | ..  |
| Yemen, Rep.             | 4                | 43                                      | 2.8                                 | 1.4    | ..  | 28   | 226  | 0  | ..  | 0.1   | 3.7                              | 18.9  |
| Zambia                  | 5                | ..                                      | 1.1                                 | 4.2    | 0.02  | 3  | 91   | 0  | ..  | 0.1   | 5.1                              | 8.5   |
| Zimbabwe                | ..               | 32                                      | 6.5                                 | 10.1   | 0.11  | 4  | ..   | 1  | 3.5   | 0.3   | 2.0                              | ..  |
| World                   | 105 w            | 89 m                                    | 15.3 w                              | 21.8 w | 6.03 w  | 3,297 w  | 31.4 m   | 112 w                                      | 6.5 w   | 15.4 w  | 15.2 w                           | 6.7 w                                       |
| Low income              | ..               | 16                                      | 1.5                                 | 5.2    | 0.02  | 26   | 102.4  | 0  | ..  | 1.4   | 6.7                              | ..  |
| Middle income           | 71               | 89                                      | 5.6                                 | 15.2   | 2.72  | 389  | 28.0   | 7  | 5.9   | 16.9  | 18.0                             | 4.9   |
| Lower middle income     | 72               | 79                                      | 4.6                                 | 12.4   | 2.33  | 199  | 30.5   | 2  | 6.5   | 20.6  | 20.2                             | 5.0   |
| Upper middle income     | 65               | 92                                      | 12.4                                | 26.6   | 4.28  | 1,185  | 26.0   | 26   | 5.2   | 13.5  | 16.2                             | 4.8   |
| Low & middle income     | 66               | 63                                      | 5.3                                 | 13.1   | 2.35  | 318  | 36.3   | 5  | 5.9   | 16.1  | 17.5                             | 4.9   |
| East Asia & Pacific     | 74               | 53                                      | 5.6                                 | 14.6   | 3.70  | 247  | 21.7   | 2  | 7.3   | 30.9  | 28.1                             | 5.2   |
| Europe & Central Asia   | 109              | 96                                      | 10.8                                | 21.4   | 4.39  | 1,114  | 21.8   | 24   | 5.0   | 1.8   | 7.0                              | 5.0   |
| Latin America & Carib.  | 64               | 84                                      | 11.3                                | 26.9   | 3.64  | 1,126  | 34.0   | 18   | 4.9   | 11.4  | 15.9                             | 4.7   |
| Middle East & N. Africa | ..               | 94                                      | 6.3                                 | 17.1   | ..  | 186  | 23.0   | 1  | 4.5   | ..  | ..                               | ..  |
| South Asia              | 68               | 42                                      | 3.3                                 | 6.6    | 0.24  | 31   | 21.0   | 1  | 5.7   | 1.2   | 8.1                              | 39.0  |
| Sub-Saharan Africa      | ..               | 18                                      | 1.8                                 | 4.4    | 0.03  | 36   | 100.1  | 3  | ..  | 1.1   | 8.2                              | ..  |
| High income             | 261              | 98                                      | 67.4                                | 65.7   | 22.84   | 18,242   | 30.2   | 663  | 6.7   | 15.2  | 14.6                             | 7.0   |
| Euro area               | 201              | 97                                      | 55.5                                | 59.2   | 21.60   | 32,560   | 30.5   | 321  | 5.9   | 9.4   | 10.9                             | 8.2   |

a. Data are for the most recent year available. b. Data are from the International Telecommunication Union's (ITU) World Telecommunication Development Report database. Please cite the ITU for third-party use of these data. c. Data are for 2007.

## About the data

The digital and information revolution has changed the way the world learns, communicates, does business, and treats illnesses. New information and communications technologies (ICT) offer vast opportunities for progress in all walks of life in all countries—opportunities for economic growth, improved health, better service delivery, learning through distance education, and social and cultural advances.

The table presents indicators of the penetration of the information economy, quality, and secure Internet servers), and some of the economics of the information age.

Comparable statistics on access, use, quality, and affordability of ICT are needed to formulate growth-enabling policies for the sector and to monitor and evaluate the sector's impact on development. Although basic access data are available for many countries, in most developing countries little is known about who uses ICT; what they are used for (school, work, business, research, government); and how they affect people and businesses. The global Partnership on Measuring ICT for Development is helping to set standards, harmonize information and communications technology statistics, and build statistical capacity in developing countries. For more information see [www.itu.int/ITU-D/ict/partnership/](http://www.itu.int/ITU-D/ict/partnership/).

Data on daily newspapers in circulation are from United Nations Educational, Scientific, and Cultural Organization (UNESCO) Institute for Statistics surveys on circulation, online newspapers, journalists, community newspapers, and news agencies.

Estimates of households with television are derived from household surveys. Some countries report only the number of households with a color television set, and so the true number may be higher than reported.

Estimates of personal computers are from an annual International Telecommunication Union (ITU) questionnaire sent to member states, supplemented by other sources. Many governments lack the capacity to survey all places where personal computers are used (homes, schools, businesses, government offices, libraries, Internet cafes) so most estimates are derived from the number of personal computers sold each year. Annual shipment data can also be multiplied by an estimated average useful lifespan before replacement to approximate the number of personal computers. There is no precise method for determining replacement rates, but in general personal computers are replaced every three to five years.

Data on Internet users and related indicators are based on nationally reported data. Some countries derive these data from surveys, but since survey questions and definitions differ, the estimates may not be strictly comparable. Countries without surveys

generally derive their estimates by multiplying subscriber counts reported by Internet service providers by a multiplier. This method may undercount actual users, particularly in developing countries, where many commercial subscribers rent out computers connected to the Internet or prepaid cards are used to access the Internet.

Broadband refers to technologies that provide Internet speeds of at least 256 kilobits a second of upstream and downstream capacity and includes digital subscriber lines, cable modems, satellite broadband Internet, fiber-to-home Internet access, ethernet local access networks, and wireless area networks. Bandwidth refers to the range of frequencies available for signals. The higher the bandwidth, the more information that can be transmitted at one time. Reporting countries may have different definitions of broadband, so data are not strictly comparable.

The number of secure Internet servers, from the Netcraft Secure Server Survey, indicates how many companies conduct encrypted transactions over the Internet. The survey examines the use of encrypted transactions through extensive automated exploration, tallying the number of Web sites using a secure socket layer (SSL). Some countries, such as the Republic of Korea, use application layers to establish the encryption channel, which is SSL equivalent.

According to the World Information Technology and Services Alliance's (WITSA) *Digital Planet 2008*, the global marketplace for information and communications technologies was expected to be about \$3.4 trillion in 2007 and to rise to almost \$3.8 trillion in 2008. The data on information and communications technology expenditures cover the world's 75 largest buyers among countries and regions.

Information and communication technology goods exports and imports are defined by the Working Party on Indicators for the Information Society and are reported in the Organisation for Economic Co-operation and Development's *Guide to Measuring the Information Society*. Information and communication technology service exports data are based on the International Monetary Fund's (IMF) *Balance of Payments Statistics Yearbook* classification.

## Definitions

• **Daily newspapers** are newspapers issued at least four times a week that report mainly on events in the 24-hour period before going to press. The indicator is average circulation (or copies printed) per 1,000 people. • **Households with television** are the percentage of households with a television set. • **Personal computers** are self-contained computers designed for use by a single individual, including laptops and

notebooks and excluding terminals connected to mainframe and minicomputers intended primarily for shared use and devices such as smart phones and personal digital assistants. • **Internet users** are people with access to the worldwide network. • **Fixed broadband Internet subscribers** are the number of broadband subscribers with a digital subscriber line, cable modem, or other high-speed technology.

• **International Internet bandwidth** is the contracted capacity of international connections between countries for transmitting Internet traffic. • **Fixed broadband Internet access tariff** is the lowest sampled cost per 100 kilobits a second per month and are calculated from low- and high-speed monthly service charges. Monthly charges do not include installation fees or modem rentals. • **Secure Internet servers** are servers using encryption technology in Internet transactions. • **Information and communications technology expenditures** include computer hardware (computers, storage devices, printers, and other peripherals); computer software (operating systems, programming tools, utilities, applications, and internal software development); computer services (information technology consulting, computer and network systems integration, Web hosting, data processing services, and other services); and communications services (voice and data communications services) and wired and wireless communications equipment.

• **Information and communication technology goods exports and imports** include telecommunications, audio and video, computer and related equipment; electronic components; and other information and communication technology goods. Software is excluded. • **Information and communication technology service exports** include computer and communications services (telecommunications and postal and courier services) and information services (computer data and news-related service transactions).

## Data sources

Data on newspapers are compiled by the UNESCO Institute for Statistics. Data on personal computers and the Internet are from the ITU's World Telecommunication Development Report database. Data on secure Internet servers are from Netcraft ([www.netcraft.com/](http://www.netcraft.com/)) and official government sources. Data on information and communication technology goods trade are from the United Nations Statistics Division's Commodity Trade (Comtrade) database. Data on information and communication technology expenditures are from WITSA's *Digital Planet 2008* and Global Insight, Inc. Data on information and communication technology service exports are from the IMF's Balance of Payments Statistics database.