

IMD World Competitiveness Yearbook 2022

COUNTRY PROFILE

AUSTRALIA



Competitiveness Trends – Overall

OVERALL PERFORMANCE (63 countries)



CHALLENGES IN 2022

- Sustaining strong growth without overheating the economy.
- Turning around lacklustre productivity growth.
- Addressing skills shortages, particularly in high valueadded technology-driven sectors.
- Speeding up progress in transition to net zero economy.
- Realising faster adoption of cutting-edge technologies by business.

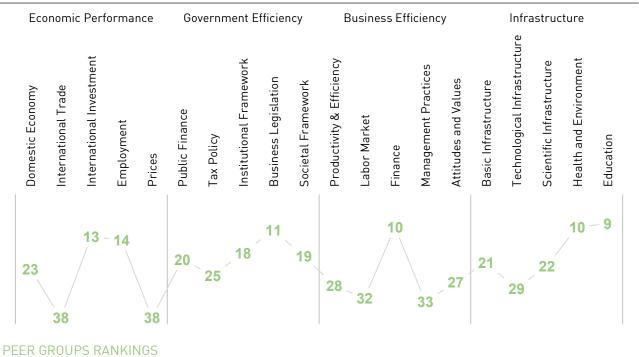
BASIC FACTS

Rank

Capital	Canberra	
Land area (square km '000)	7,741 ²⁰²¹	
Exchange Rate (per \$)	1.331 ²⁰²¹	
Population - market size (millions)	25.74 ²⁰²¹	26
Gross Domestic Product (GDP) (US\$ billions)	1,632.0 ²⁰²¹	11
GDP (PPP) per capita (US\$)	56,337 ²⁰²¹	18
Real GDP growth (%)	4.2 ²⁰²¹	44
Consumer price inflation (%)	2.82 ²⁰²¹	29
Unemployment rate (%)	5.10 ²⁰²¹	24
Labor force (millions)	13.84 ²⁰²¹	25
Current account balance (% of GDP)	3.55 ²⁰²¹	19
Direct investment stocks inward (\$bn)	790.7 ²⁰²⁰	13
Direct investment flows inward (% of GDP)	1.45 ²⁰²⁰	34

PROVIDED BY: CEDA - Committee for Economic Development of Australia

COMPETITIVENESS LANDSCAPE





Competitiveness Evolution & Attractiveness Indicators

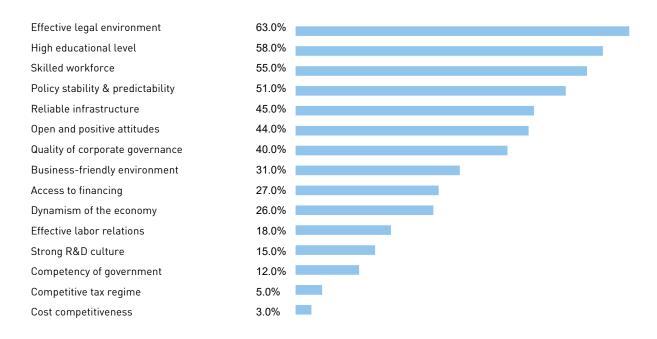
COMPETITIVENESS EVOLUTION

The criteria below highlight the 15 biggest Improvements and the 15 biggest Declines in the overall performance of the economy. They are determined by the largest percentage changes in the value of each criterion from one yearbook to the next.

IMPROVEMENTS	WCY 2021	WCY 2022	DECLINES	WCY 2021	WCY 2022
1.1.18 Gross fixed capital formation - real growth	-3.00	9.22	1.5.01 Consumer price inflation	0.90	2.82
1.1.14 Real GDP growth	-2.4	4.2	2.4.07 Government subsidies	1.42	2.82
1.1.15 Real GDP growth per capita	-3.70	4.51	4.1.07 Population - growth	1.31	0.18
3.4.10 Social responsibility	3.98	6.26	2.1.02 Government budget surplus/deficit (%)	-4.33	-6.18
2.3.13 Bribery and corruption	4.23	6.40	1.2.25 Tourism receipts	3.29	1.94
4.4.25 Sustainable development	4.51	6.53	3.2.14 Labor force - long-term growth	1.62	0.96
2.3.11 Transparency	4.09	5.82	1.1.13 Economic complexity index	-0.14	-0.19
1.2.02 Current account balance	2.51	3.55	1.5.06 Gasoline prices	0.92	1.15
3.4.05 Corporate boards	4.43	6.26	1.2.13 Exports of commercial services (%)	3.52	2.73
1.2.08 Exports of goods (\$bn)	250.35	343.59	2.3.12 Bureaucracy	5.64	4.46
3.4.04 Credibility of managers	4.39	6.00	3.2.18 Skilled labor	5.79	4.60
1.4.04 Employment - long-term growth	0.86	1.16	2.4.16 Labor regulations	7.11	5.74
4.2.17 Cyber security	4.52	6.08	3.1.07 Workforce productivity	6.89	5.64
2.3.07 Foreign currency reserves per capita	1,674	2,247	3.2.01 Compensation levels	27.18	31.47
2.1.08 Tax evasion	4.32	5.78	2.2.11 Real personal taxes	6.98	5.88

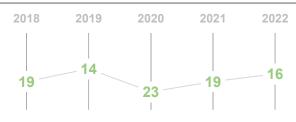
KEY ATTRACTIVENESS INDICATORS

From a list of 15 indicators, respondents of the Executive Opinion Survey were asked to select 5 that they perceived as the key attractiveness factors of their economy. The chart shows the percentage of responses per indicator from the highest number of responses to the lowest.



Competitiveness Trends – Factor Breakdown

ECONOMIC PERFORMANCE



SUB-FACTOR RANKINGS :	2021	2022
Domestic Economy	19	23
International Trade	44	38
International Investment	14	13
Employment	20	14
Prices	27	38

GOVERNMENT EFFICIENCY



SUB-FACTOR RANKINGS :	2021	2022
Public Finance	25	20
Tax Policy	19	25
Institutional Framework	19	18
Business Legislation	13	11
Societal Framework	22	19

BUSINESS EFFICIENCY



SUB-FACTOR RANKINGS :	2021	2022
Productivity & Efficiency	23	28
Labor Market	29	32
Finance	17	10
Management Practices	58	33
Attitudes and Values	40	27

INFRASTRUCTURE



SUB-FACTOR RANKINGS :	2021	2022
Basic Infrastructure	27	21
Technological Infrastructure	29	29
Scientific Infrastructure	22	22
Health and Environment	12	10
Education	17	09

Balance Sheet – Factor Breakdown

ECONOMIC PERFORMANCE

STRENGTHS	Rank
1.2.24 Terms of trade index	01
1.5.05 Food costs	08
1.3.13 Relocation threats of business	09
1.1.20 GDP per capita	10
1.1.19 Resilience of the economy	10
1.3.07 Direct investment stocks inward (\$bn)	13
1.3.03 Direct investment stocks abroad (\$bn)	15
1.4.10 Youth exclusion	15
1.4.09 Youth unemployment	15
1.4.02 Employment (%)	16

WEAKNESSES	Rank
1.1.13 Economic complexity index	57
1.5.04 Office rent	56
1.2.17 Export concentration by partner	55
1.2.23 Trade to GDP ratio	54
1.2.13 Exports of commercial services (%)	52
1.2.18 Export concentration by product	52
1.5.02 Cost-of-living index	49
1.2.09 Exports of goods (%)	46
1.1.14 Real GDP growth	44
1.1.15 Real GDP growth per capita	35

GOVERNMENT EFFICIENCY

STRENGTHS	Rank
2.3.04 Country credit rating	01
2.4.14 Start-up days	05
2.4.01 Tariff barriers	05
2.5.01 Justice	06
2.4.15 Start-up procedures	06
2.4.12 New business density	07
2.2.10 Employee social security tax rate	07
2.4.02 Protectionism	07
2.4.10 Competition legislation	07
2.5.11 Equal opportunity	07

WEAKNESSES	Rank
2.2.02 Collected personal income tax	55
2.2.07 Corporate tax rate on profit	55
2.5.09 Income distribution - lowest 40%	51
2.3.03 Interest rate spread	46
2.1.02 Government budget surplus/deficit (%)	45
2.5.15 Disposable Income	45
2.4.07 Government subsidies	44
2.3.07 Foreign currency reserves per capita	41
2.2.01 Collected total tax revenues	30

BUSINESS EFFICIENCY

STRENGTHS	Rank
3.3.08 Stock markets	06
3.3.04 Access to financial services	07
3.3.19 Corporate debt	08
3.2.17 Foreign labor force - migrant stock	09
3.3.01 Banking sector assets	11
3.2.22 Foreign highly-skilled personnel	12
3.2.16 Female labor force	12
3.3.14 Shareholders' rights	13
3.2.20 Attracting and retaining talents	14
3.2.12 Labor force (%)	14

WEAKNESSES	Rank
3.4.09 Entrepreneurship	61
3.2.01 Compensation levels	57
3.2.03 Remuneration in services professions	50
3.2.23 International experience	49
3.2.09 Apprenticeships	49
3.2.06 Working hours	48
3.1.08 Large corporations	48
3.2.10 Employee training	44
3.2.18 Skilled labor	42
3.1.07 Workforce productivity	41

INFRASTRUCTURE

STRENGTHS	Rank
4.4.24 Environmental agreements	01
4.5.09 Student mobility inbound	02
4.4.05 Universal health coverage index	03
4.2.01 Investment in Telecommunications	04
4.4.06 Life expectancy at birth	06
4.4.17 Exposure to particle pollution	07
4.5.17 University education index	07
4.5.08 Women with degrees	07
4.2.02 Mobile Broadband subscribers	08
4.4.11 Human development index	08

WEAKNESSES	Rank
4.3.11 Graduates in Sciences	52
4.2.03 Mobile Telephone costs	49
4.2.04 Communications technology	47
4.4.18 Renewable energies (%)	47
4.2.08 Internet bandwidth speed	45
4.3.19 Medium- and high-tech value added	45
4.2.16 ICT service exports	45
4.1.04 Access to water	41
4.1.15 Energy infrastructure	40
4.1.09 Dependency ratio	39

Extended Country Profile

1 · Economic Performance

1.1 · Domestic Economy	Value	Average R	ank 'ear
1.1.00 · Exchange Rate	1.331 :	21,532.090	202
National currency per US\$ (average)	4 000 0	4 004 4	11 202
1.1.01 · Gross Domestic Product (GDP)	1,632.0	1,394.4	11 -02
US\$ billions 1.1.02 · GDP (PPP)	1 450 4	1 001 0	18 ²⁰²
	1,450.1	1,981.9	18
Estimates ; US\$ billions at purchasing power parity 1.1.03 · World GDP contribution	1 70	1 1 1	11 202
Percentage share of world GDP in market prices	1.70	1.44	11 .
1.1.04 · Household consumption expenditure (\$bn)	821.2	735.2	12 202
US\$ billions	021.2	755.2	12
1.1.05 · Household consumption expenditure (%)	50.3	53.4	40 202
Percentage of GDP	50.5	55.4	40
1.1.06 · Government consumption expenditure (\$bn)	345.0	232.9	10 202
US\$ billions	5-5.0	202.0	10
1.1.07 · Government consumption expenditure (%)	21.1	18.3	22 202
Percentage of GDP	21.1	10.5	22
1.1.08 · Gross fixed capital formation (\$bn)	373.1	351.9	11 202
US\$ billions	575.1	001.0	
1.1.09 · Gross fixed capital formation (%)	22.9	22.7	33 202
Percentage of GDP	22.5	22.1	00
1.1.10 · Gross domestic savings (\$bn)	465.8	379.1	11 202
US\$ billions	403.0	575.1	
1.1.11 · Gross domestic savings (%)	28.5	28.3	29 ²⁰²
Percentage of GDP	20.3	20.5	23
1.1.12 · Economic sectors			202
Breakdown of the economic sectors, percentage of GDP			
Economic sectors / Agriculture	2.7	3.7	202
	2.1	5.7	
Economic sectors / Industry	24.7	29.1	202
Economic sectors / Services	72.7	67.0	202
1.1.13 · Economic complexity index	-0.19	0.86	57 ²⁰¹
Measures knowledge intensity, by considering exports			
1.1.14 · Real GDP growth	4.2	5.6	44 202
Percentage change, based on national currency in constant prices			
1.1.15 · Real GDP growth per capita	4.51	5.35	35 202
Percentage change, based on national currency in constant prices			
1.1.16 · Household consumption expenditure - real growth	4.81	4.78	32 202
Percentage change, based on constant prices			
1.1.17 · Government consumption expenditure - real growth	5.02	4.01	21 202
Percentage change, based on constant prices			
1.1.18 · Gross fixed capital formation - real growth	9.22	6.32	23 202
Percentage change, based on constant prices			
1.1.19 · Resilience of the economy	7.36	5.88	10 202
Resilience of the economy to economic cycles is strong			
1.1.20 · GDP per capita	63,405	34,279	10 202
US\$ per capita	,	,	
1.1.21 · GDP (PPP) per capita	56,337	44,580	18 ²⁰²
Estimates; US\$ per capita at purchasing power parity	,	,	
1.1.22 · Forecast: Real GDP growth	4.3	3.7	22 202
Percentage change, based on national currency in constant prices			
1.1.23 · Forecast: Inflation	3.3	38.4	14 ²⁰²
Percentage change	0.0	50	
1.1.24 · Forecast: Unemployment	3.8	6.3	16 ²⁰²
Percentage of total labor force	5.0	0.0	
1.1.25 · Forecast: Current account balance	-3.3	1.7	53 ²⁰²
	-0.0	1.7	

1.2 · International Trade	Value A	Average F	Rank 'ear
1.2.01 · Current account balance (\$bn)	57.9	10.4	11 ²⁰²¹
US\$ billions (minus sign = deficit)			
1.2.02 · Current account balance	3.55	1.64	19 ²⁰²¹
Percentage of GDP			
1.2.03 · Balance of trade (\$bn)	82.3	-2.5	5 ²⁰²¹
US\$ billions (minus sign = deficit)			
1.2.04 · Balance of trade (%)	5.04	0.27	17 ²⁰²¹
Percentage of GDP			
1.2.05 · Balance of commercial services (\$bn)	5.79	8.39	22 ²⁰²¹
US\$ billions (minus sign = deficit)			
1.2.06 · Balance of commercial services (%)	0.35	1.84	33 ²⁰²¹
Percentage of GDP			0004
1.2.07 · World exports contribution	1.38	1.45	22 ²⁰²¹
Percentage share of world exports (goods and commercial services)			2021
1.2.08 · Exports of goods (\$bn)	343.59	321.20	20 2021
US\$ billions			46 2021
1.2.09 · Exports of goods (%)	21.05	41.98	46 202
Percentage of GDP	10.010	15 0 10	25 ²⁰²¹
1.2.10 · Exports of goods per capita	13,349	15,049	25 202
US\$ per capita 1.2.11 · Exports of goods - growth	20.00	07.00	11 ²⁰²¹
	36.99	27.30	11
Percentage change, based on US\$ values	44.57	00.04	27 ²⁰²¹
1.2.12 · Exports of commercial services (\$bn)	44.57	88.34	27
US\$ billions 1.2.13 · Exports of commercial services (%)	2.73	15 10	52 ²⁰²¹
Percentage of GDP	2.13	15.10	52
1.2.14 · Exports of commercial services - growth	-8.50	17.14	59 ²⁰²
Percentage change, based on US\$ values	-8:50	17.14	59
1.2.15 · Exports of goods & commercial services	388.17	408.43	22 ²⁰²¹
US\$ billions	500.17	400.40	22
1.2.16 · Exports breakdown by economic sector			2020
Percentage of total exports			
Exports breakdown by economic sector / Agriculture	10.5	11.3	2020
Exports breakdown by economic sector / Industry	73.2	64.4	2020
Exports breakdown by economic sector / Services	16.3	24.3	2020
1.2.17 · Export concentration by partner	69.5	55.0	55 ²⁰²⁰
Exports to top 5 countries, percentage of total exports			
1.2.18 · Export concentration by product	71.4	57.6	52 ²⁰²⁰
Top 5 products, percentage of total exports			
1.2.19 · Imports of goods & commercial services (\$bn)	300.0	402.5	40 202
US\$ billions			
1.2.20 · Imports of goods & commercial services (%)	18.4	54.7	6 202
Percentage of GDP			000
1.2.21 · Imports of goods & commerc. services growth	20.08	24.33	18 ²⁰²
Percentage change, based on US\$ values			0000
1.2.22 · Imports breakdown by economic sector			2020
Percentage of total imports			0000
Imports breakdown by economic sector / Agriculture	7.0	9.0	2020
Imports breakdown by economic sector / Industry	77.7	67.7	2020
Imports breakdown by economic sector / Services	15.2	23.3	2020
1.2.23 · Trade to GDP ratio	40.61	102.61	54 ²⁰²⁰
(Exports + Imports) / GDP			
1.2.24 · Terms of trade index	131.2	99.4	1 2020
Unit value of exports over unit value of imports			
1.2.25 · Tourism receipts	1.94	1.54	18 2020
International tourism receipts as a percentage of GDP			

1.3 · International Investment		/alue Average Rank 'ear		
1.3.01 · Direct investment flows abroad (\$bn)	12.47	14.96	16 ²⁰²⁰	
US\$ billions			2020	
1.3.02 · Direct investment flows abroad (% of GDP)	0.92	4.62	29 2020	
Percentage of GDP			2020	
1.3.03 · Direct investment stocks abroad (\$bn)	627.3	612.1	15 ²⁰²⁰	
US\$ billions		100 57	25 ²⁰²⁰	
1.3.04 · Direct investment stocks abroad (% of GDP)	46.36	109.57	25 2020	
Percentage of GDP			18 ²⁰²⁰	
1.3.05 · Direct investment flows inward (\$bn)	19.64	16.61	18 2020	
US\$ billions 1.3.06 · Direct investment flows inward (% of GDP)	4.45	4.00	34 2020	
	1.45	4.86	34	
Percentage of GDP 1.3.07 · Direct investment stocks inward (\$bn)	790.7	613.9	13 2020	
US\$ billions	790.7	015.9	15	
1.3.08 · Direct investment stocks inward (% of GDP)	58.44	122.21	26 2020	
Percentage of GDP				
1.3.09 · Balance of direct investment flows (\$bn)	-7.17	-1.64	50 ²⁰²⁰	
US\$ billions (flows abroad minus flows inward)				
1.3.10 · Balance of direct investment flows (%)	-0.53	-0.24	28 2020	
Percentage of GDP (flows abroad minus flows inward)				
1.3.11 · Net position in direct investment stocks (\$bn)	-163.4	-1.8	56 ²⁰²⁰	
US\$ billions (stocks abroad minus stocks inward)				
1.3.12 · Net position in direct investment stocks (%)	-12.08	-12.64	29 ²⁰²⁰	
Percentage of GDP (stocks abroad minus stocks inward)				
1.3.13 · Relocation threats of business	6.24	5.36	9 2022	
Relocation of business is not a threat to the future of your economy				
1.3.14 · Portfolio investment assets	62.73	38.51	11 ²⁰²⁰	
US\$ billions				
1.3.15 · Portfolio investment liabilities	49.69	34.92	10 2020	
US\$ billions				

1.4 · Employment	Value A	Value Average Rank		
1.4.01 · Employment	13.21	38.16	26 ²⁰²¹	
Total employment in millions				
1.4.02 · Employment (%)	51.32	47.14	16 2021	
Percentage of population				
1.4.03 · Employment - growth	2.82	1.54	18 ²⁰²¹	
Estimates: percentage change				
1.4.04 · Employment - long-term growth	1.16	-0.41	29 ²⁰²¹	
Estimates: five year percentage change				
1.4.05 · Employment by sector			2021	
Percentage of total employment				
Employment by sector / Agriculture	2.4	7.7	2021	
Employment by sector / Industry	18.3	23.5	2021	
Employment by sector / Services	79.3	68.8	2021	
1.4.06 · Employment in the public sector	15.29	17.83	24 2020	
Percentage of total employment				
1.4.07 · Unemployment rate	5.10	8.00	24 ²⁰²¹	
Percentage of labor force				
1.4.08 · Long-term unemployment	1.07	2.81	21 2021	
Percentage of labor force				
1.4.09 · Youth unemployment	9.40	17.13	15 ²⁰²¹	
Percentage of youth labor force (under the age of 25)				
1.4.10 · Youth exclusion	8.4	14.6	15 ²⁰¹⁹	
Share of youth population (15-24) not in education, employment or training				

1.5 · Prices	Value A	Value Average Ranl		
1.5.01 · Consumer price inflation	2.82	29.25	29 ²⁰²¹	
Average annual rate				
1.5.02 · Cost-of-living index	88.70	78.37	49 ²⁰²¹	
Index of a basket of goods & services in the main city, including housing (New York City = 100)				
1.5.03 · Apartment rent	2,788	1,530	55 ²⁰¹⁸	
3-room apartment monthly rent in major cities, US\$				
1.5.04 · Office rent	1,116	656	56 ²⁰²¹	
Total occupation cost in the main city (US\$/Sq.M. per year)				
1.5.05 · Food costs	10.12	17.58	8 2021	
Percentage of household final consumption expenditures				
1.5.06 · Gasoline prices	1.15	1.26	27 2021	
Premium unleaded gasoline (95 Ron) US\$ per litre				

Extended Country Profile

2 · Government Efficiency

2.1 · Public Finance	Value Averag		Rank 'ear	
2.1.01 · Government budget surplus/deficit (\$bn) US\$ billions	-100.81	-91.93	55 ²⁰²	
2.1.02 · Government budget surplus/deficit (%) Percentage of GDP	-6.18	-4.00	45 ²⁰²	
2.1.03 · Total general government debt (\$bn) US\$ billions	976.04	1,436.31	51 ²⁰²	
2.1.04 · Total general government debt (%) Percentage of GDP	59.81	71.59	31 ²⁰²	
2.1.05 · Total general government debt-real growth Percentage change, based on national currency in constant prices	11.16	8.58	44 ²⁰²	
2.1.06 · Interest payment (%) Percentage of current revenue	3.46	5.98	29 202	
2.1.07 · Public finances Public finances are being efficiently managed	5.86	4.92	19 ²⁰²²	
2.1.08 · Tax evasion Tax evasion is not a threat to your economy	5.78	5.05	23 202	
2.1.09 · Pension funding Pension funding is adequately addressed for the future	6.63	4.77	11 ^{202;}	
2.1.10 · General government expenditure Percentage of GDP	38.8	38.2	30 202	

2.2 · Tax Policy

2.2 · Tax Policy	Value A	e Average Rank 'ear		
2.2.01 · Collected total tax revenues	28.18	27.09	30 ²⁰²⁰	
Percentage of GDP				
2.2.02 · Collected personal income tax	11.76	6.00	55 ²⁰²⁰	
On profits, income and capital gains, as a percentage of GDP				
2.2.03 · Collected corporate taxes	4.85	2.70	60 2020	
On profits, income and capital gains, as a percentage of GDP				
2.2.04 · Collected indirect tax revenues	7.38	9.41	20 2020	
Taxes on goods and services as a percentage of GDP				
2.2.05 · Collected capital and property taxes	1.72	1.47	40 2020	
Percentage of GDP				
2.2.06 · Collected social security contribution	0.00	7.28	1 2020	
Compulsory contribution of employees and employers as a percentage of GDP				
2.2.07 · Corporate tax rate on profit	30.00	22.34	55 ²⁰²¹	
Maximum tax rate, calculated on profit before tax				
2.2.08 · Consumption tax rate	10.00	16.37	11 ²⁰²¹	
Standard rate of VAT/GST				
2.2.09 · Employer social security tax rate	10.0	16.0	20 2021	
%				
2.2.10 · Employee social security tax rate	2.0	10.4	7 2021	
%				
2.2.11 · Real personal taxes	5.88	5.12	21 2022	
Real personal taxes do not discourage people from working or seeking advancement				

2.3 · Institutional Framework		Value Average Rank 'ea		
2.3.01 · Real short-term interest rate	-2.64	-3.07	25 ²⁰²¹	
Real discount / bank rate				
2.3.02 · Cost of capital	6.87	5.63	12 2022	
Cost of capital encourages business development				
2.3.03 · Interest rate spread	3.54	3.49	46 2019	
Lending rate minus deposit rate				
2.3.04 · Country credit rating	60.0	43.0	1 2021	
Index (0-60) of three country credit ratings: Fitch, Moody's and S&P				
2.3.05 · Central bank policy	7.52	6.31	9 2022	
Central bank policy has a positive impact on the economy				
2.3.06 · Foreign currency reserves	57.85	216.77	34 ²⁰²¹	
US\$ billions				
2.3.07 · Foreign currency reserves per capita	2,247	9,199	41 2021	
US\$ per capita				
2.3.08 · Exchange rate stability	0.046	0.072	43 2021	
Parity change from national currency to SDR, 2021 / 2019				
2.3.09 · Legal and regulatory framework	6.62	5.37	13 ²⁰²²	
The legal and regulatory framework encourages the competitiveness of enterprises				
2.3.10 · Adaptability of government policy	5.04	4.83	28 2022	
Adaptability of government policy to changes in the economy is high				
2.3.11 · Transparency	5.82	4.87	22 2022	
Transparency of government policy is satisfactory				
2.3.12 · Bureaucracy	4.46	3.72	20 2022	
Bureaucracy does not hinder business activity				
2.3.13 · Bribery and corruption	6.40	4.77	20 2022	
Bribery and corruption do not exist				
2.3.14 · Rule of law	92.31	72.47	13 ²⁰²⁰	
Rule of Law Index				
2.3.15 · Sustainable Development Goals	75.6	75.1	32 ²⁰²¹	
Country performance on the 17 SDGs				
2.3.16 · Democracy Index	8.90	6.97	9 2021	
EIU Overall Democracy Index, © The Economist Intelligence Unit Limited 2021				

2.4 · Business Legislation	Value A	verage R	lank 'ear
2.4.01 · Tariff barriers	0.71	2.32	5 ²⁰²⁰
Tariffs on imports: Applied weighted mean tariff rate for all products			
2.4.02 · Protectionism	7.52	5.74	7 2022
Protectionism of your government does not impair the conduct of your business			
2.4.03 · Public sector contracts	7.00	5.96	18 ²⁰²²
Public sector contracts are sufficiently open to foreign bidders			
2.4.04 · Foreign investors	6.92	6.82	33 ²⁰²²
Foreign investors are free to acquire control in domestic companies			
2.4.05 · Capital markets	7.78	6.57	13 2022
Capital markets (foreign and domestic) are easily accessible			
2.4.06 · Investment incentives	6.00	5.93	35 ²⁰²²
Investment incentives are attractive to foreign investors			
2.4.07 · Government subsidies	2.82	2.02	44 ²⁰²¹
To private and public companies as a percentage of GDP			
2.4.08 · Subsidies	5.82	5.52	26 2022
Subsidies do not distort fair competition and economic development			
2.4.09 · State ownership of enterprises	7.68	6.04	8 2022
State ownership of enterprises is not a threat to business activities			
2.4.10 · Competition legislation	7.28	5.84	7 2022
Competition legislation is efficient in preventing unfair competition			
2.4.11 · Parallel economy	7.30	5.14	13 ²⁰²²
Parallel (black-market, unrecorded) economy does not impair economic development			
2.4.12 · New business density	13.6	5.8	7 2019
Registered new businesses per 1'000 people aged 15-64			
2.4.13 · Creation of firms	7.62	6.63	17 2022
Creation of firms is supported by legislation			
2.4.14 · Start-up days	2.0	15.1	5 ²⁰¹⁹
Number of days to start a business			
2.4.15 · Start-up procedures	3.0	6.0	6 2019
Number of procedures to start a business			
2.4.16 · Labor regulations	5.74	5.50	28 2022
Labor regulations (hiring/firing practices, minimum wages, etc.) do not hinder business activities			
2.4.17 · Unemployment legislation	6.14	4.99	14 2022
Unemployment legislation provides an incentive to look for work			
2.4.18 · Immigration laws	5.86	5.83	33 2022
Immigration laws do not prevent your company from employing foreign labor			
2.4.19 · Redundancy costs	8.7	9.4	34 2019
Number of weeks of salary			

2.5 · Societal Framework Value		Average Rank 'ear		
2.5.01 · Justice	8.46	5.72	6 2022	
Justice is fairly administered				
2.5.02 · Homicide	0.87	4.28	24 2020	
Intentional homicide, rate per 100'000 population				
2.5.03 · Ageing of population	16.8	14.8	33 2021	
Population over 65, percentage of total population				
2.5.04 · Risk of political instability	7.80	5.80	16 2022	
The risk of political instability is very low				
2.5.05 · Social cohesion	7.22	5.68	12 2022	
Social cohesion is high				
2.5.06 · Gini coefficient	34.30	35.03	32 2018	
Equal distribution of income scale: 0 (absolute equality) to 100 (absolute inequality)				
2.5.07 · Income distribution - lowest 10%	3.30	2.75	2017	
Percentage of household incomes going to lowest 10% of households				
2.5.08 · Income distribution - highest 10%	23.60	26.98	2017	
Percentage of household incomes going to highest 10% of households				
2.5.09 · Income distribution - lowest 40%	13.30	18.99	51 ²⁰¹⁸	
Percentile going to the lowest 40% of households				
2.5.10 · Income distribution - lowest 40% growth	-	0.34		
Percentile going to the lowest 40% of households - growth				
2.5.11 · Equal opportunity	7.54	6.17	7 2022	
Equal opportunity legislation in your economy encourages economic development				
2.5.12 · Females in parliament	31.13	29.11	25 ²⁰²¹	
Percentage of total seats in Parliament				
2.5.13 · Unemployment rate - gender ratio	1.02	1.25	28 2021	
Ratio of the female and male unemployement rates				
2.5.14 · Gender inequality	0.097	0.183	27 2019	
Gender Inequality Index (UNDP)				
2.5.15 · Disposable Income	68.0	72.2	45 ²⁰²¹	
Female / male ratio				
2.5.16 · Freedom of the Press	19.79	27.85	21 2021	
Reporters Without Borders: World Press Freedom Score				

Extended Country Profile

3 · Business Efficiency

3.1 · Productivity & Efficiency	Productivity & Efficiency Value Average R		Rank 'ear	
3.1.01 · Overall productivity (PPP)	103,602	84,576	22 ²⁰²¹	
Estimates: GDP (PPP) per person employed, US\$				
3.1.02 · Overall productivity (PPP) - real growth	3.65	2.84	27 2021	
Estimates: Percentage change of GDP (PPP) per person employed				
3.1.03 · Labor productivity (PPP)	64.73	48.28	16 ²⁰²¹	
Estimates: GDP (PPP) per person employed per hour, US\$				
3.1.04 · Agricultural productivity (PPP)	122,323	55,834	6 2021	
Estimates: Related GDP (PPP) per person employed in agriculture, US\$				
3.1.05 · Productivity in industry (PPP)	147,905	107,180	13 ²⁰²¹	
Estimates: Related GDP (PPP) per person employed in industry, US\$				
3.1.06 · Productivity in services (PPP)	100,605	86,235	22 2021	
Estimates: Related GDP (PPP) per person employed in services, US\$				
3.1.07 · Workforce productivity	5.64	6.15	41 2022	
Workforce productivity is competitive by international standards				
3.1.08 · Large corporations	6.14	6.67	48 2022	
Large corporations are efficient by international standards				
3.1.09 · Small and medium-size enterprises	6.54	6.12	27 2022	
Small and medium-size enterprises are efficient by international standards				
3.1.10 · Use of digital tools and technologies	6.34	6.29	27 2022	
Companies are very good at using digital tools and technologies to improve performance				

3.2 · Labor Market	Value	Average F	Rank 'ear
3.2.01 · Compensation levels	31.47	15.09	57 ²⁰²¹
Total hourly compensation in manufacturing (wages + supplementary benefits), US\$ 3.2.02 · Unit labor costs for total economy	0.40	1.59	17 2021
Percentage change			50 ²⁰¹⁸
3.2.03 · Remuneration in services professions Gross annual income including supplements such as bonuses, US\$	46,494	28,619	50 2010
Remuneration in services professions / Call center agent	35,702	19,099	2018
Remuneration in services professions / Nurse	54,672	30,277	2018
Remuneration in services professions / Primary school	55,553	30,970	2018
Remuneration in services professions / Product Manager	67,116	49,302	2018
Remuneration in services professions / Sales Assistant	35,030	19,165	2018
	·	19,100	
Remuneration in services professions / Secretary / Personal	30,889	22,903	2018
3.2.04 · Remuneration of management Total base salary plus bonuses and long-term incentives, US\$	156,674	169,169	28 ²⁰¹⁹
Remuneration of management / CEO	286,548	306,535	2019
Remuneration of management / Director manufacturing	148,296	149,356	2019
Remuneration of management / Engineer	72,555	80,327	2019
Remuneration of management / Human resources director	119 296	140,455	2019
			15 ²⁰¹⁸
3.2.05 · Remuneration spread Ratio of CEO to personal assistant remuneration	9.87	17.99	15 2010
3.2.06 · Working hours	1,600	1,843	48 2021
Average number of working hours per year 3.2.07 · Worker motivation	5.96	5.87	31 2022
Worker motivation in companies is high		10.01	28 2020
3.2.08 · Industrial disputes Working days lost per 1,000 inhabitants per year (average 2018-2020)	2.69	12.21	28 2020
3.2.09 · Apprenticeships	4.48	5.20	49 ²⁰²²
Apprenticeships are sufficiently implemented 3.2.10 · Employee training	5.55	6.03	44 2022
Employee training is a high priority in companies 3.2.11 · Labor force	13.84	40.47	25 ²⁰²¹
Employed and registered unemployed (millions)	10.01	10.11	
3.2.12 · Labor force (%) Percentage of population	53.77	50.09	14 ²⁰²¹
3.2.13 · Labor force growth	0.31	1.18	38 2021
Percentage change 3.2.14 · Labor force - long-term growth	0.96	-0.67	24 2021
Estimates: five year percentage change 3.2.15 · Part-time employment	25.54	15.19	9 ²⁰¹⁹
Percentage of total employment	20.04	15.19	
3.2.16 · Female labor force Percentage of total labor force	47.44	42.68	12 ²⁰²¹
3.2.17 · Foreign labor force - migrant stock	35.99	17.76	9 2020
Migrant stock, age 20-64, % of population 3.2.18 · Skilled labor	4.60	5.21	42 2022
Skilled labor is readily available			24 2022
3.2.19 · Finance skills Finance skills are readily available	6.56	6.07	
3.2.20 · Attracting and retaining talents	7.70	6.82	14 ²⁰²²
Attracting and retaining talents is a priority in companies 3.2.21 · Brain drain	5.66	4.93	22 2022
Brain drain (well-educated and skilled people) does not hinder competitiveness in your economy 3.2.22 · Foreign highly-skilled personnel	6.85	5.39	12 2022
Foreign highly-skilled personnel are attracted to your country's business environment	0.0	5.58	
3.2.23 · International experience International experience of senior managers is generally significant	4.89	5.62	49 ²⁰²²
3.2.24 · Competent senior managers	5.46	5.45	32 2022
Competent senior managers are readily available			

3.3 · Finance	Value Average Rank 'e		lank 'ear
3.3.01 · Banking sector assets	206.77	157.54	11 ²⁰²¹
Percentage of GDP			
3.3.02 · Financial cards in circulation	5.55	3.45	10 2021
Number of cards per capita			
3.3.03 · Financial card transactions	25,514	11,334	5 2021
US\$ per capita			
3.3.04 · Access to financial services	99.52	82.66	7 2017
Proportion of adults with a bank account or mobile-money-service provider			
3.3.05 · Access to financial services - gender ratio	0.99	0.96	27 2017
Ratio of the female and male access to a bank account or mobile-money-service provider			
3.3.06 · Banking and financial services	6.92	6.24	19 ²⁰²²
Banking and financial services do support business activities efficiently			
3.3.07 · Regulatory compliance (banking laws)	7.48	6.92	21 2022
Regulatory compliance is sufficiently developed			
3.3.08 · Stock markets	7.68	5.83	6 2022
Stock markets provide adequate financing to companies			
3.3.09 · Stock market capitalization (\$bn)	1,954.4	1,470.4	14 2021
US\$ billions			
3.3.10 · Stock market capitalization (%)	119.76	105.47	17 2021
Percentage of GDP			
3.3.11 · Value traded on stock markets	47,723	23,478	7 2020
US\$ per capita			
3.3.12 · Listed domestic companies	1,902	718	9 2020
Number of listed domestic companies			
3.3.13 · Stock market index	17.40	26.39	43 2021
Percentage change on index in national currency			
3.3.14 · Shareholders' rights	7.86	6.91	13 2022
Shareholders' rights are sufficiently implemented			
3.3.15 · Initial Public Offerings	4,389.5	4,258.5	12 2021
By acquiror nation (average 2019-2021) US\$ millions			
3.3.16 · Credit	7.06	6.05	16 2022
Credit is easily available for business			
3.3.17 · Venture capital	5.94	5.34	23 2022
Venture capital is easily available for business			
3.3.18 · M&A Activity	0.626	1.193	28 2020
Deals per listed company (average 2018-2020)			
3.3.19 · Corporate debt	7.27	5.83	8 2022
Corporate debt does not restrain the ability of enterprises to compete			

3.4 · Management Practices	Value A	verage R	ank 'ear
3.4.01 · Agility of companies	5.76	6.08	39 ²⁰²²
Companies are agile			
3.4.02 · Changing market conditions	6.88	6.69	29 ²⁰²²
Companies are generally extremely aware of changing market conditions			
3.4.03 · Opportunities and threats	6.06	6.29	41 2022
Companies are very good at responding quickly to opportunities and threats			
3.4.04 · Credibility of managers	6.00	6.15	39 ²⁰²²
Credibility of managers in society is strong			
3.4.05 · Corporate boards	6.26	6.17	29 2022
Corporate boards do supervise the management of companies effectively			
3.4.06 · Auditing and accounting practices	7.74	7.25	24 2022
Auditing and accounting practices are adequately implemented in business			
3.4.07 · Use of big data and analytics	5.37	5.33	30 2022
Companies are very good at using big data and analytics to support decision-making			
3.4.08 · Customer satisfaction	6.85	6.95	37 2022
Customer satisfaction is emphasized in companies			
3.4.09 · Entrepreneurship	5.09	6.07	61 2022
Entrepreneurship of managers is widespread in business			
3.4.10 · Social responsibility	6.26	6.16	30 2022
Social responsibility of business leaders is high			
3.4.11 · Women in management	32.50	31.46	30 2020
Female share of senior and middle management (% of management)			
3.4.12 · Women on boards	34.80	24.22	13 ²⁰²¹
Boardmembers of all companies analyzed by MSCI			
3.4.13 · Entrepreneurial fear of failure	47.37	42.81	33 2019
% indicating that fear of failure would prevent them from setting up a business			
3.4.14 · Total early-stage Entrepreneurial Activity	10.52	12.11	25 ²⁰¹⁹
% who are either a nascent entrepreneur or owner-manager of a new business			
3.5 · Attitudes and Values	Value A	verage R	ank 'ear
3.5.01 · Attitudes toward globalization	6.42	6.47	35 ²⁰²²
Attitudes toward globalization are generally positive in your society			
3.5.02 · Image abroad or branding	7.23	6.44	21 2022
The image abroad of your country encourages business development			
3.5.03 · National culture	7.26	6.82	23 2022
The national culture is open to foreign ideas			
3.5.04 · Flexibility and adaptability	7.02	6.63	24 2022
Flexibility and adaptability of people are high when faced with new challenges			
3.5.05 · Need for economic and social reforms	5.78	5.88	34 2022
The need for economic and social reforms is generally well understood			
3.5.06 · Digital transformation in companies	5.56	5.95	36 2022
Digital transformation in companies is generally well implemented			
3.5.07 · Value system	6.88	6.23	20 2022

The value system in your society supports competitiveness

Extended Country Profile

4 · Infrastructure

4.1 · Basic Infrastructure	Value	Average F	Rank 'ear
4.1.01 · Land area	7,741	1,207	5 ²⁰²¹
Square kilometers ('000)	.,	.,201	Ū
4.1.02 · Arable area	12,190	2,704	2 2019
Square meters per capita			
4.1.03 · Water resources	19,761	18,375	10 2018
Total internal renewable per capita in cubic meters			
4.1.04 · Access to water	7.58	7.90	41 2022
Access to water is adequately ensured and managed			
4.1.05 · Management of cities	7.34	6.61	21 2022
Management of cities supports business development			
4.1.06 · Population - market size	25.74	81.51	26 2021
Estimates in millions			
4.1.07 · Population - growth	0.18	0.30	39 ²⁰²¹
Percentage change			
4.1.08 · Dependent Population	35.4	33.6	2021
Percentage of total population			
Population over 65 years	16.8	14.8	2021
Population under 15 years	18.5	18.7	2021
4.1.09 · Dependency ratio	54.7	51.2	39 ²⁰²¹
Population under 15 and over 64 years old, divided by active population (15 to 64 years)			
4.1.10 · Roads	0.12	1.39	48 ²⁰¹⁵
Density of the network, km roads/square km land area			
4.1.11 · Railroads	0.001	0.049	55 ²⁰²⁰
Density of the network, km per square km			
4.1.12 · Air transportation	23,627	27,297	22 2020
Number of passengers carried by main companies, thousands			
4.1.13 · Quality of air transportation	8.08	7.07	16 ²⁰²²
Quality of air transportation encourages business development			
4.1.14 · Distribution infrastructure	7.54	7.12	28 2022
The distribution infrastructure of goods and services is generally efficient			
4.1.15 · Energy infrastructure	6.50	6.81	40 2022
Energy infrastructure is adequate and efficient			
4.1.16 · Total indigenous energy production	444.80	169.14	7 2019
Millions MTOE			
4.1.17 · Total indigenous energy production (%)	345.5	106.4	5 ²⁰¹⁹
Percentage of total requirements in tons of oil equivalent			0010
4.1.18 · Total final energy consumption	82.34	122.04	46 ²⁰¹⁹
Millions MTOE			
4.1.19 · Total final energy consumption per capita	3.25	2.46	49 ²⁰¹⁹
MTOE per capita			
4.1.20 · Electricity costs for industrial clients	-	0.107	
US\$ per kwh			

4.2.01 · Investment in Telecommunications 0.72 0.42 4 2021 Percentage of GDP 93.3 71.5 8 2020 42.02 · Mobile Broadband subscribers 93.3 71.5 8 2020 42.03 · Mobile Telephone costs 22.1 15.7 49 2020 Monthly Blended Average Revenue per User 7.10 7.67 47 2022 Communications technology (voice and data) meets business requirements 39,804 36.109 18 2020 A2.06 · Communications technology (voice and data) meets business requirements 42.00 · 10 7.67 47 2022 Communications technology (voice and data) meets business requirements 42.00 · 10 7.70 7.67 47 2020 Autor of internet users per 1000 inhabitants 42.00 · 10 499 381 15 2020 Number of subscriptions per 1000 inhabitants 42.00 · Digital/Technological skills 6.59 6.77 39.2 2022 Qualified engineers are available in your labor market 42.10 · Qualified engineers are available in your labor market 42.10 · Qualified engineers are available in your labo	4.2 · Technological Infrastructure	Technological Infrastructure Value Average F		Rank 'ear	
42.02 · Mobile Broadband subscribers 93.3 71.5 8 2020 46.8.50 market, % of mobile market 22.1 15.7 49 2020 42.03 · Mobile Telephone costs 22.1 15.7 49 2020 Monthy Blended Average Revenue per User 22.1 15.7 47 2022 Communications technology (voice and datal meets business requirements 20.0 7.10 7.67 47 2022 Communications technology (voice and datal meets business requirements 39,804 36,109 18 2020 publicly-trusted TLS/SSL certificates, Netcraft Secure Server Survey. 4.2.05 Secure internet users per 1000 people 42.07 Broadband subscribers 499 381 15 2020 Number of subscriptions per 1000 inhabitants 42.09 Number of subscriptions per 1000 inhabitants 42.09 93.5 45 2021 Logital/Technological skills 6.59 6.79 93 2022 Digital/Technological skills 6.59 6.79 39 2022 Qualified engineers 6.47 6.35 12 2022 Qualified engineers are available in your labor market <td< th=""><th>4.2.01 · Investment in Telecommunications</th><th>0.72</th><th>0.42</th><th>4 2021</th></td<>	4.2.01 · Investment in Telecommunications	0.72	0.42	4 2021	
46 & 56 market, % of mobile market 4.2.03 Mobile Telephone costs 22.1 15.7 49 2000 Monthly Blended Average Revenue per User 2.04 · Communications technology 7.10 7.67 47 2022 Communications technology 7.10 7.67 47 2022 Communications technology (voice and data) meets business requirements 39,004 36,109 18 2000 4.2.06 · Internet servers 39,004 36,109 18 2000 Number of internet users per 1000 people 42.07 · Broadband subscribers 499 381 15 2020 Number of subscriptions per 1000 inhabitants 42.09 · Digital/Technological skills are readily available 6.59 6.79 39 2022 20igital/Technological skills are readily available 6.47 6.35 31 2022 42.10 · Qualified engineers are available in your labor market 6.47 6.59 6.97 30 2022 Public and private sector ventures are supporting technological development 6.97 6.46 24 2022 Li Public-private partnerships	Percentage of GDP				
4.2.03 · Mobile Telephone costs 22.1 15.7 49 2020 Monthly Blended Average Revenue per User 7.10 7.67 47 2022 Communications technology 7.10 7.67 47 2022 Communications technology Voice and data) meets business requirements 39,804 36,109 18 2020 Publicly-trusted TLS/SSL certificates, Netcraft Secure Server Survey. 854 839 35 2021 4.2.06 · Internet users per 1000 people 854 839 35 2021 4.2.07 · Broadband subscribers 499 381 15 2020 Number of subscriptions per 1000 inhabitants 42.09 · Digital/Technological skills are readity available 57.7 93.5 45 2021 Average speed 57.7 93.5 45 2022 2021<	4.2.02 · Mobile Broadband subscribers	93.3	71.5	8 2020	
Monthly Blended Average Revenue per User 4.2.04 Communications technology 7.10 7.67 47 2022 Communications technology (voice and data) meets business requirements 39,804 36,109 18 2000 2.2.05 Secure internet servers 39,804 36,109 18 2000 publicly-trusted TLS/SSL certificates, Netcraft Secure Server Survey. 4.2.05 854 839 35 2021 Number of internet users per 1000 people 4.2.07 Broadband subscribers 499 381 15 2020 Number of subscriptions per 1000 inhabitants 4.2.07 Broadband subscribers 499 381 15 2021 Average speed 4.2.07 Digital/Technological skills 6.59 6.79 39 2022 Digital/Technological skills are readily available 6.47 6.35 31 2022 Logital/Technological skills are readily available 6.18 6.08 30 2022 Digital/Technological development market 4.210 Public and private sector ventures are supporting technological development 4.24 2022	4G & 5G market, % of mobile market				
4.2.04 · Communications technology 7.10 7.67 47 2022 Communications technology (voice and data) meets business requirements 39,804 36,109 18 2020 4.2.05 · Secure internet servers 39,804 36,109 18 2020 4.2.06 · Internet users 854 839 35 2021 Number of internet users per 1000 people 42.07 Broadband subscribers 499 381 15 2020 Number of subscriptions per 1000 inhabitants 42.09 S181 15 2020 Average speed 57.7 93.5 45 2021 Average speed 6.59 6.79 39 2022 Qualified engineers are available 6.47 6.35 31 2022 Qualified engineers are available in your labor market 42.10 · Qualified engineers 6.47 6.35 31 2022 Public and private sector ventures are supporting technological development 6.97 6.46 24 2022 Public and private sector ventures are supported by the legal environment 42.13 · Funding for technological development 5.96 5.98 37 2020 <tr< td=""><td>4.2.03 · Mobile Telephone costs</td><td>22.1</td><td>15.7</td><td>49 ²⁰²⁰</td></tr<>	4.2.03 · Mobile Telephone costs	22.1	15.7	49 ²⁰²⁰	
Communications technology (voice and data) meets business requirements 42.05 - Secure internet servers 39,804 36,109 18 2020 publicly-trusted TLS/SSL certificates, Netcraft Secure Server Survey. 8654 839 35 2021 Number of internet users per 1000 people 8654 839 35 2021 42.06 - Internet users per 1000 inhabitants 499 381 15 2020 Number of subscriptions per 1000 inhabitants 42.08 - Internet bandwidth speed 57.7 93.5 45 2021 Average speed	Monthly Blended Average Revenue per User				
4.2.05 · Secure internet servers 39,804 36,109 18 2020 publicly-trusted TLS/SSL certificates, Netcraft Secure Server Survey. 854 839 35 2021 Number of internet users 854 839 35 2021 Number of internet users per 1000 people 42.07 · Broadband subscribers 499 381 15 2020 Number of subscriptions per 1000 inhabitants 42.08 · Internet bandwidth speed 57.7 93.5 45 2021 Average speed 57.7 93.5 45 2021 42.09 · Digital/Technological skills are readily available 4.2.10 · Qualified engineers 6.47 6.35 31 2022 Qualified engineers are available in your labor market 6.18 6.08 30 2022 4.2.10 · Qualified engineers are supporting technological development 4.2.12 · Development & application of tech. 6.97 6.46 24 2022 Development and application of tech. 6.97 6.46 24 2022 Development and application of technological development 5.96 5.98 37 2022 Low of technological development 5.598 47.160	4.2.04 · Communications technology	7.10	7.67	47 ²⁰²²	
publicly-trusted TLS/SSL certificates, Netcraft Secure Server Survey. 42.06 · Internet users 854 839 35 2021 Number of internet users per 1000 people 42.07 · Broadband subscribers 499 381 15 2020 Number of subscriptions per 1000 inhabitants 42.08 · Internet bandwidth speed 57.7 93.5 45 2021 Average speed 6.59 6.79 39 2022 Digital/Technological skills 6.59 6.79 39 2022 Digital/Technological skills are readily available 647 6.35 31 2022 42.10 · Qualified engineers 647 6.35 31 2022 Qualified engineers are available in your labor market 42.11 · Public-private partnerships 6.18 6.08 30 2022 Public and private sector ventures are supporting technological development 6.97 6.46 24 2022 Public and private sector ventures are supported by the legal environment 42.13 · Funding for technological development 5.96 5.98 37 2022 Usevelopment and application of tech. <td< td=""><td>Communications technology (voice and data) meets business requirements</td><td></td><td></td><td></td></td<>	Communications technology (voice and data) meets business requirements				
4.2.06 · Internet users 854 839 35 2021 Number of internet users per 1000 people 4.2.07 · Broadband subscribers 499 381 15 2020 Number of subscriptions per 1000 inhabitants 4.2.08 · Internet bandwidth speed 57.7 93.5 45 2021 Average speed	4.2.05 · Secure internet servers	39,804	36,109	18 ²⁰²⁰	
Number of internet users per 1000 people 42.07 · Broadband subscribers 499 381 15 2020 Number of subscriptions per 1000 inhabitants 57.7 93.5 45 2021 Average speed 57.7 93.5 45 2021 Average speed 6.59 6.79 39 2022 Upital/Technological skills 6.59 6.79 39 2022 Qualified engineers 6.47 6.35 31 2022 Qualified engineers are available in your labor market 42.10 · Qualified engineers are available in your labor market 6.18 6.08 30 2022 Public and private sector ventures are supporting technological development 6.97 6.46 24 2022 Public and private sector ventures are supported by the legal environment 6.97 6.46 24 2022 A.21 · Development and application of technological development 5.96 5.98 37 2022 Funding for technological development 5.96 5.98 37 2022 Us\$ millions 21.49 18.12	publicly-trusted TLS/SSL certificates, Netcraft Secure Server Survey.				
4.2.07 · Broadband subscribers 499 381 15 2020 Number of subscriptions per 1000 inhabitants 57.7 93.5 45 2021 Average speed 6.59 6.79 39 2022 Digital/Technological skills 6.59 6.79 39 2022 Qualified engineers 6.47 6.35 31 2022 Qualified engineers are available in your labor market 6.18 6.08 30 2022 Public and private sector ventures are supporting technological development 6.97 6.46 24 2022 Public and private sector ventures are supported by the legal environment 6.97 6.46 24 2022 Auding for technological development 5.96 5.98 37 2022 Public and private sector ventures are supported by the legal environment 4.2.13 · Funding for technological development 5.96 5.98 37 2022 4.2.14 · High-tech exports (\$) 5.96 5.98 37 2022 Us\$ millions 21.49 18.12 19 2020 4.2.16 · ICT service exports 4.7 9.7 45 20149	4.2.06 · Internet users	854	839	35 ²⁰²¹	
Number of subscriptions per 1000 inhabitants 4.2.08 · Internet bandwidth speed 57.7 93.5 45 2021 Average speed 6.59 6.79 39 2022 Digital/Technological skills are readily available 6.47 6.35 31 2022 Qualified engineers 6.47 6.35 31 2022 Qualified engineers are available in your labor market 6.18 6.08 30 2022 Public and private sector ventures are supporting technological development 6.18 6.08 30 2022 Public and private sector ventures are supporting technological development 6.18 6.08 30 2022 Action of technology are supported by the legal environment 6.97 6.46 24 2022 Development and application of technology are supported by the legal environment 5.96 5.98 37 2022 4.2.13 · Funding for technological development 5.96 5.98 37 2022 US\$ millions 1 4.2.15 · High-tech exports [\$] 21.49 18.12 19 2020 VS \$					
4.2.08 · Internet bandwidth speed 57.7 93.5 45 2021 Average speed 6.59 6.79 39 2022 Digital/Technological skills are readily available 6.47 6.35 31 2022 Qualified engineers are available in your labor market 6.47 6.35 31 2022 Qualified engineers are available in your labor market 6.18 6.08 30 2022 Public and private sector ventures are supporting technological development 6.97 6.46 24 2022 Development & application of technology are supported by the legal environment 6.97 6.46 24 2022 Funding for technological development 5.96 5.98 37 2022 4.2.14 · High-tech exports [\$] 5.598 47,160 34 2020 U\$\$ \$millions 21.49 18.12 19 2020 Percentage of manufactured exports 4.7 9.7 45 2018 4.2.16 · ICT service exports 4.7 9.7 45 2018 Percentage of service exports 4.7 9.7 45 2018	4.2.07 · Broadband subscribers	499	381	15 ²⁰²⁰	
Average speed 4.2.09 · Digital/Technological skills 6.59 6.79 39 2022 Digital/Technological skills are readily available 6.47 6.35 31 2022 Qualified engineers 6.47 6.35 31 2022 Qualified engineers are available in your labor market 6.18 6.08 30 2022 Public and private partnerships 6.18 6.08 30 2022 Public and private sector ventures are supporting technological development 6.97 6.46 24 2022 Development and application of technology are supported by the legal environment 6.97 6.46 24 2022 Levelopment and application of technology are supported by the legal environment 7 2022 2022 Funding for technological development 5.96 5.98 37 2022 VS millions 21.4 · High-tech exports (\$) 21.49 18.12 19 2020 VS millions 21.49 18.12 19 2020 2020 2020 2020 2020 2020 2020	Number of subscriptions per 1000 inhabitants				
4.2.09 · Digital/Technological skills 6.59 6.79 39 2022 Digital/Technological skills are readily available 6.47 6.35 31 2022 Qualified engineers 6.47 6.35 31 2022 Qualified engineers are available in your labor market 6.18 6.08 30 2022 Qualified engineers are available in your labor market 6.18 6.08 30 2022 Public and private partnerships 6.18 6.08 30 2022 Public and private sector ventures are supporting technological development 6.97 6.46 24 2022 Development and application of technology are supported by the legal environment 6.97 6.46 24 2022 Levelopment and application of technology are supported by the legal environment 5.96 5.98 37 2022 Funding for technological development 5.96 5.98 37 2022 US\$ millions 21.49 18.12 19 2020 Percentage of manufactured exports 4.7 9.7 45 2018 Percentage of service exports 4.7 9.7 45	4.2.08 · Internet bandwidth speed	57.7	93.5	45 ²⁰²¹	
Digital/Technological skills are readily available4.2.10 · Qualified engineers Qualified engineers are available in your labor market4.2.11 · Public-private partnerships6.186.08302022Public and private sector ventures are supporting technological development6.186.08302022Public and private sector ventures are supporting technological development6.976.46242022Development and application of technology are supported by the legal environment6.976.46242022Levelopment and application of technological development5.965.98372022Funding for technological development5.965.98372022Vultich High-tech exports (\$)5.59847,160342020US\$ millions21.4918.12192020Percentage of manufactured exports4.79.7452018Percentage of service exports4.79.74520184.2.17 · Cyber security6.085.89312022	5 1				
4.2.10 · Qualified engineers6.476.35312022Qualified engineers are available in your labor market6.186.08302022Public and private partnerships6.186.08302022Public and private sector ventures are supporting technological development6.976.46242022Development & application of tech.6.976.46242022Development and application of technology are supported by the legal environment5.965.98372022Funding for technological development5.965.98372022Funding for technological development5.59847,160342020US\$ millions18.12192020Percentage of manufactured exports4.79.7452018Percentage of service exports4.79.74520184.2.17 · Cyber security6.085.89312022	4.2.09 · Digital/Technological skills	6.59	6.79	39 ²⁰²²	
Qualified engineers are available in your labor market 4.2.11 · Public-private partnerships 6.18 6.08 30 2022 Public and private sector ventures are supporting technological development 6.97 6.46 24 2022 Development & application of tech. 6.97 6.46 24 2022 Development and application of technology are supported by the legal environment 6.97 6.46 24 2022 Funding for technological development 5.96 5.98 37 2022 Funding for technological development 5.598 47,160 34 2020 US\$ millions					
4.2.11 · Public-private partnerships 6.18 6.08 30 2022 Public and private sector ventures are supporting technological development 6.97 6.46 24 2022 Development & application of tech. 6.97 6.46 24 2022 Development and application of technology are supported by the legal environment 6.97 6.46 24 2022 Funding for technological development 5.96 5.98 37 2022 Funding for technological development is readily available 5,598 47,160 34 2020 US\$ millions 21.49 18.12 19 2020 Percentage of manufactured exports 4.7 9.7 45 2018 Percentage of service exports 4.2.17 · Cyber security 6.08 5.89 31 2022	4.2.10 · Qualified engineers	6.47	6.35	31 ²⁰²²	
Public and private sector ventures are supporting technological development4.2.12 · Development & application of tech. Development and application of technology are supported by the legal environment6.976.462420224.2.13 · Funding for technological development Funding for technological development is readily available5.965.983720224.2.14 · High-tech exports (\$) US\$ millions5,59847,1603420204.2.15 · High-tech exports (%) Percentage of manufactured exports21.4918.121920204.2.16 · ICT service exports Percentage of service exports4.79.74520184.2.17 · Cyber security6.085.89312022	Qualified engineers are available in your labor market				
4.2.12 · Development & application of tech. 6.97 6.46 24 2022 Development and application of technology are supported by the legal environment 5.96 5.98 37 2022 Funding for technological development 5.96 5.98 37 2022 Funding for technological development is readily available 5.598 47,160 34 2020 US\$ millions 21.49 18.12 19 2020 Percentage of manufactured exports 4.7 9.7 45 2018 Percentage of service exports 4.7 9.7 45 2018 4.2.17 · Cyber security 6.08 5.89 31 2022	4.2.11 · Public-private partnerships	6.18	6.08	30 ²⁰²²	
Development and application of technology are supported by the legal environment 4.2.13 · Funding for technological development 5.96 5.98 37 ²⁰²² Funding for technological development is readily available					
4.2.13 · Funding for technological development 5.96 5.98 37 2022 Funding for technological development is readily available	4.2.12 · Development & application of tech.	6.97	6.46	24 ²⁰²²	
Funding for technological development is readily available 4.2.14 · High-tech exports (\$) 5,598 47,160 34 ²⁰²⁰ US\$ millions					
4.2.14 · High-tech exports (\$) 5,598 47,160 34 2020 US\$ millions		5.96	5.98	37 ²⁰²²	
US\$ millions 4.2.15 · High-tech exports (%) 21.49 18.12 19 2020 Percentage of manufactured exports 4.7 9.7 45 2018 Percentage of service exports 4.7 9.7 45 2018 Percentage of service exports 6.08 5.89 31 2022					
4.2.15 · High-tech exports (%) 21.49 18.12 19 2020 Percentage of manufactured exports 4.7 9.7 45 2018 Percentage of service exports 4.7 9.7 45 2018 Vercentage of service exports 6.08 5.89 31 2022		5,598	47,160	34 ²⁰²⁰	
Percentage of manufactured exports 4.2.16 · ICT service exports Percentage of service exports 4.2.17 · Cyber security 6.08 5.89 31 2022					
4.2.16 · ICT service exports 4.7 9.7 45 ²⁰¹⁸ Percentage of service exports 4.2.17 · Cyber security 6.08 5.89 31 ²⁰²²		21.49	18.12	19 ²⁰²⁰	
Percentage of service exports 4.2.17 · Cyber security 6.08 5.89 31 ²⁰²²	5				
4.2.17 · Cyber security 6.08 5.89 31 ²⁰²²	4.2.16 · ICT service exports	4.7	9.7	45 ²⁰¹⁸	
4.2.17 Gyber Security 0.00 0.09 01	Percentage of service exports				
Cyber security is being adequately addressed by corporations	4.2.17 · Cyber security	6.08	5.89	31 ²⁰²²	
	Cyber security is being adequately addressed by corporations				

4.3 · Scientific Infrastructure	Value /	Average R	ank 'ear
4.3.01 · Total expenditure on R&D (\$)	24,749	31,953	10 ²⁰¹⁹
US\$ millions			
4.3.02 · Total expenditure on R&D (%)	1.79	1.63	22 ²⁰¹⁹
Percentage of GDP			
4.3.03 · Total expenditure on R&D per capita (\$)	975.7	647.1	19 ²⁰¹⁹
US\$ per capita			
4.3.04 · Business expenditure on R&D (\$)	12,632	24,238	16 ²⁰¹⁹
US\$ millions			
4.3.05 · Business expenditure on R&D (%)	0.91	1.11	26 ²⁰¹⁹
Percentage of GDP			
4.3.06 · Total R&D personnel	-	233.3	
Full-time work equivalent (FTE thousands)			
4.3.07 · Total R&D personnel per capita	-	5.37	
Full-time work equivalent (FTE) per 1000 people			
4.3.08 · Total R&D personnel in business enterprise	77.7	183.3	18 ²⁰¹⁹
Full-time work equivalent (FTE thousands)			
4.3.09 · Total R&D personnel in business per capita	3.06	3.31	28 ²⁰¹⁹
Full-time work equivalent (FTE) per 1000 people			
4.3.10 · Researchers in R&D per capita	-	3.6	
Full-time work equivalent (FTE) per 1000 people			
4.3.11 · Graduates in Sciences	18.63	24.75	52 ²⁰¹⁹
% of graduates in ICT, Engineering, Math & Natural Sciences			
4.3.12 · Scientific articles	57,258	39,473	13 ²⁰¹⁹
Scientific articles published by origin of author			
4.3.13 · Nobel prizes	8	9	10 ²⁰²¹
Awarded in physics, chemistry, physiology or medicine and economics since 1950			
4.3.14 · Nobel prizes per capita	0.31	0.19	15 ²⁰²¹
Awarded in physics, chemistry, physiology or medicine and economics since 1950 per million people			
4.3.15 · Patent applications	11,907	52,962	20 2020
Number of applications filed by applicant's origin			
4.3.16 · Patent applications per capita	46.34	80.01	25 ²⁰²⁰
Number of applications filed by applicant's origin, per 100,000 inhabitants			
4.3.17 · Patent grants	5,768	25,007	21 ²⁰²⁰
Number of patents granted by applicant's origin (average 2018-2020)			
4.3.18 · Number of patents in force	247.7	491.7	25 ²⁰²⁰
by applicant's origin, per 100,000 inhabitants			
4.3.19 · Medium- and high-tech value added	28.48	38.63	45 ²⁰¹⁹
Proportion of total manufacturing value added, expressed as a percentage			
4.3.20 · Scientific research legislation	6.69	5.97	24 2022
Laws relating to scientific research do encourage innovation			
4.3.21 · Intellectual property rights	7.88	6.59	12 2022
Intellectual property rights are adequately enforced			
4.3.22 · Knowledge transfer	5.52	5.52	29 ²⁰²²
Knowledge transfer is highly developed between companies and universities			

4.4 · Health and Environment	Value A	Average F	Rank 'ear
4.4.01 · Total health expenditure	9.9	7.5	14 ²⁰¹⁹
Percentage of GDP			
4.4.02 · Total health expenditure per capita	5,415	2,614	10 ²⁰¹⁹
US\$ per capita			2010
4.4.03 · Public expenditure on health (%)	71.68	65.44	26 ²⁰¹⁹
Percentage of total health expenditure	0.00	5.07	25 2022
4.4.04 · Health infrastructure	6.92	5.97	25 2022
Health infrastructure meets the needs of society 4.4.05 · Universal health coverage index	87	78	3 2019
Coverage index for essential health services (0-100)	07	70	3
4.4.06 · Life expectancy at birth	83.2	78.4	6 2020
Average estimate	00.2	70.4	0
4.4.07 · Healthy life expectancy	71.0	68.3	19 ²⁰²¹
Average estimate	11.0	00.0	10
4.4.08 · Infant mortality	3.7	7.9	22 2020
Under five mortality rate per 1000 live births	0.1		
4.4.09 · Medical assistance			9 ²⁰²¹
Number of inhabitants per physician and per nurse			
Medical assistance / Per nurse	83.30	302.83	2021
Medical assistance / Per physician	263.25	533.91	2021
4.4.10 · Urban population	86	77	2021
Percentage of total population			
4.4.11 · Human development index	0.944	0.862	8 2019
Combines economic - social - educational indicators/ Source: Human Development Report			
4.4.12 · Energy intensity	59	102	14 2018
Total energy consumed for each 1000 US\$ of GDP in MTOE			
4.4.13 · Safely treated waste water	76.2	76.7	39 ²⁰²⁰
Percentage of waste water			
4.4.14 · Water use efficiency	82.19	97.67	20 2019
US\$ per cubic meter			
4.4.15 · CO2 emissions	376.0	420.2	51 ²⁰²⁰
Metric tons of carbon dioxide from fuel combustion			
4.4.16 · CO2 emissions intensity	277.9	354.2	35 ²⁰²⁰
CO2 emissions from fuel combustion in metric tons per one million US\$ of GDP			
4.4.17 · Exposure to particle pollution	6.75	20.45	7 ²⁰¹⁹
Mean population exposure to PM2.5, Micrograms per cubic metre			
4.4.18 · Renewable energies (%)	7.3	16.8	47 ²⁰¹⁹
Share of renewables in total energy requirements, %			0000
4.4.19 · Forest area growth	0.7	0.4	18 ²⁰²⁰
Five year percentage change of hectares			. 2019
4.4.20 · Total biocapacity	11.47	3.26	4 ²⁰¹⁸
Global hectares per capita of biologically productive space			52 ²⁰¹⁸
4.4.21 · Ecological footprint	7.1	5.0	52 2010
Global hectares per person	4.00	4 70	5 ²⁰¹⁸
4.4.22 · Ecological balance (reserve/deficit)	4.39	-1.73	5 2010
Total biocapacity minus total footprint in global hectares per capita	0.07	4.00	17 ²⁰¹⁹
4.4.23 · Environment-related technologies	0.67	1.60	17
Development of environment-related technologies, % inventions worldwide 4.4.24 · Environmental agreements	100.00	02.24	1 2015
5	100.00	83.34	
Multilateral agreements on hazardous waste, proportion fulfilled 4.4.25 · Sustainable development	6.53	6.21	23 2022
Sustainable development is a priority in companies	0.00	0.21	23
4.4.26 · Pollution problems	6.83	5.71	12 2022
Pollution problems do not seriously affect your economy	0.03	5.71	14
4.4.27 · Environmental laws	6.76	6.17	17 2022
Environmental laws and compliance do not hinder the competitiveness of businesses	0.70	0.17	.,
4.4.28 · Quality of life	9.02	6.76	8 2022
Quality of life is high	0.02	0.10	-
Guardy of the 13 mgm			

4.5 · Education	Value A	verage R	ank 'ear
4.5.01 · Total public expenditure on education	5.8	5.0	17 ²⁰²⁰
Percentage of GDP			- 2020
4.5.02 · Total public expenditure on education per capita	3,057	1,562	9 2020
US\$ per capita	0.000	0.044	18 ²⁰¹⁹
4.5.03 · Total public exp. on education per student	9,699	6,944	18 2010
Spending per enrolled pupil/student, all levels	15.14	15.05	34 ²⁰¹⁹
4.5.04 · Pupil-teacher ratio (primary education)	15.14	15.95	34
Ratio of students to teaching staff 4.5.05 · Pupil-teacher ratio (secondary education)	11.00	10 74	30 2018
Ratio of students to teaching staff	11.89	13.74	30
	95.9	92.7	27 2019
4.5.06 · Secondary school enrollment	95.9	92.7	21
Percentage of relevant age group receiving full-time education	E4 C	44.0	15 ²⁰²⁰
4.5.07 · Higher education achievement	54.6	44.2	15
Percentage of population that has attained at least tertiary education for persons 25-34	54.4	20.7	7 2020
4.5.08 · Women with degrees	54.4	39.7	/
Share of women who have a degree in the population 25-65	00.07	4.04	2 2019
4.5.09 · Student mobility inbound	20.07	4.01	2 2010
Foreign tertiary-level students per 1000 inhabitants	0.50	0.00	53 ²⁰¹⁹
4.5.10 · Student mobility outbound	0.52	2.62	53 2010
National tertiary-level students studying abroad per 1000 inhabitants 4.5.11 · Educational assessment - PISA	400	474	20 2018
	499	471	20 2010
PISA survey of 15-year olds Educational assessment - PISA / Mathematics	491	472	2018
Educational assessment - PISA / Reading	503	468	2018
Educational assessment - PISA / Sciences	503	472	2018
4.5.12 · Students who are not low achievers - PISA	69.5	58.5	25 ²⁰¹⁸
% of students who are not low achievers in maths, sciences and reading			
4.5.13 · English proficiency - TOEFL	96	92	13 ²⁰²⁰
TOEFL scores			
4.5.14 · Primary and secondary education	7.60	6.10	15 ²⁰²²
Primary and secondary education meets the needs of a competitive economy			
4.5.15 · University education	7.58	6.40	15 ²⁰²²
University education meets the needs of a competitive economy			
4.5.16 · Management education	7.06	6.34	17 ²⁰²²
Management education meets the needs of the business community			
4.5.17 · University education index	37.37	14.07	7 2021
Country score calculated from Times Higher Education university ranking			
4.5.18 · Illiteracy	1.0	2.4	1 2020
Adult (over 15 years) illiteracy rate as a percentage of population			
4.5.19 · Language skills	6.24	6.41	36 2022
Language skills are meeting the needs of enterprises			

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