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IMD WORLD

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COMPETITIVENESS

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YEARBOOK

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**SAMPLE**

**2020**

Factor I: Economic Performance





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**STATISTICAL TABLES**  
FACTOR I:  
ECONOMIC PERFORMANCE

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#### Investment

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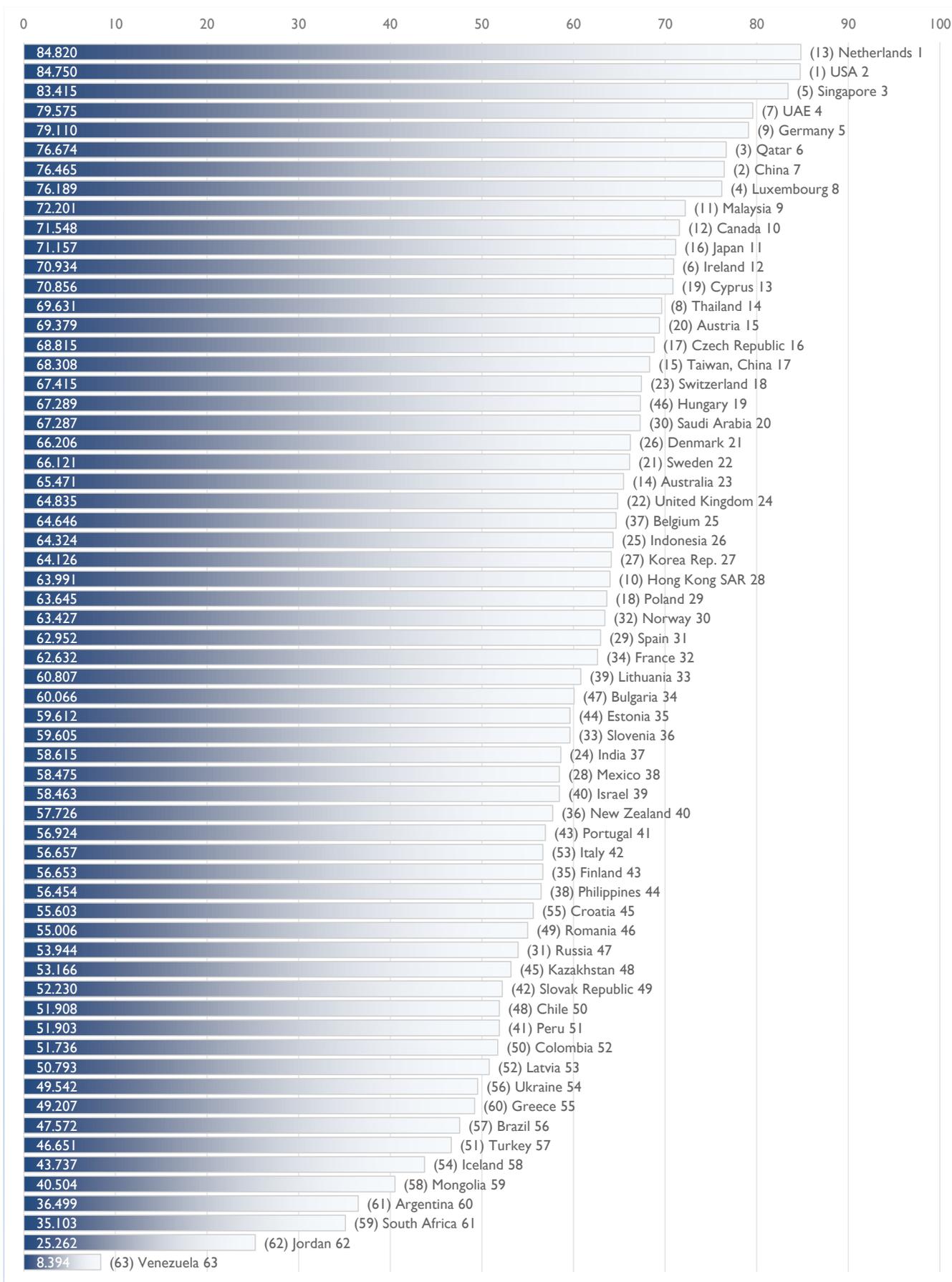
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## Economic Performance

### Macro-economic evaluation of the domestic economy



(2019 rankings are in parentheses)

## Exchange Rate

National currency per US\$ (average)

|                    | 2014      | 2015      | 2016      | 2017      | 2018      | 2019       |
|--------------------|-----------|-----------|-----------|-----------|-----------|------------|
| 1 ARGENTINA        | 8.075     | 9.233     | 14.758    | 16.563    | 28.095    | 48.148     |
| 2 AUSTRALIA        | 1.109     | 1.331     | 1.345     | 1.305     | 1.338     | 1.439      |
| 3 AUSTRIA          | 0.754     | 0.901     | 0.903     | 0.885     | 0.847     | 0.893      |
| 4 BELGIUM          | 0.754     | 0.901     | 0.903     | 0.885     | 0.847     | 0.893      |
| 5 BRAZIL           | 2.353     | 3.327     | 3.491     | 3.191     | 3.654     | 3.944      |
| 6 BULGARIA         | 1.474     | 1.764     | 1.768     | 1.735     | 1.657     | 1.747      |
| 7 CANADA           | 1.106     | 1.279     | 1.326     | 1.298     | 1.296     | 1.327      |
| 8 CHILE            | 570.348   | 654.124   | 676.958   | 648.834   | 641.277   | 702.897    |
| 9 CHINA            | 6.143     | 6.227     | 6.644     | 6.759     | 6.616     | 6.908      |
| 10 COLOMBIA        | 2.002     | 2.742     | 3.054     | 2.951     | 2.956     | 3.281      |
| 11 CROATIA         | 5.748     | 6.858     | 6.806     | 6.624     | 6.279     | 6.623      |
| 12 CYPRUS          | 0.754     | 0.901     | 0.903     | 0.885     | 0.847     | 0.893      |
| 13 CZECH REPUBLIC  | 20.758    | 24.599    | 24.440    | 23.376    | 21.730    | 22.932     |
| 14 DENMARK         | 5.612     | 6.728     | 6.732     | 6.603     | 6.315     | 6.669      |
| 15 ESTONIA         | 0.754     | 0.901     | 0.903     | 0.885     | 0.847     | 0.893      |
| 16 FINLAND         | 0.754     | 0.901     | 0.903     | 0.885     | 0.847     | 0.893      |
| 17 FRANCE          | 0.754     | 0.901     | 0.903     | 0.885     | 0.847     | 0.893      |
| 18 GERMANY         | 0.754     | 0.901     | 0.903     | 0.885     | 0.847     | 0.893      |
| 19 GREECE          | 0.754     | 0.901     | 0.903     | 0.885     | 0.847     | 0.893      |
| 20 HONG KONG SAR   | 7.754     | 7.752     | 7.762     | 7.793     | 7.839     | 7.836      |
| 21 HUNGARY         | 232.602   | 279.333   | 281.523   | 274.433   | 270.212   | 290.660    |
| 22 ICELAND         | 116.767   | 131.919   | 120.812   | 106.840   | 108.300   | 122.607    |
| 23 INDIA           | 61.030    | 64.152    | 67.195    | 65.122    | 68.389    | 70.420     |
| 24 INDONESIA       | 11.865    | 13.389    | 13.308    | 13.381    | 14.237    | 14.148     |
| 25 IRELAND         | 0.754     | 0.901     | 0.903     | 0.885     | 0.847     | 0.893      |
| 26 ISRAEL          | 3.578     | 3.887     | 3.841     | 3.600     | 3.591     | 3.565      |
| 27 ITALY           | 0.754     | 0.901     | 0.903     | 0.885     | 0.847     | 0.893      |
| 28 JAPAN           | 0.106     | 0.121     | 0.109     | 0.112     | 0.110     | 0.109      |
| 29 JORDAN          | 0.710     | 0.710     | 0.710     | 0.710     | 0.710     | 0.710      |
| 30 KAZAKHSTAN      | 179.192   | 221.728   | 342.160   | 326.001   | 344.706   | 382.747    |
| 31 KOREA REP.      | 1.053     | 1.131     | 1.160     | 1.130     | 1.101     | 1.165      |
| 32 LATVIA          | 0.754     | 0.901     | 0.903     | 0.885     | 0.847     | 0.893      |
| 33 LITHUANIA       | 2.600     | 0.901     | 0.903     | 0.885     | 0.847     | 0.893      |
| 34 LUXEMBOURG      | 0.754     | 0.901     | 0.903     | 0.885     | 0.847     | 0.893      |
| 35 MALAYSIA        | 3.273     | 3.906     | 4.148     | 4.300     | 4.035     | 4.142      |
| 36 MEXICO          | 13.292    | 15.848    | 18.664    | 18.927    | 19.244    | 19.264     |
| 37 MONGOLIA        | 1,817.939 | 1,970.309 | 2,140.291 | 2,439.777 | 2,472.484 | 2,663.541  |
| 38 NETHERLANDS     | 0.754     | 0.901     | 0.903     | 0.885     | 0.847     | 0.893      |
| 39 NEW ZEALAND     | 1.205     | 1.434     | 1.437     | 1.407     | 1.445     | 1.518      |
| 40 NORWAY          | 6.302     | 8.064     | 8.400     | 8.272     | 8.133     | 8.800      |
| 41 PERU            | 2.839     | 3.184     | 3.375     | 3.260     | 3.287     | 3.337      |
| 42 PHILIPPINES     | 44.395    | 45.503    | 47.492    | 50.404    | 52.661    | 51.796     |
| 43 POLAND          | 3.155     | 3.770     | 3.943     | 3.779     | 3.612     | 3.839      |
| 44 PORTUGAL        | 0.754     | 0.901     | 0.903     | 0.885     | 0.847     | 0.893      |
| 45 QATAR           | 3.640     | 3.640     | 3.640     | 3.640     | 3.640     | 3.640      |
| 46 ROMANIA         | 3.349     | 4.006     | 4.059     | 4.052     | 3.942     | 4.238      |
| 47 RUSSIA          | 38.378    | 60.938    | 67.056    | 58.343    | 62.668    | 64.738     |
| 48 SAUDI ARABIA    | 3.750     | 3.750     | 3.750     | 3.750     | 3.750     | 3.750      |
| 49 SINGAPORE       | 1.267     | 1.375     | 1.382     | 1.381     | 1.349     | 1.364      |
| 50 SLOVAK REPUBLIC | 0.754     | 0.901     | 0.903     | 0.885     | 0.847     | 0.893      |
| 51 SLOVENIA        | 0.754     | 0.901     | 0.903     | 0.885     | 0.847     | 0.893      |
| 52 SOUTH AFRICA    | 10.853    | 12.759    | 14.710    | 13.324    | 13.234    | 14.448     |
| 53 SPAIN           | 0.754     | 0.901     | 0.903     | 0.885     | 0.847     | 0.893      |
| 54 SWEDEN          | 6.861     | 8.435     | 8.562     | 8.549     | 8.693     | 9.458      |
| 55 SWITZERLAND     | 0.916     | 0.962     | 0.985     | 0.985     | 0.978     | 0.994      |
| 56 TAIWAN, CHINA   | 30.368    | 31.908    | 32.325    | 30.442    | 30.163    | 30.927     |
| 57 THAILAND        | 32.480    | 34.248    | 35.296    | 33.940    | 32.310    | 31.048     |
| 58 TURKEY          | 2.189     | 2.720     | 3.020     | 3.648     | 4.828     | 5.674      |
| 59 UAE             | 3.673     | 3.673     | 3.673     | 3.673     | 3.673     | 3.673      |
| 60 UKRAINE         | 11.887    | 21.845    | 25.551    | 26.597    | 27.200    | 25.846     |
| 61 UNITED KINGDOM  | 0.608     | 0.655     | 0.741     | 0.777     | 0.750     | 0.783      |
| 62 USA             | 1.000     | 1.000     | 1.000     | 1.000     | 1.000     | 1.000      |
| 63 VENEZUELA       | 14.079    | 23.166    | 98.179    | 1,396.619 | 346.694   | 45,336.100 |

## GROSS DOMESTIC PRODUCT

(GDP)

2019

US\$ billions

| Ranking |                 | US\$ billions |
|---------|-----------------|---------------|
| 1       | USA             | 21,427.7      |
| 2       | CHINA           | 14,342.9      |
| 3       | JAPAN           | 5,081.8       |
| 4       | GERMANY         | 3,846.2       |
| 5       | INDIA           | 2,894.7       |
| 6       | UNITED KINGDOM  | 2,827.1       |
| 7       | FRANCE          | 2,708.0       |
| 8       | ITALY           | 2,001.2       |
| 9       | BRAZIL          | 1,839.8       |
| 10      | CANADA          | 1,761.9       |
| 11      | RUSSIA          | 1,689.3       |
| 12      | KOREA REP.      | 1,642.4       |
| 13      | SPAIN           | 1,394.1       |
| 14      | AUSTRALIA       | 1,386.8       |
| 15      | MEXICO          | 1,258.3       |
| 16      | INDONESIA       | 1,119.2       |
| 17      | NETHERLANDS     | 880.5         |
| 18      | SAUDI ARABIA    | 793.0         |
| 19      | TURKEY          | 754.4         |
| 20      | SWITZERLAND     | 703.1         |
| 21      | TAIWAN, CHINA   | 611.1         |
| 22      | POLAND          | 589.9         |
| 23      | THAILAND        | 543.6         |
| 24      | SWEDEN          | 531.4         |
| 25      | BELGIUM         | 530.2         |
| 26      | ARGENTINA       | 449.7         |
| 27      | AUSTRIA         | 446.1         |
| 28      | UAE             | 421.1         |
| 29      | NORWAY          | 402.0         |
| 30      | ISRAEL          | 395.1         |
| 31      | IRELAND         | 388.7         |
| 32      | SINGAPORE       | 372.1         |
| 33      | HONG KONG SAR   | 366.0         |
| 34      | MALAYSIA        | 364.7         |
| 35      | PHILIPPINES     | 359.4         |
| 36      | SOUTH AFRICA    | 351.4         |
| 37      | DENMARK         | 348.1         |
| 38      | COLOMBIA        | 323.8         |
| 39      | CHILE           | 282.3         |
| 40      | FINLAND         | 268.8         |
| 41      | ROMANIA         | 248.7         |
| 42      | CZECH REPUBLIC  | 246.6         |
| 43      | PORTUGAL        | 237.6         |
| 44      | PERU            | 230.3         |
| 45      | GREECE          | 209.9         |
| 46      | NEW ZEALAND     | 204.9         |
| 47      | QATAR           | 183.5         |
| 48      | KAZAKHSTAN      | 179.3         |
| 49      | HUNGARY         | 161.0         |
| 50      | UKRAINE         | 153.8         |
| 51      | SLOVAK REPUBLIC | 107.6         |
| 52      | LUXEMBOURG      | 71.1          |
| 53      | VENEZUELA       | 70.1          |
| 54      | BULGARIA        | 67.9          |
| 55      | CROATIA         | 60.4          |
| 56      | LITHUANIA       | 54.1          |
| 57      | SLOVENIA        | 53.7          |
| 58      | JORDAN          | 43.8          |
| 59      | LATVIA          | 34.1          |
| 60      | ESTONIA         | 31.4          |
| 61      | CYPRUS          | 24.6          |
| 62      | ICELAND         | 24.2          |
| 63      | MONGOLIA        | 13.9          |

## GDP (PPP)

2019

Estimates ; US\$ billions at purchasing power parity

| Ranking |                 | US\$ billions |
|---------|-----------------|---------------|
| 1       | CHINA           | 27,307.0      |
| 2       | USA             | 21,427.7      |
| 3       | INDIA           | 11,043.2      |
| 4       | JAPAN           | 5,711.9       |
| 5       | GERMANY         | 4,443.6       |
| 6       | RUSSIA          | 4,390.0       |
| 7       | INDONESIA       | 3,735.6       |
| 8       | BRAZIL          | 3,480.6       |
| 9       | UNITED KINGDOM  | 3,162.4       |
| 10      | FRANCE          | 3,061.8       |
| 11      | MEXICO          | 2,616.3       |
| 12      | ITALY           | 2,454.8       |
| 13      | TURKEY          | 2,361.8       |
| 14      | KOREA REP.      | 2,320.5       |
| 15      | SPAIN           | 1,923.7       |
| 16      | CANADA          | 1,904.4       |
| 17      | SAUDI ARABIA    | 1,900.9       |
| 18      | THAILAND        | 1,377.5       |
| 19      | AUSTRALIA       | 1,362.1       |
| 20      | TAIWAN, CHINA   | 1,339.8       |
| 21      | POLAND          | 1,287.3       |
| 22      | MALAYSIA        | 1,076.4       |
| 23      | PHILIPPINES     | 1,027.2       |
| 24      | NETHERLANDS     | 1,005.3       |
| 25      | ARGENTINA       | 911.6         |
| 26      | SOUTH AFRICA    | 804.7         |
| 27      | COLOMBIA        | 785.8         |
| 28      | UAE             | 744.1         |
| 29      | SINGAPORE       | 593.8         |
| 30      | BELGIUM         | 572.9         |
| 31      | SWITZERLAND     | 566.2         |
| 32      | SWEDEN          | 564.8         |
| 33      | ROMANIA         | 549.2         |
| 34      | KAZAKHSTAN      | 541.0         |
| 35      | CHILE           | 495.2         |
| 36      | HONG KONG SAR   | 482.2         |
| 37      | AUSTRIA         | 476.8         |
| 38      | PERU            | 476.0         |
| 39      | IRELAND         | 417.9         |
| 40      | CZECH REPUBLIC  | 413.0         |
| 41      | UKRAINE         | 409.8         |
| 42      | NORWAY          | 407.4         |
| 43      | QATAR           | 358.9         |
| 44      | ISRAEL          | 354.9         |
| 45      | PORTUGAL        | 346.9         |
| 46      | HUNGARY         | 335.8         |
| 47      | GREECE          | 323.7         |
| 48      | DENMARK         | 319.5         |
| 49      | FINLAND         | 265.9         |
| 50      | NEW ZEALAND     | 208.7         |
| 51      | VENEZUELA       | 202.0         |
| 52      | SLOVAK REPUBLIC | 198.4         |
| 53      | BULGARIA        | 170.9         |
| 54      | CROATIA         | 112.6         |
| 55      | LITHUANIA       | 103.0         |
| 56      | JORDAN          | 96.3          |
| 57      | SLOVENIA        | 79.2          |
| 58      | LUXEMBOURG      | 68.8          |
| 59      | LATVIA          | 59.5          |
| 60      | ESTONIA         | 47.8          |
| 61      | MONGOLIA        | 46.7          |
| 62      | CYPRUS          | 36.9          |
| 63      | ICELAND         | 20.0          |

## WORLD GDP CONTRIBUTION

2019

Percentage share of world GDP in market prices

Background  
Information

| Ranking |                 | %     |
|---------|-----------------|-------|
| 1       | USA             | 24.76 |
| 2       | CHINA           | 16.33 |
| 3       | JAPAN           | 5.95  |
| 4       | GERMANY         | 4.46  |
| 5       | INDIA           | 3.39  |
| 6       | UNITED KINGDOM  | 3.17  |
| 7       | FRANCE          | 3.13  |
| 8       | ITALY           | 2.30  |
| 9       | BRAZIL          | 2.13  |
| 10      | CANADA          | 2.00  |
| 11      | RUSSIA          | 1.89  |
| 12      | KOREA REP.      | 1.88  |
| 13      | SPAIN           | 1.61  |
| 14      | AUSTRALIA       | 1.59  |
| 15      | MEXICO          | 1.47  |
| 16      | INDONESIA       | 1.28  |
| 17      | NETHERLANDS     | 1.04  |
| 18      | SAUDI ARABIA    | 0.90  |
| 19      | TURKEY          | 0.86  |
| 20      | SWITZERLAND     | 0.83  |
| 21      | TAIWAN, CHINA   | 0.68  |
| 22      | POLAND          | 0.65  |
| 23      | THAILAND        | 0.61  |
| 24      | SWEDEN          | 0.61  |
| 25      | BELGIUM         | 0.60  |
| 26      | AUSTRIA         | 0.52  |
| 27      | ARGENTINA       | 0.51  |
| 28      | NORWAY          | 0.48  |
| 29      | UAE             | 0.47  |
| 30      | ISRAEL          | 0.45  |
| 31      | IRELAND         | 0.44  |
| 32      | HONG KONG SAR   | 0.43  |
| 33      | MALAYSIA        | 0.42  |
| 34      | SINGAPORE       | 0.42  |
| 35      | SOUTH AFRICA    | 0.41  |
| 36      | PHILIPPINES     | 0.41  |
| 37      | DENMARK         | 0.40  |
| 38      | COLOMBIA        | 0.38  |
| 39      | CHILE           | 0.34  |
| 40      | FINLAND         | 0.31  |
| 41      | CZECH REPUBLIC  | 0.29  |
| 42      | ROMANIA         | 0.28  |
| 43      | PORTUGAL        | 0.27  |
| 44      | PERU            | 0.26  |
| 45      | GREECE          | 0.25  |
| 46      | NEW ZEALAND     | 0.24  |
| 47      | QATAR           | 0.22  |
| 48      | HUNGARY         | 0.20  |
| 49      | KAZAKHSTAN      | 0.20  |
| 50      | UKRAINE         | 0.17  |
| 51      | SLOVAK REPUBLIC | 0.12  |
| 52      | VENEZUELA       | 0.08  |
| 53      | LUXEMBOURG      | 0.08  |
| 54      | BULGARIA        | 0.08  |
| 55      | CROATIA         | 0.07  |
| 56      | SLOVENIA        | 0.06  |
| 57      | LITHUANIA       | 0.06  |
| 58      | JORDAN          | 0.05  |
| 59      | LATVIA          | 0.04  |
| 60      | ESTONIA         | 0.04  |
| 61      | CYPRUS          | 0.03  |
| 62      | ICELAND         | 0.03  |
| 63      | MONGOLIA        | 0.02  |

## HOUSEHOLD CONSUMPTION

EXPENDITURE (\$BN)

2019

US\$ billions

Background  
Information

| Ranking |                 | US\$ billions |
|---------|-----------------|---------------|
| 1       | USA             | 14,562.7      |
| 2       | CHINA           | 5,263.2       |
| 3       | JAPAN           | 2,730.9       |
| 4       | GERMANY         | 2,008.3       |
| 5       | UNITED KINGDOM  | 1,835.0       |
| 6       | INDIA           | 1,756.9       |
| 7       | FRANCE          | 1,453.9       |
| 8       | BRAZIL          | 1,194.7       |
| 9       | ITALY           | 1,192.9       |
| 10      | CANADA          | 1,003.7       |
| 11      | RUSSIA          | 849.1         |
| 12      | MEXICO          | 822.6         |
| 13      | SPAIN           | 803.0         |
| 14      | KOREA REP.      | 768.3         |
| 15      | AUSTRALIA       | 764.2         |
| 16      | INDONESIA       | 633.7         |
| 17      | TURKEY          | 433.0         |
| 18      | SWITZERLAND     | 373.5         |
| 19      | NETHERLANDS     | 372.4         |
| 20      | POLAND          | 334.4         |
| 21      | TAIWAN, CHINA   | 319.1         |
| 22      | SAUDI ARABIA    | 308.8         |
| 23      | ARGENTINA       | 289.5         |
| 24      | BELGIUM         | 272.3         |
| 25      | THAILAND        | 272.1         |
| 26      | PHILIPPINES     | 268.2         |
| 27      | HONG KONG SAR   | 250.9         |
| 28      | SWEDEN          | 235.4         |
| 29      | AUSTRIA         | 230.4         |
| 30      | COLOMBIA        | 221.9         |
| 31      | MALAYSIA        | 218.1         |
| 32      | SOUTH AFRICA    | 211.7         |
| 33      | ISRAEL          | 208.6         |
| 34      | NORWAY          | 181.1         |
| 35      | CHILE           | 177.8         |
| 36      | UAE             | 163.9         |
| 37      | DENMARK         | 161.9         |
| 38      | ROMANIA         | 159.0         |
| 39      | PORTUGAL        | 152.5         |
| 40      | PERU            | 151.7         |
| 41      | VENEZUELA       | 144.5         |
| 42      | FINLAND         | 141.3         |
| 43      | GREECE          | 136.9         |
| 44      | SINGAPORE       | 133.9         |
| 45      | UKRAINE         | 131.8         |
| 46      | IRELAND         | 125.7         |
| 47      | NEW ZEALAND     | 117.3         |
| 48      | CZECH REPUBLIC  | 115.2         |
| 49      | KAZAKHSTAN      | 93.4          |
| 50      | HUNGARY         | 92.5          |
| 51      | SLOVAK REPUBLIC | 58.3          |
| 52      | QATAR           | 43.1          |
| 53      | BULGARIA        | 40.0          |
| 54      | JORDAN          | 36.2          |
| 55      | CROATIA         | 35.1          |
| 56      | LITHUANIA       | 32.9          |
| 57      | SLOVENIA        | 27.3          |
| 58      | LUXEMBOURG      | 21.0          |
| 59      | LATVIA          | 20.0          |
| 60      | CYPRUS          | 15.9          |
| 61      | ESTONIA         | 14.8          |
| 62      | ICELAND         | 12.3          |
| 63      | MONGOLIA        | 7.7           |

## HOUSEHOLD CONSUMPTION

## EXPENDITURE (%)

2019

Percentage of GDP

Background  
Information

| Ranking |                 | %     |      |
|---------|-----------------|-------|------|
| 1       | VENEZUELA       | 100.5 | 2017 |
| 2       | JORDAN          | 85.8  | 2018 |
| 3       | UKRAINE         | 85.7  |      |
| 4       | PHILIPPINES     | 74.6  |      |
| 5       | HONG KONG SAR   | 68.5  |      |
| 6       | COLOMBIA        | 68.5  |      |
| 7       | USA             | 68.0  |      |
| 8       | PERU            | 65.9  |      |
| 9       | MEXICO          | 65.4  |      |
| 10      | GREECE          | 65.2  |      |
| 11      | BRAZIL          | 64.9  |      |
| 12      | UNITED KINGDOM  | 64.9  |      |
| 13      | CYPRUS          | 64.9  |      |
| 14      | ARGENTINA       | 64.4  |      |
| 15      | PORTUGAL        | 64.2  |      |
| 16      | ROMANIA         | 63.9  |      |
| 17      | CHILE           | 63.0  |      |
| 18      | LITHUANIA       | 60.8  |      |
| 19      | INDIA           | 60.7  |      |
| 20      | SOUTH AFRICA    | 60.2  |      |
| 21      | MALAYSIA        | 59.8  |      |
| 22      | ITALY           | 59.6  |      |
| 23      | BULGARIA        | 58.9  |      |
| 24      | LATVIA          | 58.6  |      |
| 25      | HUNGARY         | 58.6  | 2018 |
| 26      | CROATIA         | 58.1  |      |
| 27      | SPAIN           | 57.6  |      |
| 28      | TURKEY          | 57.4  |      |
| 29      | NEW ZEALAND     | 57.3  |      |
| 30      | CANADA          | 57.0  |      |
| 31      | POLAND          | 56.7  |      |
| 32      | INDONESIA       | 56.6  |      |
| 33      | MONGOLIA        | 55.3  |      |
| 34      | AUSTRALIA       | 55.1  |      |
| 35      | SLOVAK REPUBLIC | 54.8  | 2018 |
| 36      | JAPAN           | 53.7  |      |
| 37      | FRANCE          | 53.7  |      |
| 38      | SWITZERLAND     | 53.1  |      |
| 39      | ISRAEL          | 52.8  |      |
| 40      | FINLAND         | 52.6  |      |
| 41      | TAIWAN, CHINA   | 52.2  |      |
| 42      | GERMANY         | 52.2  |      |
| 43      | KAZAKHSTAN      | 52.1  | 2018 |
| 44      | AUSTRIA         | 51.6  |      |
| 45      | BELGIUM         | 51.3  |      |
| 46      | SLOVENIA        | 50.9  |      |
| 47      | ICELAND         | 50.8  |      |
| 48      | RUSSIA          | 50.3  |      |
| 49      | THAILAND        | 50.1  |      |
| 50      | ESTONIA         | 47.1  |      |
| 51      | KOREA REP.      | 46.8  |      |
| 52      | CZECH REPUBLIC  | 46.7  |      |
| 53      | DENMARK         | 46.5  |      |
| 54      | NORWAY          | 45.1  |      |
| 55      | SWEDEN          | 44.3  |      |
| 56      | NETHERLANDS     | 42.3  |      |
| 57      | SAUDI ARABIA    | 38.9  |      |
| 58      | UAE             | 38.9  |      |
| 59      | CHINA           | 37.9  | 2018 |
| 60      | SINGAPORE       | 36.0  |      |
| 61      | IRELAND         | 32.3  |      |
| 62      | LUXEMBOURG      | 29.5  |      |
| 63      | QATAR           | 23.5  |      |

## GOVERNMENT CONSUMPTION

## EXPENDITURE (\$BN)

2019

US\$ billions

Background  
Information

| Ranking |                 | US\$ billions |      |
|---------|-----------------|---------------|------|
| 1       | USA             | 3,018.4       |      |
| 2       | CHINA           | 1,997.2       | 2018 |
| 3       | JAPAN           | 1,016.5       |      |
| 4       | GERMANY         | 783.0         |      |
| 5       | FRANCE          | 625.9         |      |
| 6       | UNITED KINGDOM  | 533.7         |      |
| 7       | ITALY           | 376.3         |      |
| 8       | BRAZIL          | 373.2         |      |
| 9       | CANADA          | 367.6         |      |
| 10      | INDIA           | 345.7         |      |
| 11      | RUSSIA          | 313.4         |      |
| 12      | KOREA REP.      | 283.4         |      |
| 13      | AUSTRALIA       | 265.6         |      |
| 14      | SPAIN           | 261.1         |      |
| 15      | NETHERLANDS     | 203.7         |      |
| 16      | SAUDI ARABIA    | 189.1         |      |
| 17      | MEXICO          | 146.0         |      |
| 18      | SWEDEN          | 138.2         |      |
| 19      | BELGIUM         | 122.7         |      |
| 20      | TURKEY          | 118.3         |      |
| 21      | POLAND          | 105.0         |      |
| 22      | NORWAY          | 98.4          |      |
| 23      | INDONESIA       | 98.0          |      |
| 24      | ISRAEL          | 90.4          |      |
| 25      | THAILAND        | 87.7          |      |
| 26      | AUSTRIA         | 86.2          |      |
| 27      | TAIWAN, CHINA   | 85.5          |      |
| 28      | SWITZERLAND     | 83.7          |      |
| 29      | DENMARK         | 83.7          |      |
| 30      | SOUTH AFRICA    | 74.8          |      |
| 31      | ARGENTINA       | 68.7          |      |
| 32      | FINLAND         | 62.1          |      |
| 33      | UAE             | 55.9          |      |
| 34      | COLOMBIA        | 50.1          |      |
| 35      | CZECH REPUBLIC  | 49.9          |      |
| 36      | PHILIPPINES     | 45.7          |      |
| 37      | ROMANIA         | 43.3          |      |
| 38      | MALAYSIA        | 42.7          |      |
| 39      | CHILE           | 41.2          |      |
| 40      | GREECE          | 40.9          |      |
| 41      | PORTUGAL        | 39.9          |      |
| 42      | HONG KONG SAR   | 39.4          |      |
| 43      | IRELAND         | 39.0          |      |
| 44      | NEW ZEALAND     | 38.8          |      |
| 45      | SINGAPORE       | 38.1          |      |
| 46      | QATAR           | 33.7          |      |
| 47      | PERU            | 26.5          |      |
| 48      | SLOVAK REPUBLIC | 19.7          | 2018 |
| 49      | HUNGARY         | 15.7          |      |
| 50      | KAZAKHSTAN      | 14.9          | 2018 |
| 51      | UKRAINE         | 14.7          |      |
| 52      | VENEZUELA       | 12.9          | 2017 |
| 53      | LUXEMBOURG      | 12.2          |      |
| 54      | BULGARIA        | 11.9          |      |
| 55      | CROATIA         | 11.9          |      |
| 56      | SLOVENIA        | 9.9           |      |
| 57      | LITHUANIA       | 9.2           |      |
| 58      | JORDAN          | 6.6           | 2018 |
| 59      | ESTONIA         | 6.2           |      |
| 60      | LATVIA          | 6.2           |      |
| 61      | ICELAND         | 5.9           |      |
| 62      | CYPRUS          | 4.0           |      |
| 63      | MONGOLIA        | 1.7           |      |

## GOVERNMENT CONSUMPTION

## EXPENDITURE (%)

2019

Percentage of GDP

Background  
Information

| Ranking |                 | %                    |
|---------|-----------------|----------------------|
| 1       | SWEDEN          | 26.0                 |
| 2       | NORWAY          | 24.5                 |
| 3       | ICELAND         | 24.3                 |
| 4       | DENMARK         | 24.0                 |
| 5       | SAUDI ARABIA    | 23.8                 |
| 6       | BELGIUM         | 23.1                 |
| 7       | NETHERLANDS     | 23.1                 |
| 8       | FRANCE          | 23.1                 |
| 9       | FINLAND         | 23.1                 |
| 10      | ISRAEL          | 22.9                 |
| 11      | SOUTH AFRICA    | 21.3                 |
| 12      | CANADA          | 20.9                 |
| 13      | GERMANY         | 20.4                 |
| 14      | BRAZIL          | 20.3                 |
| 15      | CZECH REPUBLIC  | 20.2                 |
| 16      | JAPAN           | 20.0                 |
| 17      | ESTONIA         | 19.9                 |
| 18      | CROATIA         | 19.6                 |
| 19      | GREECE          | 19.5                 |
| 20      | AUSTRIA         | 19.3                 |
| 21      | AUSTRALIA       | 19.2                 |
| 22      | NEW ZEALAND     | 18.9                 |
| 23      | UNITED KINGDOM  | 18.9                 |
| 24      | ITALY           | 18.8                 |
| 25      | SPAIN           | 18.7                 |
| 26      | RUSSIA          | 18.5                 |
| 27      | SLOVAK REPUBLIC | 18.5 <sup>2018</sup> |
| 28      | SLOVENIA        | 18.4                 |
| 29      | QATAR           | 18.4                 |
| 30      | LATVIA          | 18.2                 |
| 31      | POLAND          | 17.8                 |
| 32      | BULGARIA        | 17.5                 |
| 33      | ROMANIA         | 17.4                 |
| 34      | KOREA REP.      | 17.3                 |
| 35      | LUXEMBOURG      | 17.1                 |
| 36      | LITHUANIA       | 17.0                 |
| 37      | PORTUGAL        | 16.8                 |
| 38      | CYPRUS          | 16.4                 |
| 39      | THAILAND        | 16.1                 |
| 40      | TURKEY          | 15.7                 |
| 41      | JORDAN          | 15.6 <sup>2018</sup> |
| 42      | COLOMBIA        | 15.5                 |
| 43      | ARGENTINA       | 15.3                 |
| 44      | CHILE           | 14.6                 |
| 45      | CHINA           | 14.4 <sup>2018</sup> |
| 46      | USA             | 14.1                 |
| 47      | TAIWAN, CHINA   | 14.0                 |
| 48      | UAE             | 13.3                 |
| 49      | PHILIPPINES     | 12.7                 |
| 50      | MONGOLIA        | 12.2                 |
| 51      | INDIA           | 11.9                 |
| 52      | SWITZERLAND     | 11.9                 |
| 53      | MALAYSIA        | 11.7                 |
| 54      | MEXICO          | 11.6                 |
| 55      | PERU            | 11.5                 |
| 56      | HONG KONG SAR   | 10.8                 |
| 57      | SINGAPORE       | 10.3                 |
| 58      | IRELAND         | 10.0                 |
| 59      | HUNGARY         | 9.7                  |
| 60      | UKRAINE         | 9.5                  |
| 61      | VENEZUELA       | 9.0 <sup>2017</sup>  |
| 62      | INDONESIA       | 8.8                  |
| 63      | KAZAKHSTAN      | 8.3 <sup>2018</sup>  |

## GROSS FIXED CAPITAL

## FORMATION (\$BN)

2019

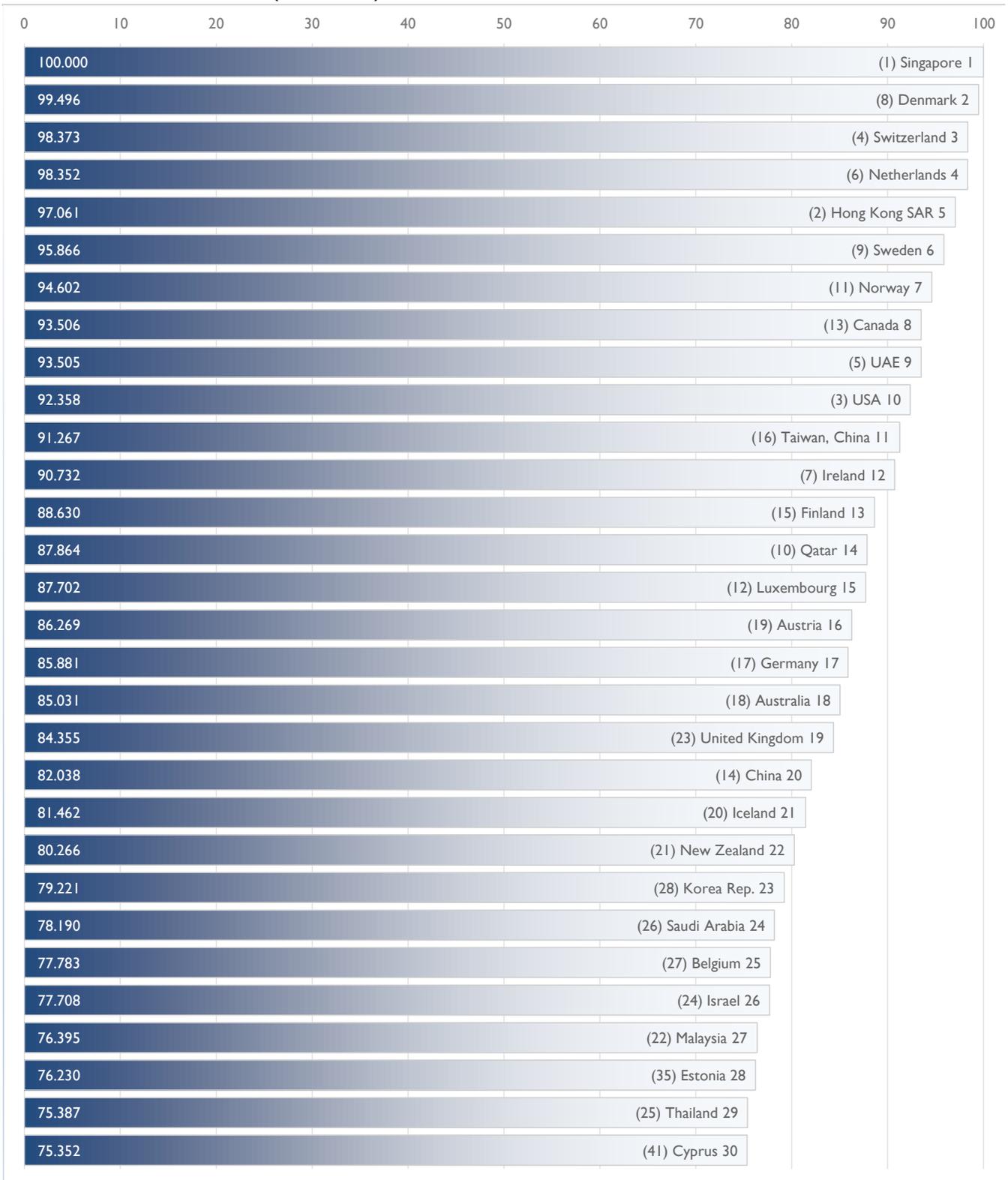
US\$ billions

Background  
Information

| Ranking |                 | US\$ billions           |
|---------|-----------------|-------------------------|
| 1       | CHINA           | 5,755.4 <sup>2018</sup> |
| 2       | USA             | 4,410.1                 |
| 3       | JAPAN           | 1,235.4                 |
| 4       | GERMANY         | 836.1                   |
| 5       | INDIA           | 815.5                   |
| 6       | FRANCE          | 633.4                   |
| 7       | KOREA REP.      | 489.9                   |
| 8       | UNITED KINGDOM  | 482.1                   |
| 9       | CANADA          | 383.8                   |
| 10      | INDONESIA       | 361.9                   |
| 11      | ITALY           | 361.3                   |
| 12      | RUSSIA          | 358.4                   |
| 13      | AUSTRALIA       | 315.6                   |
| 14      | BRAZIL          | 282.5                   |
| 15      | SPAIN           | 279.0                   |
| 16      | MEXICO          | 262.8                   |
| 17      | TURKEY          | 196.8                   |
| 18      | NETHERLANDS     | 178.7                   |
| 19      | SAUDI ARABIA    | 175.2                   |
| 20      | SWITZERLAND     | 169.3                   |
| 21      | IRELAND         | 168.9                   |
| 22      | TAIWAN, CHINA   | 143.2                   |
| 23      | SWEDEN          | 133.6                   |
| 24      | BELGIUM         | 127.5                   |
| 25      | THAILAND        | 122.9                   |
| 26      | POLAND          | 109.7                   |
| 27      | AUSTRIA         | 108.6                   |
| 28      | NORWAY          | 105.3                   |
| 29      | UAE             | 100.4                   |
| 30      | PHILIPPINES     | 94.4                    |
| 31      | SINGAPORE       | 86.1                    |
| 32      | MALAYSIA        | 83.7                    |
| 33      | ISRAEL          | 83.5                    |
| 34      | QATAR           | 81.4                    |
| 35      | DENMARK         | 77.2                    |
| 36      | COLOMBIA        | 72.2                    |
| 37      | HONG KONG SAR   | 69.8                    |
| 38      | FINLAND         | 63.6                    |
| 39      | CHILE           | 63.4                    |
| 40      | SOUTH AFRICA    | 62.9                    |
| 41      | CZECH REPUBLIC  | 62.8                    |
| 42      | ARGENTINA       | 59.0                    |
| 43      | ROMANIA         | 58.8                    |
| 44      | PERU            | 48.8                    |
| 45      | NEW ZEALAND     | 48.6                    |
| 46      | HUNGARY         | 46.0                    |
| 47      | PORTUGAL        | 43.5                    |
| 48      | KAZAKHSTAN      | 38.0 <sup>2018</sup>    |
| 49      | UKRAINE         | 27.7                    |
| 50      | GREECE          | 24.0                    |
| 51      | SLOVAK REPUBLIC | 22.5 <sup>2018</sup>    |
| 52      | CROATIA         | 12.5                    |
| 53      | BULGARIA        | 12.4                    |
| 54      | LUXEMBOURG      | 12.0                    |
| 55      | LITHUANIA       | 11.5                    |
| 56      | SLOVENIA        | 10.4                    |
| 57      | ESTONIA         | 8.2                     |
| 58      | LATVIA          | 7.8                     |
| 59      | JORDAN          | 7.0 <sup>2016</sup>     |
| 60      | ICELAND         | 4.9                     |
| 61      | CYPRUS          | 4.7                     |
| 62      | MONGOLIA        | 4.4                     |
| 63      | VENEZUELA       | -5.4 <sup>2017</sup>    |

# The 2020 IMD World

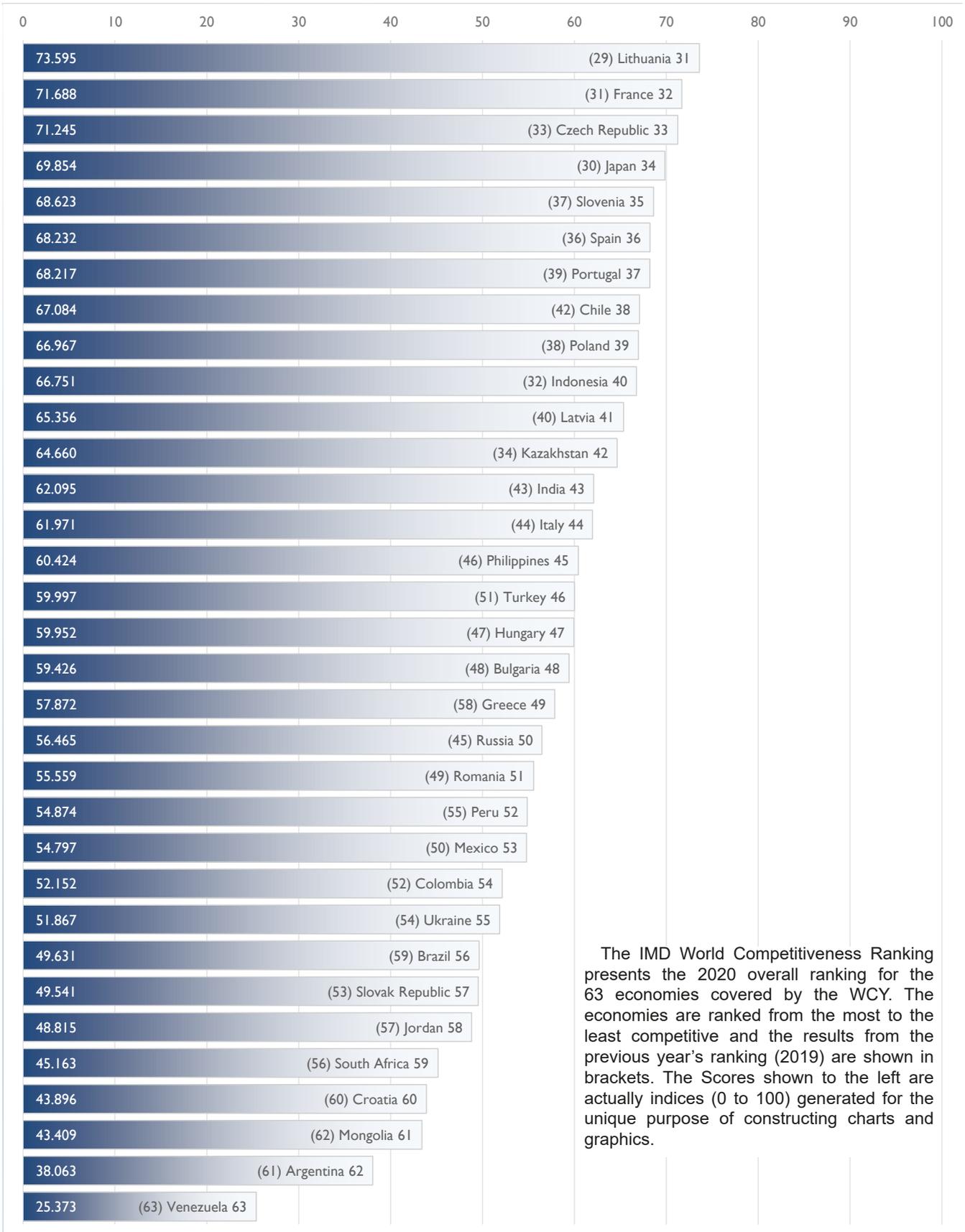
## COMPETITIVENESS RANKING (Ranks 1 - 30)



(2019 rankings are in parentheses)

# Competitiveness Ranking

## COMPETITIVENESS RANKING (Ranks 31 - 63)



The IMD World Competitiveness Ranking presents the 2020 overall ranking for the 63 economies covered by the WCY. The economies are ranked from the most to the least competitive and the results from the previous year's ranking (2019) are shown in brackets. The Scores shown to the left are actually indices (0 to 100) generated for the unique purpose of constructing charts and graphics.

(2019 rankings are in parentheses)

## Factor Rankings - 5 years overview

|                 | OVERALL |      |      |      |      | Economic Performance |      |      |      |      |
|-----------------|---------|------|------|------|------|----------------------|------|------|------|------|
|                 | 2016    | 2017 | 2018 | 2019 | 2020 | 2016                 | 2017 | 2018 | 2019 | 2020 |
| Argentina       | 55      | 58   | 56   | 61   | 62   | 53                   | 56   | 60   | 61   | 60   |
| Australia       | 17      | 21   | 19   | 18   | 18   | 24                   | 25   | 19   | 14   | 23   |
| Austria         | 24      | 25   | 18   | 19   | 16   | 19                   | 40   | 17   | 20   | 15   |
| Belgium         | 22      | 23   | 26   | 27   | 25   | 33                   | 23   | 44   | 37   | 25   |
| Brazil          | 57      | 61   | 60   | 59   | 56   | 55                   | 59   | 54   | 57   | 56   |
| Bulgaria        | 50      | 49   | 48   | 48   | 48   | 40                   | 37   | 28   | 47   | 34   |
| Canada          | 10      | 12   | 10   | 13   | 8    | 14                   | 16   | 13   | 12   | 10   |
| Chile           | 36      | 35   | 35   | 42   | 38   | 34                   | 34   | 41   | 48   | 50   |
| China           | 25      | 18   | 13   | 14   | 20   | 3                    | 2    | 2    | 2    | 7    |
| Colombia        | 51      | 54   | 58   | 52   | 54   | 46                   | 41   | 51   | 50   | 52   |
| Croatia         | 58      | 59   | 61   | 60   | 60   | 56                   | 57   | 56   | 55   | 45   |
| Cyprus          | -       | 37   | 41   | 41   | 30   | -                    | 28   | 22   | 19   | 13   |
| Czech Republic  | 27      | 28   | 29   | 33   | 33   | 20                   | 19   | 16   | 17   | 16   |
| Denmark         | 6       | 7    | 6    | 8    | 2    | 22                   | 20   | 26   | 26   | 21   |
| Estonia         | 31      | 30   | 31   | 35   | 28   | 39                   | 44   | 32   | 44   | 35   |
| Finland         | 20      | 15   | 16   | 15   | 13   | 47                   | 45   | 43   | 35   | 43   |
| France          | 32      | 31   | 28   | 31   | 32   | 25                   | 24   | 30   | 34   | 32   |
| Germany         | 12      | 13   | 15   | 17   | 17   | 8                    | 7    | 12   | 9    | 5    |
| Greece          | 56      | 57   | 57   | 58   | 49   | 58                   | 61   | 61   | 60   | 55   |
| Hong Kong SAR   | 1       | 1    | 2    | 2    | 5    | 5                    | 11   | 9    | 10   | 28   |
| Hungary         | 46      | 52   | 47   | 47   | 47   | 26                   | 36   | 39   | 46   | 19   |
| Iceland         | 23      | 20   | 24   | 20   | 21   | 29                   | 39   | 57   | 54   | 58   |
| India           | 41      | 45   | 44   | 43   | 43   | 16                   | 18   | 21   | 24   | 37   |
| Indonesia       | 48      | 42   | 43   | 32   | 40   | 37                   | 33   | 27   | 25   | 26   |
| Ireland         | 7       | 6    | 12   | 7    | 12   | 6                    | 4    | 11   | 6    | 12   |
| Israel          | 21      | 22   | 21   | 24   | 26   | 31                   | 31   | 37   | 40   | 39   |
| Italy           | 35      | 44   | 42   | 44   | 44   | 36                   | 38   | 47   | 53   | 42   |
| Japan           | 26      | 26   | 25   | 30   | 34   | 18                   | 14   | 15   | 16   | 11   |
| Jordan          | 53      | 56   | 52   | 57   | 58   | 57                   | 62   | 62   | 62   | 62   |
| Kazakhstan      | 47      | 32   | 38   | 34   | 42   | 52                   | 54   | 49   | 45   | 48   |
| Korea Rep.      | 29      | 29   | 27   | 28   | 23   | 21                   | 22   | 20   | 27   | 27   |
| Latvia          | 37      | 40   | 40   | 40   | 41   | 51                   | 53   | 53   | 52   | 53   |
| Lithuania       | 30      | 33   | 32   | 29   | 31   | 45                   | 42   | 36   | 39   | 33   |
| Luxembourg      | 11      | 8    | 11   | 12   | 15   | 7                    | 3    | 4    | 4    | 8    |
| Malaysia        | 19      | 24   | 22   | 22   | 27   | 11                   | 13   | 8    | 11   | 9    |
| Mexico          | 45      | 48   | 51   | 50   | 53   | 23                   | 30   | 35   | 28   | 38   |
| Mongolia        | 60      | 62   | 62   | 62   | 61   | 59                   | 60   | 48   | 58   | 59   |
| Netherlands     | 8       | 5    | 4    | 6    | 4    | 9                    | 9    | 6    | 13   | 1    |
| New Zealand     | 16      | 16   | 23   | 21   | 22   | 41                   | 32   | 33   | 36   | 40   |
| Norway          | 9       | 11   | 8    | 11   | 7    | 32                   | 48   | 40   | 32   | 30   |
| Peru            | 54      | 55   | 54   | 55   | 52   | 50                   | 50   | 55   | 41   | 51   |
| Philippines     | 42      | 41   | 50   | 46   | 45   | 38                   | 26   | 50   | 38   | 44   |
| Poland          | 33      | 38   | 34   | 38   | 39   | 27                   | 27   | 18   | 18   | 29   |
| Portugal        | 39      | 39   | 33   | 39   | 37   | 48                   | 51   | 42   | 43   | 41   |
| Qatar           | 13      | 17   | 14   | 10   | 14   | 2                    | 8    | 5    | 3    | 6    |
| Romania         | 49      | 50   | 49   | 49   | 51   | 42                   | 49   | 34   | 49   | 46   |
| Russia          | 44      | 46   | 45   | 45   | 50   | 49                   | 46   | 38   | 31   | 47   |
| Saudi Arabia    | -       | 36   | 39   | 26   | 24   | -                    | 21   | 23   | 30   | 20   |
| Singapore       | 4       | 3    | 3    | 1    | 1    | 4                    | 6    | 7    | 5    | 3    |
| Slovak Republic | 40      | 51   | 55   | 53   | 57   | 44                   | 52   | 46   | 42   | 49   |
| Slovenia        | 43      | 43   | 37   | 37   | 35   | 43                   | 47   | 29   | 33   | 36   |
| South Africa    | 52      | 53   | 53   | 56   | 59   | 54                   | 58   | 59   | 59   | 61   |
| Spain           | 34      | 34   | 36   | 36   | 36   | 30                   | 35   | 31   | 29   | 31   |
| Sweden          | 5       | 9    | 9    | 9    | 6    | 17                   | 17   | 24   | 21   | 22   |
| Switzerland     | 2       | 2    | 5    | 4    | 3    | 10                   | 15   | 25   | 23   | 18   |
| Taiwan, China   | 14      | 14   | 17   | 16   | 11   | 15                   | 12   | 14   | 15   | 17   |
| Thailand        | 28      | 27   | 30   | 25   | 29   | 13                   | 10   | 10   | 8    | 14   |
| Turkey          | 38      | 47   | 46   | 51   | 46   | 35                   | 43   | 52   | 51   | 57   |
| UAE             | 15      | 10   | 7    | 5    | 9    | 12                   | 5    | 3    | 7    | 4    |
| Ukraine         | 59      | 60   | 59   | 54   | 55   | 60                   | 55   | 58   | 56   | 54   |
| United Kingdom  | 18      | 19   | 20   | 23   | 19   | 28                   | 29   | 45   | 22   | 24   |
| USA             | 3       | 4    | 1    | 3    | 10   | 1                    | 1    | 1    | 1    | 2    |
| Venezuela       | 61      | 63   | 63   | 63   | 63   | 61                   | 63   | 63   | 63   | 63   |

| Government Efficiency |      |      |      |      | Business Efficiency |      |      |      |      | Infrastructure |      |      |      |      |                 |
|-----------------------|------|------|------|------|---------------------|------|------|------|------|----------------|------|------|------|------|-----------------|
| 2016                  | 2017 | 2018 | 2019 | 2020 | 2016                | 2017 | 2018 | 2019 | 2020 | 2016           | 2017 | 2018 | 2019 | 2020 |                 |
| 58                    | 58   | 60   | 61   | 63   | 55                  | 58   | 49   | 59   | 62   | 51             | 52   | 47   | 51   | 52   | Argentina       |
| 14                    | 18   | 14   | 13   | 15   | 17                  | 27   | 24   | 24   | 21   | 18             | 18   | 16   | 17   | 18   | Australia       |
| 35                    | 33   | 32   | 28   | 25   | 22                  | 17   | 14   | 17   | 16   | 12             | 11   | 14   | 11   | 10   | Austria         |
| 28                    | 32   | 35   | 36   | 35   | 19                  | 26   | 23   | 28   | 22   | 13             | 13   | 20   | 21   | 19   | Belgium         |
| 61                    | 62   | 62   | 62   | 61   | 51                  | 49   | 50   | 57   | 47   | 46             | 51   | 52   | 54   | 53   | Brazil          |
| 33                    | 39   | 37   | 42   | 39   | 54                  | 56   | 57   | 54   | 53   | 47             | 47   | 51   | 50   | 50   | Bulgaria        |
| 10                    | 13   | 9    | 14   | 10   | 12                  | 11   | 7    | 16   | 10   | 9              | 10   | 7    | 12   | 8    | Canada          |
| 27                    | 26   | 24   | 26   | 20   | 36                  | 31   | 26   | 41   | 37   | 45             | 45   | 43   | 47   | 45   | Chile           |
| 51                    | 45   | 46   | 35   | 37   | 26                  | 18   | 15   | 15   | 18   | 25             | 25   | 19   | 16   | 22   | China           |
| 53                    | 56   | 58   | 56   | 56   | 45                  | 53   | 56   | 47   | 52   | 56             | 58   | 58   | 56   | 56   | Colombia        |
| 56                    | 57   | 56   | 58   | 59   | 61                  | 63   | 62   | 63   | 63   | 43             | 46   | 46   | 49   | 48   | Croatia         |
| -                     | 22   | 28   | 32   | 21   | -                   | 50   | 53   | 52   | 35   | -              | 40   | 41   | 42   | 38   | Cyprus          |
| 29                    | 29   | 27   | 34   | 36   | 30                  | 34   | 32   | 37   | 38   | 26             | 28   | 30   | 31   | 32   | Czech Republic  |
| 8                     | 7    | 6    | 6    | 4    | 6                   | 8    | 3    | 7    | 1    | 2              | 4    | 3    | 3    | 2    | Denmark         |
| 20                    | 23   | 21   | 27   | 19   | 34                  | 32   | 27   | 33   | 27   | 33             | 29   | 32   | 34   | 33   | Estonia         |
| 21                    | 16   | 15   | 17   | 16   | 21                  | 13   | 16   | 13   | 13   | 5              | 6    | 6    | 5    | 4    | Finland         |
| 52                    | 52   | 39   | 48   | 46   | 37                  | 40   | 31   | 38   | 43   | 15             | 12   | 12   | 9    | 13   | France          |
| 19                    | 21   | 19   | 22   | 24   | 15                  | 16   | 19   | 26   | 25   | 10             | 9    | 11   | 10   | 11   | Germany         |
| 59                    | 61   | 61   | 60   | 52   | 57                  | 57   | 59   | 58   | 51   | 38             | 39   | 40   | 41   | 39   | Greece          |
| 1                     | 1    | 1    | 1    | 1    | 1                   | 1    | 1    | 2    | 2    | 21             | 20   | 23   | 22   | 14   | Hong Kong SAR   |
| 54                    | 54   | 48   | 45   | 47   | 56                  | 60   | 58   | 56   | 59   | 39             | 41   | 39   | 39   | 41   | Hungary         |
| 17                    | 8    | 16   | 15   | 17   | 27                  | 24   | 22   | 19   | 15   | 17             | 17   | 17   | 13   | 17   | Iceland         |
| 47                    | 48   | 50   | 46   | 50   | 31                  | 29   | 29   | 30   | 32   | 58             | 60   | 56   | 55   | 49   | India           |
| 32                    | 30   | 36   | 25   | 31   | 39                  | 30   | 35   | 20   | 31   | 57             | 59   | 59   | 53   | 55   | Indonesia       |
| 13                    | 9    | 13   | 11   | 13   | 2                   | 3    | 10   | 3    | 5    | 23             | 19   | 21   | 23   | 23   | Ireland         |
| 22                    | 24   | 20   | 30   | 27   | 23                  | 22   | 18   | 21   | 26   | 14             | 16   | 13   | 18   | 20   | Israel          |
| 50                    | 53   | 53   | 53   | 57   | 35                  | 45   | 44   | 42   | 45   | 32             | 33   | 31   | 32   | 30   | Italy           |
| 37                    | 35   | 41   | 38   | 41   | 29                  | 35   | 36   | 46   | 55   | 11             | 14   | 15   | 15   | 21   | Japan           |
| 44                    | 49   | 43   | 43   | 45   | 40                  | 47   | 39   | 35   | 46   | 52             | 57   | 54   | 58   | 58   | Jordan          |
| 31                    | 19   | 25   | 21   | 29   | 44                  | 23   | 34   | 29   | 34   | 48             | 43   | 42   | 43   | 51   | Kazakhstan      |
| 26                    | 28   | 29   | 31   | 28   | 48                  | 44   | 43   | 34   | 28   | 22             | 24   | 18   | 20   | 16   | Korea Rep.      |
| 30                    | 36   | 33   | 33   | 32   | 43                  | 39   | 40   | 43   | 44   | 37             | 35   | 37   | 35   | 37   | Latvia          |
| 24                    | 34   | 31   | 29   | 33   | 28                  | 33   | 30   | 23   | 24   | 29             | 30   | 29   | 30   | 34   | Lithuania       |
| 12                    | 15   | 17   | 10   | 12   | 9                   | 6    | 8    | 12   | 17   | 24             | 22   | 24   | 25   | 24   | Luxembourg      |
| 18                    | 25   | 23   | 24   | 30   | 14                  | 19   | 17   | 18   | 29   | 31             | 32   | 33   | 28   | 31   | Malaysia        |
| 46                    | 51   | 54   | 52   | 55   | 42                  | 36   | 48   | 49   | 48   | 53             | 55   | 55   | 57   | 57   | Mexico          |
| 55                    | 60   | 57   | 59   | 53   | 58                  | 62   | 61   | 61   | 57   | 60             | 62   | 62   | 62   | 62   | Mongolia        |
| 15                    | 12   | 8    | 9    | 11   | 10                  | 4    | 6    | 4    | 4    | 7              | 8    | 9    | 8    | 9    | Netherlands     |
| 4                     | 5    | 7    | 8    | 8    | 13                  | 20   | 28   | 22   | 30   | 20             | 23   | 25   | 24   | 25   | New Zealand     |
| 6                     | 6    | 5    | 7    | 6    | 8                   | 7    | 5    | 8    | 8    | 6              | 5    | 4    | 7    | 6    | Norway          |
| 41                    | 43   | 47   | 49   | 40   | 50                  | 55   | 51   | 55   | 50   | 59             | 61   | 61   | 61   | 60   | Peru            |
| 36                    | 37   | 44   | 41   | 42   | 24                  | 28   | 38   | 32   | 33   | 55             | 54   | 60   | 59   | 59   | Philippines     |
| 34                    | 44   | 40   | 44   | 43   | 32                  | 37   | 37   | 36   | 40   | 34             | 34   | 34   | 36   | 35   | Poland          |
| 48                    | 40   | 34   | 37   | 34   | 46                  | 46   | 33   | 45   | 41   | 28             | 27   | 26   | 29   | 27   | Portugal        |
| 5                     | 11   | 10   | 5    | 7    | 20                  | 12   | 13   | 10   | 11   | 41             | 38   | 38   | 40   | 40   | Qatar           |
| 43                    | 47   | 51   | 51   | 49   | 49                  | 52   | 52   | 51   | 54   | 42             | 50   | 49   | 48   | 47   | Romania         |
| 39                    | 46   | 52   | 47   | 48   | 52                  | 51   | 54   | 53   | 58   | 36             | 36   | 35   | 37   | 42   | Russia          |
| -                     | 31   | 30   | 18   | 22   | -                   | 38   | 45   | 25   | 19   | -              | 44   | 44   | 38   | 36   | Saudi Arabia    |
| 3                     | 3    | 3    | 3    | 5    | 5                   | 10   | 11   | 5    | 6    | 8              | 7    | 8    | 6    | 7    | Singapore       |
| 42                    | 55   | 55   | 57   | 60   | 38                  | 54   | 60   | 60   | 61   | 40             | 42   | 45   | 44   | 46   | Slovak Republic |
| 45                    | 42   | 42   | 39   | 38   | 53                  | 48   | 47   | 40   | 39   | 30             | 31   | 28   | 27   | 29   | Slovenia        |
| 40                    | 50   | 49   | 50   | 54   | 47                  | 41   | 46   | 44   | 56   | 54             | 56   | 57   | 60   | 61   | South Africa    |
| 49                    | 38   | 38   | 40   | 44   | 41                  | 42   | 42   | 39   | 42   | 27             | 26   | 27   | 26   | 26   | Spain           |
| 11                    | 14   | 11   | 16   | 14   | 4                   | 9    | 4    | 6    | 3    | 4              | 3    | 5    | 4    | 1    | Sweden          |
| 2                     | 2    | 2    | 4    | 2    | 3                   | 5    | 9    | 9    | 9    | 3              | 1    | 2    | 2    | 3    | Switzerland     |
| 9                     | 10   | 12   | 12   | 9    | 16                  | 15   | 20   | 14   | 12   | 19             | 21   | 22   | 19   | 15   | Taiwan, China   |
| 23                    | 20   | 22   | 20   | 23   | 25                  | 25   | 25   | 27   | 23   | 49             | 49   | 48   | 45   | 44   | Thailand        |
| 38                    | 41   | 45   | 55   | 51   | 33                  | 43   | 41   | 48   | 36   | 44             | 48   | 50   | 46   | 43   | Turkey          |
| 7                     | 4    | 4    | 2    | 3    | 11                  | 2    | 2    | 1    | 7    | 35             | 37   | 36   | 33   | 28   | UAE             |
| 57                    | 59   | 59   | 54   | 58   | 60                  | 59   | 55   | 50   | 49   | 50             | 53   | 53   | 52   | 54   | Ukraine         |
| 16                    | 17   | 18   | 19   | 18   | 18                  | 21   | 21   | 31   | 20   | 16             | 15   | 10   | 14   | 12   | United Kingdom  |
| 25                    | 27   | 26   | 23   | 26   | 7                   | 14   | 12   | 11   | 14   | 1              | 2    | 1    | 1    | 5    | USA             |
| 60                    | 63   | 63   | 63   | 62   | 59                  | 61   | 63   | 62   | 60   | 61             | 63   | 63   | 63   | 63   | Venezuela       |

## Sub-factor Rankings

|                 | Economic Performance |                     |                          |            |        | Government Efficiency |            |                         |                      |                    |
|-----------------|----------------------|---------------------|--------------------------|------------|--------|-----------------------|------------|-------------------------|----------------------|--------------------|
|                 | Domestic Economy     | International Trade | International Investment | Employment | Prices | Public Finance        | Tax Policy | Institutional Framework | Business Legislation | Societal Framework |
| Argentina       | 62                   | 46                  | 56                       | 53         | 55     | 62                    | 49         | 63                      | 62                   | 50                 |
| Australia       | 27                   | 45                  | 13                       | 21         | 34     | 14                    | 26         | 20                      | 11                   | 12                 |
| Austria         | 16                   | 20                  | 19                       | 32         | 20     | 24                    | 61         | 17                      | 20                   | 7                  |
| Belgium         | 26                   | 11                  | 24                       | 44         | 33     | 52                    | 62         | 26                      | 26                   | 13                 |
| Brazil          | 44                   | 59                  | 28                       | 56         | 38     | 63                    | 38         | 60                      | 59                   | 62                 |
| Bulgaria        | 46                   | 29                  | 50                       | 23         | 8      | 21                    | 24         | 43                      | 52                   | 45                 |
| Canada          | 21                   | 49                  | 8                        | 28         | 9      | 20                    | 17         | 10                      | 17                   | 10                 |
| Chile           | 50                   | 62                  | 21                       | 48         | 17     | 10                    | 31         | 19                      | 13                   | 49                 |
| China           | 2                    | 38                  | 6                        | 13         | 56     | 30                    | 47         | 36                      | 41                   | 30                 |
| Colombia        | 42                   | 55                  | 37                       | 58         | 3      | 43                    | 37         | 54                      | 51                   | 61                 |
| Croatia         | 57                   | 19                  | 41                       | 49         | 25     | 45                    | 55         | 52                      | 61                   | 48                 |
| Cyprus          | 53                   | 53                  | 2                        | 34         | 4      | 32                    | 13         | 37                      | 19                   | 19                 |
| Czech Republic  | 28                   | 23                  | 33                       | 4          | 29     | 31                    | 48         | 31                      | 48                   | 28                 |
| Denmark         | 15                   | 24                  | 23                       | 27         | 41     | 4                     | 40         | 1                       | 2                    | 4                  |
| Estonia         | 37                   | 33                  | 39                       | 36         | 23     | 25                    | 30         | 24                      | 15                   | 20                 |
| Finland         | 31                   | 34                  | 45                       | 43         | 37     | 22                    | 54         | 6                       | 16                   | 2                  |
| France          | 14                   | 28                  | 11                       | 55         | 54     | 50                    | 63         | 25                      | 29                   | 21                 |
| Germany         | 6                    | 8                   | 7                        | 6          | 39     | 19                    | 58         | 18                      | 23                   | 14                 |
| Greece          | 58                   | 26                  | 49                       | 57         | 32     | 58                    | 60         | 49                      | 34                   | 35                 |
| Hong Kong SAR   | 49                   | 3                   | 4                        | 25         | 62     | 3                     | 2          | 11                      | 1                    | 27                 |
| Hungary         | 18                   | 12                  | 40                       | 20         | 19     | 44                    | 45         | 41                      | 43                   | 43                 |
| Iceland         | 55                   | 57                  | 57                       | 18         | 60     | 18                    | 34         | 23                      | 21                   | 6                  |
| India           | 17                   | 35                  | 31                       | 45         | 51     | 51                    | 32         | 45                      | 47                   | 56                 |
| Indonesia       | 23                   | 50                  | 38                       | 11         | 15     | 33                    | 6          | 44                      | 50                   | 42                 |
| Ireland         | 1                    | 18                  | 51                       | 17         | 42     | 16                    | 20         | 13                      | 5                    | 16                 |
| Israel          | 24                   | 36                  | 25                       | 38         | 53     | 38                    | 21         | 27                      | 31                   | 26                 |
| Italy           | 35                   | 25                  | 15                       | 59         | 47     | 60                    | 59         | 42                      | 45                   | 44                 |
| Japan           | 9                    | 39                  | 9                        | 2          | 59     | 61                    | 41         | 21                      | 35                   | 29                 |
| Jordan          | 61                   | 42                  | 61                       | 63         | 35     | 48                    | 25         | 47                      | 39                   | 51                 |
| Kazakhstan      | 41                   | 60                  | 48                       | 33         | 16     | 23                    | 16         | 50                      | 28                   | 38                 |
| Korea Rep.      | 11                   | 41                  | 30                       | 12         | 48     | 27                    | 19         | 29                      | 46                   | 31                 |
| Latvia          | 51                   | 37                  | 62                       | 52         | 22     | 26                    | 44         | 30                      | 32                   | 33                 |
| Lithuania       | 40                   | 7                   | 55                       | 46         | 12     | 29                    | 39         | 33                      | 30                   | 36                 |
| Luxembourg      | 13                   | 6                   | 10                       | 9          | 45     | 7                     | 43         | 9                       | 9                    | 11                 |
| Malaysia        | 29                   | 9                   | 36                       | 16         | 1      | 35                    | 9          | 32                      | 49                   | 39                 |
| Mexico          | 47                   | 58                  | 32                       | 8          | 18     | 47                    | 29         | 56                      | 58                   | 47                 |
| Mongolia        | 59                   | 61                  | 54                       | 60         | 7      | 42                    | 33         | 58                      | 56                   | 41                 |
| Netherlands     | 12                   | 2                   | 5                        | 3          | 46     | 8                     | 50         | 4                       | 4                    | 8                  |
| New Zealand     | 39                   | 43                  | 46                       | 29         | 24     | 13                    | 22         | 8                       | 8                    | 9                  |
| Norway          | 8                    | 51                  | 20                       | 24         | 43     | 1                     | 42         | 3                       | 14                   | 1                  |
| Peru            | 54                   | 56                  | 47                       | 22         | 31     | 28                    | 28         | 46                      | 38                   | 52                 |
| Philippines     | 30                   | 48                  | 43                       | 26         | 44     | 37                    | 14         | 48                      | 57                   | 53                 |
| Poland          | 22                   | 16                  | 53                       | 35         | 13     | 40                    | 52         | 39                      | 44                   | 32                 |
| Portugal        | 48                   | 31                  | 34                       | 40         | 30     | 46                    | 53         | 35                      | 22                   | 22                 |
| Qatar           | 5                    | 54                  | 35                       | 1          | 2      | 9                     | 1          | 14                      | 24                   | 34                 |
| Romania         | 32                   | 44                  | 60                       | 41         | 21     | 49                    | 35         | 51                      | 40                   | 54                 |
| Russia          | 36                   | 47                  | 27                       | 47         | 52     | 34                    | 18         | 59                      | 54                   | 57                 |
| Saudi Arabia    | 33                   | 40                  | 22                       | 15         | 10     | 15                    | 7          | 28                      | 25                   | 55                 |
| Singapore       | 7                    | 1                   | 3                        | 7          | 58     | 6                     | 10         | 7                       | 3                    | 18                 |
| Slovak Republic | 43                   | 30                  | 63                       | 50         | 27     | 53                    | 51         | 55                      | 60                   | 46                 |
| Slovenia        | 45                   | 10                  | 58                       | 37         | 11     | 39                    | 57         | 34                      | 36                   | 25                 |
| South Africa    | 60                   | 52                  | 44                       | 62         | 5      | 59                    | 11         | 53                      | 55                   | 59                 |
| Spain           | 34                   | 22                  | 14                       | 54         | 26     | 54                    | 46         | 38                      | 42                   | 24                 |
| Sweden          | 20                   | 15                  | 16                       | 39         | 40     | 12                    | 56         | 5                       | 7                    | 3                  |
| Switzerland     | 4                    | 13                  | 18                       | 30         | 57     | 2                     | 8          | 2                       | 12                   | 5                  |
| Taiwan, China   | 10                   | 27                  | 26                       | 31         | 14     | 11                    | 4          | 12                      | 27                   | 15                 |
| Thailand        | 38                   | 5                   | 29                       | 10         | 28     | 17                    | 5          | 40                      | 33                   | 40                 |
| Turkey          | 56                   | 14                  | 42                       | 61         | 36     | 41                    | 36         | 57                      | 37                   | 58                 |
| UAE             | 25                   | 4                   | 17                       | 5          | 6      | 5                     | 3          | 15                      | 6                    | 17                 |
| Ukraine         | 52                   | 21                  | 59                       | 51         | 50     | 56                    | 23         | 61                      | 53                   | 60                 |
| United Kingdom  | 19                   | 17                  | 12                       | 19         | 61     | 36                    | 27         | 16                      | 10                   | 23                 |
| USA             | 3                    | 32                  | 1                        | 14         | 49     | 55                    | 12         | 22                      | 18                   | 37                 |
| Venezuela       | 63                   | 63                  | 52                       | 42         | 63     | 57                    | 15         | 62                      | 63                   | 63                 |

| Business Efficiency       |              |         |                      |                      | Infrastructure       |                              |                           |                        |           |                 |
|---------------------------|--------------|---------|----------------------|----------------------|----------------------|------------------------------|---------------------------|------------------------|-----------|-----------------|
| Productivity & Efficiency | Labor Market | Finance | Management Practices | Attitudes and Values | Basic Infrastructure | Technological Infrastructure | Scientific Infrastructure | Health and Environment | Education |                 |
| 60                        | 41           | 62      | 55                   | 62                   | 51                   | 58                           | 51                        | 47                     | 46        | Argentina       |
| 27                        | 18           | 11      | 35                   | 23                   | 19                   | 18                           | 21                        | 11                     | 12        | Australia       |
| 10                        | 21           | 20      | 9                    | 35                   | 11                   | 19                           | 12                        | 7                      | 13        | Austria         |
| 16                        | 36           | 15      | 26                   | 40                   | 39                   | 20                           | 17                        | 19                     | 10        | Belgium         |
| 61                        | 47           | 35      | 39                   | 47                   | 54                   | 54                           | 41                        | 40                     | 63        | Brazil          |
| 46                        | 57           | 54      | 54                   | 45                   | 52                   | 46                           | 48                        | 50                     | 51        | Bulgaria        |
| 19                        | 5            | 6       | 7                    | 12                   | 8                    | 14                           | 19                        | 8                      | 4         | Canada          |
| 52                        | 29           | 26      | 45                   | 39                   | 30                   | 45                           | 55                        | 38                     | 50        | Chile           |
| 23                        | 6            | 28      | 20                   | 11                   | 22                   | 10                           | 10                        | 36                     | 29        | China           |
| 54                        | 40           | 57      | 30                   | 55                   | 46                   | 59                           | 56                        | 48                     | 58        | Colombia        |
| 57                        | 63           | 58      | 63                   | 63                   | 59                   | 55                           | 57                        | 37                     | 40        | Croatia         |
| 37                        | 24           | 31      | 40                   | 36                   | 48                   | 49                           | 53                        | 29                     | 5         | Cyprus          |
| 25                        | 48           | 41      | 44                   | 42                   | 27                   | 33                           | 24                        | 33                     | 38        | Czech Republic  |
| 1                         | 8            | 8       | 1                    | 3                    | 4                    | 5                            | 9                         | 2                      | 1         | Denmark         |
| 28                        | 37           | 39      | 18                   | 26                   | 28                   | 35                           | 44                        | 28                     | 17        | Estonia         |
| 14                        | 26           | 5       | 11                   | 18                   | 12                   | 4                            | 16                        | 4                      | 7         | Finland         |
| 24                        | 53           | 14      | 47                   | 61                   | 17                   | 11                           | 14                        | 14                     | 25        | France          |
| 18                        | 20           | 17      | 32                   | 43                   | 21                   | 25                           | 4                         | 6                      | 28        | Germany         |
| 42                        | 55           | 50      | 53                   | 48                   | 43                   | 43                           | 40                        | 35                     | 35        | Greece          |
| 6                         | 7            | 2       | 3                    | 5                    | 2                    | 7                            | 23                        | 17                     | 11        | Hong Kong SAR   |
| 51                        | 61           | 49      | 60                   | 59                   | 34                   | 44                           | 36                        | 39                     | 45        | Hungary         |
| 17                        | 33           | 32      | 2                    | 8                    | 1                    | 23                           | 35                        | 10                     | 6         | Iceland         |
| 39                        | 12           | 30      | 49                   | 25                   | 49                   | 30                           | 27                        | 61                     | 57        | India           |
| 47                        | 4            | 38      | 22                   | 27                   | 42                   | 53                           | 47                        | 58                     | 56        | Indonesia       |
| 2                         | 9            | 23      | 13                   | 1                    | 35                   | 21                           | 20                        | 18                     | 21        | Ireland         |
| 31                        | 34           | 29      | 33                   | 16                   | 45                   | 16                           | 5                         | 26                     | 23        | Israel          |
| 34                        | 58           | 42      | 48                   | 53                   | 53                   | 39                           | 22                        | 21                     | 33        | Italy           |
| 55                        | 45           | 18      | 62                   | 56                   | 44                   | 31                           | 8                         | 9                      | 32        | Japan           |
| 50                        | 60           | 55      | 38                   | 31                   | 62                   | 51                           | 60                        | 52                     | 49        | Jordan          |
| 40                        | 32           | 47      | 19                   | 29                   | 31                   | 52                           | 58                        | 57                     | 44        | Kazakhstan      |
| 38                        | 28           | 34      | 36                   | 15                   | 20                   | 13                           | 3                         | 31                     | 27        | Korea Rep.      |
| 43                        | 43           | 51      | 34                   | 38                   | 37                   | 24                           | 54                        | 32                     | 26        | Latvia          |
| 21                        | 30           | 48      | 8                    | 22                   | 29                   | 22                           | 42                        | 30                     | 30        | Lithuania       |
| 15                        | 17           | 13      | 28                   | 21                   | 15                   | 41                           | 28                        | 22                     | 16        | Luxembourg      |
| 32                        | 23           | 33      | 23                   | 30                   | 13                   | 17                           | 32                        | 44                     | 37        | Malaysia        |
| 48                        | 22           | 52      | 50                   | 50                   | 55                   | 57                           | 46                        | 53                     | 62        | Mexico          |
| 62                        | 50           | 61      | 58                   | 44                   | 50                   | 62                           | 63                        | 63                     | 54        | Mongolia        |
| 7                         | 2            | 4       | 15                   | 9                    | 9                    | 3                            | 13                        | 15                     | 14        | Netherlands     |
| 49                        | 39           | 22      | 24                   | 19                   | 23                   | 40                           | 31                        | 13                     | 19        | New Zealand     |
| 3                         | 19           | 12      | 5                    | 14                   | 3                    | 12                           | 18                        | 3                      | 9         | Norway          |
| 56                        | 42           | 53      | 46                   | 37                   | 58                   | 61                           | 61                        | 51                     | 53        | Peru            |
| 45                        | 10           | 37      | 29                   | 33                   | 60                   | 48                           | 59                        | 55                     | 61        | Philippines     |
| 26                        | 46           | 43      | 41                   | 49                   | 38                   | 37                           | 30                        | 41                     | 31        | Poland          |
| 44                        | 44           | 44      | 52                   | 24                   | 36                   | 29                           | 34                        | 24                     | 24        | Portugal        |
| 11                        | 11           | 21      | 10                   | 7                    | 5                    | 36                           | 50                        | 42                     | 42        | Qatar           |
| 29                        | 59           | 59      | 56                   | 54                   | 56                   | 42                           | 45                        | 45                     | 52        | Romania         |
| 58                        | 51           | 45      | 61                   | 58                   | 41                   | 38                           | 25                        | 56                     | 39        | Russia          |
| 22                        | 14           | 25      | 43                   | 13                   | 16                   | 28                           | 29                        | 54                     | 41        | Saudi Arabia    |
| 9                         | 3            | 10      | 14                   | 6                    | 18                   | 1                            | 15                        | 23                     | 2         | Singapore       |
| 36                        | 62           | 56      | 59                   | 60                   | 47                   | 47                           | 49                        | 43                     | 48        | Slovak Republic |
| 33                        | 52           | 36      | 31                   | 46                   | 40                   | 32                           | 33                        | 27                     | 22        | Slovenia        |
| 59                        | 49           | 40      | 57                   | 57                   | 61                   | 60                           | 43                        | 60                     | 59        | South Africa    |
| 30                        | 54           | 27      | 51                   | 51                   | 24                   | 26                           | 26                        | 20                     | 36        | Spain           |
| 4                         | 16           | 7       | 4                    | 4                    | 7                    | 2                            | 6                         | 1                      | 8         | Sweden          |
| 8                         | 13           | 1       | 16                   | 17                   | 6                    | 9                            | 2                         | 5                      | 3         | Switzerland     |
| 13                        | 25           | 16      | 6                    | 10                   | 32                   | 8                            | 7                         | 25                     | 20        | Taiwan, China   |
| 41                        | 15           | 24      | 21                   | 20                   | 26                   | 34                           | 39                        | 49                     | 55        | Thailand        |
| 35                        | 35           | 46      | 27                   | 32                   | 33                   | 50                           | 38                        | 46                     | 47        | Turkey          |
| 12                        | 1            | 19      | 12                   | 2                    | 10                   | 27                           | 37                        | 34                     | 34        | UAE             |
| 53                        | 38           | 60      | 42                   | 41                   | 57                   | 56                           | 52                        | 62                     | 43        | Ukraine         |
| 20                        | 27           | 9       | 25                   | 34                   | 25                   | 15                           | 11                        | 12                     | 18        | United Kingdom  |
| 5                         | 31           | 3       | 17                   | 28                   | 14                   | 6                            | 1                         | 16                     | 15        | USA             |
| 63                        | 56           | 63      | 37                   | 52                   | 63                   | 63                           | 62                        | 59                     | 60        | Venezuela       |

# Methodology in a Nutshell

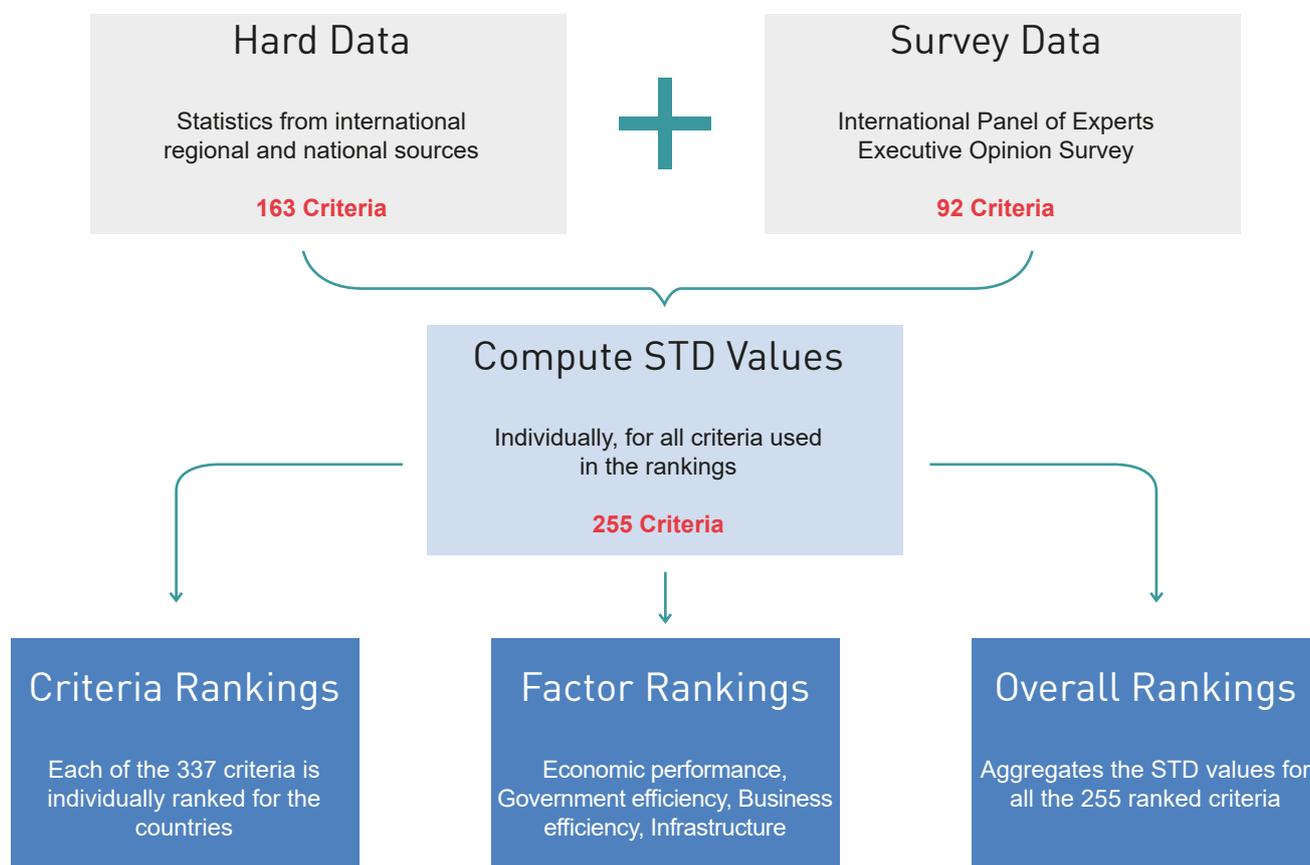
1. The IMD World Competitiveness ranking analyzes and ranks the capacity of countries to create and maintain an environment which sustains the competitiveness of enterprises.
2. It means that we assume that wealth creation takes place primarily at enterprise level (whether private or state-owned) - this field of research is called: "competitiveness of enterprises".
3. However, enterprises operate in a national environment which enhances or hinders their ability to compete domestically or internationally - this field of research is called: "competitiveness of countries" and is covered by the World Competitiveness ranking.
4. Based on analysis made by leading scholars and by our own research and experience, the methodology of the World Competitiveness ranking thus divides the national environment into four main factors:
  - Economic Performance
  - Government Efficiency
  - Business Efficiency
  - Infrastructure
5. In turn, each of these factors is divided into 5 sub-factors which highlight every facet of the areas analyzed. Altogether, the World Competitiveness ranking features 20 such sub-factors.
6. These 20 sub-factors comprise 337 criteria, although each sub-factor does not necessarily have the same number of criteria (for example, it takes more criteria to assess Education than to evaluate Prices).
7. Each sub-factor, independently of the number of criteria it contains, has the same weight in the overall consolidation of results, that is 5% ( $20 \times 5 = 100$ ).
8. Criteria can be hard data, which analyze competitiveness as it can be measured (e.g. GDP) or soft data, which analyze competitiveness as it is perceived (e.g. availability of competent managers). Hard criteria represent a weight of  $\frac{2}{3}$  in the overall ranking whereas the survey data represent a weight of  $\frac{1}{3}$ .
9. In addition, some criteria are for background information only, which means that they are not used in calculating the overall competitiveness ranking (e.g. population under 15).
10. Finally, aggregating the results of the 20 sub-factors makes the total consolidation, which leads to the overall ranking of the IMD World Competitiveness ranking.

# What is the IMD World Competitiveness Ranking?

## Competitiveness Factors and Sub-factors

| FACTORS     | Economic Performance  | Government Efficiency   | Business Efficiency  | Infrastructure   |
|-------------|---|---|--|--|
|             | <i>Macro-economic evaluation of the domestic economy, employment trends and prices.</i>     | <i>Extent to which government policies are conducive to competitiveness.</i>                          | <i>Extent to which the national environment encourages enterprises to perform in an innovative, profitable and responsible manner.</i> | <i>Extent to which basic, technological, scientific and human resources meet the needs of businesses.</i>                |
| SUB-FACTORS | Domestic Economy<br>International Trade<br>International Investment<br>Employment<br>Prices | Public Finance<br>Tax Policy<br>Institutional Framework<br>Business Legislation<br>Societal Framework | Productivity<br>Labor Market<br>Finance<br>Management Practices<br>Attitudes and Values  | Basic Infrastructure<br>Technological Infrastructure<br>Scientific Infrastructure<br>Health and Environment<br>Education |

## Computing the Rankings



This section presents the data for all criteria and economies that are included in the IMD World Competitiveness Ranking. The economies are ranked on a global basis from the most to the least competitive. A low ranking number indicates a strong competitive position and vice-versa. However, with some criteria the inverse may be true; where the lowest value is the most competitive, for example, Government Debt. In these cases, an inverse ranking is used.

Economies are ranked by individual criterion and all criteria are grouped by Competitiveness Factor. The statistical tables present **Hard data (A)** drawn from international, national and regional organizations. Collaboration with 57 Partner Institutes worldwide helps us gather complete, up-to-date and reliable statistics.

When statistical data is not available or is too out-dated to be relevant for a particular economy, the name appears at the bottom of the statistical table and a dash is shown. When the data is older than the reference year, the year of the data is shown next to the criterion value.

The tables also consist of **Survey responses (B)** from our annual Executive Opinion Survey. Additional information is provided as background data.

The Survey icon indicates that the data is drawn from our Executive Opinion Survey.



All background data are shown by the Background icon at the top of the table.



Only Hard data and Survey responses are used in the consolidation to determine the rankings. Background data is not included but provided for information only. The statistical tables which display a "Ranking" column indicate that the criterion is used when consolidating the data for the Overall Scoreboard. The ranking shows the economy's performance in that particular criterion. When data is not available or is too old to be relevant, a dash is shown.

## Hard data (A)

| Public Finance                           |                | 2.1.01        |
|--|----------------|---------------|
| GOVERNMENT BUDGET SURPLUS/DEFICIT (\$BN) |                |               |
| 2019                                     |                |               |
| US\$ billions                            |                |               |
|  |                |               |
| Ranking                                  |                | US\$ billions |
| 1  | GERMANY        | 55.74         |
| 2  | NORWAY         | 25.76         |
| 3  | RUSSIA         | 16.22         |
| 4  | NETHERLANDS    | 15.71         |
| 5  | DENMARK        | 12.73         |
| 6  | KOREA REP.     | 11.94         |
| 7  | SWITZERLAND    | 9.81          |
| 8  | AUSTRIA        | 3.27          |
| 9  | GREECE         | 3.07          |
| 10                                       | SWEDEN         | 2.62          |
| 11                                       | QATAR          | 1.73          |
| 12                                       | LUXEMBOURG     | 1.55          |
| 13                                       | IRELAND        | 1.50          |
| 14                                       | BULGARIA       | 1.41          |
| 15                                       | CZECH REPUBLIC | 0.67          |
| 16                                       | PORTUGAL       | 0.45          |
| 17                                       | CYPRUS         | 0.43          |
| 18                                       | SLOVENIA       | 0.29          |
| 19                                       | CROATIA        | 0.23          |
| 20                                       | NEW ZEALAND    | 0.23          |
| 21                                       | LITHUANIA      | 0.14          |
| 22                                       | MONGOLIA       | 0.08          |

## Survey Responses (B)

| Business Legislation - Competition and Regulations |                | 2.4.13                   |
|--|----------------|--------------------------|
| CREATION OF FIRMS                                  |                |                          |
| 2020   |                |                          |
| Creation of firms is                               |                |                          |
| hindered by legislation                            |                | supported by legislation |
|  |                |                          |
| Ranking  |                | Survey [0..10]           |
| 1  | DENMARK        | 8.95                     |
| 2  | SINGAPORE      | 8.74                     |
| 3  | NEW ZEALAND    | 8.71                     |
| 4  | ESTONIA        | 8.67                     |
| 5  | HONG KONG SAR  | 8.59                     |
| 6  | SWEDEN         | 8.49                     |
| 7  | UAE            | 8.36                     |
| 8  | USA            | 8.22                     |
| 9  | ICELAND        | 8.09                     |
| 10   | NETHERLANDS    | 8.07                     |
| 11   | FINLAND        | 8.05                     |
| 12   | AUSTRALIA      | 8.00                     |
| 13   | SWITZERLAND    | 7.94                     |
| 14   | IRELAND        | 7.92                     |
| 15   | QATAR          | 7.87                     |
| 16   | UNITED KINGDOM | 7.82                     |
| 17   | KAZAKHSTAN     | 7.82                     |
| 18   | LUXEMBOURG     | 7.77                     |
| 19   | NORWAY         | 7.70                     |
| 20   | PORTUGAL       | 7.69                     |
| 21   | LITHUANIA      | 7.64                     |
| 22   | CHILE          | 7.57                     |
| 23   | SAUDI ARABIA   | 7.54                     |
| 24   | CANADA         | 7.51                     |
| 25   | CYPRUS         | 7.50                     |
| 26   | TURKEY         | 7.26                     |
| 27   | ...            | ...                      |





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# APPENDICES

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# Criteria Excluded From Profiles

|        |  |        |  |
|--------|--|--------|--|
| 1.1.01 | Gross domestic product (GDP)             | 4.1.02 | Arable area                            |
| 1.1.02 | GDP (PPP)                                | 4.1.03 | Water resources                        |
| 1.2.11 | Exports of goods - growth                | 4.1.10 | Roads                                  |
| 1.2.14 | Exports of commercial services - growth  | 4.1.11 | Railroads                              |
| 1.2.24 | Terms of trade index                     | 4.1.17 | Total indigenous energy production (%) |
| 1.3.14 | Portfolio investment assets (\$bn)       | 4.2.05 | Computers in use                       |
| 1.3.15 | Portfolio investment liabilities (\$bn)  | 4.2.15 | High-tech exports (\$m)                |
| 1.4.01 | Employment                               | 4.3.01 | Total expenditure on R&D (\$m)         |
| 1.4.03 | Employment - growth                      | 4.3.04 | Business expenditure on R&D (\$m)      |
|        |  | 4.3.06 | Total R&D personnel nationwide         |
| 2.1.08 | Interest payment                         | 4.3.12 | Scientific articles                    |
| 2.1.12 | General government expenditure           | 4.3.14 | Nobel prizes per capita                |
| 2.5.03 | Ageing of population                     | 4.3.15 | Patent applications                    |
| 2.5.11 | Females in parliament                    | 4.3.17 | Patent grants                          |
| 2.5.13 | Gender inequality                        | 4.4.14 | Water consumption intensity            |
|        |  | 4.4.16 | CO2 emissions intensity                |
| 3.1.02 | Overall productivity (PPP) - real growth | 4.4.22 | Ecological balance (reserve/deficit)   |
| 3.2.11 | Labor force (millions)                   | 4.5.12 | Educational assessment                 |
| 3.2.13 | Labor force growth                       | 4.5.19 | Illiteracy                             |
| 3.2.15 | Part-time employment                     |        |  |
| 3.3.03 | Financial card transactions              |        |  |
| 3.3.12 | Listed domestic companies                |        |  |
| 3.3.13 | Stock market index (%)                   |        |  |
| 3.3.15 | Initial Public Offerings (\$m)           |        |  |
| 3.3.18 | M&A activity                             |        |  |
| 3.4.12 | Women on boards                          |        |  |

The above criteria represent all ranked data that are excluded from the analysis of an economy's evolution, strengths and weaknesses highlighted in the National Competitiveness Profiles. These criteria were excluded because the economy has little control to influence them, for example, due to a size factor such as arable land, or when there is a very limited impact on competitiveness. The background data are not taken into consideration nor do they appear in any of the profile pages, as they are not used in any calculations to determine the rankings.

The following organizations have supplied their most currently available statistical data for the World Competitiveness Yearbook. This has enabled us to provide the most up-to-date and accurate data for this edition. We would like to thank them for their generous cooperation and their kind permission to reproduce their statistical material.

# International and Regional Organizations

Eurostat, Luxembourg:  
<http://ec.europa.eu/eurostat>  
© European Communities

Food and Agriculture Organization of the UN, Rome, Italy:  
[www.fao.org](http://www.fao.org)

International Civil Aviation Organization (ICAO), Montreal, Canada:  
Traffic (Commercial Air Carriers)

International Energy Agency (IEA), Paris, France:  
IEA Statistics Online: World Energy Balances © OECD/IEA  
Renewable Statistics

International Labour Office (ILO), Geneva, Switzerland:  
<http://laborsta.ilo.org>

International Monetary Fund (IMF), Washington, USA:  
Government Finance Statistics Yearbook  
International Financial Statistics, IMF eLIBRARY-DATA  
World Economic Outlook Database

International Road Federation (IRF), Geneva, Switzerland:  
[www.irfnet.org](http://www.irfnet.org)  
World Road Statistics

International Union of Railways, Paris, France:  
International Railways Statistics

Organization for Economic Cooperation and Development (OECD), Paris, France:  
OECD, Main Economic Indicators - complete database  
Consumption Tax Trends  
Education at a Glance  
Energy Prices and Taxes (International Energy Agency)  
Environmental Data  
Unit labor costs database  
Main Science and Technology Indicators  
PISA  
Revenue Statistics

United Nations, New York, USA and Geneva, Switzerland:  
UNCTAD, United Nations Conference on Trade and Development  
Energy Statistics Yearbook  
Human Development Report (UNDP)  
UN Demographic Database  
World Investment Database UNCTADSTAT  
UNEP Sustainable Development Goals  
UNIDO

United Nations Educational, Scientific and Cultural Organization (UNESCO), Montreal, Canada:  
Global Education Digest  
[www.unesco.org](http://www.unesco.org)

World Bank, Washington DC, USA:  
Global Database of Shared Prosperity (GDSP)  
Global Financial Inclusion Database  
World Development Indicators Database  
Development Data Group – <http://databank.worldbank.org>  
Doing Business  
Entrepreneurship Survey and Database

World Health Organization, Geneva, Switzerland:  
World Health Statistics  
[www.who.org](http://www.who.org)

World Intellectual Property Organization (WIPO), Geneva, Switzerland:  
WIPO Statistics Database  
[www.wipo.int/ipstats](http://www.wipo.int/ipstats)

World Tourism Organization, Madrid, Spain:  
Tourism Highlights

World Trade Organization, Geneva, Switzerland:  
World Trade Organization Statistics Database  
World Tariff Profiles  
[www.wto.org](http://www.wto.org)

# National Sources

The information has been collected by our Partner Institutes in their respective countries, from the following sources:

**Argentina:** Research Program on Economic Development and Institutions, Faculty of Economic Sciences, Catholic University of Argentina, Buenos Aires  
Central Bank of the Argentine Republic, Ministry of Economy, Statistics and Census National Institute (INDEC).

**Australia:** CEDA - Committee for Economic Development of Australia  
ABS Quarterly and Annual National Accounts, RBA Bulletin, ABS Labour Force Statistics, ABS employee earnings, ABS Demographic Statistics, AIHW Health Expenditure Australia, Reserve Bank of Australia.

**Austria:** Federation of Austrian Industries, Vienna; Austrian Institute of Economic Research, Vienna  
Statistics Austria, Economic Bulletin, Austrian National Bank, WIFO, Ministry of Finance, BMF, Austrian Institute of Economic Research.

**Belgium:** FEB - Federation of Enterprises in Belgium, Brussels  
National Bank of Belgium (NBB), Institute for National Accounts (INA), Ministry of Economic Affairs, Federal Planning Bureau, Statbel.

**Brazil:** Fundação Dom Cabral, Innovation and Entrepreneurship Center  
Brazilian Central Bank, Brazilian Geographic and Statistics Institute (IBGE), National Treasury, IPEA, Ministry of Finance, Ministry of Tourism, Ministry of Labour and Employment, National Department for Infrastructure and Transport, Focus, PNAD, IBGE.

**Bulgaria:** Center for the Study of Democracy, Sofia  
National Bank of Bulgaria (BNB), NSI Statistical Institute, Ministry of Finance, National Budget, European Commission.

**Canada:** Information and Communications Technology Council (ICTC)  
Statistics Canada, Agriculture Canada, Bank of Canada, Department of Finance - Fiscal Reference Tables & Annual Financial Report, Canada Fact and Figures: Immigration Overview.

**Chile:** Universidad de Chile, Facultad de Economía y Negocios (FEN)  
Central Bank of Chile, National Statistical Institute (INE), Dipres, National Science and Technology Commission (CONICYT), IPSA Santiago.

**China:** China Institute for Development Planning, Tsinghua University  
China Statistical Yearbook, National Debt Association of China, State Administration of Foreign Exchange, National Bureau of Statistics, Ministry of Finance, Shanghai Stock Exchange, Ministry of Science and Technology, Ministry of Education, ADO, WEO.

**Colombia:** National Planning Department  
Direction of Economic Studies (DNP), DANE, National Central Bank, National Planning Department, National Statistics Department, Ministry of Education, Ministry for Economic Development, OCYT.

**Croatia:** National Competitiveness Council  
Croatian National Bank, Central Bureau of Statistics, Ministry of Finance, Croatian Employment Service, Zagreb Stock Exchange, Ministry of Health and Social Service, Croatia Chamber of Commerce, Ministry of Science, Education and Sport, Institute of Economics, NCC.

**Cyprus:** Economics Research Centre, University of Cyprus  
Statistical Services of Cyprus, Ministry of Finance, Public Debt Management Office, Tax Department, Labour Force Survey, Transport Statistics.

**Czech Republic:** Consumer Forum (Spotřebitelské fórum)  
Czech National Bank, Czech Statistical Office, Ministry of Finance, Prague Stock Exchange, ARAD, Ministry of Transport.

**Denmark:** Confederation of Danish Industries  
Statistics Denmark, National Bank, Central Bank of Denmark, Danish Ministry of Children and Education, Danish National Labour Market Authority.

**Estonia:** Estonian Institute of Economic Research (EKI)

Statistic Estonia (SE), Estonian Bank (EB), Ministry of Finance, Ministry of Education Research, Labor Inspectorate, Citizenship and Migration Board, Ministry of Social Affairs, Estonian Energy, Tallinn Stock Exchange, Estonian Environment Centre, Ober Haus.

**Finland:** ETLA, Economic Research

Bank of Finland, Statistics Finland, National Accounts, Customs Foreign Trade,

**France:** Business France, Paris

INSEE-DGTPE, OECD Economic Perspectives, Bank of France, Customs Authorities, Agence France Trésor.

**Greece:** Federation of Industries of Greece (SBE), Thessaloniki; Foundation for Economic and Industrial Research (FEIR/IOBE), Athens

Hellenic Statistical Authority (ELSTAT), Bank of Greece, Ministry of Economy, Labor Force Survey, Ministry of Environment, Ministry of Finance, Athens Stock Exchange.

**Hong Kong SAR:** Hong Kong Trade Development Council

Census and Statistics Department, Economic Analysis Division, EABFU, Financial Secretary's Office, The Treasury Branch, Hong Kong Monetary Authority, Labour Department, Planning Department, Hong Kong Exchanges and Clearing Ltd, Highways Department, Transport Department, Food and Health Bureau, Hong Kong Medical Council, Department of Health, Environmental Protection Department, Education Bureau.

**Hungary:** National University of Public Service, Competitiveness and Fiscal Stability Research Group

Central Statistical Office, Hungarian National Bank, Government Debt Management Agency, National Tax and Customs Agency, Hungarian Financial Supervisory Authority, Budapest Stock Exchange.

**Iceland:** Icelandic Chamber of Commerce, Reykjavik

Statistics Iceland, Central Bank of Iceland, Ministry of Finance, Leigulistinn, Landsvirkjun.

**India:** National Productivity Council, New Delhi

Central Statistical Office, Economic Survey of India, Economic Census of India, Centre for Monitoring Indian Economy Monthly Review, Reserve Bank of India, Annual Survey of Industries, NSSO, Ministries of Finance, Power, Human Resource Development, and Labour & Employment, Departments of Education, Industrial Policy & Promotion, Science & Technology, Delhi Electricity Regulation Commission, MOSPL.

**Indonesia:** Lembaga Management, Faculty of Economics and Business, Universitas Indonesia (LM FEB UI), Jakarta, NuPMK Consulting, Jakarta

Bank of Indonesia, Central Board of Statistics, Ministry of Finance, Ministry of Education, National Budget, Department of Manpower, Indonesian Financial Statistics.

**Ireland:** IDA Ireland

Central Bank of Ireland, Central Statistics Office, ESRI Quarterly Bulletin, National Treasury Management Agency, CSI Quarterly National Household Survey, Department of Finance, Irish Stock Exchange, Department of Education.

**Israel:** The Federation of Israeli Chambers of Commerce, Tel-Aviv

Bank of Israel, Ministry of Finance, Central Bureau of Statistics, Ministry of Health.

**Italy:** CONFINDUSTRIA, Economic Research Department, Rome

Bank of Italy, ISTAT National Accounts and Labour Force Survey, Ministry of Education.

**Japan:** Mitsubishi Research Institute, Inc., Tokyo

Statistical Bureau Japanese Government, Bank of Japan, Economic and Social Research Institute, Ministry of Finance, Ministry of Public Management, Nikkei Stock Exchange, Research Center for Policy and Economy.

**Jordan:** Ministry of Planning and International Cooperation

Central Bank of Jordan, Department of Statistics, Ministry of Finance, Ministry of Labor, Ministry of Tourism, Higher Council for Science and Technology, Ministry of Energy and Mineral Resources, Ministry of Health, National Center for Human Resources Development, Social Security Corporation.

**Kazakhstan:** Economic Research Institute, JSC of the Ministry of National Economy of the Republic of Kazakhstan, Nur-Sultan

National Bank, Agency of Statistics, Ministry of Finance, Ministry of Labor and Social Protection, Committee of Intellectual Property Rights of the Ministry of Justice, Ministry of economic Development and Trade.

**Korea Rep.:** Korea Institute for International Economic Policy (KIEP)

Bank of Korea, Statistics Korea, Ministry of Strategy and Finance, National Tax Service, Ministry of Labor, Ministry of Justice, Ministry of Land, Transport and Maritime Affairs, Ministry of Trade, Industry and Energy, Ministry of Education, Science and Technology.

**Latvia:** University of Latvia Centre for European and Transition Studies, LU CETS  
CBS Lavia, 2016 Prognosis MoE, Bank of Latvia, Central Statistical Bureau of Latvia, The Treasury, State Revenue Service, State Social Insurance Agency, Ministry of Finance.

**Lithuania:** Enterprise Lithuania  
Bank of Lithuania, Lithuanian Department of Statistics, Ministry of Finance, Ministry of Social Security and Labour, Lithuanian Health Information Centre, Ministry of Environment.

**Luxembourg:** Chamber of Commerce of the Grand Duchy of Luxembourg  
Central Bank, "Service Central de la Statistique et des Etudes Economiques" (STATEC), "Comité de Prévision" IGSS, Luxembourg State Budget, Luxembourg Stock Exchange, Ministry of Finance, Ministry of Environment.

**Malaysia:** Malaysia Productivity Corporation (MPC), Petaling Jaya, Selangor  
Central Bank of Malaysia, Department of Statistics, Employees Provident Funds, Inland Revenue Board, Ministries of Education, of Finance, of Science Technology & Innovation, of Human Resources, of Health, of Energy, Green Technology and Water, Solid Waste And Public Cleansing Management Corporation, Malaysian Science & Technology Information Centre, Department of Immigration, Malaysian Stock Exchange, Ministry of Domestic Trade, Co-operative and Consumerism, MPC, JPPH, LHDN, MOHE, KPDKK.

**Mexico:** Strategic Studies Center for Competitiveness  
Bank of Mexico, Instituto Nacional de Estadística Geografía e Informática (INEGI), Secretaría de Hacienda y Crédito Público (SHCP).

**Mongolia:** Economic Policy and Competitiveness Research Center  
NRSO Bulletin, NRSO Labor Force Survey, National Employment Service, Ministry of Labor, Ministry of Finance, Bank of Mongolia, Mongolian Tax Administration, Information, Communications Technology and Post Authority, Center for Health Development, Ministry of Environment, Green Development and Tourism, Population and Housing Census.

**Netherlands:** Confederation of Netherlands Industry and Employers (VNO-NCW), The Hague  
CBS Quarterly National Accounts, CPB Economic Outlook, Ministry of Finance, CBS Population and Population Dynamics.

**New Zealand:** Kerridge & Partners, Auckland  
Census, Kiwirails, Education Stats of NZ, NZ GDP Report, NZ treasury department, CJ CTS/National police, nat. road Statistics

**Norway:**  
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**Peru:** CENTRUM PUCP  
Central Reserve Bank of Peru (BCRP), Ministry of Labour (MINTRA), National Institute of Statistics and Information (INEI), National Superintendency of Tax Administration (SUNAT), Peruvian Congress, Peruvian Banking Association (Asbanc), Superintendency of Banking, Insurance and Private Pension Funds (SBS), Lima Stock Exchange (BVL), Ministry of Agriculture (MINAG), National Sanitation Services Supervisory (SUNASS), Ministry of Economy and Finance (MEF).

**Philippines:** Asian Institute of Management, Rizalino S. Navarro Policy Center for Competitiveness  
National Statistical Coordination Board, Central Bank, National Economic and Development Authority, National Statistics Office, Bureau of Treasury, Bureau of Internal Revenue, Department of Finance, Bureau of Labor and Employment, Department of Transportation and Communications, Department of Energy, Professional Regulation Commission, Department of Science and Technology, ADO.

**Poland:** SGH Warsaw School of Economics, Warsaw  
Central Statistical Office of Poland, Central Bank of Poland, CSO Statistical Bulletin, Statistical Yearbook of the Republic of Poland, Ministry of Finance, Ministry of Infrastructure.

**Portugal:** Porto Business School, University of Porto, Porto  
Quarterly National Accounts INE, Statistical Yearbook, State Budget, Labor Force Survey, Ministry of the Economy, Ministry of Finance, Bank of Portugal,

**Qatar:** Planning and Statistics Authority, Department of Strategic Planning  
Qatar Central Bank (QCB), Qatar Statistical Authority (QSA), Labour Force Sample Survey, Ministry of Economy and Finance, General Secretariat of Development Planning, Household Expenditure and Income Survey, Annual Statistical Abstract, Council of Ministries, The Planning Council.

**Romania:** CIT-IRECSON Center of Technological Information, Bucharest  
Center of Technological Information National Institute of Statistics, National Forecast Commission, Central Budget, Central Bank.

**Russia:** Moscow School of Management SKOLKOVO

Central Bank of Russia, Federal State Statistical Service, Ministry of Finance, SDDS, Roskazna, RSY.

**Saudi Arabia:** NCC, National Competitiveness Center

Saudi Arabia Monetary Authority, CDSI, Labour Force Survey, Bank Saudi Fransi, Ministry of Energy, Industry and Mining, Department of Zakat and Income, Ministry of Finance, GOSI, MODON, National Water Company.

**Singapore:** Economics Division, Ministry of Trade and Industry, Singapore

Monetary Authority of Singapore, Singapore Department of Statistics, Ministry of Trade and Industry, Singapore Exchange, Agency for Science, Technology and Research, Ministry of Education, Ministry of Finance, Ministry of Manpower, Public Services Division, Land Transport Authority.

**Slovak Republic:** The F.A Hayek Foundation, Bratislava

National Bank of Slovakia, Statistical Office of the Slovak Republic, Trend Analyses from ref. Banks, Ministry of Finance, Ministry of Economy, UPSVAR.

**Slovenia:** Institute for Economic Research, Ljubljana

Bank of Slovenia, IMAD, ERBD forecasts, Statistical Yearbook, Ministry of Finance, Management Research, Ljubljana Stock Exchange, Institute of Public Health, Statistical Office of the Slovenia Republic.

**South Africa:** Productivity SA

South African Reserve Bank Bulletin, Statistics South Africa, South Africa Treasury, Budget Ministry of Finance, Department of Labor, Labour Force Survey, Human Sciences Research Council, QLF survey.

**Spain:** Spanish Confederation of Employers, Madrid

National Statistics Institute (INE), Ministry of Economy, Bank of Spain, Balance of Payments, CEOE; Ministry of Education.

**Taiwan, China:** National Development Council, Taipei

Central Bank of the Republic of China, DGBAS Quarterly National Economic Trends, DGBAS Monthly Bulletin of Manpower Statistics, National Treasury Agency, Council of Labor Affairs, Intellectual Property Office, Ministries of Finance, Education, Transportation and Communications and Interior, Manpower Planning Department, Department of Health, National Science Council, Bureau of Energy, Statistics of Taiwan Paper Industry, Construction and Planning Administration.

**Thailand:** Thailand Management Association (TMA), Bangkok

The National Economic and Social Board, National Statistical Office, Bank of Thailand, Ministry of Finance, Fiscal Policy Office, Labour Force Statistics, Labor Stand. Dev. Bureau, Department of Employment, Ministry of Transport, Alien Occupation Control Division, NSTDA, Securities and Exchange Commission.

**Turkey:** TUSIAD, Turkish Industry and Business Association, Economic Research Department

Central Bank of Republic of Turkey, State Institute of Statistics, Turkish Statistical Institute - TURKSTAT, State Planning Organization, Undersecretariat of Treasury, Ministry of Education, Ministry of Finance, Ministry of Labor and Social Security, The Bank Association of Turkey.

**United Arab Emirates:** Federal Competitiveness & Statistics Authority (FCSA), Dubai

Central Bureau of Statistics, National Bureau of Statistics, Ministry of Economy, Ministry of Finance, Ministry of Labor, Ministry of Higher Education and Scientific Research, National Foundation on R&D.

**Ukraine:** International Management Institute (MIM-Kyiv)

National Bank of Ukraine, National Accounts, Ministry of Economy, Balance of Payments, Statistical Yearbook, Ukrainian State Committee on Statistics, Ministry of Finance.

**Venezuela:** Venezuelan Council for Investment Promotion (CONAPRI)

Central Bank of Venezuela, National Statistics Institute, Ministry of Finance, Ministry of Planning, Ministry of Science, Technology and Intermediate Industries.

# Other Institutions

BMI Research:

A Fitch Group Company

Computer Industry Almanac Inc., Arlington Heights, USA:

The Conference Board, New York, USA:

Cushman & Wakefield:

Office Space Across the World Report

Educational Testing Service (The TOEFL® Test),  
Princeton, USA:

Economist Intelligence Unit  
[www.eiu.com](http://www.eiu.com)

Euromonitor International, London, UK:  
Passport GMID

Fitch

Global Entrepreneurship Monitor  
[www.gemconsortium.org](http://www.gemconsortium.org)

Global Footprint Network, Oakland, USA:  
[www.footprintnetwork.org](http://www.footprintnetwork.org)

GMI Ratings, New York, USA:  
[www.gmiratings.com](http://www.gmiratings.com)

HCM International Ltd, Geneva, Switzerland:  
CCT-ProSurvey™

MERCER HR Consulting, Geneva, Switzerland:  
[www.mercerHR.com](http://www.mercerHR.com)

M-Labs and cable.co.uk:  
Worldwide broadband speed league

MIT Media Lab:  
The Observatory of Economic Complexity

Moody's

MSCI, New York, USA:

National Science Foundation, Arlington, USA:  
Science and Engineering Indicators  
[www.nsf.gov](http://www.nsf.gov)

PriceWaterhouseCoopers SA, Lausanne and Basel,  
Switzerland: Resource Tax Manager

Reporters Without Borders  
[www.rsf.org](http://www.rsf.org)

Standard and Poor's

The Nobel Foundation, Stockholm, Sweden:

The World Justice Project:  
Rule of Law Index

Thomson Reuters, London, England:  
Thomson One Banker

Times Higher Education:  
World University Ranking

Union Bank of Switzerland, Zurich, Switzerland:  
Prices and Earnings

US Department of Agriculture, Washington DC, USA

# Notes and Sources by Criteria

The source of the survey criteria is always :  
*IMD World Competitiveness Center's Executive Opinion Survey 2020.*  
Which was conducted from mid-February to early May 2020, with a total number of 5'866 respondents.

## Standard notes used in the data tables

When statistical data is not available or is too out-dated to be relevant for a particular economy, the name appears at the bottom of the statistical table and a dash is shown. When the data is older than the reference year, the year of the data is shown next to the criterion value.

|               |   |
|---------------|---|
| Exchange Rate | As most data are expressed in U.S. dollars, you will find the exchange rates used at the beginning of the Statistical Tables. The sources for the Exchange Rates are International Financial Statistics Online March 2020 (IMF) and national sources. |
| Per capita    | For all information presented "per capita" the sources for the population are Passport GMID (Euromonitor) and national sources.   |
| % of GDP      | For all information presented as a "percentage of GDP" the sources for GDP are the OECD Main Economic Indicators April 2020 and national sources.   |

### Economic sectors

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|              |  |
|--------------|--|
| Agriculture: | including agriculture, hunting, forestry and fishing.  |
| Industry:    | including manufacturing, mining, electricity, construction, gas and water.   |
| Services:    | including trade, restaurants and hotels, transport storage, communications, financial and business services, social and personal services. |

## Factor 1: Economic Performance

### 1.1 Domestic Economy

#### 1.1.00 [B] Exchange Rate

International Financial Statistics Online March 2020 (IMF)  
National sources

[Period average.](#)

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#### 1.1.01 Gross Domestic Product (GDP)

OECD (2020), Main Economic Indicators - complete database  
National sources

[Provisional data or estimates for most recent year. Malaysia: Data 2017 & 2018: Preliminary; Data 2019 is sum of 4 quarters.](#)

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#### 1.1.02 GDP (PPP)

IMF World Economic Outlook April 2020  
Conference Board - Total Economy Database 2019

The 2019 data for GDP PPP are estimates.

[Purchasing Power Parities \(PPP\) are the currency exchange rates that equalize the purchasing power of different currencies. This means that a given sum of money, when converted into different currencies, at the PPP rates, will buy the same basket of goods and services in all countries. PPPs are the rates of currency conversion, which eliminate the differences in price levels among countries.](#)

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#### 1.1.03 [B] World GDP contribution

IMF World Economic Outlook April 2020

[Based on GDP, current prices, U.S. dollars.](#)

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#### 1.1.04 [B] Household consumption expenditure (\$bn)

OECD (2020), Main Economic Indicators - complete database  
National sources

[Provisional data or estimates for most recent year. Including not for profit institutions serving households. Malaysia: Data 2017 &](#)

2018: Preliminary; Data 2019 is sum of 4 quarters.

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**1.1.05 [B] Household consumption expenditure (%)**

OECD (2020), Main Economic Indicators - complete database  
National sources

Provisional data or estimates for most recent year. Including not for profit institutions serving households.

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**1.1.06 [B] Government consumption expenditure (\$bn)**

OECD (2020), Main Economic Indicators - complete database  
National sources

Provisional data or estimates for most recent year. Malaysia: Data 2017 & 2018: Preliminary; Data 2019 is sum of 4 quarters.  
Singapore: Financial year.

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**1.1.07 [B] Government consumption expenditure (%)**

OECD (2020), Main Economic Indicators - complete database  
National sources

Provisional data or estimates for most recent year.

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**1.1.08 [B] Gross fixed capital formation (\$bn)**

OECD (2020), Main Economic Indicators - complete database  
National sources

Provisional data or estimates for most recent year. Saudi Arabia: Domestic aggregate for non-oil sector supply and demand.  
Malaysia: Data 2017 & 2018: Preliminary; Data 2019 is sum of 4 quarters.

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**1.1.09 Gross fixed capital formation (%)**

OECD (2020), Main Economic Indicators - complete database  
National sources

Provisional data or estimates for most recent year. Saudi Arabia: Domestic aggregate for non-oil sector supply and demand.

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**1.1.10 [B] Gross domestic savings (\$bn)**

OECD (2020), Main Economic Indicators - complete database  
National sources

GDP minus Household Consumption minus Government Consumption. Provisional data or estimates for most recent year. Malaysia: Data 2017 & 2018: Preliminary; Data 2019 is sum of 4 quarters.

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**1.1.11 [B] Gross domestic savings (%)**

OECD (2020), Main Economic Indicators - complete database  
National sources

GDP minus Household Consumption minus Government Consumption. Provisional data or estimates for most recent year.

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**1.1.12 [B] Economic sectors**

IMF World Economic Outlook April 2020  
ILOSTAT  
National sources

Provisional data or estimates for most recent year. Bulgaria: break in series in 2012, new classification has been used (NACE A10), industry includes categories B-E. Hong Kong: Agriculture Includes mining and quarrying; Industry includes manufacturing, electricity, gas and water supply, waste management and construction. Malaysia: industry includes import duty. Ireland break in series 2010 (new classification)

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**1.1.13 Economic complexity index**

The Observatory of Economic Complexity, MIT Media Lab  
<https://atlas.media.mit.edu/en/>

The Economic Complexity Index (ECI) is a holistic measure of the productive capabilities of large economic systems, usually cities, regions, or countries. In particular, the ECI looks to explain the knowledge accumulated in a population and that is expressed in the economic activities present in a city, country, or region. To achieve this goal, the ECI defines the knowledge available in a location, as the average knowledge of the activities present in it, and the knowledge of an activity as the average knowledge of the places where that economic activity is conducted.

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**1.1.14 Real GDP growth**

OECD (2020), Main Economic Indicators - complete database  
National sources

Provisional data or estimates for most recent year.

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**1.1.15 Real GDP growth per capita**

IMF World Economic Outlook April 2020  
Conference Board - Total Economy Database 2019

Provisional data or estimates for most recent year.

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### 1.1.16 [B] Household consumption expenditure - real growth

OECD (2020), Main Economic Indicators - complete database  
National sources

Provisional data or estimates for most recent year. Including not for profit institutions serving households. Data 2017 & 2018: Preliminary; Data 2019 is sum of 4 quarters.

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### 1.1.17 [B] Government consumption expenditure - real growth

OECD (2020), Main Economic Indicators - complete database  
National sources

Provisional data or estimates for most recent year. Singapore: Financial year. Data 2017 & 2018: Preliminary; Data 2019 is sum of 4 quarters.

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### 1.1.18 Gross fixed capital formation - real growth

OECD (2020), Main Economic Indicators - complete database  
National sources

Provisional data or estimates for most recent year. Saudi Arabia: Domestic aggregate for non-oil sector supply and demand. Data 2017 & 2018: Preliminary; Data 2019 is sum of 4 quarters.

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### 1.1.20 GDP per capita

OECD (2020), Main Economic Indicators - complete database  
National sources

Provisional data or estimates for most recent year. Malaysia: Data 2017 & 2018: Preliminary; Data 2019 is sum of 4 quarters.

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### 1.1.21 GDP (PPP) per capita

IMF World Economic Outlook April 2020  
Conference Board - Total Economy Database 2019

The 2019 data for GDP PPP are estimates.

Purchasing Power Parities (PPP) are the currency exchange rates that equalize the purchasing power of different currencies. This means that a given sum of money, when converted into different currencies, at the PPP rates, will buy the same basket of goods and services in all countries. PPPs are the rates of currency conversion, which eliminate the differences in price levels among countries.

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### 1.1.22 [B] Forecast: Real GDP growth

IMF World Economic Outlook April 2020  
National sources

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### 1.1.23 [B] Forecast: Inflation

IMF World Economic Outlook April 2020  
National sources

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### 1.1.24 [B] Forecast: Unemployment

IMF World Economic Outlook April 2020  
National sources

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### 1.1.25 [B] Forecast: Current account balance

IMF World Economic Outlook April 2020  
National sources

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## 1.2 International Trade

### 1.2.01 [B] Current account balance (\$bn)

OECD (2020), Main Economic Indicators - complete database  
IMF World Economic Outlook October 2019  
National sources

Current account equals the trade balance plus the balance of other goods, services, and income, private unrequited transfers, and official unrequited transfers not included elsewhere. Brazil: From January to May 2019. Hong Kong: In mid-2013, a technical revision exercise to review the estimation method of cross-boundary movements of goods and services in the GDP compilation framework was conducted. As a result of the exercise, estimates of exports of goods as well as imports and exports of services in the current account of BoP were revised back to 2009.

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### 1.2.02 Current account balance

OECD (2020), Main Economic Indicators - complete database  
IMF World Economic Outlook October 2019  
National sources

Current account equals the trade balance plus the balance of other goods, services, and income, private unrequited transfers,

and official unrequited transfers not included elsewhere. Hong Kong SAR: In mid-2013, a technical revision exercise to review the estimation method of cross-boundary movements of goods and services in the GDP compilation framework was conducted. As a result of the exercise, estimates of exports of goods as well as imports and exports of services in the current account of BoP were revised back to 2009.

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#### **1.2.03 [B] Balance of trade (\$bn)**

World Trade Organization Statistics database  
[www.wto.org](http://www.wto.org)

Estimates based on preliminary data for the most recent year. Hong Kong SAR, Singapore: including re-exports. Saudi Arabia: Defense imports are excluded.

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#### **1.2.04 [B] Balance of trade (%)**

World Trade Organization data  
[data.wto.org](http://data.wto.org)

Estimates based on preliminary data for the most recent year. Hong Kong SAR, Singapore: including re-exports. Saudi Arabia: Defense imports are excluded.

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#### **1.2.05 [B] Balance of commercial services (\$bn)**

World Trade Organization data  
[data.wto.org](http://data.wto.org)

Commercial services include transportation, travel, other private services and income. Estimates based on preliminary data for the most recent year. Data are not always fully comparable across countries. Due to frequent revisions to the services data, there are numerous breaks in the continuity of the data series.

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#### **1.2.06 [B] Balance of commercial services (%)**

World Trade Organization data  
[data.wto.org](http://data.wto.org)

Commercial services include transportation, travel, other private services and income. Estimates based on preliminary data for the most recent year. Data are not always fully comparable across countries. Due to frequent revisions to the services data, there are numerous breaks in the continuity of the data series.

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#### **1.2.07 [B] World exports contribution**

World Trade Organization Statistics database  
[www.wto.org](http://www.wto.org)

Estimates based on preliminary data for the most recent year. Hong Kong SAR, Singapore: including re-exports. Commercial services include transportation, travel, other private services and income.

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#### **1.2.08 Exports of goods (\$bn)**

World Trade Organization data  
[data.wto.org](http://data.wto.org)

Estimates based on preliminary data for the most recent year. Hong Kong SAR, Singapore: including re-exports.

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#### **1.2.09 Exports of goods (%)**

World Trade Organization data  
[data.wto.org](http://data.wto.org)

Estimates based on preliminary data for the most recent year. Hong Kong SAR, Singapore: including re-exports.

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#### **1.2.10 [B] Exports of goods per capita**

World Trade Organization data  
[data.wto.org](http://data.wto.org)

Estimates based on preliminary data for latest year. Hong Kong SAR, Singapore: including re-exports.

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#### **1.2.11 Exports of goods - growth**

World Trade Organization data  
[data.wto.org](http://data.wto.org)

Estimates based on preliminary data for the most recent year. Hong Kong SAR, Singapore: including re-exports.

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#### **1.2.12 Exports of commercial services (\$bn)**

World Trade Organization data  
[data.wto.org](http://data.wto.org)

Commercial services include transportation, travel, other private services and income. Estimates based on preliminary data for the most recent year. Data are not always fully comparable across countries. Due to frequent revisions to the services data, there are numerous breaks in the continuity of the data series.

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### 1.2.13 Exports of commercial services (%)

World Trade Organization data  
data.wto.org

Commercial services include transportation, travel, other private services and income. Estimates based on preliminary data for the most recent year. Data are not always fully comparable across countries. Due to frequent revisions to the services data, there are numerous breaks in the continuity of the data series.

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### 1.2.14 Exports of commercial services - growth

World Trade Organization data  
data.wto.org

Commercial services include transportation, travel, other private services and income. Estimates based on preliminary data for the most recent year. Data are not always fully comparable across countries. Due to frequent revisions to the services data, there are numerous breaks in the continuity of the data series.

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### 1.2.15 [B] Exports of goods & commercial services

World Trade Organization data  
data.wto.org

Commercial services include transportation, travel, other private services and income. Estimates based on preliminary data for latest year. Data are not always fully comparable across countries. Due to frequent revisions to the services data, there are numerous breaks in the continuity of the data series.

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### 1.2.16 [B] Exports breakdown by economic sector

World Trade Organization data  
data.wto.org

Estimates based on preliminary data for the most recent year. Hong Kong SAR, Singapore: including re-exports.

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### 1.2.17 Export concentration by partner

UNCTAD

Top five named export countries as a percentage of total exports.

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### 1.2.18 Export concentration by product

UNCTAD

Top five named export products, as a percentage of total exports, using the UNCTAD product data based on the SITC commodity classification, Revision 3, at the two-digit level; giving 65 product categories.

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### 1.2.19 [B] Imports of goods & commercial services (\$bn)

World Trade Organization data  
data.wto.org

Estimates based on preliminary data for the most recent year. Commercial services include transportation, travel, other private services and income. Data are not always fully comparable across countries. Due to frequent revisions to the services data, there are numerous breaks in the continuity of the data series. Saudi Arabia: Defense imports are excluded.

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### 1.2.20 [B] Imports of goods & commercial services (%)

World Trade Organization data  
data.wto.org

Estimates based on preliminary data for the most recent year. Commercial services include transportation, travel, other private services and income. Data are not always fully comparable across countries. Due to frequent revisions to the services data, there are numerous breaks in the continuity of the data series. Saudi Arabia: Defense imports are excluded.

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### 1.2.21 [B] Imports of goods & commercial services - growth

World Trade Organization data  
data.wto.org

Estimates based on preliminary data for the most recent year. Commercial services include transportation, travel, other private services and income. Data are not always fully comparable across countries. Due to frequent revisions to the services data, there are numerous breaks in the continuity of the data series. Saudi Arabia: Defense imports are excluded.

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### 1.2.22 [B] Imports breakdown by economic sector

World Trade Organization data  
data.wto.org

Estimates based on preliminary data for the most recent year.

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### 1.2.23 Trade to GDP ratio

World Trade Organization data  
data.wto.org

Estimates based on preliminary data for the most recent year. Hong Kong SAR, Singapore: including re-exports.

#### **1.2.24 Terms of trade index**

International Financial Statistics Online April 2020 (IMF)  
World Development Indicators April 2020  
National sources

Base year 2010. Hong Kong base year 2018. Taiwan base year 2016. Bulgaria, Chile, China, Cyprus, Germany, Greece, Indonesia, Israel, Jordan, Netherlands, New Zealand, Norway, Saudi Arabia, Sweden, United Kingdom and USA: base year 2000 . Slovenia: base year 2015.

#### **1.2.25 Tourism receipts**

World Tourism Organization  
Tourism Highlights 2019, <http://mkt.unwto.org/publication/unwto-tourism-highlights>

Provisional data for the most recent year.

### **1.3 International Investment**

#### **1.3.01 Direct investment flows abroad (\$bn)**

UNCTADSTAT 2019 <http://unctadstat.unctad.org>  
International Financial Statistics Online April 2020 (IMF)  
National sources

Break in series, up to 2004 IFS BPM5.  
[Preliminary estimates for 2019, provisional data for 2018.](#)

#### **1.3.02 Direct investment flows abroad (% of GDP)**

UNCTADSTAT 2019 <http://unctadstat.unctad.org>  
International Financial Statistics Online April 2020 (IMF)  
National sources

Break in series, up to 2004 IFS BPM5.  
[Preliminary estimates for 2019, provisional data for 2018.](#)

#### **1.3.03 Direct investment stocks abroad (\$bn)**

UNCTADSTAT 2019 <http://unctadstat.unctad.org>

Estimates, sometime based on the adding of the flows to the stock of a previous year or by accumulating flows.

#### **1.3.04 Direct investment stocks abroad (% of GDP)**

UNCTADSTAT 2019 <http://unctadstat.unctad.org>

Estimates, sometime based on the adding of the flows to the stock of a previous year or by accumulating flows.

#### **1.3.05 Direct investment flows inward (\$bn)**

UNCTADSTAT 2019 <http://unctadstat.unctad.org>  
International Financial Statistics Online April 2020 (IMF)  
National sources

Break in series, up to 2004 IFS BPM5.  
[Preliminary estimates for 2019, provisional data for 2018.](#)

#### **1.3.06 Direct investment flows inward (% of GDP)**

UNCTADSTAT 2019 <http://unctadstat.unctad.org>  
International Financial Statistics Online April 2020 (IMF)  
National sources

Break in series, up to 2004 IFS BPM5.  
[Preliminary estimates for 2019, provisional data for 2018. Jordan: as of September 2019.](#)

#### **1.3.07 Direct investment stocks inward (\$bn)**

UNCTADSTAT 2019 <http://unctadstat.unctad.org>

Estimates, sometime based on the adding of the flows to the stock of a previous year or by accumulating flows.

#### **1.3.08 Direct investment stocks inward (% of GDP)**

UNCTADSTAT 2019 <http://unctadstat.unctad.org>

Estimates, sometime based on the adding of the flows to the stock of a previous year or by accumulating flows.

### **1.3.09 [B] Balance of direct investment flows (\$bn)**

UNCTADSTAT 2019 <http://unctadstat.unctad.org>  
International Financial Statistics Online April 2020 (IMF)  
National sources

Break in series, up to 2004 IFS BPM5.

[Preliminary estimates for 2019, provisional data for 2018.](#)

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### **1.3.10 [B] Balance of direct investment flows (%)**

UNCTADSTAT 2019 <http://unctadstat.unctad.org>  
International Financial Statistics Online April 2020 (IMF)  
National sources

Break in series, up to 2004 IFS BPM5.

[Preliminary estimates for 2019, provisional data for 2018.](#)

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### **1.3.11 [B] Net position in direct investment stocks (\$bn)**

UNCTADSTAT 2019 <http://unctadstat.unctad.org>

[Estimates, sometime based on the adding of the flows to the stock of a previous year or by accumulating flows.](#)

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### **1.3.12 [B] Net position in direct investment stocks (%)**

UNCTADSTAT 2019 <http://unctadstat.unctad.org>

[Estimates, sometime based on the adding of the flows to the stock of a previous year or by accumulating flows.](#)

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### **1.3.14 Portfolio investment assets**

International Financial Statistics Online April 2020 (IMF)  
National sources

Portfolio investment includes, in addition to equity securities in the form of bonds and notes, money market instruments and financial derivatives such as options. Excluded are any of the aforementioned instruments included in the categories of direct investment and reserve assets.

[2013-2005 IFS uses BPM6; Break in series: Up to 2004 IFS uses BPM5.](#)

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### **1.3.15 Portfolio investment liabilities**

International Financial Statistics Online April 2020 (IMF)  
National sources

Portfolio investment includes, in addition to equity securities in the form of bonds and notes, money market instruments and financial derivatives such as options. Excluded are any of the aforementioned instruments included in the categories of direct investment and reserve assets.

[2013-2005 IFS uses BPM6; Break in series: Up to 2004 IFS uses BPM5.](#)

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## **1.4 Employment**

### **1.4.01 Employment**

OECD (2020), Main Economic Indicators - complete database  
ILOSTAT  
National sources

[Data on employment are often estimates and provisional for the most recent year. Australia: In November. Austria: break in series in 2004 and 2008. Brazil: Break in series in 2011. Finland: including armed forces. Hong Kong SAR: Figures before 2012 have been revised based on the up-to-date benchmark population data and the revised employment figures compiled from the GHS, taking into account the results of the 2011 Population Census. Mexico: without non-specific employment. Portugal: break in series in 2011. Romania: 3rd quarter for 2018; break in series in 2002. Spain: break in series in 2005. UAE: break in series in 2016.](#)

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### **1.4.02 Employment (%)**

OECD (2020), Main Economic Indicators - complete database  
ILOSTAT  
National sources

[Data on employment are often estimates and provisional for the most recent year. Australia: In November. Austria: break in series in 2004 and 2008. Brazil: Break in series in 2011. Finland: including armed forces. Hong Kong SAR: Figures before 2012 have been revised based on the up-to-date benchmark population data and the revised employment figures compiled from the GHS, taking into account the results of the 2011 Population Census. Mexico: without non-specific employment. Portugal: break in series in 2011. Romania: 3rd quarter for 2018; break in series in 2002. Spain: break in series in 2005. UAE: break in series in 2016.](#)

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### **1.4.03 Employment - growth**

OECD (2020), Main Economic Indicators - complete database  
ILOSTAT  
National sources

[Data on employment are often estimates and provisional for the most recent year. Australia: In November. Austria: break in series](#)

in 2004 and 2008. Brazil: Break in series in 2011. Finland: including armed forces. Hong Kong SAR: Figures before 2012 have been revised based on the up-to-date benchmark population data and the revised employment figures compiled from the GHS, taking into account the results of the 2011 Population Census. Mexico: without non-specific employment. Portugal: break in series in 2011. Romania: 3rd quarter for 2018; break in series in 2002. Spain: break in series in 2005. UAE: break in series in 2016.

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#### **1.4.04 [B] Employment - long-term growth**

OECD (2020), Main Economic Indicators - complete database  
ILOSTAT  
National sources

Data on employment are often estimates and provisional for the most recent year. Australia: In November. Austria: break in series in 2004 and 2008. Brazil: Break in series in 2011. Hong Kong: Figures before 2012 have been revised based on the up-to-date benchmark population data and the revised employment figures compiled from the GHS, taking into account the results of the 2011 Population Census. Mexico: without non-specific employment. Portugal: break in series in 2011. Romania: 3rd quarter for 2018; break in series in 2002. Spain: break in series in 2005. UAE: break in series in 2016.

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#### **1.4.05 [B] Employment by sector**

OECD (2020), Main Economic Indicators - complete database  
ILOSTAT  
National sources

It is difficult to gather data on employment by sector. Estimates or provisional data for the most recent year. Years and sources are not always comparable. Australia: In November. Austria: break in series in 2004 and 2008. Hong Kong SAR: Figures before 2012 have been revised based on the up-to-date benchmark population data and the revised employment figures compiled from the GHS, taking into account the results of the 2011 Population Census. Portugal: break in series (methodological change) in 2008 and 2011. Romania: third quarter for 2018.

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#### **1.4.06 [B] Employment in the public sector**

ILO LABORSTA  
<http://laborsta.ilo.org>  
National sources

Public sector employment covers employment in the government sector plus employment in publicly-owned resident enterprises and companies, operating at central, state (or regional) and local levels of government. It covers all persons employed directly by those institutions, regardless of the particular type of employment contract. Argentina: in urban areas only. Australia: In June. Bulgaria: break in series in 2012, new classification has been used (NACE A10), industry includes categories F-U. China: estimates. Indonesia: total number of public servants. Romania: 3rd quarter for 2018.

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#### **1.4.07 Unemployment rate**

OECD (2020), Main Economic Indicators - complete database  
National sources

China: registered unemployment rate in urban areas. Hong Kong SAR: Labour force refers to the land-based non-institutional population aged 15 and over who satisfy the criteria for being classified as employed persons or unemployed persons; unemployment rate refers to the proportion of unemployed persons aged 15 or over in the labour force. Portugal: methodological change in 2011. Romania: third quarter for 2018.

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#### **1.4.08 Long-term unemployment**

Eurostat 2020  
OECD Labor Market Statistics April 2020  
National sources

Long-term unemployment is defined as that involving people out of work and looking for work for 12 months or more. Provisional data or estimates for the most recent year. Philippines: Based on number of people who are out of work and looking for work for 20 or more weeks. Portugal: methodological change in 2011. Romania: data for 2007-2013 were revised based on the resident population re-estimated in accordance with the Population and Housing Census in 2011; third quarter for 2018. Singapore: unemployed residents for 25 weeks or more.

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#### **1.4.09 Youth unemployment**

OECD (2020), Main Economic Indicators - complete database  
National sources

Unemployment of population under 25 years as a percentage of labor force of the same age category. Provisional data or estimates for the most recent year. Hong Kong SAR: Youth unemployment refers to those unemployed persons aged 15-24. Portugal: methodological change in 2011. Singapore: Resident youth unemployment rate.

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#### **1.4.10 [B] Youth exclusion**

International Labour Organization, ILOSTAT <https://www.ilo.org/shinyapps/bulkexplorer4/>  
National sources

Share of youth not in education, employment or training (NEET) is the proportion of young people who are not in education, employment, or training to the population of the corresponding age group: youth (ages 15 to 24)

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## 1.5 Prices

### 1.5.01 Consumer price inflation

IMF World Economic Outlook April 2020

Harmonized inflation rates, year average.

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### 1.5.02 Cost-of-living index

MERCER Cost of Living survey 2018

[www.mercer.com](http://www.mercer.com)

Break in series in 2015: In the main city as of 2015, average of main cities in large countries (made by IMD WCC) or in the capital in smaller ones up to 2014. The Mercer survey covers 214 cities across five continents and measures the comparative cost of over 200 items in each location, including housing, transport, food, clothing, household goods and entertainment. It is the world's most comprehensive cost of living survey and is used to help multinational companies and governments determine compensation allowance for their expatriate employees. New York is used as the base city (=100) for the index and all cities are compared against New York. Currency movements are measured against the US dollar. The cost of housing - often the biggest expense for expats - plays an important part in determining where cities are ranked.

Data is not always comparable over years (money fluctuations in 2010 and 2011).

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### 1.5.03 [B] Apartment rent

UBS Prices and Earnings 2018

National sources

Average cost of housing per month, in a medium price range in major cities, which an apartment seeker would expect to pay on the free market at the time of the survey. We standardized requirements to Western preferences, with an unfurnished three-room apartment. We only looked at newly built apartments with a bathroom and a kitchen. Prices included utilities (energy and water taxes), but not the use of a garage. Kazakhstan: average of 5 main cities, estimate for 80m2.

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### 1.5.04 Office rent

Cushman & Wakefield's Office Space Across the World 2019

CB Richard Ellis Prime Office Occupancy Costs, 2014

National Sources

Office total occupation costs in the most expensive city - Cushman & Wakefield. Break in series in 2015: average of main cities in large countries (made by IMD WCC) or in the capital in smaller ones up to 2014 CBRE. Including rent, management costs, property taxes and basic ongoing building maintenance. Kazakhstan: Data on rental prices for administrative and office premises in the city of Nur Sultan were obtained from a sample survey of enterprises included in the sample, taking into account all the costs of maintaining buildings and structures, including VAT.

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### 1.5.05 Food costs

US Dept Agr. 2020

Total consumer expenditure on food and non-alcoholic beverages as a percentage of total household final consumption expenditures.

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### 1.5.06 Gasoline prices

OECD Energy Prices and Taxes 1/2020 (International Energy Agency)

National sources

For 2019, OECD prices refer to mid-year, otherwise end-year. Prices refer to the simple average of the domestic monthly reference prices with tax for premium gasoline. Hong Kong SAR: Since 95 Ron unleaded gasoline are no longer on sale in Hong Kong, the price series are estimated based on the average retail price of 98 Ron unleaded petrol in Hong Kong and the average price difference between 95 and 97/98 Ron unleaded gasoline in neighbouring economies.

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## Government Efficiency

### 2.1 Public Finance

#### 2.1.01 [B] Government budget surplus/deficit (\$bn)

© European Communities, 1995-2020

<http://epp.eurostat.ec.europa.eu>

World Economic Outlook October 2019 (IMF)

National sources

Provisional data or estimates for 2019.

The government deficit/surplus is the net borrowing/net lending (B.9) of general government as defined in the ESA 2010. It is the difference between the revenue and the expenditure of the general government. Europe: According to the Maastricht Treaty (Protocol on the excessive deficit procedure, government deficit or surplus) means the net borrowing (net lending) of the whole general government sector (central government, state government, local government and social security funds). It is calculated according to national accounts concepts (European System of Accounts, ESA95). Singapore: Financial year.

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### 2.1.02 Government budget surplus/deficit (%)

© European Communities, 1995-2020  
http://epp.eurostat.ec.europa.eu  
World Economic Outlook October 2019 (IMF)  
National sources

Provisional data or estimates for 2019.

The government deficit/surplus is the net borrowing/net lending (B.9) of general government as defined in the ESA 2010. It is the difference between the revenue and the expenditure of the general government. Europe: According to the Maastricht Treaty (Protocol on the excessive deficit procedure, government deficit or surplus) means the net borrowing (net lending) of the whole general government sector (central government, state government, local government and social security funds). It is calculated according to national accounts concepts (European System of Accounts, ESA95). Singapore: Financial year.

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### 2.1.03 [B] Total general government debt (\$bn)

World Economic Outlook October 2019 (IMF)

Government debt is the consolidated gross debt of the whole general government sector outstanding at the end of the year.

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### 2.1.04 Total general government debt (%)

World Economic Outlook October 2019 (IMF)

Government debt is the consolidated gross debt of the whole general government sector outstanding at the end of the year.

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### 2.1.05 Total general government debt-real growth

World Economic Outlook October 2019 (IMF)

Government debt is the consolidated gross debt of the whole general government sector outstanding at the end of the year.

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### 2.1.06 [B] Central government domestic debt

National sources

Israel: as of September 30, 2019. Italy: Central Government debt held by residents. New Zealand: domestic debt incl. foreign.

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### 2.1.07 [B] Central government foreign debt

National sources

Israel: as of September 30, 2019. Italy: Central Government debt held by non-residents. New Zealand: domestic debt incl. foreign.

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### 2.1.08 Interest payment (%)

Government Finance Statistics 2020 (IMF)  
Eurostat April 2020  
National sources

Current revenue covers all nonrepayable government receipts other than grants. Break in series: general government since 2001, central government only for previous years. Hong Kong: Operating Revenue. Singapore: Financial year. Thailand: central government.

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### 2.1.12 General government expenditure

Eurostat April 2020  
National sources

Total general government spending, netting out intergovernmental grants and transfers. Belgium: including interest. Cyprus: Figures cover the period Q4 - Q3. Singapore: Financial year.

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## 2.2 Tax Policy

### 2.2.01 Collected total tax revenues

OECD Revenue Statistics 2019  
Government Finance Statistics 2019  
National sources

Total tax revenues of general government. This includes: income taxes, profits and capital gains; social security contributions; taxes on payroll and workforce; taxes on property; taxes on goods and services; other taxes. General government consists of supra-national authorities, the central administration and the agencies whose operations are under its effective control, state and local governments and their administrations, social security schemes and autonomous government entities, excluding public enterprises. Japan: The tax revenue figures exclude revenue from Social security funds. Russia: break in series in 2005 and 2007. Singapore: financial year.

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### 2.2.02 [B] Collected personal income tax

OECD Revenue Statistics 2019  
Government Finance Statistics 2019  
National sources

Personal income taxes paid to general government. Russia: break in series in 2005 and 2007. Singapore: financial year.

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### **2.2.03 [B] Collected corporate taxes**

OECD Revenue Statistics 2019  
Government Finance Statistics 2019  
National sources

Corporate taxes paid to general government. Colombia: break in series in 2008. Russia: break in series in 2005 and 2007. Singapore: financial year.

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### **2.2.04 [B] Collected indirect tax revenues**

OECD Revenue Statistics 2019  
Government Finance Statistics 2019  
National sources

Indirect taxes paid to general government. Colombia: break in series in 2008. Russia: break in series in 2005 and 2007. Singapore: financial year.

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### **2.2.05 [B] Collected capital and property taxes**

OECD Revenue Statistics 2019  
Government Finance Statistics 2019  
National sources

Taxes on capital and property include: recurrent taxes on immovable property and on net wealth, estate, inheritance and gift taxes, taxes on financial and capital transactions, and other recurrent and non-recurrent taxes on property, paid to general government. Colombia: break in series in 2008. Philippines: Property and documentary stamp taxes. Russia: break in series in 2005 and 2007. Singapore: financial year.

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### **2.2.06 [B] Collected social security contribution**

OECD Revenue Statistics 2019  
Government Finance Statistics 2019  
National sources

Austria, Denmark, France and Spain: The total tax revenues have been reduced by the amount of any capital transfer that represents uncollected taxes. Bulgaria: Total receipts from taxes and social contributions (including imputed social contributions) after deduction of amounts assessed but unlikely to be collected minus Total tax receipts equals Social security contributions. Colombia: break in series in 2008. Hungary: the figures are on cash basis. Philippines: Includes social security contributions to the Social Security System and Government Service Insurance System. Russia: break in series in 2005 and 2007.

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### **2.2.07 Effective personal income tax rate**

PricewaterhouseCoopers, "Resource Tax Manager"

This criterion is based on the GDP per capita 2018 figures.

Amount of personal income tax (including social security paid by the employee) that an individual married + 1 child with this level of earnings would expect to pay in 2018.

The taxes for Canada, Switzerland and the US are an average for the respective provinces, cantons and states.

India: in case, where the number of employees in the establishment exceeds 20 and an employee's monthly salary is less than INR 6,500.--, he would have to contribute to Provident Fund 12% of basic salary. The employer also contributes to an equal amount to Provident Fund. As a consequence, if we assume that the number of employees is less than 20, no social security contributions would be due.

The differences against last year's data can generally be explained by differences in base GDP/capita, and the changes in legislation for some countries.

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### **2.2.08 Corporate tax rate on profit**

PricewaterhouseCoopers, "Resource Tax Manager"  
National sources

Rates in effect on January 1, 2018 when available. For better comparability between countries, we show the maximum tax rates. But average effective corporate tax rates are often lower. General assumptions from PWC: 1) They have worked on the profit before tax, in order to make tax rates as comparable as possible between them. 2) They have assumed model company is an ordinary commercial company. 3) They have assumed company is active on its national territory exclusively, therefore a company having neither a branch nor a subsidiary abroad. Dividend income, branch profit tax credit and their specific tax treatment could therefore be ignored. 4) Tax treatment of specific types of income is not mentioned, such as for instance the capital gain taxes. 5) Each country has its particular rules as regards deductible items and therefore, many specific deductions or add-backs could simply not be taken into consideration. Typical examples to illustrate this mechanism are specific incentive tax credits (on creation of jobs), credit for tax on equity, etc. 6) So far as possible, they have not taken into consideration the national mechanisms put in place to reduce double taxation of income (company and its shareholder), like the French avoir fiscal or the British ACT. Specific comments are indicated where a dual system based on different rates exists as regards distributed/undistributed profit. 7) They have therefore also ignored withholding tax levied upon dividend distributions; having assumed this is a tax relating to the shareholder and not the company. 8) Only tax on profit is considered, with possible surtax (national surtax or cantonal, state or municipal taxes) where appropriate. 9) Surtax linked to payment of tax, such as interest for late payment or similar mechanisms were not taken into consideration, as this depends on specific situation of each contributor, on the one hand, and was likely to give a wrong image as not all countries have such rules. 10) Tax on equity, on share capital or certain types of assets are not included, as systems are difficult to compare between them and would not have provided a coherent image.

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### 2.2.09 Consumption tax rate

Consumption tax trends (OECD)  
National Sources

Value Added Tax (VAT)/Goods and Services Tax (GST) to international services and intangibles transactions. China: rates can be 6%, 10% or 16%. India: 12.5 % is the most common VAT rate for the maximum number of commodities; however the range is from 1 to 44 %. Spain: 2010: 16% January - June, 18% July – December; 2012: 18% January – August, 21% September – December. Taiwan, China: sales tax; however various consumption tax rates are applied.

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### 2.2.10 Employee's social security contribution rate

PricewaterhouseCoopers, "Resource Tax Manager"

This criterion is based on the GDP per capita 2018 figures.

India: in case, where the number of employees in the establishment exceeds 20 and an employee's monthly salary is less than INR 6,500.--, he would have to contribute to Provident Fund 12% of basic salary. The employer also contributes to an equal amount to Provident Fund. As a consequence, if we assume that the number of employees is less than 20, no social security contributions would be due.

The differences against last year's data can generally be explained by differences in base GDP/capita and the changes in legislation for some countries.

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### 2.2.11 Employer's social security contribution rate

PricewaterhouseCoopers, "Resource Tax Manager"

This criterion is based on the GDP per capita 2018 figures.

India: in case, where the number of employees in the establishment exceeds 20 and an employee's monthly salary is less than INR 6,500.--, he would have to contribute to Provident Fund 12% of basic salary. The employer also contributes to an equal amount to Provident Fund. As a consequence, if we assume that the number of employees is less than 20, no social security contributions would be due.

The differences against last year's data can generally be explained by differences in base GDP/capita and the changes in legislation for some countries.

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## 2.3 Institutional Framework

### 2.3.01 [B] Real short-term interest rate

International Financial Statistics Online April 2020 (IMF)  
National sources

Average annual discount rate or money market rate or central bank rate; estimates for some countries. We deflated the rates using the inflation rate for the year of reference. Finland: Eonia rate. Malaysia: Interbank Money Market, Average of the Overnight Policy Rate (OPR).

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### 2.3.03 Interest rate spread

International Financial Statistics Online April 2020 (IMF)  
National sources

Based on average annual rates (for corporations), estimates for some countries. Finland: For households and firms. Portugal: Average of monthly rates to non-financial corporations. Slovenia: For lending rate: Loans over EUR 1 million, floating and up to 1 year initial rate fixation; for deposit rate: Average interest rate on all deposits with agreed maturity up to 1 year. Turkey: 3 month time deposit.

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### 2.3.04 Country credit rating

Fitch, Moody's and S&P

IMD WCC created index of the three country credit ratings Fitch, Moody's and S&P. Each rating, including the outlook, is converted to a numerical score from 20-0 and totalled for each country.

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### 2.3.06 [B] Foreign currency reserves

International Finance Statistics Online April 2020 (IMF)

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### 2.3.07 Foreign currency reserves per capita

International Finance Statistics Online April 2020 (IMF)

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### 2.3.08 Exchange rate stability

International Financial Statistics Online April 2020 (IMF)

Parity changes are in absolute values. Period average for all countries.

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### 2.3.14 Rule of law

The World Justice Project Rule of Law Index

The WJP Rule of Law Index offers a detailed, multidimensional view of the extent to which countries adhere to the rule of law in

practice, and is the most comprehensive index of its kind. To date, over 100,000 citizens and experts have been interviewed in 99 countries. The Index measures the rule of law using 47 indicators organized around 8 themes.

### **2.3.15 Sustainable Development Goals**

#### **Sustainable Development Report 2019**

<http://sustainabledevelopment.report>

The Sustainable Development Report 2019 presents an updated SDG Index and Dashboards with a refined assessment of countries' distance to SDG targets. The report has been successfully audited for the first time by the European Commission Joint Research Centre. New indicators have been included, primarily to refine the indicator selection on agriculture, diets, gender equality and freedom of speech. We have also added more metrics for international spillovers, including on fatal work accidents.

### **2.3.16 Democracy Index**

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The Economist Intelligence Unit's index is based on the view that measures of democracy which reflect the state of political freedoms and civil liberties are not thick enough. They do not encompass sufficiently, or, in some cases, at all, the features that determine how substantive democracy is. Freedom is an essential component of democracy, but not, in itself, sufficient. In existing measures, the elements of political participation and functioning of government are taken into account only in a marginal and formal way. The Democracy Index is based on five categories: electoral process and pluralism; civil liberties; the functioning of government; political participation; and political culture. The five categories are interrelated and form a coherent conceptual whole. The condition of holding free and fair competitive elections, and satisfying related aspects of political freedom, is clearly the sine qua non of all definitions.

## **2.4 Business Legislation**

### **2.4.01 Tariff barriers**

World Bank

All simple averages are based on pre-aggregated HS six-digit averages. Most Favored Nation (MFN): with respect to customs duties, any advantage, favor, privilege or immunity, granted by WTO member to any product originating in or destined for another country, are accorded in principle to the like product originating from or destined for the territories of all other WTO members, under the Principle of MFN treatment.

### **2.4.07 Government subsidies**

<http://ec.europa.eu/eurostat>

Government Finance Statistics 2020

National sources

Grants on current account by the General Government to (i) private industries and public corporations and (ii) government enterprises, to compensate for losses which are clearly the consequence of the price policies of the public authorities. Argentina, Luxembourg, Romania, Russia and Switzerland: break in series. (Argentina: central government only until 2002, Romania and Switzerland: until 2001).

### **2.4.12 [B] New business density**

World Bank, Entrepreneurship Survey and Database

New businesses registered are the number of new limited liability corporations registered in the calendar year. New business density is calculated by new registrations per 1,000 people ages 15-64.

### **2.4.14 Start-up days**

Doing Business 2020

World Bank

Average time for men and women since 2016. Time is recorded in calendar days. The measure captures the median duration that incorporation lawyers or notaries indicate is necessary in practice to complete a procedure with minimum follow-up with government agencies and no unofficial payments. It is assumed that the minimum time required for each procedure is one day, except for procedures that can be fully completed online, for which the minimum time required is recorded as half a day. Although procedures may take place simultaneously, they cannot start on the same day (that is, simultaneous procedures start on consecutive days). A registration process is considered completed once the company has received the final incorporation document or can officially commence business operations. If a procedure can be accelerated legally for an additional cost, the fastest procedure is chosen if that option is more beneficial to the economy's distance to frontier score. When obtaining a spouse's approval, it is assumed that permission is granted at no additional cost unless the permission needs to be notarized. It is assumed that the entrepreneur does not waste time and commits to completing each remaining procedure without delay. The time that the entrepreneur spends on gathering information is not measured. It is assumed that the entrepreneur is aware of all entry requirements and their sequence from the beginning but has had no prior contact with any of the officials involved. For a complete definition of the business please see <http://www.doingbusiness.org/Methodology/Starting-a-Business>

### **2.4.15 Start-up procedures**

Doing Business 2020

World Bank

Average number of procedures for men and women since 2016. A procedure is defined as any interaction of the company found-

ers with external parties (for example, government agencies, lawyers, auditors or notaries) or spouses (if legally required). Interactions between company founders or company officers and employees are not counted as procedures. Procedures that must be completed in the same building but in different offices or at different counters are counted as separate procedures. If founders have to visit the same office several times for different sequential procedures, each is counted separately. The founders are assumed to complete all procedures themselves, without middlemen, facilitators, accountants or lawyers, unless the use of such a third party is mandated by law or solicited by the majority of entrepreneurs. If the services of professionals are required, procedures conducted by such professionals on behalf of the company are counted as separate procedures. Each electronic procedure is counted as a separate procedure. Approvals from spouses to own a business or leave the home are considered procedures if required by law or if by failing to obtain such approval the spouse will suffer consequences under the law, such as the loss of right to financial maintenance. Obtaining permissions only required by one gender for company registration and operation, or getting additional documents only required by one gender for a national identification card are considered additional procedures. In that case, only procedures required for one spouse but not the other are counted. Both pre- and post-incorporation procedures that are officially required or commonly done in practice for an entrepreneur to formally operate a business are recorded. For more information and a complete definition of the business please see <http://www.doingbusiness.org/Methodology/Starting-a-Business>

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#### **2.4.19 Redundancy costs**

Doing business 2020  
World Bank

Redundancy cost measures the cost of advance notice requirements and severance payments due when terminating a redundant worker, expressed in weeks of salary. The average value of notice requirements and severance payments applicable to a worker with 1 year of tenure, a worker with 5 years and a worker with 10 years is considered. One month is recorded as 4 and 1/3 weeks. For more details please see <https://www.doingbusiness.org/en/methodology/employing-workers>

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### **2.5 Societal Framework**

#### **2.5.02 Homicide**

UNODC - United Nations Office on Drugs and Crimes

Intentional homicide: Unlawful death inflicted upon a person with the intent to cause death or serious injury.

Inclusions: Murder; honour killing; serious assault leading to death; death as a result of terrorist activities; dowry-related killings; femicide; infanticide; voluntary manslaughter; extrajudicial killings; killings caused by excessive use of force by law enforcement/state officials.

Exclusions: Death due to legal interventions; justifiable homicide in self-defence; attempted intentional homicide; homicide without the element of intent; non-negligent or involuntary manslaughter; assisting suicide or instigating suicide; illegal feticide; euthanasia.

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#### **2.5.03 Ageing of population**

Passeport GMID  
Source: © Euromonitor International 2020  
National sources

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#### **2.5.06 Gini coefficient**

Human Development Report 2020 (UNDP)

Measure of the deviation of the distribution of income among individuals or households within a country from a perfectly equal distribution. A value of 0 represents absolute equality, a value of 100 absolute inequality.

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#### **2.5.07 [B] Income distribution - lowest 10%**

World Development Indicators Database

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#### **2.5.08 [B] Income distribution - highest 10%**

World Development Indicators Database

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#### **2.5.09 Income share held by lowest 60% - growth**

World Bank, Global Database of Shared Prosperity (GDSP)  
National sources

Percentage share of income or consumption is the share that accrues to subgroups of population indicated by deciles or quintiles. Percentage shares by quintile may not sum to 100 because of rounding.

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#### **2.5.11 Females in parliament**

Human Development Report 2020 (UNDP)  
National sources

Share of seats in national parliament: Proportion of seats held by women in a lower/ single house or /and an upper house/ senate

expressed as percentage of total seats. For countries with bicameral legislative systems, the share of seats is calculated based on both houses. China Hong Kong: percentage of Executive Council seats held by women.

### 2.5.12 [B] Unemployment rate - gender ratio

OECD (2020), Main Economic Indicators - complete database  
National sources

Percentage of the civilian labor force which is unemployed, female divided by male ratio. The government defines unemployed as people who are jobless, looking for jobs, and available for work. Unemployed persons comprise persons aged 15 to 64 who were: without work during the reference week, i.e. neither had a job nor were at work (for one hour or more) in paid employment or self-employment; currently available for work, i.e. were available for paid employment or self-employment before the end of the two weeks following the reference week; actively seeking work, i.e. had taken specific steps in the four weeks period ending with the reference week to seek paid employment or self-employment or who found a job to start later, i.e. within a period of at most three months. Belgium: % of active population. Czech Republic: January - September for 2018. Philippines: data calculated from the July 2018 Labor Force Survey. Romania: 3rd quarter for 2018. Singapore: for resident population.

### 2.5.13 Gender inequality

Human Development Report 2020 (UNDP)

A composite measure reflecting inequality in achievement between women and men in three dimensions: reproductive health, empowerment and the labour market. Hong Kong: local calculation based on UNDP methodology.

### 2.5.14 Disposable Income

Passport GMID  
Source: © Euromonitor International 2020  
National sources

Based on gross income minus social security contributions and income taxes.

### 2.5.15 Freedom of the Press Reporters Without Borders

The degree of freedom available to journalists in 180 countries is determined by pooling the responses of experts to a questionnaire devised by RSF. This qualitative analysis is combined with quantitative data on abuses and acts of violence against journalists during the period evaluated. The criteria evaluated in the questionnaire are pluralism, media independence, media environment and self-censorship, legislative framework, transparency, and the quality of the infrastructure that supports the production of news and information.

## Business Efficiency

### 3.1 Productivity & Efficiency

#### 3.1.01 Overall productivity (PPP)

MF World Economic Outlook April 2020  
Conference Board - Total Economy Database 2019

Adjusted Conference Board series: GDP growth and levels adjusted for rapidly falling ICT prices. More specifically, GDP deflators for 3 countries with significant ICT production and trade, including China, Japan and the United States are adjusted downward using an alternative series of ICT price deflators developed by Byrne and Corrado (2016, updated and revised in 2018). These alternative prices show faster declines than what official data suggests. Hence, GDP growth is revised upward for these countries, and as a consequence all variables in this version that are based on GDP (e.g. GDP levels, labor productivity, per capita GDP) differ with those from the original version of the TED (see below). Since country specific PPPs are updated to reflect 2018 prices using the change in the country specific GDP deflator relative to the US GDP deflator, GDP levels in all countries differ from the original version.

#### 3.1.02 Overall productivity (PPP) - real growth

IMF World Economic Outlook April 2020  
Conference Board - Total Economy Database 2019

Adjusted Conference Board series: GDP growth and levels adjusted for rapidly falling ICT prices. More specifically, GDP deflators for 3 countries with significant ICT production and trade, including China, Japan and the United States are adjusted downward using an alternative series of ICT price deflators developed by Byrne and Corrado (2016, updated and revised in 2018). These alternative prices show faster declines than what official data suggests. Hence, GDP growth is revised upward for these countries, and as a consequence all variables in this version that are based on GDP (e.g. GDP levels, labor productivity, per capita GDP) differ with those from the original version of the TED (see below). Since country specific PPPs are updated to reflect 2018 prices using the change in the country specific GDP deflator relative to the US GDP deflator, GDP levels in all countries differ from the original version.

#### 3.1.03 Labor productivity (PPP)

IMF World Economic Outlook April 2020  
Conference Board - Total Economy Database 2019

Adjusted Conference Board series: GDP growth and levels adjusted for rapidly falling ICT prices. More specifically, GDP deflators for 3 countries with significant ICT production and trade, including China, Japan and the United States are adjusted downward using an alternative series of ICT price deflators developed by Byrne and Corrado (2016, updated and revised in 2018). These alternative

prices show faster declines than what official data suggests. Hence, GDP growth is revised upward for these countries, and as a consequence all variables in this version that are based on GDP (e.g. GDP levels, labor productivity, per capita GDP) differ with those from the original version of the TED (see below). Since country specific PPPs are updated to reflect 2018 prices using the change in the country specific GDP deflator relative to the US GDP deflator, GDP levels in all countries differ from the original version.

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#### **3.1.04 [B] Agricultural productivity (PPP)**

IMF World Economic Outlook April 2020  
ILOSTAT  
National sources

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#### **3.1.05 [B] Productivity in industry (PPP)**

IMF World Economic Outlook April 2020  
ILOSTAT  
National sources

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#### **3.1.06 [B] Productivity in services (PPP)**

IMF World Economic Outlook April 2020  
ILOSTAT  
National sources

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### **3.2 Labor Market**

#### **3.2.01 Compensation levels**

Passport GMID  
Source: © Euromonitor International 2020  
National sources

Wage per hour in manufacturing refers to average wage per worker in manufacturing as a whole, according to the International Standard Industrial Classification of all economic activities (ISIC). The series cover workers of both sexes, irrespective of age. Statistics relate to employees' gross remuneration, i.e. the total before any deductions are made by the employer in respect of taxes, contributions of employees to social security and pension schemes, life insurance premiums, union dues and other obligations of employees. It includes overtime payments, premiums, bonuses and allowances.

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#### **3.2.02 [B] Unit labor costs for total economy**

OECD (2020), "Productivity and unit labour cost by industry, ISIC Rev. 4", OECD Productivity Statistics (database), <https://doi.org/10.1787/data-00687-en>  
National sources

Annual unit labour costs (ULCs) measure the average cost of labour per unit of output and are calculated as the ratio of total labour costs to real output. OECD countries: Data of real gross value added, labour compensation, hours worked and employment are sourced from the OECD Annual National Accounts. Brazil: for industry only.

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#### **3.2.03 Remuneration in services professions**

UBS Prices and Earnings 2018  
National sources

Figures are estimates remuneration paid in major cities. Gross annual income including possible supplementary benefits, such as bonuses, vacation pay, meal or housing allowances, or family assistance. reduct Manager: manager in pharmaceutical, chemical or food industry, about five years of experience, tertiary educational degree, middle management, approximate age and status: 35, married. Primary school teacher: teaching for about 10 years in government-operated schools, approximate age and status: 35, married, two children. Secretary/Personal Assistant: secretary of a department manager in an industrial firm, at least five years of experience; knowledge of PCs and one foreign language, approximate age and status: 25, single. Call center agent: trained agent at an inbound call/service center in the telecommunications or technology sector, approximate age and status: 25, single. Nurse: Completed apprenticeship or studies, at least 10 years of experience, approx. age and status: 35, married, two children. Sales Assistant: Sales in ladies' apparel at a large department store, specialized training in sales, several years of experience, approx. age and status: 25, single.

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#### **3.2.04 Remuneration of management**

HCM International Ltd, April 2019  
National sources

Total remuneration: including annual base salary, annual short-term incentive bonus and long term incentive. Based on companies having a minimal turnover of US\$ 250 million. Chief Executive Officer: directs all company's operations, including sales, marketing, manufacturing and support function; coordinates and provides guidance for the development and implementation of business strategies; optimizes market potential; provides long-term vision and leadership; identifies growth opportunities; assures organizational efficiency of the operations; builds long-term partnership with key accounts. Estonia: break in series in 2011 (change of source, data for earlier years are not comparable).

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#### **3.2.05 [B] Remuneration spread**

HCM International Ltd, April 2019  
National sources

Personal Assistant: to a department head in an industrial or service company, around 5 years' experience (PC skills, 1 foreign language); about 25 years old, single. Figures are estimates remuneration paid in major cities. Gross annual income including possible supplements such as profit sharing, performance bonuses, vacation pay, additional monthly salaries and family allowances. Chief Executive Officer: Total remuneration: including annual base salary, annual short-term incentive bonus and long term incentive. Based on companies having a minimal turnover of US\$ 250 million. Chief Executive Officer: directs all company's operations, including sales, marketing, manufacturing and support function; coordinates and provides guidance for the development and implementation of business strategies; optimizes market potential; provides long-term vision and leadership; identifies growth opportunities; assures organizational efficiency of the operations; builds long-term partnership with key accounts. Estonia: break in series in 2011 (change of source, data for earlier years are not comparable).

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### **3.2.06 Working hours**

Conference Board Total Economy Database™  
UBS Prices and Earnings 2018  
National sources

Estimates. Qatar, Saudi Arabia, UAE, Ukraine and Venezuela: Weighted average of 14 professions in major cities (industrial sector: Construction worker, department manager, electrical engineer, female industrial worker, industrial technician; service sector: cook (chef de partie), bank credit clerk, call center agent, automobile mechanic, product manager, bus driver, secretary/personal assistant, female sales assistant, hospital nurse).

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### **3.2.08 [B] Industrial disputes**

ILO Database <http://laborsta.ilo.org>  
National sources

Due to different definitions and regulations, especially on the minimum duration of reported strikes, data are not always comparable. Argentina, Austria, Brazil, Chile, France, Hungary, Korea, Lithuania, Peru, Portugal, Romania, Singapore, Slovak Republic, Turkey, Ukraine : strikes only. Germany: excluding disputes lasting less than one day or not entailing a loss of more than 100 working days and those involving less than 10 employees in the firm. India: Excluding strikes with less than 10 workers. Ireland, Israel: Excludes strikes lasting less than 10 days. Mexico: strikes only, strikes for more than 8 hours only. Norway, Philippines, Switzerland: excludes strikes that last less than 1 day. Poland: strikes only, excluding the ones that last less than one hour. Russia: strikes only, excluding the ones that last less than half a day. Spain: excludes strikes that last less than one hour. USA: excluding strikes with less than 500 workers.

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### **3.2.11 Labor force**

OECD (2020), Main Economic Indicators - complete database  
National sources

Estimates for 2019. Austria: break in series in 2008. Belgium: until Q3 for 2018. Brazil: break in series in 2014. China and Saudi Arabia: estimate calculated by the World Competitiveness Center based on employment and unemployment rate for 2018. Denmark: break in series in 2009. Lithuania: break in series 2011 - census revised labor force figure downwards by 10% (emigration to EU over past decade). Latvia: break in series in 2012. Malaysia: break in series in 2010. Portugal: methodological change in 2011. Romania: for 2018 - third quarter. Spain: break in series in 2005.

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### **3.2.12 Labor force (%)**

OECD (2020), Main Economic Indicators - complete database  
National sources

Estimates for 2018. Austria: break in series in 2008. Belgium: until Q3 for 2018. Brazil: break in series in 2014. China and Saudi Arabia: estimate calculated by the World Competitiveness Center based on employment and unemployment rate for 2018. Denmark: break in series in 2009. Lithuania: break in series 2011 - census revised labor force figure downwards by 10% (emigration to EU over past decade). Latvia: break in series in 2012. Malaysia: break in series in 2010. Portugal: methodological change in 2011. Romania: for 2018 - third quarter. Spain: break in series in 2005.

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### **3.2.13 Labor force growth**

OECD (2020), Main Economic Indicators - complete database  
National sources

Estimates for 2019. Austria: break in series in 2008. Belgium: until Q3 for 2018. Brazil: break in series in 2014. China and Saudi Arabia: estimate calculated by the World Competitiveness Center based on employment and unemployment rate for 2018. Denmark: break in series in 2009. Lithuania: break in series 2011 - census revised labor force figure downwards by 10% (emigration to EU over past decade). Latvia: break in series in 2012. Malaysia: break in series in 2010. Portugal: methodological change in 2011. Romania: for 2018 - third quarter. Spain: break in series in 2005.

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### **3.2.14 [B] Labor force long-term growth**

OECD (2020), Main Economic Indicators - complete database  
National sources

Estimates for 2019. Austria: break in series in 2008. Belgium: until Q3 for 2018. Brazil: break in series in 2014. China and Saudi Arabia: estimate calculated by the World Competitiveness Center based on employment and unemployment rate for 2018. Denmark: break in series in 2009. Lithuania: break in series 2011 - census revised labor force figure downwards by 10% (emigration to EU over past decade). Latvia: break in series in 2012. Malaysia: break in series in 2010. Portugal: methodological change in 2011. Romania: for 2018 - third quarter. Spain: break in series in 2005.

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### **3.2.15 Part-time employment**

OECD (2020), Labor Force Statistics

## National sources

Part-time employment refers to persons who usually work less than 30 hours per week in their main job. Indonesia: less than 35 hours per week. Philippines: PSA defines part-time workers as workers who work for less than 40 hours per week.

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### 3.2.16 Female labor force

OECD (2020), Main Economic Indicators - complete database

National sources

Estimate for 2019. Austria: break in series in 2008. Belgium: until Q3 for 2018. Denmark: break in series in 2009. Malaysia: break in series in 2010. Portugal: methodological change in 2011. Romania: for 2018 - third quarter. Spain: break in series in 2005. Philippines: 2018 data calculated from the July 2018 Labor Force Survey.

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### 3.2.17 [B] Foreign labor force

OECD (2019) Migration Statistics

National sources

The share of foreign or foreign-born workers in a country's labor force. Not always comparable through countries. For the European countries, the main difficulty consists in covering EU nationals, who have free labor market access in EU Member States. They are sometimes issued work permits, but this information is not always as readily available as for third-country nationals. Belgium: until Q3 for 2018. Bulgaria: Active persons from foreign countries estimates. Croatia: estimate. Greece: 3rd quarter for 2015. Japan: break in series in 2008. Hungary: not including the unemployed. Luxembourg: for salaried workforce only. Norway: self-employed not included. Philippines: Based on Alien Employment Permits Issued. Singapore: Foreign employment. Slovenia: break in series in 2008; from 2008 foreign born labor force; up to 2007 fixed-term working permits for foreigners. Turkey: Number of work permits given to foreigners.

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## 3.3 Finance

### 3.3.01 Banking sector assets

IMF Monetary and Financial Stats (MFS) April 2020

Including net foreign assets and total domestic claims for depository corporations.

[Including net foreign assets and total domestic claims for depository corporations.](#)

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### 3.3.02 [B] Financial cards in circulation

Passport GMID

Source: © Euromonitor International 2020

National sources

Including credit, debit and ATM cards, charge and pre-paid cards as well as storecards and smart cards.

ATM Function:

An ATM card (also called a cash card, cash dispenser card or cash machine card) enables access to an ATM machine in order to receive cash or monitor account activity. In Euromonitor's system, ATM transactions refer to cash withdrawal and do not include other ATM transaction activity including top-ups, deposits and money transfer. The ATM value and volume categories contain all ATM cash withdrawal activity regardless of the type of card (e.g., debit) used to access cash.

Charge Card Function:

A charge card (sometimes referred to as a Travel and Entertainment card) shares the pay later component with credit cards. However, charge card balances normally have to be paid off monthly and do not attract interest charges. Charge cards typically possess high (or even no) pre-set spending limits and may carry a high annual fee.

Credit Function:

Credit cards allow for purchases against a preapproved line of credit. The account holder has the choice of whether to pay off the entire balance each month or opt for monthly installments with the balance serving as revolving credit. If the cardholder decides to revolve a balance, the consumer pays interest. Credit cards can include affinity cards, reward cards and types of co-branded cards. Co-branded retailer cards—issued by retailers acting as financial institutions and without usage restrictions—are included in this category. Cards issued by a retailer with usage limited to a specific store within a predefined retail group fall under the store cards definition. Debit cards with an overdraft function are not counted as cards with a credit function.

Debit Function:

Debit cards merge the functionality of both an ATM card and direct payment from a bank account (a check substitute in some markets). A debit card allows the cardholder to receive cash and monitor account activity at an ATM machine, as well as pay for goods and services via a point-of-sale terminal. A debit card payment transaction involves the automatic withdrawal of funds from the cardholders demand deposit bank account (checking or giro). Since the funds are removed from a bank account, no interest is charged on payments.

Store Cards:

A store card (also known as a retailer or private label card) contains a pay later component and revolving line of credit similar to credit cards. However, store cards must contain usage limited to specific stores within a predefined retail group unlike retailer co-branded cards. Co-branded credit cards issued by retailers acting as financial institutions and without usage restrictions fall into the credit card category.

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### 3.3.03 Financial card transactions

Passport GMID

Source: © Euromonitor International 2020

National sources

Includes both card payment and ATM transactions.

Card Payment Transactions includes debit, credit, charge, store and prepaid transaction. Cyprus: Includes payments by resident PSPS with cards issued by resident PSPS and payments by non-resident PSPS with cards issued by resident PSPS. Taiwan, China: Official ATM data records all transactions on ATMs; this includes deposits, withdrawals and fund transfer.

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#### **3.3.04 Access to financial services**

Global Financial Inclusion Database, World Bank

Proportion of adults (15 years and older) with an account at a financial institution or mobile-money-service provider (% of adults aged 15 years and older. Taiwan: Financial institution account (% age 15+).

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#### **3.3.05 Access to financial services - gender ratio**

Global Financial Inclusion Database, World Bank

Proportion of adults (15 years and older) with an account at a financial institution or mobile-money-service provider (% of adults aged 15 years and older. Expressed as a ratio: males minus females. Taiwan: Financial institution account (% age 15+).

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#### **3.3.09 [B] Stock market capitalization (\$bn)**

Passport GMID

Source: © Euromonitor International 2020

National sources

World Bank 2010+, S&P Global Stock Markets Factbook up to 2009

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#### **3.3.10 Stock market capitalization (%)**

Passport GMID

Source: © Euromonitor International 2020

National sources

World Bank 2010+, S&P Global Stock Markets Factbook up to 2009

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#### **3.3.11 [B] Value traded on stock markets**

The World Bank Development Indicators

<http://databank.worldbank.org>

World Bank 2010+, S&P Global Stock Markets Factbook up to 2009

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#### **3.3.12 Listed domestic companies**

Thomson Reuters – Thomson One Banker

WBDI

World Bank 2010+, S&P Global Stock Markets Factbook up to 2009

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#### **3.3.13 Stock market index**

Passport GMID

Source: © Euromonitor International 2020

National sources

Stock market index is a hypothetical basket of securities designed to summarize the performance of stocks market. Usually all indexes are chain-linked, meaning that they are always calculated based on the price level of the previous trading day. The indexes are market weighted, calculated based on the change in the total market value from one point in time to another of all the shares included in the index. The figure for a certain time period refers to an average of daily data for that period.

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#### **3.3.15 Initial Public Offerings**

Thomson Reuters – Thomson One Banker

Thomson Reuters Standard Initial Public Offering by issue date, by equity domicile nation. Three year average.

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#### **3.3.18 M&A Activity**

Thomson Reuters – Thomson One Banker

WBDI

Number of Mergers and Acquisitions divided by the number of listed domestic companies. 3 years average.

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### **3.4 Management Practices**

#### **3.4.11 Women in management**

ILO

The World Bank (Development Data Group)

<http://databank.worldbank.org>

The proportion of females in total employment in senior and middle management. It corresponds to major group 1 in both ISCO-08 and ISCO-88 minus category 14 in ISCO-08 (hospitality, retail and other services managers) and minus category 13 in ISCO-88 (general managers), since these comprise mainly managers of small enterprises. Hong Kong: Women in management refer to

those employed women who were managers and administrators. The percentages refer to shares of females among all managers and administrators.

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#### **3.4.12 Women on boards**

©2019 Copyright MSCI  
Women on Boards Report, MSCI  
www.msci.com  
National sources

% of board seats held by women, of the approximately 2'500 companies around the world measured by MSCI. Kazakhstan: including public sector.

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#### **3.4.13 Fear of failure rate**

Global Entrepreneurship Monitor <https://www.gemconsortium.org/data>

Percentage of 18-64 population perceiving good opportunities to start a business who indicate that fear of failure would prevent them from setting up a business.

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#### **3.4.14 Total early-stage Entrepreneurial Activity**

Global Entrepreneurship Monitor <https://www.gemconsortium.org/data>

Percentage of 18-64 population who are either a nascent entrepreneur or owner-manager of a new business.

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## Infrastructure

### **4.1 Basic Infrastructure**

#### **4.1.01 [B] Land area**

FAO 2019 - Food and Agriculture Organization of the United Nations (FAO)  
National Sources

Including area under inland water bodies.

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#### **4.1.02 Arable area**

FAO 2019 - Food and Agriculture Organization of the United Nations (FAO)  
National Sources

Including arable and permanent cropland.

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#### **4.1.03 Water resources**

FAO 2019. AQUASTAT Main Database - Food and Agriculture Organization of the United Nations (FAO)  
National sources

Internal Renewable Water Resources: long-term average annual flow of rivers and recharge of aquifers generated from endogenous precipitation. Double counting of surface water and groundwater resources is avoided by deducting the overlap from the sum of the surface water and groundwater resources.

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#### **4.1.06 [B] Population - market size**

UNDP Human Development Report 2019

Mid-year estimates. Croatia: new census in 2011 with a new methodology. India: break in series in 2011. Jordan: series have been revised according to the the new Population and Housing Census published in 2016: end of year population for 2019. Portugal: methodological change in 2011. Russia: including Crimea as of 2015. UAE: re-estimation of the national population was made by the National Bureau of Statistics in 2010 (consequent increase as of 2008). Lithuania: break in series 2011 - census revised population figure downwards by 10% (emigration to EU over past decade). Philippines: Latest available census data is for 2010. 2011-2015 figures are projections based on PSA's annual Philippines in Figures publication.

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#### **4.1.07 Population - growth**

UNDP Human Development Report 2019

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#### **4.1.08 [B] Dependent Population**

Passport GMID  
Source: © Euromonitor International 2020  
National sources

Singapore: Resident population.

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#### **4.1.09 Dependency ratio**

Passport GMID  
Source: © Euromonitor International 2020  
National sources

[Singapore: Resident population.](#)

#### **4.1.10 Roads**

World Roads Statistics  
International Road Federation, <http://www.irfnet.org>  
National sources

Total network including motorways, highways, main or national roads, secondary or regional roads and other roads. Hong Kong SAR: Estimates based on topographic maps, which include roads maintained by various Departments as well as all private roads. Indonesia: including national, provinces and sub districts roads. Qatar: Based on NRS data (Network Referencing System) using Centre line instead of Double carriage as taken in earlier calculations, Information Systems Department, Public Works Authority (ASGHAL), State of Qatar(2019).

#### **4.1.11 Railroads**

International Railways Statistics 2019 Synopsis  
National sources

Total length of public lines worked at end of year. Data may not be always comparable between countries. Hong Kong: Includes heavy rail, light rail, tram, peak tram and airport automated people mover. Singapore: Rapid Transit Systems. Taiwan: incl. THSRC and TRA since 2008, TRA only for previous years.

#### **4.1.12 [B] Air transportation**

**World Development Indicators database (from International Civil Aviation Organization)**  
National sources

Members of the International Civil Aviation Organization only, on international and domestic flights. The number of revenue passengers carried should be obtained by counting each passenger on a particular flight (one that has the same flight number throughout the journey of the passenger) only once and not at each individual stage of that flight, with the single exception that a passenger flying on both the international and domestic stages of the same flight should be counted as both a domestic and an international passenger. Non-revenue passengers should be excluded.

#### **4.1.16 [B] Total indigenous energy production Energy Balances 2019 © OECD/International Energy Agency 2020**

[Estimates for the most recent year.](#)

#### **4.1.17 Total indigenous energy production (%)**

Energy Balances 2019 © OECD/International Energy Agency 2020

[Estimates for the most recent year.](#)

#### **4.1.18 [B] Total final energy consumption**

Energy Balances 2019 © OECD/International Energy Agency 2020

[Estimates for the most recent year.](#)

#### **4.1.19 [B] Total final energy consumption per capita**

Energy Balances 2019 © OECD/International Energy Agency 2020

[Estimates for the most recent year.](#)

#### **4.1.20 Electricity costs for industrial clients**

OECD Energy Prices and Taxes 1/2020 (International Energy Agency)  
National sources

For 2019, OECD prices refer to mid-year, otherwise end-year. Prices refer to the simple average of the domestic monthly reference with tax for electricity for industry. Bulgaria: average for all industry groups, without refundable taxes and VAT. Kazakhstan: Average limit rates for groups of 13 energy-producing companies approved by the Government of the Republic of Kazakhstan. Philippines: November 2016 to October 2017 data. Singapore: domestic low tension supplies. USA: excluding taxes.

## **4.2 Technological Infrastructure**

### **4.2.01 Investment in Telecommunications**

Passport GMID  
Source: © Euromonitor International 2020  
National sources

Investment refers to as the annual capital expenditure; this is the gross annual investment in telecom (including fixed, mobile and other services) for acquiring property and network. The term investment means the expenditure associated with acquiring

the ownership of property (including intellectual and non-tangible property such as computer software) and plant. This includes expenditure on initial installations and on additions to existing installations where the usage is expected to be over an extended period of time. Note that this applies to telecom services that are available to the public, and exclude investment in telecom software or equipment for private use.

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#### **4.2.02 Mobile Broadband subscribers**

Business Monitor International

Total active mobile 3G and 4G subscriptions, excluding broadband connections on dedicated data SIM cards or USB dongles. Data given as a percentage of the total mobile market.

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#### **4.2.03 Mobile Telephone costs**

Business Monitor International

Monthly blended mobile average revenue per user, including postpaid and prepaid subscriptions.

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#### **4.2.05 Computers in use**

Computer Industry Almanac Inc. April 2018  
National sources

PCs in-use includes tablets. Tablets are personal computing devices and usage are similar to PCs.

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#### **4.2.06 Computers per capita**

Computer Industry Almanac Inc. April 2018  
National sources

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#### **4.2.07 Internet users**

Computer Industry Almanac Inc. April 2018  
National sources

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#### **4.2.08 Broadband subscribers**

Business Monitor International

Total number of dedicated internet connections with download speeds higher than 256kbps. Includes both fixed and mobile connections (dedicated mobile data connections on data SIMs, USB dongles and M2M connections, but excluding smartphone-based voice and data 3G/4G connections). Per 1'000 inhabitants. Taiwan: fixed broadband only.

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#### **4.2.09 Internet bandwidth speed**

M-Labs / [cable.co.uk](http://cable.co.uk)

Ookla  
Akamai  
OpenSignal

Average connection speed in Mbps: data transfer rates for Internet access by end-users.

Values presented are an average compiled from four different sources: M-Labs / [cable.co.uk](http://cable.co.uk); Ookla; Akamai; and OpenSignal.

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#### **4.2.15 High-tech exports (\$)**

The World Bank (Development Data Group)  
<http://databank.worldbank.org>  
National sources

High-technology exports are products with high R&D intensity, such as in aerospace, computers, pharmaceuticals, scientific instruments, and electrical machinery.

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#### **4.2.16 High-tech exports (%)**

The World Bank (Development Data Group)  
<http://databank.worldbank.org>  
National sources

High-technology exports are products with high R&D intensity, such as in aerospace, computers, pharmaceuticals, scientific instruments, and electrical machinery.

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#### **4.2.17 ICT service exports**

The World Bank (Development Data Group)  
<http://databank.worldbank.org>

ICT service exports (% of service exports). 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).

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### 4.3 Scientific Infrastructure

#### 4.3.01 Total expenditure on R&D (\$)

OECD Main Science and Technology Indicators  
UNESCO <http://stats.uis.unesco.org>  
National sources

National estimates, projections or provisional data for the most recent year. Chile, Denmark, France, Japan, Korea, Netherlands, Portugal, Slovenia, Spain and Sweden: break in series. Hungary (up to 2003), Israel: defense excluded(all or mostly). Indonesia: Estimate based on target GERD by the Ministry of Science and Technology. Sweden: underestimated or based on underestimated data. USA: excludes most or all capital expenditure.

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#### 4.3.02 Total expenditure on R&D (%)

OECD Main Science and Technology Indicators  
UNESCO <http://stats.uis.unesco.org>  
National sources

National estimates, projections or provisional data for the most recent year. Chile, Denmark, France, Japan, Korea, Netherlands, Portugal, Slovenia, Spain and Sweden: break in series. Hungary (up to 2003), Israel: defense excluded(all or mostly). Indonesia: Estimate based on target GERD by the Ministry of Science and Technology. Sweden: underestimated or based on underestimated data. USA: excludes most or all capital expenditure.

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#### 4.3.03 [B] Total expenditure on R&D per capita (\$)

OECD Main Science and Technology Indicators  
UNESCO <http://stats.uis.unesco.org>  
National sources

National estimates, projections or provisional data for the most recent year. Chile, Denmark, France, Japan, Korea, Netherlands, Portugal, Slovenia, Spain and Sweden: break in series. Hungary (up to 2003), Israel: defense excluded(all or mostly). Indonesia: Estimate based on target GERD by the Ministry of Science and Technology. Sweden: underestimated or based on underestimated data. USA: excludes most or all capital expenditure.

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#### 4.3.04 Business expenditure on R&D (\$)

OECD Main Science and Technology Indicators  
UNESCO <http://stats.uis.unesco.org>  
National sources

National estimates, projections or provisional data for most recent year. Chile, Denmark, France, Korea, Kazakhstan, Netherlands, Slovenia, Spain and Taiwan: break in series. Indonesia: estimate based on target BERD by the Ministry of Research and Technology. Israel: defense excluded (all or mostly). Hungary: the sum of the breakdown does not add to the total. USA: excludes most or all capital expenditures.

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#### 4.3.05 Business expenditure on R&D (%)

OECD Main Science and Technology Indicators  
UNESCO <http://stats.uis.unesco.org>  
National sources

National estimates, projections or provisional data for most recent year. Chile, Denmark, France, Korea, Kazakhstan, Netherlands, Slovenia, Spain and Taiwan: break in series. Indonesia: estimate based on target BERD by the Ministry of Research and Technology. Israel: defense excluded (all or mostly). Hungary: the sum of the breakdown does not add to the total. USA: excludes most or all capital expenditures.

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#### 4.3.06 Total R&D personnel

OECD Main Science and Technology Indicators  
UNESCO <http://stats.uis.unesco.org>  
National sources

National estimates, projections or provisional data for most recent year. Czech Republic, Colombia, Denmark, Finland, Korea, Mexico, Netherlands, Hungary, Japan, Portugal, Slovenia, Sweden and Taiwan: break in series. United Kingdom: underestimated or based on underestimated data. Jordan, Philippines: based on headcount, not FTE.

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#### 4.3.07 Total R&D personnel per capita

OECD Main Science and Technology Indicators  
UNESCO <http://stats.uis.unesco.org>  
National sources

National estimates, projections or provisional data for most recent year. Czech Republic, Colombia, Denmark, Finland, Korea, Mexico, Netherlands, Hungary, Japan, Portugal, Slovenia, Sweden and Taiwan: break in series. United Kingdom: underestimated or based on underestimated data. Jordan, Philippines: based on headcount, not FTE.

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#### 4.3.08 [B] Total R&D personnel in business enterprise

OECD Main Science and Technology Indicators  
UNESCO <http://stats.uis.unesco.org>  
National sources

National estimates, projections or provisional data for most recent year. Czech Republic, Colombia, Denmark, Finland, Korea, Mexico, Netherlands, Hungary, Japan, Portugal, Slovenia, Sweden and Taiwan: break in series. Bulgaria: researchers only. United Kingdom: underestimated or based on underestimated data. Jordan, Philippines: based on headcount, not FTE.

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#### **4.3.09 [B] Total R&D personnel in business per capita**

OECD Main Science and Technology Indicators  
UNESCO <http://stats.uis.unesco.org>  
National sources

National estimates, projections or provisional data for most recent year. Czech Republic, Colombia, Denmark, Finland, Korea, Mexico, Netherlands, Hungary, Japan, Portugal, Slovenia, Sweden and Taiwan: break in series. Bulgaria: researchers only. United Kingdom: underestimated or based on underestimated data. Jordan, Philippines: based on headcount, not FTE.

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#### **4.3.10 Researchers in R&D per capita**

OECD Main Science and Technology Indicators  
UNESCO <http://stats.uis.unesco.org>  
National sources

National estimates, projections or provisional data for most recent year. Researchers in R&D are professionals engaged in the conception or creation of new knowledge, products, processes, methods, or systems and in the management of the projects concerned. Postgraduate PhD students (ISCED97 level 6) engaged in R&D are included.

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#### **4.3.11 Science degrees**

NSF Science & Engineering Indicators 2020  
Courtesy: National Science Foundation  
National sources

Including physical/biological sciences, mathematic and statistics, computer science, agricultural sciences, social and behavioral sciences and engineering. China data include mathematics under physical and biological sciences and computer sciences under engineering. Hong Kong: Includes degrees in medicine, dentistry and health; sciences; engineering and technology; architecture, and social sciences. India: data include social sciences in humanities and arts (non-S&E). Japan: social science also include business administration. Philippines: Includes graduates of Engineering and Technology, Mathematics and Computer Science, Medical and Allied, and Natural Sciences. Singapore: data include social sciences in humanities (non-S&E) and mathematical sciences in physical and biological sciences. United Kingdom: includes former colleges and polytechnical institutions.

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#### **4.3.12 Scientific articles**

NSF Science & Engineering Indicators 2020  
Courtesy: National Science Foundation  
National sources

Article counts are from a selection of journals, books, and conference proceedings in S&E from Scopus. Articles are classified by their year of publication and are assigned to a region/country/economy on the basis of the institutional address(es) listed in the article. Articles are credited on a fractional-count basis. The sum of the countries/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 country or economy. Hong Kong: Includes articles in biology and medicine; physical sciences; engineering; and social sciences.

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#### **4.3.13 [B] Nobel prizes**

The Nobel Foundation  
<http://nobelprize.org>

List of Nobel Laureates 1950-2019. Number of laureates (by nationality) awarded in physics, chemistry, physiology or medicine and economics since 1950.

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#### **4.3.14 Nobel prizes per capita**

The Nobel Foundation  
<http://nobelprize.org>

List of Nobel Laureates 1950-2019. Number of laureates (by nationality) awarded in physics, chemistry, physiology or medicine and economics since 1950.

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#### **4.3.15 Patent applications**

WIPO Statistics Database  
<http://www.wipo.int/ipstats/en/statistics/patents/>  
TIPO for Taiwan, China

Total patent applications (Direct and PCT national phase entries) by applicant's origin. Counts are based on the patent filing date. Country of origin refers to the country of residency of the first-named applicant in the application. Taiwan: data compiled by TIPO using data supplied by international patent offices (USPTO, JPO, EPO, KIPO, SIPO).

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#### **4.3.16 Patent applications per capita**

WIPO Statistics Database  
<http://www.wipo.int/ipstats/en/statistics/patents/>  
TIPO for Taiwan, China

Total patent applications (Direct and PCT national phase entries) per 100'000 inhabitants, by applicant's origin. Counts are based on the patent filing date. Country of origin refers to the country of residency of the first-named applicant in the application. Taiwan: data compiled by TIPO using data supplied by international patent offices (USPTO, JPO, EPO, KIPO, SIPO).

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#### **4.3.17 Patent grants**

WIPO Statistics Database

<http://www.wipo.int/ipstats/en/statistics/patents/>

TIPO for Taiwan, China

Total patent grants (Direct and PCT national phase entries) by applicant's origin. Three year average to reduce volatility. Counts are based on the grant date. Country of origin refers to the country of residency of the first-named applicant in the application. Taiwan: data compiled by TIPO using data supplied by international patent offices (USPTO, JPO, EPO, KIPO, SIPO).

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#### **4.3.18 Number of patents in force**

WIPO Statistics Database

<http://www.wipo.int/ipstats/en/statistics/patents/>

TIPO for Taiwan, China

Patents in Force per 100'000 inhabitants, by applicant's origin. Country of origin refers to the country of residency of the first-named applicant in the application. Taiwan: data compiled by TIPO using data supplied by international patent offices (USPTO, JPO, EPO, KIPO, SIPO).

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#### **4.3.19 Medium- and high-tech value added**

UNIDO CIP 2019 database

<https://stat.unido.org/database/CIP%202019>

The indicator is calculated as the share of the sum of the value added from medium and high-tech industry economic activities to manufacturing value added. The medium and high-tech industry is defined using OECD classification as the following by International Standard Industrial Classification of All Economic Activities (ISIC) Revision 3 and Revision 4 Division respectively: ISIC Rev. 3 (24, 29, 30, 31, 32, 33, 34, 35 excluding 351). Manufacturing value added is the value added of manufacturing industry, which is Section C of ISIC Rev.4, and Section D of ISIC Rev.3. Data can be found in UNIDO INDSTAT4 Database by ISIC Revision 3 and ISIC Revision 4 respectively. Data are collected using General Industrial Statistics Questionnaire which is filled by NSOs and submitted to UNIDO annually. Data for OECD countries are obtained directly from OECD. Country data are also collected from official publications and official web-sites.

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### **4.4 Health and Environment**

#### **4.4.01 Total health expenditure**

World Health Statistics (World Health Organization)

<http://apps.who.int/ghodata/>

National sources

#### **4.4.02 [B] Total health expenditure per capita**

World Health Statistics (World Health Organization)

<http://apps.who.int/ghodata/>

National sources

#### **4.4.03 [B] Public expenditure on health (%)**

World Health Statistics (World Health Organization)

<http://apps.who.int/ghodata/>

National sources

#### **4.4.05 Universal health care coverage index**

World Health Organization

2017 Global Monitoring Report. Geneva, WHO 2017. [http://www.who.int/healthinfo/universal\\_health\\_coverage/report/2017/en/](http://www.who.int/healthinfo/universal_health_coverage/report/2017/en/)

UHC means people receive the health services they need without suffering financial hardship. Data on coverage of essential health services and financial protection are used to monitor progress toward UHC.

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#### **4.4.06 Life expectancy at birth**

Human Development Report 2020 (UNDP)

#### **4.4.07 [B] Healthy life expectancy**

Passport GMID

Source: © Euromonitor International 2020

National sources

Break in series in 2003. Health adjusted life expectancy is based on life expectancy at birth but includes an adjustment for time in poor health. It is the average number of years that a person at birth can expect to live in “full health” by taking into account years lived in less than full health due to disease and/or injury.

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#### **4.4.08 [B] Infant mortality**

World Health Statistics (World Health Organization)  
<http://apps.who.int/ghodata/>  
National sources

Under-five mortality rate is the probability (expressed as per 1000 live births) of a child born in a specific year dying before reaching five years of age, if subjected to current age-specific mortality rate.

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#### **4.4.09 Medical assistance**

Passport GMID  
Source: © Euromonitor International 2020  
National sources

Doctors/Physicians: The number of physicians, general practitioners and specialists (including self-employed) who are actively practicing medicine in public and private institutions. The data should exclude dentists, stomatologists, qualified physicians who are working abroad, working in administration, research and industry positions. Data should include foreign physicians licensed to practice and actively practicing medicine in the country. The data refer to the total number of nurses certified/registered and actively practicing in public and private hospitals, clinics and other health facilities, including self-employed. Nursing assistants and midwives should be included. Data should exclude nurses who are working abroad, in administrative, research and industry positions. A midwife is defined as a practitioner of the obstetric art, qualified to deliver babies and to care for women before, during, and after childbirth. Brazil: Break in series in 2007. China: since 2002 refer to the certified (assistant) doctors. Hong Kong SAR: physicians refer to doctors registered with the Medical Council of Hong Kong with full registration on the local and overseas lists, nurses refer to those registered/enrolled in any part of the register with the Nursing Council of Hong Kong (NCHK). Midwives refer to those registered with the Midwives Council of Hong Kong (MWCHK). The data series is the sum of the number of registered nurses, enrolled nurses and midwives. Philippines: including all doctors and nurses working abroad.

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#### **4.4.10 [B] Urban population**

Global Market Information Database  
Source: © Euromonitor International 2020  
National sources

The infrastructure, types of houses and dwellings in agglomerations, density, landscapes, etc., are very different between the countries, hence, naturally, it is impossible to have a uniform definition. Refers to metropolitan regions, which in most cases differ from city proper.

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#### **4.4.11 Human development index**

UNDP Human Development Report 2019

HDI examines three basic dimensions to measure a country's growth and achievements in human development. The first of these is health for the country's people. This is measured by life expectancy at birth and those with higher life expectancies rank higher than those with lower life expectancies. The second dimension measured in the HDI is a country's overall knowledge level as measured by the adult literacy rate combined with the gross enrollment ratios of students in primary school through the university level. The third and final dimension in the HDI is a country's standard of living. Those with higher standards of living rank higher than those with lower standards of living. This dimension is measured with the gross domestic product per capita in purchasing power parity terms, based on United States dollars. The human development index values were calculated by the UNDP using a consistent methodology and data series; they are not strictly comparable with those published in earlier Human Development Reports. Break in series in 2009.

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#### **4.4.12 Energy intensity**

Energy Balances 2019 © OECD/International Energy Agency 2020

The amount of energy consumed (production + imports - exports - bunkers - stock changes) for each dollar of gross domestic product. France: including Monaco. Italy: incl. San Marino. South Africa: African Customs Union includes South Africa, Botswana, Lesotho, Swaziland and Namibia. Switzerland: incl. Liechtenstein.

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#### **4.4.13 [B] Waste water treatment plants**

OECD Environmental Data May 2020  
EUROSTAT May 2020  
National sources

Percentage of national population connected to a sewerage treatment plant, public treatment and other treatment. Malaysia: Wastewater treatment plants which are operated by public authorities only.

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#### **4.4.14 Water consumption intensity**

FAO 2020. AQUASTAT Main Database - Food and Agriculture Organization of the United Nations (FAO)  
OECD Environmental Data  
EUROSTAT  
National sources

Annual quantity of freshwater withdrawn for agricultural, industrial and domestic purposes. It includes renewable freshwater resources as well as potential over-abstraction of renewable groundwater or withdrawal of fossil groundwater and eventual use of desalinated water or treated wastewater. It does not include other categories of water use, such as for cooling of power plants,

mining, recreation, navigation, fisheries, etc., which are sectors that are characterized by a very low net consumption rate. Belgium: excluding manufacturing cooling. China: Does not include ecological protection of 10.54 km<sup>3</sup>. Philippines: Data excludes water use for power, fisheries, livestock, recreation and other uses. USA: Includes 63.45 km<sup>3</sup> of withdrawal of saline water (sea water, coastal brackish, saline groundwater), mostly for cooling of thermoelectric plants and some for mining, does not include Puerto Rico.

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#### **4.4.15 [B] CO2 emissions**

IEA Statistics Online: CO2 emissions 2018 © OECD/IEA

Total Carbon Dioxide (CO<sub>2</sub>) Emissions refer to the mass of CO<sub>2</sub> released from the burning (combustion) of fuel in a particular country or region. Fuels combusted include coal and coal products, oil, natural gas, industrial waste and non-renewable municipal waste.

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#### **4.4.16 CO2 emissions intensity**

IEA Statistics Online: CO2 emissions 2018 © OECD/IEA

Total Carbon Dioxide (CO<sub>2</sub>) Emissions refer to the mass of CO<sub>2</sub> released from the burning (combustion) of fuel in a particular country or region. Fuels combusted include coal and coal products, oil, natural gas, industrial waste and non-renewable municipal waste.

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#### **4.4.17 Exposure to particle pollution**

OECD (2020), "Air quality and health: Exposure to PM<sub>2.5</sub> fine particles - countries and regions", OECD Environment Statistics (database)

Particle pollution, also called particulate matter or PM, is a mixture of solids and liquid droplets floating in the air. Some particles are released directly from a specific source, while others form in complicated chemical reactions in the atmosphere. Particles less than 10 micrometers in diameter pose the greatest problems, because they can get deep into lungs and even the bloodstream. Cyprus: includes PM<sub>2.5</sub> and PM<sub>10</sub>.

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#### **4.4.18 Renewable energies (%)**

OECD IEA Renewable Statistics 2019

Renewable Energy is derived from natural processes that are replenished constantly. In its various forms, it derives directly or indirectly from the sun, or from heat generated deep within the earth. Included in the definition is energy generated from solar, wind, biomass, geothermal, hydropower and ocean resources, and biofuels and hydrogen derived from renewable resources. Therefore, the renewable products are: hydro (large, medium and small), geothermal, solar photovoltaic, solar thermal, tide, wave, ocean, wind, solid biomass, gases from biomass, liquid biomass and renewable municipal waste. It follows that total renewables does not include industrial waste, non-renewable municipal waste, waste heat, net heat generated by heat pumps, and electricity generated with hydro pumped storage. Is equal to the direct sum of HYDRO, GEOTHERM, SOLARPV, SOLARTH, TIDE, WIND, MUNWASTER, PRIMSBIO, BIOGASES, BIOGASOL, BIODIESEL, OBIOLIQ, RENEWNS and CHARCOAL.

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#### **4.4.19 Forest area growth**

UN SDG Indicators Database

FAO, Global Forest Resources Assessment

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#### **4.4.20 [B] Total biocapacity**

©Global Footprint Network 2019

Biocapacity (or biological capacity) is the capacity of ecosystems to produce useful biological materials and to absorb waste materials generated by humans, using current management schemes and extraction technologies. "Useful biological materials" are defined as those used by the human economy, hence what is considered "useful" can change from year to year (e.g. use of corn (maize) stover for cellulosic ethanol production would result in corn stover becoming a useful material, and so increases the biocapacity of maize cropland). The biocapacity of an area is calculated by multiplying the actual physical area by the yield factor and the appropriate equivalence factor. Biocapacity is usually expressed in units of global hectares.

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#### **4.4.21 [B] Ecological footprint**

©Global Footprint Network 2019

A measure of how much biologically productive land and water an individual, population or activity requires to produce all the resources it consumes and to absorb the waste it generates using prevailing technology and resource management practices. The Ecological Footprint is usually measured in global hectares. Because trade is global, an individual or country's Footprint includes land or sea from all over the world. The footprint can be compared with nature's ability to renew these resources. The footprint of a country includes all the cropland, grazing land, forest, and fishing grounds required to produce the food, fiber and timber it consumes, to absorb the wastes emitted in generating the energy it uses, and to provide space for its infrastructure. Ecological Footprint is often referred to in short form as Footprint.

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#### **4.4.22 Ecological balance (reserve/deficit)**

©Global Footprint Network 2019

Ecological deficit / reserve is the difference between the biocapacity and Ecological Footprint of a region or country. An ecological deficit occurs when the Footprint of a population exceeds the biocapacity of the area available to that population. Conversely, an ecological reserve exists when the biocapacity of a region exceeds its population's Footprint. If there is a regional or national ecological deficit, it means that the region is importing biocapacity through trade or liquidating regional ecological assets. In contrast, the global ecological deficit cannot be compensated through trade, and is therefore equal to overshoot by definition.

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#### 4.4.23 Environment-related technologies

OECD (2020), "Green growth indicators", OECD Environment Statistics (database)

The number of environment-related inventions is expressed as a percentage of environment-related inventions worldwide. This indicator allows the importance of inventive activity in a given country to be assessed in terms of its contribution to the global pool of inventions.

Indicators of technology development are constructed by measuring inventive activity using patent data across a wide range of environment-related technological domains (ENV-TECH), including environmental management, water-related adaptation, and climate change mitigation technologies. The counts used here include only higher-value inventions (with patent family size  $\geq 2$ ).

Data are obtained from the Patents: Technology development dataset of the OECD Environment Database. Detailed information on the methodology used to compute the patent counts is in the associated metadata.

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#### 4.4.24 Environmental agreements

UNEP Sustainable Development Goals

Number of international multilateral environmental agreements on hazardous waste, and other chemicals where the country's commitments and obligations in transmitting information as required by each relevant agreement have been met.

The indicator refers to the following Multilateral Environmental Agreements (MEAs): The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (Basel Convention); The Rotterdam Convention on the prior informed consent procedure for certain hazardous chemicals and pesticides in international trade (Rotterdam Convention); The Stockholm Convention on Persistent Organic Pollutants (Stockholm Convention); The Montreal Protocol on Substances that Deplete the Ozone Layer (Montreal Protocol); Minamata Convention on Mercury (Minamata Convention).

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### 4.5 Education

#### 4.5.01 Total public expenditure on education

UNESCO <http://stats.uis.unesco.org>

Eurostat April 2020

National sources

Total general (local, regional and central) government expenditure in educational institutions (current and capital). It excludes transfers to private entities such as subsidies to households and students, but includes expenditure funded by transfers from international sources to government. It includes pre-primary, primary, secondary all levels and tertiary public institutions. Chile and Jordan: Budgetary central government. Philippines: Includes expenditure for items other than basic and higher education such as vocational education, culture and sports.

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#### 4.5.02 [B] Total public expenditure on education per capita

UNESCO <http://stats.uis.unesco.org>

Eurostat April 2020

National sources

Total general (local, regional and central) government expenditure in educational institutions (current and capital). It excludes transfers to private entities such as subsidies to households and students, but includes expenditure funded by transfers from international sources to government. It includes pre-primary, primary, secondary all levels and tertiary public institutions. Chile and Jordan: Budgetary central government. Philippines: Includes expenditure for items other than basic and higher education such as vocational education, culture and sports.

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#### 4.5.03 Gov. expenditure on education per student

UNESCO <http://stats.uis.unesco.org>

National sources

Initial government funding per secondary student as a percentage of GDP per capita. Total general (local, regional and central) government expenditure (current and capital) on a given level of education (secondary) minus international transfers to government for education, divided by the number of student enrolled at that level of education. Philippines: calculated by the partner institute. Slovenia: upper secondary education. Slovenia: upper secondary education. Taiwan, China: including elementary and secondary schools.

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#### 4.5.04 Total public expenditure on education per student

UNESCO <http://stats.uis.unesco.org>

Eurostat October 2019

National sources

Total general (local, regional and central) government expenditure in educational institutions (current and capital). It excludes transfers to private entities such as subsidies to households and students, but includes expenditure funded by transfers from international sources to government. It includes pre-primary, primary, secondary all levels and tertiary public institutions. Chile and Jordan: Budgetary central government. Philippines: Includes expenditure for items other than basic and higher education such as vocational education, culture and sports.

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#### 4.5.05 Pupil-teacher ratio (primary education)

UNESCO <http://stats.uis.unesco.org>

OECD Education at a Glance 2019

National sources

For public and private institutions, based on full-time equivalent. Primary education (ISCED level 1): level of which the main function is to provide the basic elements of education at such establishments as elementary schools, primary schools. The ratio of students to teaching staff is calculated as the total number of full-time equivalent students divided by the total number of full-time equivalent educational personnel. Teaching staff refers to professional personnel directly involved in teaching students. The classification includes classroom teachers; special education teacher; and other teachers who work with students as a whole class in a classroom, in small groups in a resource room, or in one-to-one teaching inside a regular classroom. Teaching staff also includes chairpersons of departments whose duties include some amount of teaching, but it does not include non-professional personnel who support teachers in providing instructions to students, such as teacher's aides and other paraprofessional personnel. Data are UNESCO or OECD estimates and from national statistics. Bulgaria, Cyprus, Greece, Hong Kong SAR, India, Indonesia, Jordan, Kazakhstan, Mongolia, Peru, Philippines, Qatar, Romania, Saudi Arabia, Singapore, Thailand, UAE and Ukraine: based on headcounts. Canada: Primary includes pre-primary education. France: Public and government-dependent private institutions only for all levels. Ireland and Switzerland: Public institutions only for all levels.

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#### **4.5.06 Pupil-teacher ratio (secondary education)**

UNESCO <http://stats.uis.unesco.org>

OECD Education at a Glance 2019

National source

For public and private institutions, based on full-time equivalent. Secondary education (ISCED levels 2 and 3): level providing general and/or specialized instruction at middle schools, secondary schools, high schools, teacher training schools and schools of a vocational or technical nature. The ratio of students to teaching staff is calculated as the total number of full-time equivalent students divided by the total number of full-time equivalent educational personnel. Teaching staff refers to professional personnel directly involved in teaching students. The classification includes classroom teachers; special education teacher; and other teachers who work with students as a whole class in a classroom, in small groups in a resource room, or in one-to-one teaching inside a regular classroom. Teaching staff also includes chairpersons of departments whose duties include some amount of teaching, but it does not include non-professional personnel who support teachers in providing instructions to students, such as teacher's aides and other paraprofessional personnel. Data are UNESCO or OECD estimates and from national statistics. Bulgaria, Cyprus, Greece, Hong Kong, Jordan, Kazakhstan, Peru, Philippines, Qatar, Romania, Singapore, Thailand, UAE, Ukraine and Venezuela: Based on headcounts. Australia: general programs only. Ireland, Israel and Switzerland: public institutions only. France: Public and government-dependent private institutions only. Iceland: lower secondary only.

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#### **4.5.07 Secondary school enrollment**

UNESCO <http://stats.uis.unesco.org>

National sources

Net enrollment ratio, all programs, is the number of children of official school age (as defined by the education system) enrolled in secondary school, expressed as a percentage of the number of children of official school age for those levels in the population. Enrollment data are based on annual enrollment surveys, typically conducted at the beginning of the school year. They do not reflect actual attendance or dropout rates during the school year. Problems affecting cross-country comparisons of enrollment data stem from inadvertent or deliberate misreporting of age, and from errors in estimates of school-age populations. China and Slovak Republic: gross enrolment. Slovenia: Share of young people between 15 and 18 years of age enrolled in full-time education.

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#### **4.5.08 Higher education achievement**

OECD Education at a Glance 2019

National sources

Percentage of the population aged 25-34 that has attained tertiary-type B and tertiary-type A and advance research programs. Tertiary-type A education covers more theoretical programs that give access to advanced research programs and to professions with high general skills requirements. Tertiary-type B education covers more practical or occupationally specific programs that provide participants with a qualification of immediate relevance to the labor market. Hong Kong: Figures starting from 2012 exclude post-secondary diploma or certificate and exclude foreign domestic helpers. Kazakhstan: The data were reviewed taking into account the inclusion of graduates in technical and vocational education organizations (MCKO-5). New-Zealand and Slovenia: break in series. Peru: Tertiary education type A refers to University tertiary level and tertiary education type B refers to Non-university tertiary level; for 25 years and more. Singapore: proportion of resident non-students aged 25-34 years with polytechnic, professional qualification or other diploma, or university qualification. Japan: Data for tertiary education include upper secondary or post-secondary non-tertiary programmes (less than 5% of adults are in this group).

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#### **4.5.09 Women with degrees**

OECD Education at a Glance 2019

Educational attainment in tertiary education of 25-64 year-old females expressed as a percentage of the female population 25-64. In most countries data refer to ISCED 2011 (codes 5/6/7/8). Japan: includes data from another category. Kazakhstan: Proportion of women aged 24-44 who have received tertiary education.

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#### **4.5.10 Student mobility inbound**

UNESCO <http://stats.uis.unesco.org>

International mobile students (men and women) from abroad studying in a given country (in tertiary education). Data can refer to the school or financial year prior or after the reference year.

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#### 4.5.11 [B] Student mobility outbound

UNESCO <http://stats.uis.unesco.org>

International flows of mobile students (men and women) from a given country (in tertiary education) studying abroad. Data can refer to the school or financial year prior or after the reference year.

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#### 4.5.12 Educational assessment - PISA

PISA 2018 (OECD)

<http://www.oecd.org/pisa/>

The OECD's Programme for International Student Assessment (PISA) is a regular survey of 15-year olds which assesses aspects of their preparedness for adult life. PISA selects a sample of students that represents the full population of 15-year-old students in each participating country or education system, in both public and private schools. Mathematical literacy: an individual's capacity to identify and understand the role that mathematics plays in the world, to make well-founded judgments and to use and engage with mathematics in ways that meet the needs of that individual's life as a constructive, concerned and reflective citizen. Scientific literacy: an individual's scientific knowledge and use of that knowledge to identify questions, to acquire new knowledge, to explain scientific phenomena, and to draw evidence based conclusions about science-related issues, understanding of the characteristic features of science as a form of human knowledge and enquiry, awareness of how science and technology shape our material, intellectual, and cultural environments, and willingness to engage in science-related issues, and with the ideas of science, as a reflective citizen. Hong Kong (China), Netherlands, Portugal and United States: Data did not meet the PISA technical standards but were accepted as largely comparable. China: limited regions (B-S-J-Z); the municipalities of Beijing and Shanghai and the provinces of Jiangsu and Zhejiang participated.

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#### 4.5.13 Students who are not low achievers - PISA

PISA 2018 (OECD)

<http://www.oecd.org/pisa/>

The OECD's Programme for International Student Assessment (PISA) is a regular survey of 15-year olds which assesses aspects of their preparedness for adult life. PISA selects a sample of students that represents the full population of 15-year-old students in each participating country or education system, in both public and private schools. Mathematical literacy: an individual's capacity to identify and understand the role that mathematics plays in the world, to make well-founded judgments and to use and engage with mathematics in ways that meet the needs of that individual's life as a constructive, concerned and reflective citizen. Scientific literacy: an individual's scientific knowledge and use of that knowledge to identify questions, to acquire new knowledge, to explain scientific phenomena, and to draw evidence based conclusions about science-related issues, understanding of the characteristic features of science as a form of human knowledge and enquiry, awareness of how science and technology shape our material, intellectual, and cultural environments, and willingness to engage in science-related issues, and with the ideas of science, as a reflective citizen. Hong Kong (China), Netherlands, Portugal and United States: Data did not meet the PISA technical standards but were accepted as largely comparable. China: limited regions (B-S-J-Z); the municipalities of Beijing and Shanghai and the provinces of Jiangsu and Zhejiang participated.

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#### 4.5.14 [B] English proficiency - TOEFL

The TOEFL® Test - Test of English as a Foreign Language™

[www.ets.org](http://www.ets.org)

TOEFL iBT materials selected from Test and Score Summary for TOEFL® Internet-based tests, 2016

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TOEFL IBT Total and Section Score Means – Nonnative English-Speaking Examinees. The data are based on examinees who took the TOEFL internet based test between January 2015 and December 2015. The maximum score is 120 (Reading 30, Listening 30, Speaking 30 and Writing 30).

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#### 4.5.18 University education index

World University Ranking, Times Higher Education

IMD WCC created index calculated from the Times Higher Education ranking of the top 1'000 universities, measuring the quantity and quality of the universities in each economy. 33% weighting is the number of universities in THES ranking for each country, 33% weighting is the total score, 33% weighting is the total score per capita.

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#### 4.5.19 Illiteracy

UNESCO <http://stats.uis.unesco.org>

National sources

UNESCO or national estimates.

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# Index to Criteria

The first number indicates the Competitiveness Factor, the second number indicates the sub-factor and the third number indicates the criterion number.

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