



IMD World Competitiveness Yearbook 2021



OVERALL PERFORMANCE (64 countries)



CHALLENGES IN 2021

- Minimize the impact of COVID-19 on economic, social and environment through agile policies and regulations.
- Upskilling and reskilling are crucial to keep up with new and emerging job challenges and nurture a future-ready workforce.
- To inculcate digital-first mindset and increase the adoption of digital technology across the public sector.
- To increase productivity through measures enabling business environment e.g. to boost innovation, skills and institutional quality.
- · Creating an ecosystem conducive to attracting investment.

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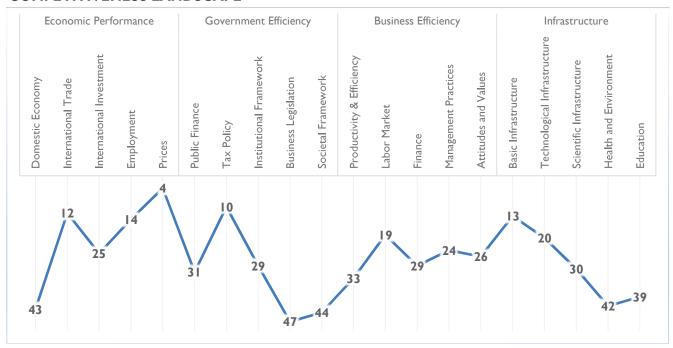
Malaysia Productivity Corporation (MPC), Petaling Jaya, Selangor

BASIC FACTS

Rank

Capital	Kuala Lumpur	
Land area (square km '000)	330 ²⁰²⁰	
Exchange Rate (per \$)	4.203 2020	
Population - market size (millions)	32.70 ²⁰²⁰	26
Gross Domestic Product (GDP) (US\$ billions)	336.7 ²⁰²⁰	36
GDP (PPP) per capita (US\$)	27,602 ²⁰²⁰	45
Real GDP growth (%)	-5.6 ²⁰²⁰	39
Consumer price inflation (%)	-I.I4 ²⁰²⁰	4
Unemployment rate (%)	4.50 2020	16
Labor force (millions)	15.67 ²⁰²⁰	26
Current account balance (% of GDP)	18.45 ²⁰²⁰	ı
Direct investment stocks inward (\$bn)	169.0 2019	32
Direct investment flows inward (% of GDP)	2.50 2019	28

COMPETITIVENESS LANDSCAPE



PEER GROUPS RANKINGS

ASIA - PACIFIC (14 countries) 2017 2018 2019 2020 2021 7 6 7 8 8

POPULATIONS > 20 MILLION (29 countries)



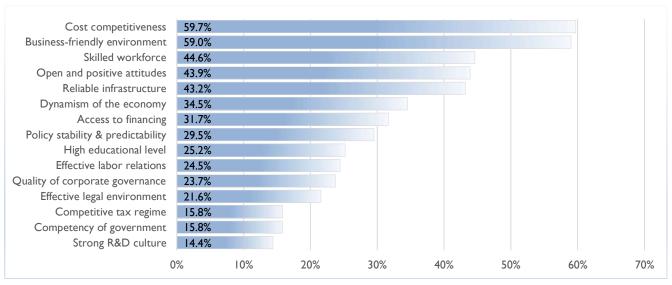
COMPETITIVENESS EVOLUTION

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.

	WCY	WCY		WCY	WCY
IMPROVEMENTS	2020	202 I	DECLINES	2020	202 I
1.5.01 Consumer price inflation	0.66	-1.14	1.1.18 Gross fixed capital formation - real growth	-2.14	-14.52
2.3.08 Exchange rate stability	0.040	0.025	1.1.15 Real GDP growth per capita	3.69	-6.17
1.2.02 Current account balance	13.64	18.45	1.1.14 Real GDP growth	4.3	-5.6
1.1.13 Economic complexity index	0.97	1.18	2.1.02 Government budget surplus/deficit (%)	-3.43	-6.19
3.2.14 Labor force long-term growth	2.72	3.22	1.4.08 Long-term unemployment	0.20	0.30
3.3.10 Stock market capitalization (%)	109.36	124.03	1.2.12 Exports of commercial services (\$bn)	40.81	21.78
3.2.01 Compensation levels	5.17	4.52	4.3.05 Business expenditure on R&D (%)	0.80	0.44
2.4.07 Government subsidies	1.56	1.40	1.2.13 Exports of commercial services (%)	11.19	6.47
2.5.16 Freedom of the Press	36.74	33.12	1.4.07 Unemployment rate	3.30	4.50
3.5.06 Digital transformation in companies	5.97	6.43	4.3.02 Total expenditure on R&D (%)	1.42	1.00
4.2.07 Internet users	751	802	2.3.13 Bribery and corruption	3.78	2.87
4.4.25 Sustainable development	6.49	6.91	1.5.04 Office rent	267	325
1.2.09 Exports of goods (%)	65.31	69.54	2.5.04 Risk of political instability	3.81	3.04
3.4.03 Opportunities and threats	6.19	6.58	1.4.04 Employment - long-term growth	2.55	2.05
2.4.03 Public sector contracts	4.74	5.00	2.1.07 Public finances	5.91	4.79

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.



ECONOMIC PERFORMANCE



Sub-Factor Rankings:	2020	2021
Domestic Economy	29	43
International Trade	9	12
International Investment	36	25
Employment	16	14
Prices	I	4

GOVERNMENT EFFICIENCY



Sub-Factor Rankings:	2020	2021
Public Finance	35	31
Tax Policy	9	10
Institutional Framework	32	29
Business Legislation	49	47
Societal Framework	39	44

BUSINESS EFFICIENCY



Sub-Factor Rankings:	2020	2021
Productivity & Efficiency	32	33
Labor Market	23	19
Finance	33	29
Management Practices	23	24
Attitudes and Values	30	26

INFRASTRUCTURE



Sub-Factor Rankings:	2020	2021
Basic Infrastructure	13	13
Technological Infrastructure	17	20
Scientific Infrastructure	32	30
Health and Environment	44	42
Education	37	39

STRENGTHS Economic Performance Rank 1.2.02 Current account balance 1.5.06 Gasoline prices 4 1.5.01 Consumer price inflation 4 1.4.08 Long-term unemployment 1.2.09 Exports of goods (%) 10 1.5.04 Office rent 15 1.2.25 Tourism receipts 15 1.2.23 Trade to GDP ratio 15 1.5.02 Cost-of-living index 16 16 1.4.07 Unemployment rate **Government Efficiency** Rank 2.2.01 Collected total tax revenues 2.2.08 Consumption tax rate 7 17 2.2.02 Collected personal income tax 18 2.1.09 Pension funding 2.3.10 Adaptability of government policy 21 2.4.17 Unemployment legislation 21 23 2.2.11 Real personal taxes 24 2.3.09 Legal and regulatory framework 2.2.09 Employer social security tax rate 25

Business Efficiency Rank 3.2.06 Working hours 4 3.4.14 Total early-stage Entrepreneurial Activity 6 9 3.2.14 Labor force long-term growth 13 3.3.10 Stock market capitalization (%) 3.4.09 Entrepreneurship 18 3.5.01 Attitudes toward globalization 18 3.2.01 Compensation levels 19 3.2.03 Remuneration in services professions 20 3.2.04 Remuneration of management 21 21 3.2.09 Apprenticeships

2.3.07 Foreign currency reserves per capita

Infrastructure	Rank
4.3.11 Graduates in Sciences	I
4.2.16 High-tech exports (%)	4
4.5.08 Women with degrees	4
4.5.04 Pupil-teacher ratio (primary education)	12
4.1.09 Dependency ratio	12
4.1.20 Electricity costs for industrial clients	4
4.2.12 Public-private partnerships	17
4.4.24 Environmental agreements	17
4.4.25 Sustainable development	19
4.4.04 Health infrastructure	22

WEAKNESSES

Economic Performance	Rank
1.1.18 Gross fixed capital formation - real growth	54
1.5.05 Food costs	48
1.1.20 GDP per capita	45
1.1.21 GDP (PPP) per capita	45
1.1.15 Real GDP growth per capita	43
1.1.09 Gross fixed capital formation (%)	40
1.2.12 Exports of commercial services (\$bn)	39
I.I.14 Real GDP growth	39
1.2.13 Exports of commercial services (%)	38
I.4.02 Employment (%)	38

Government Efficiency	Rank
2.4.15 Start-up procedures	54
2.5.04 Risk of political instability	53
2.4.19 Redundancy costs	53
2.4.04 Foreign investors	53
2.4.01 Tariff barriers	51
2.4.14 Start-up days	51
2.5.06 Gini coefficient	49
2.4.02 Protectionism	47
2.4.09 State ownership of enterprises	47
2.5.16 Freedom of the Press	46

Business Efficiency	Rank
3.2.16 Female labor force	54
3.4.11 Women in management	50
3.1.03 Labor productivity (PPP)	49
3.3.05 Access to financial services - gender ratio	46
3.1.01 Overall productivity (PPP)	44
3.2.12 Labor force (%)	42
3.2.20 Attracting and retaining talents	40
3.4.13 Entrepreneurial fear of failure	37
3.3.07 Regulatory compliance (banking laws)	36
3.3.19 Corporate debt	33

Infrastructure	Rank
4.4.01 Total health expenditure	59
4.4.09 Medical assistance	55
4.4.12 Energy intensity	55
4.2.08 Broadband subscribers	54
4.4.18 Renewable energies (%)	54
4.4.11 Human development index	49
4.4.05 Universal health care coverage index	49
4.4.19 Forest area growth	48
4.5.06 Secondary school enrollment	47
4.3.16 Patent applications per capita	46

25

I · Economic Performance

I.I · Domestic Economy	Value	Average	Rank	Year
1.1.00 · Exchange Rate	4.203	859.762		2020
National currency per US\$ (average)				
1.1.01 · Gross Domestic Product (GDP)	336.7	1,235.5	36	2020
US\$ billions				
I.I.02 · GDP (PPP)	902.6	1,829.9	25	2020
Estimates ; US\$ billions at purchasing power parity				
1.1.03 · World GDP contribution	0.40	1.46	36	2020
Percentage share of world GDP in market prices				
1.1.04 · Household consumption expenditure (\$bn)	205.0	673.9	30	2020
US\$ billions				
1.1.05 · Household consumption expenditure (%)	60.9	54.8	16	2020
Percentage of GDP				
I.I.06 · Government consumption expenditure (\$bn)	43.8	219.7	40	2020
US\$ billions				
I.I.07 · Government consumption expenditure (%)	13.0	18.7	54	2020
Percentage of GDP				
1.1.08 · Gross fixed capital formation (\$bn)	70.5	317.6	34	2020
US\$ billions				
1.1.09 · Gross fixed capital formation (%)	20.9	22.2	40	2020
Percentage of GDP				
I.I.10 · Gross domestic savings (\$bn)	87.9	336.5	33	2020
US\$ billions				
I.I.II · Gross domestic savings (%)	26.1	26.4	30	2020
Percentage of GDP				
1.1.12 · Economic sectors				2020
Breakdown of the economic sectors, percentage of GDP				
Economic sectors / Agriculture	7.4	3.8		2020
Economic sectors / Industry	36.6	27.6		2020
Economic sectors / Services	54.9	68.2		2020
1.1.13 · Economic complexity index	1.18	0.91	25	2019
Measures knowledge intensity, by considering exports				
1.1.14 · Real GDP growth	-5.6	-5.1	39	2020
Percentage change, based on national currency in constant prices				
1.1.15 · Real GDP growth per capita	-6.17	-5.54	43	2020
Percentage change, based on national currency in constant prices				
1.1.16 · Household consumption expenditure - real growth	-4.32	-5.11	24	2020
Percentage change, based on constant prices				
1.1.17 · Government consumption expenditure - real growth	4.12	3.55	19	2020
Percentage change, based on constant prices				
1.1.18 · Gross fixed capital formation - real growth	-14.52	-5.75	54	2020
Percentage change, based on constant prices				
1.1.19 · Resilience of the economy	5.71	5.59	32	2021
Resilience of the economy to economic cycles is strong				
I.I.20 · GDP per capita	10,296	29,214	45	2020
US\$ per capita				
I.I.21 · GDP (PPP) per capita	27,602	39,600	45	2020
Estimates; US\$ per capita at purchasing power parity				
1.1.22 · Forecast: Real GDP growth	6.8	4.2	5	2021
Percentage change, based on national currency in constant prices				
1.1.23 · Forecast: Inflation	3.3	88.8	52	2021

Percentage change				
1.1.24 · Forecast: Unemployment	4.6	8.0	13	2021
Percentage of total labor force				202
1.1.25 · Forecast: Current account balance Percentage of GDP	3.0	0.9	20	202
1.2 ·International Trade	Value	Average	Rank	Year
1.2.01 · Current account balance (\$bn)	62.1	9.3	8	202
US\$ billions (minus sign = deficit)				
1.2.02 Current account balance	18.45	1.65	I	202
Percentage of GDP				
1.2.03 · Balance of trade (\$bn)	44.3	0.7	10	202
US\$ billions (minus sign = deficit)				
I.2.04 · Balance of trade (%)	13.15	0.35	5	202
Percentage of GDP				
1.2.05 · Balance of commercial services (\$bn)	-11.28	4.81	55	202
US\$ billions (minus sign = deficit)				
1.2.06 · Balance of commercial services (%)	-3.35	1.21	60	202
Percentage of GDP				
1.2.07 · World exports contribution	1.14	1.47	25	202
Percentage share of world exports (goods and commercial services)				
1.2.08 · Exports of goods (\$bn)	234.13	257.28	23	2020
US\$ billions				
1.2.09 · Exports of goods (%)	69.54	37.14	10	2020
Percentage of GDP				
1.2.10 · Exports of goods per capita	7,160	11,553	31	2020
US\$ per capita				2024
1.2.11 · Exports of goods - growth	-1.71	-8.76	16	2020
Percentage change, based on US\$ values	21.70	72.11	20	2020
1.2.12 · Exports of commercial services (\$bn)	21.78	73.11	39	2020
US\$ billions		12.20	20	2020
1.2.13 · Exports of commercial services (%)	6.47	13.39	38	2020
Percentage of GDP	4/ 75	25.42	E/	2020
1.2.14 · Exports of commercial services - growth	-46.75	-25.43	56	
Percentage change, based on US\$ values 1.2.15 · Exports of goods & commercial services	255.91	332.15	25	2020
US\$ billions	233.71	332.13	23	
1.2.16 · Exports breakdown by economic sector				2019
Percentage of total exports				
Exports breakdown by economic sector / Agriculture	9.3	10.3		2019
· · · · · · · · · · · · · · · · · · ·	7/ 0			2019
Exports breakdown by economic sector / Industry	76.0	62.7		201
Exports breakdown by economic sector / Services	14.7	27.0		201
1.2.17 · Export concentration by partner	51.1	54.2	27	201
Exports to top 5 countries, percentage of total exports				
1.2.18 · Export concentration by product	53.2	55. I	35	2019
Top 5 products, percentage of total exports				
1.2.19 · Imports of goods & commercial services (\$bn)	222.9	325.6	38	2020
US\$ billions		40.0		2020
1.2.20 · Imports of goods & commercial services (%) Percentage of GDP	66.2	48.8	50	2020
1.2.21 · Imports of goods & commercial services - growth	-10.25	-10.93	32	202
Percentage change, based on US\$ values				
1.2.22 · Imports breakdown by economic sector				201
Percentage of total imports				
Imports breakdown by economic sector / Agriculture	7.9	8.0		2019
Imports breakdown by economic sector / Industry	74.6	67. I		2019
1		2,,,,		

Imports breakdown by economic sector / Services	17.5	25.0		2019
I.2.23 · Trade to GDP ratio	144.64	106.04	15	2019
(Exports + Imports) / GDP				
1.2.24 · Terms of trade index	98.2	97.1	30	2019
Unit value of exports over unit value of imports				
1.2.25 · Tourism receipts	5.44	3.79	15	2019
International tourism receipts as a percentage of GDP				
1.3 ·International Investment	Value	Average	Rank	Year
1.3.01 · Direct investment flows abroad (\$bn)	7.71	20.75	28	2019
US\$ billions				
1.3.02 · Direct investment flows abroad (% of GDP)	2.11	3.34	18	2019
Percentage of GDP				
1.3.03 · Direct investment stocks abroad (\$bn)	118.6	535.2	35	2019
US\$ billions				
1.3.04 · Direct investment stocks abroad (% of GDP)	32.52	81.76	27	2019
Percentage of GDP				
1.3.05 · Direct investment flows inward (\$bn)	9.10	24.48	33	2019
US\$ billions				
1.3.06 · Direct investment flows inward (% of GDP)	2.50	5.03	28	2019
Percentage of GDP	2.30	3.03		
1.3.07 · Direct investment stocks inward (\$bn)	169.0	536.5	32	2019
US\$ billions	107.0	330.3	32	
1.3.08 · Direct investment stocks inward (% of GDP)	46.34	96.59	30	2019
, ,	тс.от	76.37	30	
Percentage of GDP	1.20	2 72	21	2019
1.3.09 · Balance of direct investment flows (\$bn)	-1.39	-3.73	31	2017
US\$ billions (flows abroad minus flows inward)	0.30	1.40	2.4	2019
1.3.10 · Balance of direct investment flows (%)	-0.38	-1.69	24	2019
Percentage of GDP (flows abroad minus flows inward)				2010
1.3.11 · Net position in direct investment stocks (\$bn)	-50.4	-1.3	38	2019
US\$ billions (stocks abroad minus stocks inward)				
1.3.12 · Net position in direct investment stocks (%)	-13.81	-14.83	35	2019
Percentage of GDP (stocks abroad minus stocks inward)				
1.3.13 · Relocation threats of business	5.65	5.38	26	2021
Relocation of business is not a threat to the future of your economy				
1.3.14 · Portfolio investment assets	10.04	31.19	26	2019
US\$ billions				
1.3.15 · Portfolio investment liabilities US\$ billions	3.10	29.61	36	2019
I.4 · Employment	Value	Average		
1.4.01 · Employment	14.96	38.49	25	2020
Total employment in millions				
1.4.02 · Employment (%)	45.74	46.43	38	2020
Percentage of population				
1.4.03 · Employment - growth	-0.77	-2.20	22	2020
Estimates: percentage change				
1.4.04 · Employment - long-term growth	2.05	-0.60	22	2020
Estimates: % of population, percentage change in 4 years				
1.4.05 · Employment by sector				2020
Percentage of total employment				
Employment by sector / Agriculture	10.5	8.2		2020
Employment by sector / Industry	26.2	23.4		2020
Employment by sector / Services	63.4	68.4		2020
1.4.06 · Employment in the public sector	11.20	17.45	20	2019

Percentage of total employment				
1.4.07 · Unemployment rate	4.50	8.49	16	2020
Percentage of labor force				
1.4.08 · Long-term unemployment	0.30	2.17	6	2020
Percentage of labor force				
1.4.09 · Youth unemployment	12.00	17.16	24	2020
Percentage of youth labor force (under the age of 25)				
1.4.10 · Youth exclusion	12.6	13.6	35	2019
Share of youth population (15-24) not in education, employment or training				
1.5 · Prices	Value	Average	Rank	Year
1.5.01 · Consumer price inflation	-1.14	38.79	4	2020
Average annual rate				
1.5.02 · Cost-of-living index	65.00	76.02	16	2019
Index of a basket of goods & services in the main city, including housing (New York City = 100)				
1.5.03 · Apartment rent	447	1,525	5	2018
3-room apartment monthly rent in major cities, US\$				
1.5.04 · Office rent	325	664	15	2019
Total occupation cost in the main city (US\$/Sq.M. per year)				
1.5.05 · Food costs	25.89	18.82	48	2020
Percentage of household final consumption expenditures				
1.5.06 · Gasoline prices	0.47	1.13	4	2020
Premium unleaded gasoline (95 Ron) US\$ per litre				

2 · Government Efficiency

2.1 · Public Finance	Value	Average	Rank	Year
2.1.01 · Government budget surplus/deficit (\$bn)		-131.03	33	2020
US\$ billions				
2.1.02 · Government budget surplus/deficit (%)	-6.19	-7.12	30	2020
Percentage of GDP				
2.1.03 · Total general government debt (\$bn)	227.26	1,251.77	32	2020
US\$ billions				
2.1.04 · Total general government debt (%)	67.50	70.60	37	2020
Percentage of GDP				
2.1.05 · Total general government debt-real growth	11.90	16.13	28	2020
Percentage change, based on national currency in constant prices				
2.1.06 · Interest payment (%)	15.33	5.79	60	2020
Percentage of current revenue				
2.1.07 · Public finances	4.79	4.52	29	2021
Public finances are being efficiently managed				
2.1.08 · Tax evasion	4.31	4.66	35	2021
Tax evasion is not a threat to your economy				
2.1.09 · Pension funding	5.33	4.32	18	2021
Pension funding is adequately addressed for the future				
2.1.10 · General government expenditure	22.2	40.8	5	2020
Percentage of GDP				
2.2 ·Tax Policy	Value	Average	Rank	Year
2.2.01 · Collected total tax revenues	11.95	27.57	4	
Percentage of GDP	11.73	27.37	•	
2.2.02 · Collected personal income tax	2.56	5.95	17	2019
On profits, income and capital gains, as a percentage of GDP	2.50	3.73	• •	
2.2.03 · Collected corporate taxes	4.22	3.07	52	2019
On profits, income and capital gains, as a percentage of GDP	1.22	3.07		
2.2.04 · Collected indirect tax revenues	3.03	9.82	3	2019
Taxes on goods and services as a percentage of GDP	0.00	7.02		
2.2.05 · Collected capital and property taxes	0.12	1.34	8	2019
Percentage of GDP	VI.2			
2.2.06 · Collected social security contribution	5.03	7.13	23	2019
Compulsory contribution of employees and employers as a percentage of GDP				
2.2.07 · Corporate tax rate on profit	24.00	22.80	35	2020
Maximum tax rate, calculated on profit before tax				
2.2.08 · Consumption tax rate	6.00	16.43	7	2020
Standard rate of VAT/GST				
2.2.09 · Employer social security tax rate	12.0	16.4	25	2020
%				
2.2.10 · Employee social security tax rate	11.0	10.4	33	2020
%				
2.2.11 · Real personal taxes	5.84	5.03	23	2021
Real personal taxes do not discourage people from working or seeking advancement				
2.3 ·Institutional Framework	Value	Average	Rank	Year
2.3.01 · Real short-term interest rate	2.92	-0.04	57	2020
Real discount / bank rate				
2.3.02 · Cost of capital	5.93	5.53	28	2021
Cost of capital encourages business development				
2.3.03 · Interest rate spread	3.33	3.53	42	2020
Lending rate minus deposit rate				

2.3.04 · Country credit rating Index (0-60) of three country credit ratings: Fitch, Moody's and S&P	40.7	42.8	40	2020
maex (0-00) of unlee country credit radings. Fitch, Floody's and sor				
2.3.05 · Central bank policy	6.63	6.31	31	2021
Central bank policy has a positive impact on the economy				
2.3.06 Foreign currency reserves	107.64	209.20	24	2020
US\$ billions				
2.3.07 · Foreign currency reserves per capita	3,292	8,256	25	2020
US\$ per capita		-,		
2.3.08 Exchange rate stability	0.025	0.089	31	2020
Parity change from national currency to SDR, 2020 / 2018				
2.3.09 · Legal and regulatory framework	5.87	4.89	24	2021
The legal and regulatory framework encourages the competitiveness of enterprises				
2.3.10 · Adaptability of government policy	5.49	4.36	21	2021
Adaptability of government policy to changes in the economy is high				
2.3.11 · Transparency	4.46	4.36	32	2021
Transparency of government policy is satisfactory	1.10	1.50		
2.3.12 · Bureaucracy	3.44	3.31	28	2021
Bureaucracy does not hinder business activity	3.11	3.51		
2.3.13 · Bribery and corruption	2.87	4.43	43	2021
Bribery and corruption do not exist	2.07	1.13	13	
2.3.14 · Rule of law	73.08	71.01	36	2019
Rule of Law Index	73.06	71.01	36	
	71.8	74.6	45	2020
2.3.15 · Sustainable Development Goals	/1.0	/4.0	+3	
Country performance on the 17 SDGs	7.19	7.00	34	2020
2.3.16 · Democracy Index	7.17	7.00	34	2020
EIU Overall Democracy Index, © The Economist Intelligence Unit Limited 2020				
2.4 · Business Legislation	Value	Average	Rank	Year
2.4.01 · Tariff barriers	4.02	2.89	51	2016
Tariffs on imports: Applied weighted mean tariff rate for all products				
2.4.02 · Protectionism	4.57	5.55	47	2021
Protectionism of your government does not impair the conduct of your business				
2.4.03 · Public sector contracts	5.00	5.79	45	2021
Public sector contracts are sufficiently open to foreign bidders				
2.4.04 · Foreign investors	5.38	6.70	53	2021
Foreign investors are free to acquire control in domestic companies				
2.4.05 · Capital markets	5.94	6.38	40	2021
Capital markets (foreign and domestic) are easily accessible				
2.4.06 · Investment incentives	5.76	5.79	39	2021
Investment incentives are attractive to foreign investors				
2.4.07 · Government subsidies	1.40	1.94	27	2020
To private and public companies as a percentage of GDP				
2.4.08 · Subsidies	4.81	5.22	43	2021
Subsidies do not distort fair competition and economic development				
2.4.09 · State ownership of enterprises	4.91	5.73	47	2021
State ownership of enterprises is not a threat to business activities				
2.4.10 · Competition legislation	5.65	5.57	34	2021
Competition legislation is efficient in preventing unfair competition				
2.4.11 · Parallel economy	3.76	4.67	38	2021
2 mil Taraner comenty	00			
Parallel (black-market, unrecorded) economy does not impair economic development	2.4	6.0	42	2018
Parallel (black-market, unrecorded) economy does not impair economic development 2.4.12 • New husiness density	۷.۱	0.0	14	
2.4.12 · New business density				
2.4.12 · New business density Registered new businesses per 1'000 people aged 15-64	6.75	6.43	33	2021
2.4.12 · New business density Registered new businesses per I'000 people aged 15-64 2.4.13 · Creation of firms	6.75	6.43	33	2021
2.4.12 · New business density Registered new businesses per I'000 people aged I5-64 2.4.13 · Creation of firms Creation of firms is supported by legislation				
2.4.12 · New business density Registered new businesses per 1'000 people aged 15-64 2.4.13 · Creation of firms Creation of firms is supported by legislation 2.4.14 · Start-up days	6.75	6.43	33 51	2021
2.4.12 · New business density Registered new businesses per 1'000 people aged 15-64 2.4.13 · Creation of firms Creation of firms is supported by legislation 2.4.14 · Start-up days Number of days to start a business	17.5	14.9	51	2019
2.4.12 · New business density Registered new businesses per I'000 people aged I5-64 2.4.13 · Creation of firms Creation of firms is supported by legislation 2.4.14 · Start-up days Number of days to start a business 2.4.15 · Start-up procedures				
2.4.12 · New business density Registered new businesses per 1'000 people aged 15-64 2.4.13 · Creation of firms Creation of firms is supported by legislation 2.4.14 · Start-up days Number of days to start a business	17.5	14.9	51	2019

2.4.17 · Unemployment legislation	5.67	4.86	21	2021
Unemployment legislation provides an incentive to look for work				
2.4.18 · Immigration laws	5.50	5.93	41	202
Immigration laws do not prevent your company from employing foreign labor				
2.4.19 · Redundancy costs	17.2	9.5	53	2019
Number of weeks of salary				
2.5 ·Societal Framework	Value	Average		
2.5.01 · Justice	5.41	5.43	35	202
Justice is fairly administered				
2.5.02 · Homicide	-	4.53		
Intentional homicide, rate per 100'000 population				
2.5.03 · Ageing of population	7.1	14.8	П	2020
Population over 65, percentage of total population				
2.5.04 · Risk of political instability	3.04	5.60	53	202
The risk of political instability is very low				
2.5.05 · Social cohesion	5.25	5.28	33	202
Social cohesion is high				
2.5.06 · Gini coefficient	41.00	35.59	49	201
Equal distribution of income scale: 0 (absolute equality) to 100 (absolute inequality)				
2.5.07 · Income distribution - lowest 10%	2.20	2.76		2016
Percentage of household incomes going to lowest 10% of households				
2.5.08 · Income distribution - highest 10%	30.20	27.05		2016
Percentage of household incomes going to highest 10% of households				
2.5.09 · Income distribution - lowest 40%	16.40	18.77	41	201
Percentile going to the lowest 40% of households				
2.5.09 · Income share held by lowest 60% - growth	-	0.00		
Percentage change of household incomes going to lowest 60% of households				
2.5.10 · Income distribution - lowest 40% growth	-	0.54		
Percentile going to the lowest 40% of households - growth				
2.5.11 · Equal opportunity	5.93	5.93	36	202
Equal opportunity legislation in your economy encourages economic development				
2.5.12 · Females in parliament	14.86	28.00	58	202
Percentage of total seats in Parliament				
2.5.13 · Unemployment rate - gender ratio	1.07	1.26	36	202
Ratio of the female and male unemployement rates		0		
2.5.14 · Gender inequality	0.253	0.184	48	201
Gender Inequality Index (UNDP)	0.255	0.101	10	
2.5.15 · Disposable Income	74.8	71.5	32	202
Female / male ratio	77.0	, 1.3	32	
2.5.16 · Freedom of the Press	33.12	28.29	46	202
Paparters Without Borders World Proce Freedom Score	33.12	20.27	טד	

3 · Business Efficiency

Ratio of CEO to personal assistant remuneration

5 Dusiness Emerciney				
3.1 · Productivity & Efficiency	Value	Average	Rank	Year
3.1.01 · Overall productivity (PPP)	63,017	81,620	44	201
Estimates: GDP (PPP) per person employed, US\$				
3.1.02 Overall productivity (PPP) - real growth	2.24	0.53	17	201
Estimates: Percentage change of GDP (PPP) per person employed				
3.1.03 · Labor productivity (PPP)	28.68	47.29	49	201
Estimates: GDP (PPP) per person employed per hour, US\$				
3.1.04 Agricultural productivity (PPP)	42,651	52,322	29	202
Estimates: Related GDP (PPP) per person employed in agriculture, US\$				
3.1.05 · Productivity in industry (PPP)	84,409	100,324	34	202
Estimates: Related GDP (PPP) per person employed in industry, US\$				
3.1.06 · Productivity in services (PPP)	52,287	82,232	48	202
Estimates: Related GDP (PPP) per person employed in services, US\$				
3.1.07 · Workforce productivity	6.30	6.06	30	202
Workforce productivity is competitive by international standards				
3.1.08 Large corporations	6.76	6.64	34	202
Large corporations are efficient by international standards				
3.1.09 · Small and medium-size enterprises	5.99	5.99	29	202
Small and medium-size enterprises are efficient by international standards				
3.1.10 Use of digital tools and technologies	6.30	5.96	23	202
Companies are very good at using digital tools and technologies to improve performance				
3.2 ·Labor Market	Value	A	D I -	V
	Value	Average		
3.2.01 · Compensation levels	4.52	13.69	19	202
Total hourly compensation in manufacturing (wages + supplementary benefits), US\$	0.24	2.04		202
3.2.02 · Unit labor costs for total economy	0.36	2.04	12	202
Percentage change	12.544	27.072	20	201
3.2.03 · Remuneration in services professions	13,564	27,862	20	201
Gross annual income including supplements such as bonuses, US\$	0.224	10.772		201
Remuneration in services professions / Call center agent	8,324	18,772		201
Remuneration in services professions / Nurse	12,444	18,706		201
Remuneration in services professions / Primary school	10,938	30,039		201
Remuneration in services professions / Product Manager	30,650	47,954		201
Remainer action in Services professions / Froduce Frankger	30,030	17,731		
Remuneration in services professions / Sales Assistant	9,927	29,313		201
Remuneration in services professions / Secretary / Personal	9,103	22,391		201
3.2.04 · Remuneration of management	117,688	165,956	21	201
Total base salary plus bonuses and long-term incentives, US\$				
Remuneration of management / CEO	193,322	299,663		201
Remuneration of management / Director manufacturing	117,053	146,459		20
Remuneration of management / Engineer	51,396	78,229		20
	100 001	130 472		201
Remuneration of management / Human resources director	108,981	139,473		201
3.2.05 · Remuneration spread	21.51	17.91	42	201

12

3.2.06 · Working hours	2,197	1,837	4	2019
Average number of working hours per year				
3.2.07 · Worker motivation	5.76	5.79	31	2021
Worker motivation in companies is high				
3.2.08 · Industrial disputes	0.00	13.05	ı	2017
Working days lost per 1,000 inhabitants per year (average 2017-2019)				
3.2.09 · Apprenticeships	5.60	5.08	21	2021
Apprenticeships are sufficiently implemented				
3.2.10 · Employee training	6.31	5.97	25	2021
Employee training is a high priority in companies				
3.2.11 · Labor force	15.67	41.25	26	2020
Employed and registered unemployed (millions)				
3.2.12 · Labor force (%)	47.91	49.90	42	2020
Percentage of population				
3.2.13 · Labor force growth	0.55	-0.68	18	2020
Percentage change				
3.2.14 · Labor force long-term growth	3.22	-0.53	9	2020
Estimates: % of population, percentage change in 4 years				
3.2.15 · Part-time employment	2.20	13.20	56	2019
Percentage of total employment				
3.2.16 · Female labor force	39.02	43.18	54	2020
Percentage of total labor force				
3.2.17 · Foreign labor force - migrant stock	14.58	17.11	31	2020
Migrant stock, age 20-64, % of population				
3.2.18 · Skilled labor	6.14	5.51	25	2021
Skilled labor is readily available				
3.2.19 · Finance skills	6.29	6.27	33	2021
Finance skills are readily available				
3.2.20 Attracting and retaining talents	6.41	6.76	40	2021
Attracting and retaining talents is a priority in companies				
3.2.21 · Brain drain	5.23	4.78	26	2021
Brain drain (well-educated and skilled people) does not hinder competitiveness in your economy				
3.2.22 Foreign highly-skilled personnel	5.87	5.28	23	2021
Foreign highly-skilled personnel are attracted to your country's business environment				
3.2.23 International experience	5.69	5.52	30	2021
International experience of senior managers is generally significant				
3.2.24 · Competent senior managers	5.89	5.51	28	2021
Competent senior managers are readily available				
3.3 ·Finance	Value	Average	Rank	Year
				2019
3.3.01 · Banking sector assets	162.66	161.34	24	2017
Percentage of GDP	244	2.24	25	2020
3.3.02 · Financial cards in circulation	2.66	3.36	25	2020
Number of cards per capita	4 000	10000		2020
3.3.03 · Financial card transactions	4,098	10,208	46	2020
US\$ per capita	05.24	00.10	- ·	2017
3.3.04 · Access to financial services	85.34	82.18	36	2017
Proportion of adults with a bank account or mobile-money-service provider				
3.3.05 · Access to financial services - gender ratio	0.94	0.96	46	2017
Ratio of the female and male access to a bank account or mobile-money-service provider				
3.3.06 · Banking and financial services	6.51	6.09	27	2021
Banking and financial services do support business activities efficiently				
3.3.07 · Regulatory compliance (banking laws)	6.67	6.77	36	2021
Regulatory compliance is sufficiently developed				
3.3.08 · Stock markets	6.10	5.62	27	2021
Stock markets provide adequate financing to companies				
3.3.09 · Stock market capitalization (\$bn)	417.6	1,276.4	25	2020
US\$ billions				
3.3.10 · Stock market capitalization (%)	124.03	101.96	13	2020
Percentage of GDP				

3.3.11 · Value traded on stock markets	3,342	15,149	31	2019
US\$ per capita				
3.3.12 · Listed domestic companies	919	713	12	2019
Number of listed domestic companies				
3.3.13 · Stock market index	-7.30	-3.62	40	2020
Percentage change on index in national currency				
3.3.14 · Shareholders' rights	6.79	6.70	31	2021
Shareholders' rights are sufficiently implemented				
3.3.15 · Initial Public Offerings	457.6	3,591.6	34	2020
By acquiror nation (average 2018-2020) US\$ millions				
3.3.16 · Credit	6.17	5.95	34	2021
Credit is easily available for business				
3.3.17 · Venture capital	5.54	5.13	28	2021
Venture capital is easily available for business				
3.3.18 · M&A Activity	0.361	1.329	43	2019
Deals per listed company (average 2017-2019)				
3.3.19 · Corporate debt	5.71	5.83	33	2021
Corporate debt does not restrain the ability of enterprises to compete				
3.4 · Management Practices	Value	Average	Rank	Year
3.4.01 · Agility of companies	6.11	5.99	28	2021
Companies are agile				
3.4.02 · Changing market conditions	6.84	6.68	32	2021
Companies are generally extremely aware of changing market conditions				
3.4.03 · Opportunities and threats	6.58	6.23	23	2021
Companies are very good at responding quickly to opportunities and threats				
3.4.04 · Credibility of managers	6.37	5.96	29	2021
Credibility of managers in society is strong				
3.4.05 · Corporate boards	6.42	6.03	26	2021
Corporate boards do supervise the management of companies effectively				
3.4.06 · Auditing and accounting practices	7.39	7.15	27	2021
Auditing and accounting practices are adequately implemented in business				
3.4.07 · Use of big data and analytics	5.48	5.10	22	2021
Companies are very good at using big data and analytics to support decision-making				
3.4.08 · Customer satisfaction	6.99	6.91	27	2021
Customer satisfaction is emphasized in companies				
3.4.09 · Entrepreneurship	6.44	5.95	18	2021
Entrepreneurship of managers is widespread in business				
3.4.10 · Social responsibility	6.37	5.84	23	2021
Social responsibility of business leaders is high				
3.4.11 · Women in management	20.41	31.42	50	2016
Female share of senior and middle management (% of management)				
3.4.12 Women on boards	28.10	21.73	19	2020
Boardmembers of all companies analyzed by MSCI				
3.4.13 · Entrepreneurial fear of failure	44.95	40.12	37	2017
% indicating that fear of failure would prevent them from setting up a business				
3.4.14 · Total early-stage Entrepreneurial Activity	21.60	12.48	6	2017
% who are either a nascent entrepreneur or owner-manager of a new business				
3.5 · Attitudes and Values	Value	Average	Pank	Voor
		Average		
3.5.01 · Attitudes toward globalization	6.84	6.32	18	2021
		6.18	2.4	2021
Attitudes toward globalization are generally positive in your society	/ [0	h IX	34	2021
3.5.02 · Image abroad or branding	6.50	0.10		
3.5.02 · Image abroad or branding The image abroad of your country encourages business development			25	2021
3.5.02 · Image abroad or branding The image abroad of your country encourages business development 3.5.03 · National culture	6.50	6.69	35	2021
3.5.02 · Image abroad or branding The image abroad of your country encourages business development 3.5.03 · National culture The national culture is open to foreign ideas	6.80	6.69		
3.5.02 · Image abroad or branding The image abroad of your country encourages business development 3.5.03 · National culture The national culture is open to foreign ideas 3.5.04 · Flexibility and adaptability			35 23	2021
3.5.02 · Image abroad or branding The image abroad of your country encourages business development 3.5.03 · National culture The national culture is open to foreign ideas 3.5.04 · Flexibility and adaptability Flexibility and adaptability of people are high when faced with new challenges	6.80 7.06	6.69	23	2021
3.5.02 · Image abroad or branding The image abroad of your country encourages business development 3.5.03 · National culture The national culture is open to foreign ideas 3.5.04 · Flexibility and adaptability	6.80	6.69		

3.5.06 · Digital transformation in companies	6.43	5.75	22	2021
Digital transformation in companies is generally well implemented				
3.5.07 · Value system	6.47	6.11	29	2021

The value system in your society supports competitiveness

4 · Infrastructure

4.1 · Basic Infrastructure	Value	Average	Rank	Year
4.1.01 · Land area	330	1,462		
Square kilometers ('000)				
4.1.02 · Arable area	2,557	2,951	25	2018
Square meters per capita				
4.1.03 · Water resources	18,341	18,657	13	2017
Total internal renewable per capita in cubic meters				
4.1.04 · Access to water	7.83	7.94	40	2021
Access to water is adequately ensured and managed				
4.1.05 · Management of cities	7.20	6.52	23	2021
Management of cities supports business development				
4.1.06 · Population - market size	32.70	82.75	26	2020
Estimates in millions				
4.1.07 · Population - growth	0.62	0.55	25	2020
Percentage change				
4.1.08 · Dependent Population	30.5	33.5		2020
Percentage of total population				
Population over 65 years	7.1	14.8		2020
Population under 15 years	23.4	18.8		2020
4.1.09 · Dependency ratio	43.9	51.1	12	2020
Population under 15 and over 64 years old, divided by active population (15 to 64 years)	13.7	31.1	12	
4.1.10 · Roads	1.16	1.26	25	2018
Density of the network, km roads/square km land area	1.10	1.20	23	
4.1.11 · Railroads	0.008	0.051	46	2019
Density of the network, km per square km	0.000	0.031	70	
4.1.12 · Air transportation	63,623	67,271	21	2019
Number of passengers carried by main companies, thousands	03,023	07,271	۷1	
4.1.13 · Quality of air transportation	7.58	7.10	32	2021
Quality of air transportation encourages business development	7.50	7.10	32	
4.1.14 · Distribution infrastructure	7.49	7.21	32	2021
The distribution infrastructure of goods and services is generally efficient	7.17	7.21	32	
4.1.15 · Energy infrastructure	7.72	7.11	28	2021
Energy infrastructure is adequate and efficient	7.72	7.11	20	
4.1.16 · Total indigenous energy production	98.20	185.53	21	2018
Millions MTOE	70.20	103.33		
4.1.17 · Total indigenous energy production (%)	105.1	105.8	14	2018
Percentage of total requirements in tons of oil equivalent	103.1	103.0	• •	
4.1.18 · Total final energy consumption	60.59	125.76	41	2017
Millions MTOE	00.57	123.70	• • •	
4.1.19 · Total final energy consumption per capita	1.89	2.44	28	2017
MTOE per capita	1.07	2.11		
4.1.20 · Electricity costs for industrial clients	0.075	0.103	14	2020
US\$ per kwh	0.073	0.103	•••	
42 Tashnalasisal Infrastrustura				.,
4.2 ·Technological Infrastructure	Value	Average		
4.2.01 · Investment in Telecommunications	0.45	0.45	26	2020
Percentage of GDP	700	(3.1	20	2010
42.02 M Lt D II I I I I	70.2	63.4	29	2019
4.2.02 · Mobile Broadband subscribers				
4.2.02 · Mobile Broadband subscribers 4G & 5G market, % of mobile market 4.2.03 · Mobile Telephone costs	9.6	15.3	24	2019

4.2.04 · Communications technology	7.43	7.65	43	2021
Communications technology (voice and data) meets business requirements	0.45	1 24	22	2018
4.2.05 · Computers in use Worldwide share/ Source: Computer Industry Almanac	0.65	1.36	23	20.0
4.2.06 · Computers per capita	513	719	44	2018
Number of computers per 1000 people/ Source: Computer Industry Almanac	313	717	- 1 1	
4.2.07 · Internet users	802	793	41	2020
Number of internet users per 1000 people	002	,,,	•	
4.2.08 · Broadband subscribers	163	374	54	2019
Number of subscriptions per 1000 inhabitants				
4.2.09 · Internet bandwidth speed	50.7	56.5	35	2020
Average speed				
4.2.10 · Digital/Technological skills	7.19	6.88	28	2021
Digital/Technological skills are readily available				
4.2.11 · Qualified engineers	7.11	6.55	25	2021
Qualified engineers are available in your labor market				
4.2.12 · Public-private partnerships	6.91	5.95	17	2021
Public and private sector ventures are supporting technological development				
4.2.13 · Development & application of tech.	6.84	6.35	23	2021
Development and application of technology are supported by the legal environment				
4.2.14 · Funding for technological development	6.27	5.84	28	2021
Funding for technological development is readily available				
4.2.15 · High-tech exports (\$)	86,555	46,556	П	2019
US\$ millions	53,433	,		
4.2.16 · High-tech exports (%)	51.85	17.16	4	2019
Percentage of manufactured exports				
·	7.2	9.3	29	2017
4.2.17 · ICT service exports Percentage of service exports	7.2	9.3	29	2017
4.2.17 · ICT service exports Percentage of service exports 4.2.18 · Cyber security	7.2 6.26	9.3 5.77	29	2017
4.2.17 · ICT service exports Percentage of service exports				
4.2.17 · ICT service exports Percentage of service exports 4.2.18 · Cyber security	6.26	5.77	27	2021
4.2.17 · ICT service exports Percentage of service exports 4.2.18 · Cyber security Cyber security is being adequately addressed by corporations 4.3 · Scientific Infrastructure	6.26 Value	5.77 Average	27 Rank	2021
4.2.17 · ICT service exports Percentage of service exports 4.2.18 · Cyber security Cyber security is being adequately addressed by corporations 4.3 · Scientific Infrastructure 4.3.01 · Total expenditure on R&D (\$)	6.26	5.77	27	2021 Year
4.2.17 · ICT service exports Percentage of service exports 4.2.18 · Cyber security Cyber security is being adequately addressed by corporations 4.3 · Scientific Infrastructure 4.3.01 · Total expenditure on R&D (\$) US\$ millions	6.26 Value 3,636	5.77 Average 29,862	27 Rank 32	2021 Year
4.2.17 · ICT service exports Percentage of service exports 4.2.18 · Cyber security Cyber security is being adequately addressed by corporations 4.3 · Scientific Infrastructure 4.3.01 · Total expenditure on R&D (\$) US\$ millions 4.3.02 · Total expenditure on R&D (%)	6.26 Value	5.77 Average	27 Rank	2021 Year 2019
4.2.17 · ICT service exports Percentage of service exports 4.2.18 · Cyber security Cyber security is being adequately addressed by corporations 4.3 · Scientific Infrastructure 4.3.01 · Total expenditure on R&D (\$) US\$ millions 4.3.02 · Total expenditure on R&D (%) Percentage of GDP	6.26 Value 3,636 1.00	5.77 Average 29,862	27 Rank 32 40	2021 Year 2019
4.2.17 · ICT service exports Percentage of service exports 4.2.18 · Cyber security Cyber security is being adequately addressed by corporations 4.3 · Scientific Infrastructure 4.3.01 · Total expenditure on R&D (\$) US\$ millions 4.3.02 · Total expenditure on R&D (%) Percentage of GDP 4.3.03 · Total expenditure on R&D per capita (\$)	6.26 Value 3,636	5.77 Average 29,862	27 Rank 32	2021 Year 2019
4.2.17 · ICT service exports Percentage of service exports 4.2.18 · Cyber security Cyber security is being adequately addressed by corporations 4.3 · Scientific Infrastructure 4.3.01 · Total expenditure on R&D (\$) US\$ millions 4.3.02 · Total expenditure on R&D (%) Percentage of GDP 4.3.03 · Total expenditure on R&D per capita (\$) US\$ per capita	6.26 Value 3,636 1.00	5.77 Average 29,862 1.53 619.4	27 Rank 32 40	2021 Year 2019 2019
4.2.17 · ICT service exports Percentage of service exports 4.2.18 · Cyber security Cyber security is being adequately addressed by corporations 4.3 · Scientific Infrastructure 4.3.01 · Total expenditure on R&D (\$) US\$ millions 4.3.02 · Total expenditure on R&D (%) Percentage of GDP 4.3.03 · Total expenditure on R&D per capita (\$) US\$ per capita 4.3.04 · Business expenditure on R&D (\$)	6.26 Value 3,636 1.00	5.77 Average 29,862	27 Rank 32 40	2021 Year 2019 2019
4.2.17 · ICT service exports Percentage of service exports 4.2.18 · Cyber security Cyber security is being adequately addressed by corporations 4.3 · Scientific Infrastructure 4.3.01 · Total expenditure on R&D (\$) US\$ millions 4.3.02 · Total expenditure on R&D (%) Percentage of GDP 4.3.03 · Total expenditure on R&D per capita (\$) US\$ per capita 4.3.04 · Business expenditure on R&D (\$) US\$ millions	6.26 Value 3,636 1.00 111.9	5.77 Average 29,862 1.53 619.4 22,065	27 Rank 32 40 43	2021 Year 2019 2019 2019
4.2.17 · ICT service exports Percentage of service exports 4.2.18 · Cyber security Cyber security is being adequately addressed by corporations 4.3 · Scientific Infrastructure 4.3.01 · Total expenditure on R&D (\$) US\$ millions 4.3.02 · Total expenditure on R&D (%) Percentage of GDP 4.3.03 · Total expenditure on R&D per capita (\$) US\$ per capita 4.3.04 · Business expenditure on R&D (\$) US\$ millions 4.3.05 · Business expenditure on R&D (%)	6.26 Value 3,636 1.00	5.77 Average 29,862 1.53 619.4	27 Rank 32 40	2021 Year 2019 2019 2019
4.2.17 · ICT service exports Percentage of service exports 4.2.18 · Cyber security Cyber security is being adequately addressed by corporations 4.3 · Scientific Infrastructure 4.3.01 · Total expenditure on R&D (\$) US\$ millions 4.3.02 · Total expenditure on R&D (%) Percentage of GDP 4.3.03 · Total expenditure on R&D per capita (\$) US\$ per capita 4.3.04 · Business expenditure on R&D (\$) US\$ millions 4.3.05 · Business expenditure on R&D (%) Percentage of GDP	6.26 Value 3,636 1.00 111.9 1,597 0.44	5.77 Average 29,862 1.53 619.4 22,065 1.02	27 Rank 32 40 43 35 42	2021 Year 2019 2019 2019
4.2.17 · ICT service exports Percentage of service exports 4.2.18 · Cyber security Cyber security is being adequately addressed by corporations 4.3 · Scientific Infrastructure 4.3.01 · Total expenditure on R&D (\$) US\$ millions 4.3.02 · Total expenditure on R&D (%) Percentage of GDP 4.3.03 · Total expenditure on R&D per capita (\$) US\$ per capita 4.3.04 · Business expenditure on R&D (\$) US\$ millions 4.3.05 · Business expenditure on R&D (%) Percentage of GDP 4.3.06 · Total R&D personnel	6.26 Value 3,636 1.00 111.9	5.77 Average 29,862 1.53 619.4 22,065	27 Rank 32 40 43	2021 Year 2019 2019 2019
4.2.17 · ICT service exports Percentage of service exports 4.2.18 · Cyber security Cyber security is being adequately addressed by corporations 4.3 · Scientific Infrastructure 4.3.01 · Total expenditure on R&D (\$) US\$ millions 4.3.02 · Total expenditure on R&D (%) Percentage of GDP 4.3.03 · Total expenditure on R&D per capita (\$) US\$ per capita 4.3.04 · Business expenditure on R&D (\$) US\$ millions 4.3.05 · Business expenditure on R&D (%) Percentage of GDP 4.3.06 · Total R&D personnel Full-time work equivalent (FTE thousands)	6.26 Value 3,636 1.00 111.9 1,597 0.44 83.8	5.77 Average 29,862 1.53 619.4 22,065 1.02 221.6	27 Rank 32 40 43 35 42	2021 Year 2019 2019 2019 2019 2019
4.2.17 ·ICT service exports Percentage of service exports 4.2.18 · Cyber security Cyber security is being adequately addressed by corporations 4.3 · Scientific Infrastructure 4.3.01 · Total expenditure on R&D (\$) US\$ millions 4.3.02 · Total expenditure on R&D (%) Percentage of GDP 4.3.03 · Total expenditure on R&D per capita (\$) US\$ per capita 4.3.04 · Business expenditure on R&D (\$) US\$ millions 4.3.05 · Business expenditure on R&D (%) Percentage of GDP 4.3.06 · Total R&D personnel Full-time work equivalent (FTE thousands) 4.3.07 · Total R&D personnel per capita	6.26 Value 3,636 1.00 111.9 1,597 0.44	5.77 Average 29,862 1.53 619.4 22,065 1.02	27 Rank 32 40 43 35 42	2021 Year 2019 2019 2019 2019 2019
4.2.17 ·ICT service exports Percentage of service exports 4.2.18 · Cyber security Cyber security is being adequately addressed by corporations 4.3 · Scientific Infrastructure 4.3.01 · Total expenditure on R&D (\$) US\$ millions 4.3.02 · Total expenditure on R&D (%) Percentage of GDP 4.3.03 · Total expenditure on R&D per capita (\$) US\$ per capita 4.3.04 · Business expenditure on R&D (\$) US\$ millions 4.3.05 · Business expenditure on R&D (%) Percentage of GDP 4.3.06 · Total R&D personnel Full-time work equivalent (FTE thousands) 4.3.07 · Total R&D personnel per capita Full-time work equivalent (FTE) per 1000 people	6.26 Value 3,636 1.00 111.9 1,597 0.44 83.8 2.58	5.77 Average 29,862 1.53 619.4 22,065 1.02 221.6 5.01	27 Rank 32 40 43 35 42 20 39	2021 Year 2019 2019 2019 2019 2019
4.2.17 · ICT service exports Percentage of service exports 4.2.18 · Cyber security Cyber security is being adequately addressed by corporations 4.3 · Scientific Infrastructure 4.3.01 · Total expenditure on R&D (\$) US\$ millions 4.3.02 · Total expenditure on R&D (%) Percentage of GDP 4.3.03 · Total expenditure on R&D per capita (\$) US\$ per capita 4.3.04 · Business expenditure on R&D (\$) US\$ millions 4.3.05 · Business expenditure on R&D (%) Percentage of GDP 4.3.06 · Total R&D personnel Full-time work equivalent (FTE thousands) 4.3.07 · Total R&D personnel per capita Full-time work equivalent (FTE) per 1000 people 4.3.08 · Total R&D personnel in business enterprise	6.26 Value 3,636 1.00 111.9 1,597 0.44 83.8	5.77 Average 29,862 1.53 619.4 22,065 1.02 221.6	27 Rank 32 40 43 35 42	2021 Year 2019 2019 2019 2019 2019
4.2.17 · ICT service exports Percentage of service exports 4.2.18 · Cyber security Cyber security is being adequately addressed by corporations 4.3 · Scientific Infrastructure 4.3.01 · Total expenditure on R&D (\$) US\$ millions 4.3.02 · Total expenditure on R&D (%) Percentage of GDP 4.3.03 · Total expenditure on R&D per capita (\$) US\$ per capita 4.3.04 · Business expenditure on R&D (\$) US\$ millions 4.3.05 · Business expenditure on R&D (%) Percentage of GDP 4.3.06 · Total R&D personnel Full-time work equivalent (FTE thousands) 4.3.07 · Total R&D personnel per capita Full-time work equivalent (FTE) per 1000 people 4.3.08 · Total R&D personnel in business enterprise Full-time work equivalent (FTE thousands)	6.26 Value 3,636 1.00 111.9 1,597 0.44 83.8 2.58	5.77 Average 29,862 1.53 619.4 22,065 1.02 221.6 5.01 174.4	27 Rank 32 40 43 35 42 20 39	2021 Year 2019 2019 2019 2019 2019 2019
4.2.17 · ICT service exports Percentage of service exports 4.2.18 · Cyber security Cyber security is being adequately addressed by corporations 4.3 · Scientific Infrastructure 4.3.01 · Total expenditure on R&D (\$) US\$ millions 4.3.02 · Total expenditure on R&D (%) Percentage of GDP 4.3.03 · Total expenditure on R&D per capita (\$) US\$ per capita 4.3.04 · Business expenditure on R&D (\$) US\$ millions 4.3.05 · Business expenditure on R&D (%) Percentage of GDP 4.3.06 · Total R&D personnel Full-time work equivalent (FTE thousands) 4.3.07 · Total R&D personnel per capita Full-time work equivalent (FTE) per 1000 people 4.3.08 · Total R&D personnel in business enterprise Full-time work equivalent (FTE thousands) 4.3.09 · Total R&D personnel in business per capita	6.26 Value 3,636 1.00 111.9 1,597 0.44 83.8 2.58	5.77 Average 29,862 1.53 619.4 22,065 1.02 221.6 5.01	27 Rank 32 40 43 35 42 20 39	2021 Year 2019 2019 2019 2019 2019 2019
4.2.17 · ICT service exports Percentage of service exports 4.2.18 · Cyber security Cyber security is being adequately addressed by corporations 4.3 · Scientific Infrastructure 4.3.01 · Total expenditure on R&D (\$) US\$ millions 4.3.02 · Total expenditure on R&D (%) Percentage of GDP 4.3.03 · Total expenditure on R&D per capita (\$) US\$ per capita 4.3.04 · Business expenditure on R&D (\$) US\$ millions 4.3.05 · Business expenditure on R&D (\$) US\$ millions 4.3.06 · Total R&D personnel Full-time work equivalent (FTE thousands) 4.3.07 · Total R&D personnel per capita Full-time work equivalent (FTE) per 1000 people 4.3.08 · Total R&D personnel in business enterprise Full-time work equivalent (FTE thousands) 4.3.09 · Total R&D personnel in business per capita Full-time work equivalent (FTE thousands) 4.3.09 · Total R&D personnel in business per capita Full-time work equivalent (FTE) per 1000 people	6.26 Value 3,636 1.00 111.9 1,597 0.44 83.8 2.58 15.6 0.48	5.77 Average 29,862 1.53 619.4 22,065 1.02 221.6 5.01 174.4 3.14	27 Rank 32 40 43 35 42 20 39 36 48	2021 Year 2019 2019 2019 2019 2019 2019 2019
4.2.17 · ICT service exports Percentage of service exports 4.2.18 · Cyber security Cyber security is being adequately addressed by corporations 4.3 · Scientific Infrastructure 4.3.01 · Total expenditure on R&D (\$) U\$\$ millions 4.3.02 · Total expenditure on R&D (%) Percentage of GDP 4.3.03 · Total expenditure on R&D per capita (\$) U\$\$ per capita 4.3.04 · Business expenditure on R&D (\$) U\$\$ millions 4.3.05 · Business expenditure on R&D (%) Percentage of GDP 4.3.06 · Total R&D personnel Full-time work equivalent (FTE thousands) 4.3.07 · Total R&D personnel per capita Full-time work equivalent (FTE) per 1000 people 4.3.08 · Total R&D personnel in business enterprise Full-time work equivalent (FTE thousands) 4.3.09 · Total R&D personnel in business per capita Full-time work equivalent (FTE) per 1000 people 4.3.10 · Researchers in R&D per capita	6.26 Value 3,636 1.00 111.9 1,597 0.44 83.8 2.58	5.77 Average 29,862 1.53 619.4 22,065 1.02 221.6 5.01 174.4	27 Rank 32 40 43 35 42 20 39	2021 Year 2019 2019 2019 2019 2019 2019 2019
4.2.17 · ICT service exports Percentage of service exports 4.2.18 · Cyber security Cyber security is being adequately addressed by corporations 4.3 · Scientific Infrastructure 4.3.01 · Total expenditure on R&D (\$) U\$\$ millions 4.3.02 · Total expenditure on R&D (%) Percentage of GDP 4.3.03 · Total expenditure on R&D per capita (\$) U\$\$ per capita 4.3.04 · Business expenditure on R&D (\$) U\$\$ millions 4.3.05 · Business expenditure on R&D (%) Percentage of GDP 4.3.06 · Total R&D personnel Full-time work equivalent (FTE thousands) 4.3.07 · Total R&D personnel per capita Full-time work equivalent (FTE thousands) 4.3.08 · Total R&D personnel in business enterprise Full-time work equivalent (FTE thousands) 4.3.09 · Total R&D personnel in business per capita Full-time work equivalent (FTE) per 1000 people 4.3.10 · Researchers in R&D per capita Full-time work equivalent (FTE) per 1000 people	6.26 Value 3,636 1.00 111.9 1,597 0.44 83.8 2.58 15.6 0.48 2.1	5.77 Average 29,862 1.53 619.4 22,065 1.02 221.6 5.01 174.4 3.14 3.3	27 Rank 32 40 43 35 42 20 39 36 48	2021 Year 2019 2019 2019 2019 2019 2019 2019 2019
4.2.17 · ICT service exports Percentage of service exports 4.2.18 · Cyber security Cyber security is being adequately addressed by corporations 4.3 · Scientific Infrastructure 4.3.01 · Total expenditure on R&D (\$) US\$ millions 4.3.02 · Total expenditure on R&D (%) Percentage of GDP 4.3.03 · Total expenditure on R&D per capita (\$) US\$ per capita 4.3.04 · Business expenditure on R&D (\$) US\$ millions 4.3.05 · Business expenditure on R&D (\$) Percentage of GDP 4.3.06 · Total R&D personnel Full-time work equivalent (FTE thousands) 4.3.07 · Total R&D personnel per capita Full-time work equivalent (FTE) per 1000 people 4.3.08 · Total R&D personnel in business enterprise Full-time work equivalent (FTE thousands) 4.3.09 · Total R&D personnel in business per capita Full-time work equivalent (FTE) per 1000 people 4.3.10 · Researchers in R&D per capita Full-time work equivalent (FTE) per 1000 people	6.26 Value 3,636 1.00 111.9 1,597 0.44 83.8 2.58 15.6 0.48	5.77 Average 29,862 1.53 619.4 22,065 1.02 221.6 5.01 174.4 3.14	27 Rank 32 40 43 35 42 20 39 36 48	2021 Year 2015 2015 2015 2015 2015 2015 2015 2015
4.2.17 · ICT service exports Percentage of service exports 4.2.18 · Cyber security Cyber security is being adequately addressed by corporations 4.3 · Scientific Infrastructure 4.3.01 · Total expenditure on R&D (\$) US\$ millions 4.3.02 · Total expenditure on R&D (%) Percentage of GDP 4.3.03 · Total expenditure on R&D per capita (\$) US\$ per capita 4.3.04 · Business expenditure on R&D (\$) US\$ millions 4.3.05 · Business expenditure on R&D (\$) Percentage of GDP 4.3.06 · Total R&D personnel Full-time work equivalent (FTE thousands) 4.3.07 · Total R&D personnel per capita Full-time work equivalent (FTE thousands) 4.3.08 · Total R&D personnel in business enterprise Full-time work equivalent (FTE thousands) 4.3.09 · Total R&D personnel in business per capita Full-time work equivalent (FTE per 1000 people 4.3.10 · Researchers in R&D per capita Full-time work equivalent (FTE) per 1000 people 4.3.10 · Researchers in R&D per capita Full-time work equivalent (FTE) per 1000 people 4.3.11 · Graduates in Sciences % of graduates in ICT, Engineering, Math & Natural Sciences	6.26 Value 3,636 1.00 111.9 1,597 0.44 83.8 2.58 15.6 0.48 2.1	5.77 Average 29,862 1.53 619.4 22,065 1.02 221.6 5.01 174.4 3.14 3.3	27 Rank 32 40 43 35 42 20 39 36 48	2021 Year 2019 2019 2019 2019 2019 2019 2019 2019
4.2.17 · ICT service exports Percentage of service exports 4.2.18 · Cyber security Cyber security is being adequately addressed by corporations 4.3 · Scientific Infrastructure 4.3.01 · Total expenditure on R&D (\$) US\$ millions 4.3.02 · Total expenditure on R&D (%) Percentage of GDP 4.3.03 · Total expenditure on R&D per capita (\$) US\$ per capita 4.3.04 · Business expenditure on R&D (\$) US\$ millions 4.3.05 · Business expenditure on R&D (%) Percentage of GDP 4.3.06 · Total R&D personnel Full-time work equivalent (FTE thousands) 4.3.07 · Total R&D personnel per capita Full-time work equivalent (FTE) per 1000 people 4.3.08 · Total R&D personnel in business enterprise Full-time work equivalent (FTE thousands) 4.3.09 · Total R&D personnel in business per capita Full-time work equivalent (FTE) per 1000 people 4.3.10 · Researchers in R&D per capita Full-time work equivalent (FTE) per 1000 people 4.3.11 · Graduates in Sciences % of graduates in ICT, Engineering, Math & Natural Sciences % of graduates in ICT, Engineering, Math & Natural Sciences	6.26 Value 3,636 1.00 111.9 1,597 0.44 83.8 2.58 15.6 0.48 2.1	5.77 Average 29,862 1.53 619.4 22,065 1.02 221.6 5.01 174.4 3.14 3.3	27 Rank 32 40 43 35 42 20 39 36 48	2021 Year 2019 2019 2019 2019 2019 2019 2019 2019
4.2.17 · ICT service exports Percentage of service exports 4.2.18 · Cyber security Cyber security is being adequately addressed by corporations 4.3 · Scientific Infrastructure 4.3.01 · Total expenditure on R&D (\$) US\$ millions 4.3.02 · Total expenditure on R&D (%) Percentage of GDP 4.3.03 · Total expenditure on R&D per capita (\$) US\$ per capita 4.3.04 · Business expenditure on R&D (\$) US\$ millions 4.3.05 · Business expenditure on R&D (\$) Percentage of GDP 4.3.06 · Total R&D personnel Full-time work equivalent (FTE thousands) 4.3.07 · Total R&D personnel per capita Full-time work equivalent (FTE) per 1000 people 4.3.08 · Total R&D personnel in business enterprise Full-time work equivalent (FTE thousands) 4.3.09 · Total R&D personnel in business per capita Full-time work equivalent (FTE) per 1000 people 4.3.10 · Researchers in R&D per capita Full-time work equivalent (FTE) per 1000 people 4.3.11 · Graduates in Sciences % of graduates in ICT, Engineering, Math & Natural Sciences 4.3.11 · Science degrees Percentage of total first university degrees in science and engineering	6.26 Value 3,636 1.00 111.9 1,597 0.44 83.8 2.58 15.6 0.48 2.1 40.77	5.77 Average 29,862 1.53 619.4 22,065 1.02 221.6 5.01 174.4 3.14 3.3 24.82 0.00	27 Rank 32 40 43 35 42 20 39 36 48 37	2021 Year 2019 2019 2019 2019 2019 2019 2019 2019
4.2.17 · ICT service exports Percentage of service exports 4.2.18 · Cyber security Cyber security is being adequately addressed by corporations 4.3 · Scientific Infrastructure 4.3.01 · Total expenditure on R&D (\$) US\$ millions 4.3.02 · Total expenditure on R&D (%) Percentage of GDP 4.3.03 · Total expenditure on R&D per capita (\$) US\$ per capita 4.3.04 · Business expenditure on R&D (\$) US\$ millions 4.3.05 · Business expenditure on R&D (%) Percentage of GDP 4.3.06 · Total R&D personnel Full-time work equivalent (FTE thousands) 4.3.07 · Total R&D personnel per capita Full-time work equivalent (FTE thousands) 4.3.08 · Total R&D personnel in business enterprise Full-time work equivalent (FTE thousands) 4.3.09 · Total R&D personnel in business per capita Full-time work equivalent (FTE per 1000 people 4.3.10 · Researchers in R&D per capita Full-time work equivalent (FTE) per 1000 people 4.3.11 · Graduates in Sciences % of graduates in Sciences % of graduates in ICT, Engineering, Math & Natural Sciences 4.3.11 · Science degrees Percentage of total first university degrees in science and engineering 4.3.12 · Scientific articles	6.26 Value 3,636 1.00 111.9 1,597 0.44 83.8 2.58 15.6 0.48 2.1	5.77 Average 29,862 1.53 619.4 22,065 1.02 221.6 5.01 174.4 3.14 3.3	27 Rank 32 40 43 35 42 20 39 36 48	2021 Year 2019 2019 2019 2019 2019 2019 2019 2019
4.2.17 · ICT service exports Percentage of service exports 4.2.18 · Cyber security Cyber security is being adequately addressed by corporations 4.3 · Scientific Infrastructure 4.3.01 · Total expenditure on R&D (\$) US\$ millions 4.3.02 · Total expenditure on R&D (%) Percentage of GDP 4.3.03 · Total expenditure on R&D per capita (\$) US\$ per capita 4.3.04 · Business expenditure on R&D (\$) US\$ millions 4.3.05 · Business expenditure on R&D (\$) Percentage of GDP 4.3.06 · Total R&D personnel Full-time work equivalent (FTE thousands) 4.3.07 · Total R&D personnel per capita Full-time work equivalent (FTE) per 1000 people 4.3.08 · Total R&D personnel in business enterprise Full-time work equivalent (FTE thousands) 4.3.09 · Total R&D personnel in business per capita Full-time work equivalent (FTE) per 1000 people 4.3.10 · Researchers in R&D per capita Full-time work equivalent (FTE) per 1000 people 4.3.11 · Graduates in Sciences % of graduates in ICT, Engineering, Math & Natural Sciences 4.3.11 · Science degrees Percentage of total first university degrees in science and engineering	6.26 Value 3,636 1.00 111.9 1,597 0.44 83.8 2.58 15.6 0.48 2.1 40.77	5.77 Average 29,862 1.53 619.4 22,065 1.02 221.6 5.01 174.4 3.14 3.3 24.82 0.00	27 Rank 32 40 43 35 42 20 39 36 48 37	2021 Year 2019 2019 2019 2019 2019

4.3.14 · Nobel prizes per capita	0.00	0.19	29	2020
Awarded in physics, chemistry, physiology or medicine and economics since 1950 per million people				
4.3.15 · Patent applications	2,122	51,785	38	2019
Number of applications filed by applicant's origin				
4.3.16 · Patent applications per capita	6.53	79.88	46	2019
Number of applications filed by applicant's origin, per 100,000 inhabitants				
4.3.17 · Patent grants	1,032	23,979	37	2019
Number of patents granted by applicant's origin (average 2017-2019)				
4.3.18 · Number of patents in force	23.6	459.6	42	2019
by applicant's origin, per 100,000 inhabitants				
4.3.19 · Medium- and high-tech value added	44.01	37.97	23	2018
Proportion of total manufacturing value added, expressed as a percentage				
4.3.20 · Scientific research legislation	6.26	5.84	26	202
Laws relating to scientific research do encourage innovation				
4.3.21 Intellectual property rights	6.55	6.45	28	202
Intellectual property rights are adequately enforced				
4.3.22 · Knowledge transfer	5.54	5.36	26	202
Knowledge transfer is highly developed between companies and universities				
4.4 · Health and Environment	Value	Average	Rank	Year
4.4.01 · Total health expenditure	3.8	7.4	59	2011
Percentage of GDP	414	2 - 2 - 2		201
4.4.02 · Total health expenditure per capita	416	2,591	53	201
US\$ per capita				201
4.4.03 · Public expenditure on health (%)	51.18	64.56	51	201
Percentage of total health expenditure				202
4.4.04 · Health infrastructure	7.43	5.98	22	202
Health infrastructure meets the needs of society				
4.4.05 · Universal health care coverage index	73	77	49	201
Index (0-100) measuring coverage of essential health services				
4.4.06 · Life expectancy at birth	76.2	78.5	46	201
Average estimate				
4.4.07 · Healthy life expectancy	67.6	69.6	44	202
Average estimate				
4.4.08 · Infant mortality	8.6	8.1	48	201
Under five mortality rate per 1000 live births				
4.4.09 · Medical assistance			55	202
Number of inhabitants per physician and per nurse				
Medical assistance / Per nurse	576.63	301.56		202
Medical assistance / Per physician	635.27	568.09		202
4.4.10 · Urban population	78	77		202
Percentage of total population				
4.4.11 · Human development index	0.810	0.861	49	201
1. 1.11 Frankin development index	0.610			
Combines economic - social - educational indicators/ Source: Human Development Report	0.610			201
Combines economic - social - educational indicators/ Source: Human Development Report	190	119	55	201
·		119	55	201
Combines economic - social - educational indicators/ Source: Human Development Report 4.4.12 · Energy intensity		71.7	55 35	201
Combines economic - social - educational indicators/ Source: Human Development Report 4.4.12 · Energy intensity Total energy consumed for each 1000 US\$ of GDP in MTOE	190			
Combines economic - social - educational indicators/ Source: Human Development Report 4.4.12 · Energy intensity Total energy consumed for each 1000 US\$ of GDP in MTOE 4.4.13 · Safely treated waste water Percentage of waste water	190			201
Combines economic - social - educational indicators/ Source: Human Development Report 4.4.12 · Energy intensity Total energy consumed for each 1000 US\$ of GDP in MTOE 4.4.13 · Safely treated waste water Percentage of waste water	190 71.5	71.7	35	
Combines economic - social - educational indicators/ Source: Human Development Report 4.4.12 · Energy intensity Total energy consumed for each 1000 US\$ of GDP in MTOE 4.4.13 · Safely treated waste water Percentage of waste water 4.4.14 · Water use efficiency	190 71.5	71.7	35	201
Combines economic - social - educational indicators/ Source: Human Development Report 4.4.12 · Energy intensity Total energy consumed for each 1000 US\$ of GDP in MTOE 4.4.13 · Safely treated waste water Percentage of waste water 4.4.14 · Water use efficiency US\$ per cubic meter	190 71.5 58.39	71.7	35 26	201
Combines economic - social - educational indicators/ Source: Human Development Report 4.4.12 · Energy intensity Total energy consumed for each 1000 US\$ of GDP in MTOE 4.4.13 · Safely treated waste water Percentage of waste water 4.4.14 · Water use efficiency US\$ per cubic meter 4.4.15 · CO2 emissions Metric tons of carbon dioxide from fuel combustion	190 71.5 58.39	71.7	35 26	201
Combines economic - social - educational indicators/ Source: Human Development Report 4.4.12 · Energy intensity Total energy consumed for each 1000 US\$ of GDP in MTOE 4.4.13 · Safely treated waste water Percentage of waste water 4.4.14 · Water use efficiency US\$ per cubic meter 4.4.15 · CO2 emissions Metric tons of carbon dioxide from fuel combustion 4.4.16 · CO2 emissions intensity	190 71.5 58.39 228.0	71.7 86.77 455.9	35 26 42	201
Combines economic - social - educational indicators/ Source: Human Development Report 4.4.12 · Energy intensity Total energy consumed for each 1000 US\$ of GDP in MTOE 4.4.13 · Safely treated waste water Percentage of waste water 4.4.14 · Water use efficiency US\$ per cubic meter 4.4.15 · CO2 emissions Metric tons of carbon dioxide from fuel combustion 4.4.16 · CO2 emissions intensity CO2 emissions from fuel combustion in metric tons per one million US\$ of GDP	190 71.5 58.39 228.0 635.6	71.7 86.77 455.9 372.1	35 26 42 56	201
Combines economic - social - educational indicators/ Source: Human Development Report 4.4.12 · Energy intensity Total energy consumed for each 1000 US\$ of GDP in MTOE 4.4.13 · Safely treated waste water Percentage of waste water 4.4.14 · Water use efficiency US\$ per cubic meter 4.4.15 · CO2 emissions Metric tons of carbon dioxide from fuel combustion 4.4.16 · CO2 emissions intensity CO2 emissions from fuel combustion in metric tons per one million US\$ of GDP 4.4.17 · Exposure to particle pollution	190 71.5 58.39 228.0	71.7 86.77 455.9	35 26 42	201
Combines economic - social - educational indicators/ Source: Human Development Report 4.4.12 · Energy intensity Total energy consumed for each 1000 US\$ of GDP in MTOE 4.4.13 · Safely treated waste water Percentage of waste water 4.4.14 · Water use efficiency US\$ per cubic meter 4.4.15 · CO2 emissions Metric tons of carbon dioxide from fuel combustion 4.4.16 · CO2 emissions intensity	190 71.5 58.39 228.0 635.6	71.7 86.77 455.9 372.1	35 26 42 56	201

### A 20 Train biologapacity of the part personal production space of the part personal production space of the part person biologically production space of the part person of biologically production space of the part person of biologically production space of the part person of					
	4.4.19 · Forest area growth	-0.2	0.4	48	2018
Column C		• • • • • • • • • • • • • • • • • • • •	2.44		2017
14.21 Ecological balance (reservoldeficity) 1.62 1.63 1.65 1		2.29	3.44	32	2017
Comparison Com		2.0	4.0	22	2017
4.4.2.2 Exclogical balance (reserve/deficit) -1.6.2 -1.6.5 2.9 20 Total biocapaccy miss total forceprint in global hectares per capita 0.06 1.5.6 3.7 3.7 4.4.2.3 Environment-related technologies in inventoris worldwide 91.67 82.69 1.7 82.69 82.79 1.7 82.69 1.8 8.69 82.12 23.7 82.69 1.7 82.69 1.7 82.69		3.9	4.9	22	2017
Trotal biological robins also floopment in global hickares per cipita 4.4.2.3 Environment-related technologies Activation of the property of		1.42	1 45	20	2017
14.23 Environment-related technologies Niventons worldwide		-1.02	-1.43	27	
Development of entrocommental technologies. % inventions worldwide 4.4.2.4 Environmental agreements 4.4.2.5 Environmental progreements 4.2.5 Sustainable development 4.2.5 Sustainable development 4.2.5 Sustainable development 4.2.6 Pollution problems 4.2.6 Pollution problems 4.2.6 Pollution problems 4.2.7 Environmental laws Environmental laws Environmental laws Environmental laws Environmental laws 6.39 6.57 37 32 32 32 32 32 32 32 32 32 32 32 32 32		0.06	1.56	37	2018
Multilaterial greements on haardoos waste proportion fulfilled		0.00	1.50	3,	
Multibateral agreements on hazardous waste, proportion fullified 4.4.2.5 Sustainable development 5.2.5 Sustainable development 4.2.6.2 Follution problems 6.3.9 6.10 19 26 4.2.7 Environmental laws 6.3.9 6.21 23 26 Environmental laws 6.3.9 6.21 23 26 Environmental laws 6.5.9 6.57 37 26 4.4.2.6 **Callify of life (6.5.9 6.57 37 26) 4.4.2.6 **Callify of life (7.5.9 6.57 37 26) 4.5.0 **Sudation (7.5.0 a) public expenditure on education (7.5.0 a) public expenditure on education per capita 4.5.0 **Total public expenditure on education per capita 4.5.0 **Total public expenditure on education per capita 4.5.0 **Total public expenditure on education per student 4.5.0 **Sudents to teaching stuff 4.5.0 **Suppli-teacher ratio (primary education) 6.5.9 **Education 8.6.9 **Education 8.6.9 **Education 8.6.9 **Education students to teaching stuff 4.5.0 **Sudents a treatment age groot received fludine education 4.5.0 **Sudents and age groot received fludine education 4.5.0 **Sudents and age groot received fludine education 4.5.0 **Sudent multiplic public expenditure on the population 32-43 **Sudent advantage groot received fludine education 4.5.0 **Sudent multiplic public expenditure on the population 32-43 **Sure of women who have a degree in the population 32-43 **Educational assessment - PISA / Reading 6.5.1 **Educational assessment - PISA / Sciences 4.5.11 **English proficiency - TOEFL 5.12 **Suddents who are not low achievers in m		91 67	82 69	17	2015
4.4.2.5 c Sustainable development a priority in companies 4.4.2.6 c Follution problems a priority in companies 4.4.2.6 c Follution problems Follution problems a priority in companies 4.4.2.6 c Follution problems Follution problems a first your economy 4.4.2.7 c First, memorial laws Environmental laws and compliance do not hinder the competitiveness of businesses Environmental laws and compliance do not hinder the competitiveness of businesses 4.4.2.8 c Quality of life Quality of l	· · · · · · · · · · · · · · · · · · ·	71.07	02.07		
		6.91	6.10	19	2021
	·	••••	00		
Notining problems do not seriously affect your economy		4.99	5.71	46	2021
	·				
4.4.2.8 'Quality of life 6.59 6.67 37 70 Quality of life is high A.5 - Education 4.5.0.1 'Total public expenditure on education 4.2 4.7 40 20 4.5.0.2 'Total public expenditure on education per capita 477 1,50.2 46 20 USS per capita 45.03 'Total public exp. on education per student 3,188 6,873 42 20 45.03 'Total public exp. on education per student 3,188 6,873 42 20 Spending per enrolled pupli/tsudent, all levels 11.70 16.30 12 20 45.03 'Total public exp. on education per student 3,188 6,873 42 20 Spending per enrolled pupli/tsudent, all levels 11.70 16.30 12 20 45.03 'Total public exp. on education per student 11.70 18.01 12 20 A5.05 'Secondary education students to teaching students as teach students as the population 25-65 45.09 'Student mobility inbound 3,15 3.68 27 <t< td=""><td>4.4.27 · Environmental laws</td><td>6.39</td><td>6.21</td><td>23</td><td>2021</td></t<>	4.4.27 · Environmental laws	6.39	6.21	23	2021
A.5 · Education Value Average Rank Yas Value Average Rank Ya	Environmental laws and compliance do not hinder the competitiveness of businesses				
A.5 · Education Value Average Rank Yac	4.4.28 · Quality of life	6.59	6.67	37	2021
1.50 Total public expenditure on education 1.2 1.7 2.0					
1.50 Total public expenditure on education 1.2 1.7 2.0					
4.5.01 · Total public expenditure on education 4.2 4.7 4.0 10 Percenage of GDP Percenage of GDP 4.5.02 · Total public expenditure on education per capita 4.5.03 · Total public expenditure on education per student 4.5.03 · Total public expenditure on education per student 4.5.03 · Total public expenditure on education per student 4.5.03 · Total public expenditure on education per student 4.5.04 · Pupil-teacher ratio (primary education) 8.10 · Pupil-teacher ratio (primary education) 8.11.0 · 16.30 · 12 · 18 8.10 · 10 · 11.0 · 16.30 · 12 · 18 8.10 · 10 · 11.0 · 16.30 · 12 · 18 8.10 · 10 · 11.0 · 16.30 · 12 · 18 8.10 · 10 · 11.0 · 16.30 · 12 · 18 8.10 · 11.0 · 16.30 · 12 · 18 8.10 · 11.0 · 16.30 · 12 · 18 8.10 · 11.0 · 16.30 · 12 · 18 8.10 · 11.0 · 16.30 · 12 · 18 8.10 · 11.0 · 16.30 · 12 · 18 8.10 · 11.0 · 16.30 · 12 · 18 8.10 · 11.0 · 16.30 · 12 · 18 8.10 · 11.0 · 16.30 · 12 · 18 8.10 · 11.0 · 16.30 · 12 · 18 8.10 · 11.0 · 16.30 · 12 · 18 8.10 · 11.0 · 16.30 · 12 · 18 8.10 · 11.0 · 16.30 · 12 · 18 8.10 · 11.0 · 16.30 · 12 · 18 8.10 · 11.0 · 16.30 · 12 · 18 8.10 · 10.0 · 16.30 · 18 8.10 · 10.0 · 16.30 · 18 8.10 · 10.0 · 16.30 · 18 8.10 · 10.0 · 16.30 · 18 8.10 · 10.0 · 16.30 · 18 8.10 · 10.0 · 16.30 · 18 8.10 · 16.30	4.5 · Education	Value	Average	Rank	Year
Percentage of GDP	45.01 - Total public expanditure on education				2019
45.02 - Total public expenditure on education per capita US\$ per capita 15.03 - Total public exp. on education per student 5pending per enrolled puplistudent, all levels 45.04 - Pupli-Leacher ratio (primary education) Ratio of students to teaching staff 45.05 - Pupli-Leacher ratio (secondary education) Ratio of students to teaching staff 45.06 - Secondary school enrollment 85.05 - Pupli-Leacher ratio (secondary education) Ratio of students to teaching staff 45.06 - Secondary school enrollment 85.07 - Higher education achievement 86.07 - Higher education achievement 86.08 - Secondary school enrollment 87.09 - Secondary school enrollment 87.09 - Secondary school enrollment 88.00 - Secondary school enrollment 88.00 - Secondary school enrollment 89.00 - Secondary education achievers 89.00 - Secondary education achievers - PISA 89.00 - Secondary education 89.00 - Secondary education 89.00 - Secondary education 89.00 - Secondary education meets the needs of a competitive economy 89.00 - Secondary education meets the needs of a competitive economy 89.00 - Secondary education 89.00 - Secondary education meets the needs of a competitive economy 89.00 - Secondary education 89.00 - Secondary education 89.00 - Secondary education 89.00 - Secondary education meets the needs of a competitive economy 89.00 - Secondary e	·	т.2	7.7	70	
US\$ per capita		477	1 502	46	2019
4.5.03		117	1,302	10	
Spending per enrolled pupilistudent, all levels		3.188	6.873	42	2018
1.70 16.30 12 28 28 29 29 29 29 29 2		3,100	0,075		
Ratio of students to teaching staff 4.5.05 Pupil-teacher ratio (secondary education) Ratio of students to teaching staff 8.5.06 Secondary school enrollment Percentage of relevant age group receiving full-time education 4.5.07 Higher education achievement 4.5.08 Women wich degrees S7.9 40.1 4 Percentage of population that has attained at least tertiary education for persons 25-34 4.5.08 Women wich degrees S7.9 40.1 4 Percentage of population with the same at degree in the population 25-65 4.5.09 Student mobility inbound S1.15 3.68 27 Percentage of population with the population 25-65 4.5.10 Student mobility outbound 1.91 2.55 25 Percentage of population with the population 25-65 Rational tertiary-level students per 1000 inhabitants 4.5.10 Student mobility outbound National tertiary-level students studying abroad per 1000 inhabitants 4.5.11 Educational assessment - PISA Mathematics Educational assessment - PISA / Mathematics Educational assessment - PISA / Reading 4.5.12 Students who are not low achievers in maths, sciences and reading 4.5.13 English proficiency - TOEFL TOEFL scores 4.5.14 Primary and secondary education Primary and secondary education meets the needs of a competitive economy 4.5.15 University education meets the needs of a competitive economy 4.5.16 Management education 4.5.16 Management education		11.70	16.30	12	2018
1.30 13.64 22 20 20 20 20 20 20 2	, , ,	•	. 0.00		
Ratio of students to teaching staff 4.5.06 Secondary school enrollment 4.5.06 Secondary school enrollment 8.0.70 Ferrentage of relevant age group receiving full-time education 4.5.07 Fligher education achievement 8.0.70 Flore in the population 25-65 8.0.70 Flore in the		11.30	13.64	22	2018
Percentage of relevant age group receiving full-time education 4.5.07 · Higher education achievement 3.6.4 43.5 41 20 Percentage of population that has attained at least tertiary education for persons 25-34 4.5.08 · Women with degrees 57.9 40.1 4 20 58.3 68 27 20 58.3 68 28 20 58.3 68 20 58.3					
Percentage of relevant age group receiving full-time education 36.4 43.5 41 20 20 20 20 20 20 20 2	4.5.06 · Secondary school enrollment	90.5	92.5	47	2018
Percentage of population that has attained at least tertiary education for persons 25-34					
Percentage of population that has attained at least tertiary education for persons 25-34	4.5.07 · Higher education achievement	36.4	43.5	41	2019
Share of women who have a degree in the population 25-65 4.5.09 · Student mobility inbound 3.15 3.68 27 20 Foreign tertiary-level students per 1000 inhabitants 4.5.10 · Student mobility outbound 1.91 2.55 25 26 20 National tertiary-level students studying abroad per 1000 inhabitants 4.5.11 · Educational assessment - PISA Assurvey of 15-year olds Educational assessment - PISA / Mathematics 440 472 20 Educational assessment - PISA / Reading 4.5.12 · Students who are not low achievers - PISA Soft students who are not low achievers in maths, sciences and reading 4.5.13 · English proficiency - TOEFL TOEFL scores 4.5.14 · Primary and secondary education Primary and secondary education Primary and secondary education Primary and secondary education University education meets the needs of a competitive economy 4.5.15 · University education meets the needs of a competitive economy 4.5.16 · Management education 6.49 6.32 31 20	Percentage of population that has attained at least tertiary education for persons 25-34				
4.5.09 · Student mobility inbound 3.15 3.68 27 20 Foreign tertiary-level students per 1000 inhabitants 4.5.10 · Student mobility outbound 1.91 2.55 25 20 20 National tertiary-level students studying abroad per 1000 inhabitants 4.5.11 · Educational assessment - PISA 431 471 44 20 PISA survey of 15-year olds Educational assessment - PISA / Mathematics 440 472 20 Educational assessment - PISA / Reading 415 468 20 Educational assessment - PISA / Sciences 438 472 20 Educational assessment - PISA / Sciences 438 472 20 Educational assessment - PISA / Sciences 438 472 20 Educational assessment - PISA / Sciences 438 472 20 Educational assessment - PISA / Sciences 438 472 20 Educational assessment - PISA / Sciences 438 472 20 Educational assessment - PISA / Sciences 438 472 20 Educational assessment - PISA / Sciences 438 472 20 Educational assessment - PISA / Sciences 44.5.13 · English proficiency - TOEFL 91 89 27 20 TOEFL scores 45.14 · Primary and secondary education 66.11 6.01 34 20 Primary and secondary education 66.11 6.01 34 20 Primary and secondary education meets the needs of a competitive economy 45.15 · University education meets the needs of a competitive economy 45.16 · Management education 66.32 31 20 Education 66.34 6.32 31 20 Education 66	4.5.08 · Women with degrees	57.9	40.1	4	2019
Foreign tertiary-level students per 1000 inhabitants 4.5.10 · Student mobility outbound National tertiary-level students studying abroad per 1000 inhabitants 4.5.11 · Educational assessment - PISA PISA survey of 15-year olds Educational assessment - PISA / Mathematics 440 472 20 Educational assessment - PISA / Reading Educational assessment - PISA / Sciences 438 472 20 Educational assessment - PISA / Sciences 44.5.12 · Students who are not low achievers - PISA % of students who are not low achievers in maths, sciences and reading 4.5.13 · English proficiency - TOEFL TOEFL scores 4.5.14 · Primary and secondary education Primary and secondary education meets the needs of a competitive economy 4.5.15 · University education meets the needs of a competitive economy 4.5.16 · Management education 6.49 6.32 31 20	Share of women who have a degree in the population 25-65				
4.5.10 · Student mobility outbound 1.91 2.55 25 25 20 National tertiary-level students studying abroad per 1000 inhabitants 4.5.11 · Educational assessment - PISA 431 471 44 20 PISA survey of 15-year olds Educational assessment - PISA / Mathematics 440 472 20 Educational assessment - PISA / Reading 415 468 20 Educational assessment - PISA / Sciences 438 472 20 Educational assessment - PISA / Sciences 438 472 20 Educational assessment - PISA / Sciences 438 472 20 Educational assessment - PISA / Sciences 438 472 20 Educational assessment - PISA / Sciences 44.5.12 · Students who are not low achievers - PISA 50 Educational assessment - PISA / Sciences 44.5.13 · English proficiency - TOEFL 70 EFL	4.5.09 · Student mobility inbound	3.15	3.68	27	2017
National tertiary-level students studying abroad per 1000 inhabitants 4.5.11 · Educational assessment - PISA	Foreign tertiary-level students per 1000 inhabitants				
4.5.11 · Educational assessment - PISA	4.5.10 · Student mobility outbound	1.91	2.55	25	201
PISA survey of 15-year olds Educational assessment - PISA / Mathematics A40 472 20 Educational assessment - PISA / Reading A415 468 20 Educational assessment - PISA / Sciences A438 472 20 4.5.12 · Students who are not low achievers - PISA % of students who are not low achievers in maths, sciences and reading 4.5.13 · English proficiency - TOEFL TOEFL scores 4.5.14 · Primary and secondary education Primary and secondary education meets the needs of a competitive economy 4.5.15 · University education meets the needs of a competitive economy 4.5.16 · Management education 6.49 6.32 31 20	National tertiary-level students studying abroad per 1000 inhabitants				
Educational assessment - PISA / Mathematics 440 472 20 Educational assessment - PISA / Reading 415 468 20 Educational assessment - PISA / Sciences 438 472 20 4.5.12 · Students who are not low achievers - PISA 44.9 58.6 42 20 % of students who are not low achievers in maths, sciences and reading 4.5.13 · English proficiency - TOEFL 91 89 27 20 TOEFL scores 4.5.14 · Primary and secondary education 6.11 6.01 34 20 Primary and secondary education meets the needs of a competitive economy 4.5.15 · University education meets the needs of a competitive economy 4.5.16 · Management education 6.49 6.32 31 20	4.5.11 · Educational assessment - PISA	431	4 71	44	201
Educational assessment - PISA / Reading Educational assessment - PISA / Sciences 438 472 20 4.5.12 · Students who are not low achievers - PISA % of students who are not low achievers in maths, sciences and reading 4.5.13 · English proficiency - TOEFL TOEFL scores 4.5.14 · Primary and secondary education Primary and secondary education meets the needs of a competitive economy 4.5.15 · University education meets the needs of a competitive economy 4.5.16 · Management education 6.49 6.32 31 20	PISA survey of 15-year olds				
Educational assessment - PISA / Sciences 4.5.12 · Students who are not low achievers - PISA 4.5.13 · English proficiency - TOEFL TOEFL scores 4.5.14 · Primary and secondary education Primary and secondary education meets the needs of a competitive economy 4.5.15 · University education meets the needs of a competitive economy 4.5.16 · Management education 6.49 6.32 31 20	Educational assessment - PISA / Mathematics	440	472		201
Educational assessment - PISA / Sciences 4.5.12 · Students who are not low achievers - PISA 4.5.13 · English proficiency - TOEFL TOEFL scores 4.5.14 · Primary and secondary education Primary and secondary education meets the needs of a competitive economy 4.5.15 · University education meets the needs of a competitive economy 4.5.16 · Management education 6.49 6.32 31 20					
4.5.12 · Students who are not low achievers - PISA 4.5.12 · Students who are not low achievers - PISA 4.5.13 · English proficiency - TOEFL TOEFL scores 4.5.14 · Primary and secondary education Primary and secondary education meets the needs of a competitive economy 4.5.15 · University education meets the needs of a competitive economy 4.5.16 · Management education 6.49 6.32 31 203	Educational assessment - PISA / Reading	415	468		2018
4.5.12 · Students who are not low achievers - PISA 4.5.12 · Students who are not low achievers - PISA 4.5.13 · English proficiency - TOEFL TOEFL scores 4.5.14 · Primary and secondary education Primary and secondary education meets the needs of a competitive economy 4.5.15 · University education meets the needs of a competitive economy 4.5.16 · Management education 6.49 6.32 31 203					
% of students who are not low achievers in maths, sciences and reading 4.5.13 · English proficiency - TOEFL TOEFL scores 4.5.14 · Primary and secondary education Primary and secondary education meets the needs of a competitive economy 4.5.15 · University education meets the needs of a competitive economy 4.5.16 · Management education 6.49 6.32 31 200	Educational assessment - PISA / Sciences	438	472		2018
% of students who are not low achievers in maths, sciences and reading 4.5.13 · English proficiency - TOEFL TOEFL scores 4.5.14 · Primary and secondary education Primary and secondary education meets the needs of a competitive economy 4.5.15 · University education meets the needs of a competitive economy 4.5.16 · Management education 6.49 6.32 31 200					
4.5.13 · English proficiency - TOEFL TOEFL scores 4.5.14 · Primary and secondary education Primary and secondary education meets the needs of a competitive economy 4.5.15 · University education meets the needs of a competitive economy University education meets the needs of a competitive economy 4.5.16 · Management education 6.49 6.32 31 20	4.5.12 · Students who are not low achievers - PISA	44.9	58.6	42	2018
TOEFL scores 4.5.14 · Primary and secondary education Primary and secondary education meets the needs of a competitive economy 4.5.15 · University education University education meets the needs of a competitive economy 4.5.16 · Management education 6.49 6.32 31 200					***
4.5.14 · Primary and secondary education Primary and secondary education meets the needs of a competitive economy 4.5.15 · University education University education meets the needs of a competitive economy 4.5.16 · Management education 6.11 6.01 34 201 6.33 6.30 33 201 9.10 Primary and secondary education meets the needs of a competitive economy 4.5.16 · Management education 6.49 6.32 31 201	4.5.13 · English proficiency - TOEFL	91	89	27	2019
Primary and secondary education meets the needs of a competitive economy 4.5.15 · University education University education meets the needs of a competitive economy 4.5.16 · Management education 6.33 6.30 33 200 4.5.16 · Management education 6.49 6.32 31 200					
4.5.15 · University education 6.33 6.30 33 20 University education meets the needs of a competitive economy 4.5.16 · Management education 6.49 6.32 31 20 University education 6.49 6.49 6.40 University education 6.40 6.40 6.40 University education 6.40 6.40 6.40 University education 6.40 6.40 6.40 6.40 6.40 6.40 6.40 6.40	4.5.14 · Primary and secondary education	6.11	6.01	34	202
University education meets the needs of a competitive economy 4.5.16 · Management education 6.49 6.32 31 203					227
4.5.16 Management education 6.49 6.32 31 200	4.5.15 · University education	6.33	6.30	33	202
1.3.10 Trainagement education 0.17 0.32 31					
Management education meets the needs of the business community	4.5.16 · Management education	6.49	6.32	31	2021
	Management education meets the needs of the business community				

7.10	15.03	36	2020
5.1	2.6	55	2018
6.66	6.28	28	2021
	5.1	5.1 2.6	5.1 2.6 55

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