
Factors affecting Social Policies & Social Responsibility

Logically, pragmatically and philosophically...

Social Policies can...

eliminate Inequalities...

motivates people to work, produce and excel...

increases Income (GDP)...

more money for Governments...

that can help unfortunate ones...

via wise distribution or redistribution on Income

allows and motivates people to transact more ...

beneficial to every member of the society...

Logically, pragmatically and philosophically...

- Οι κοινωνικές πολιτικές μπορούν...
- να εξαλείψουν τις ανισότητες...
- να παρακινήσουν τους ανθρώπους να εργάζονται, να παράγουν και να διαπρέπουν...
- να αυξήσουν το εισόδημα (ΑΕΠ)...
- να προσφέρουν περισσότερα χρήματα στις κυβερνήσεις...
- που μπορούν να βοηθήσουν τους άτυχους...
- μέσω συνετής κατανομής ή αναδιανομής του εισοδήματος
- να επιτρέψουν και να παρακινήσουν τους ανθρώπους να πραγματοποιούν περισσότερες συναλλαγές...
- ωφέλιμες για κάθε μέλος της κοινωνίας...

and ... Economically...

Economic Development
creates Wealth...

that provides money and flexibility to Governments...

with wise distribution policies...

to put more money in the hands of the people

**We will check
some selected variables and factors
that affect
GDP, GDP per person, prosperity, social well
being, and Happiness**

- 1. Demographics*
- 2. Capital*
- 3. Taxes*
- 4. Oligopolies*
- 5. Innovation*
- 6. Defence Spending*

1) Demographics & Populations

Demographics affect Social Policies ...

VISUAL CAPITALIST DATASTREAM

THE WORLD'S POPULATION BY AGE GROUP

The world's population is getting older.

Share of population below 20 years old : 1950

44%

2020

33%



= percentage of population



Source: United Nations, Pew Research Centre



Be aware of Demographics ...

Age Group	Number of People (2020)	% of Global Population
<20 years	2.6 billion	33.2%
20-39 years	2.3 billion	29.9%
40-59 years	1.8 billion	23.1%
60-79 years	918 million	11.8%
80-99 years	147 million	1.9%
100+ years	0.6 million	0.01%

2) Policies in Attracting Productive Foreign Investment

Investment decreases poverty ...

- Investments in **Productive operations**
- Increases employment
- Brings knowhow and transfers knowledge
- In production, operation, distribution and finance
- Educated and Trained people
- Get more salaries and incomes
- More prosperity brings
- More transactions and more taxes
- More money allows governments to
- Offer and provide more to the society

Investment decreases poverty ...

- Επενδύσεις σε παραγωγικές λειτουργίες
- Αυξάνει την απασχόληση
- Προσφέρει τεχνογνωσία και μεταφέρει γνώσεις
- Στην παραγωγή, τη λειτουργία, τη διανομή και τα χρηματοοικονομικά
- Μορφωμένοι και καταρτισμένοι άνθρωποι
- Αποκτούν περισσότερους μισθούς και εισοδήματα
- Περισσότερη ευημερία φέρνει
- Περισσότερες συναλλαγές και περισσότερους φόρους
- Περισσότερα χρήματα επιτρέπουν στις κυβερνήσεις να
- Προσφέρουν και να παρέχουν περισσότερα στην κοινωνία

The Cost of Starting a Business

Have you ever wanted to be your own boss, start your own company, and take control of your life? We made this map to uncover the best and worst countries for starting a business. Which countries require a bigger investment than your current income, and which ones are free?

income, and which ones are free?

• The minimum founding capital is EUR 7,500

• Small and medium enterprises are exempt from fees for a period of 2 years

Legend:

- Dark Green: Minimum founding capital is EUR 7,500 or more
- Light Green: Minimum founding capital is EUR 1,000 or less

Minimum founding capital (EUR):

Algeria: \$203.75, Argentina: \$167.43, Australia: \$379.22, Austria: \$2,454.29, Azerbaijan: \$158.99, Bahrain: \$1,810.92, Bangladesh: \$149.25, Barbados: \$1,159.95, Belarus: \$1,409.78, Belgium: \$2,420.63, Belize: \$99.31, Benin: \$32.32, Bolivia: \$1,293.87, Bosnia and Herzegovina: \$838.95, Botswana: \$126.33, Brazil: \$212.27, Bulgaria: \$75.22, Cambodia: \$746.54, Canada: \$166.19, Cameroon: \$126.33, Chile: \$16.32, China: \$137.38, Colombia: \$358.48, Costa Rica: \$363.70, Czech Republic: \$158.99, Denmark: \$110.49, Dominican Republic: \$233.14, Ecuador: \$1,629.50, Egypt: \$12.73, El Salvador: \$975, Estonia: \$177.81, Ethiopia: \$152.78, Finland: \$803.23, France: \$320.37, Germany: \$528.54, Greece: \$205.02, Guatemala: \$820.70, Honduras: \$113.17, Hungary: \$369.31, Iceland: \$1,081.53, India: \$142.51, Indonesia: \$73.97, Italy: \$4,914.85, Jamaica: \$188.07, Japan: \$647.24, Kazakhstan: \$11.70, Kenya: \$352.93, Korea: \$118.18, Kuwait: \$11.43, Kyrgyzstan: \$9.35, Laos: \$104.79, Latvia: \$289.44, Lebanon: \$86.26, Lithuania: \$90.02, Luxembourg: \$1,353.53, Macedonia: \$203.12, Mexico: \$1,463.81, Moldova: \$76.62, Mongolia: \$36.66, Morocco: \$120.89, Mozambique: \$77.89, Myanmar: \$178.75, Nepal: \$187.18, Netherlands: \$2,207.34, New Zealand: \$43.48, Nicaragua: \$948.20, Niger: \$32.69, Nigeria: \$221.84, Norway: \$1,487.39, Oman: \$501.96, Pakistan: \$174.85, Panama: \$730, Paraguay: \$232.39, Peru: \$356.93, Philippines: \$387.30, Poland: \$388.42, Portugal: \$269.79, Romania: \$113.17, Russia: \$77.63, Rwanda: \$174.85, Saudi Arabia: \$116.88, Serbia: \$125.46, Singapore: \$237.65, Slovakia: \$11.70, Slovenia: \$11.70, South Africa: \$12.66, South Korea: \$46.36, Spain: \$741.86, Sri Lanka: \$175.24, Sweden: \$260.14, Switzerland: \$1,474.77, Taiwan: \$116.88, Thailand: \$199.30, Tajikistan: \$136.42, Tanzania: \$322.46, Togo: \$125.46, Turkey: \$92.93, Uganda: \$162.68, Ukraine: \$12.39, United Kingdom: \$117, United States: \$725, Uruguay: \$1,334.86, Uzbekistan: \$11.70, Venezuela: \$0.21, Vietnam: \$118.10, Yemen: \$807.79, Zambia: \$120.77, Zimbabwe: \$576.00



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The Affordability of Starting a Business

Thinking about starting your own business? You may be surprised to learn how expensive (or not!) it is to launch your very own business in your home country. To determine the business's affordability, we looked at the cost of starting a business relative to the monthly average income in each country.



**3) Governments get most money form
Taxes...**

Taxes is the strongest ...Social Policy

VISUAL CAPITALIST DATASTREAM

TAX-TO-GDP RATIO

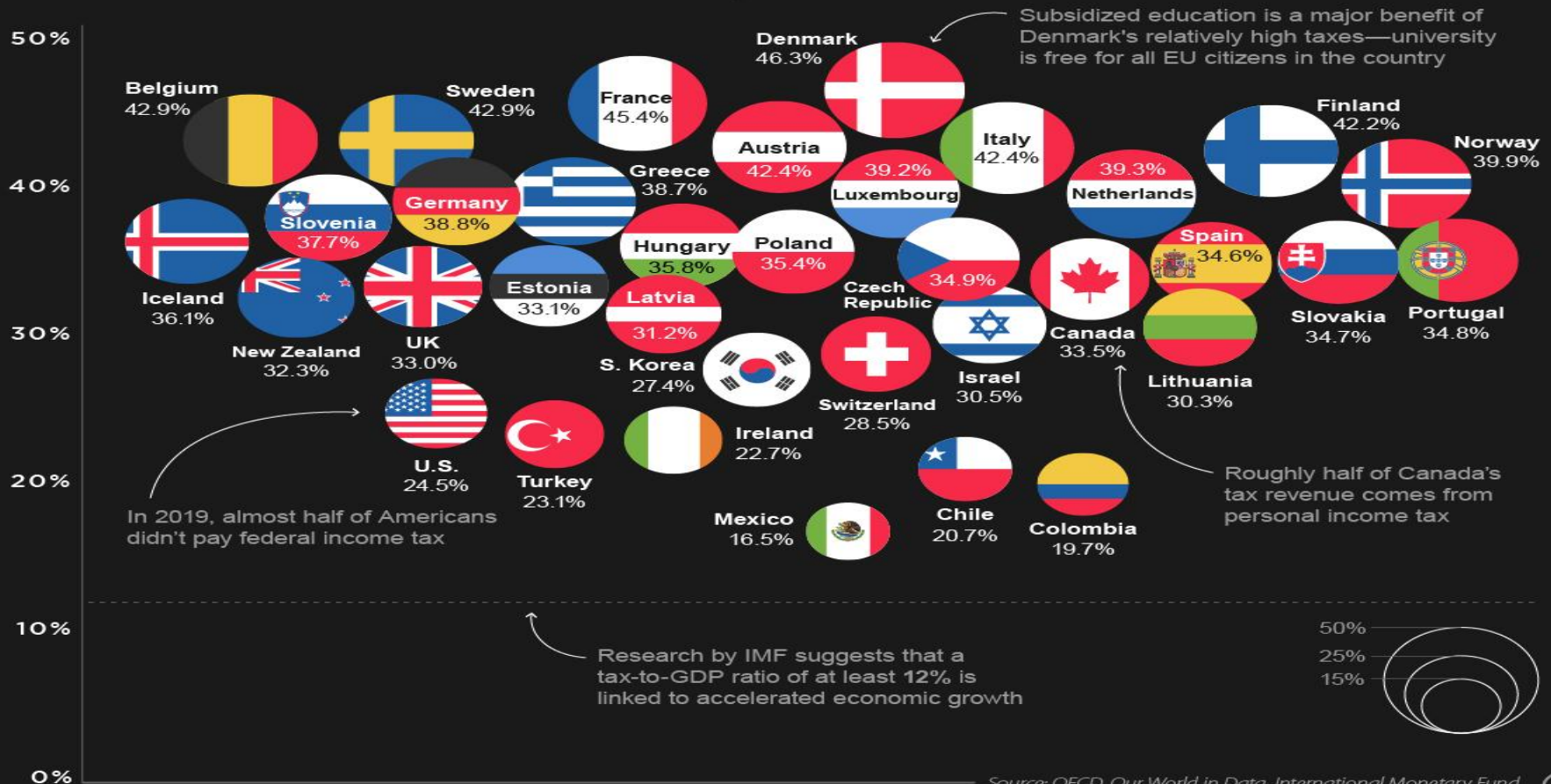
COMPARING TAX SYSTEMS
AMONG OECD COUNTRIES

Because populations and economies differ, using a tax-to-GDP ratio is one of the most useful ways to compare international tax systems.

i TAX-TO-GDP RATIO

= Total tax revenue / GDP

Measures a country's tax income relative to the size of its economy



Direct Taxes contribution to GDP

Rank	Country	Tax Revenue as % of GDP
1	Denmark	46.3%
2	France	45.4%
3	Belgium	42.9%
4	Sweden	42.9%
5	Austria	42.4%
6	Italy	42.4%
7	Finland	42.2%
8	Norway	39.9%
9	Netherlands	39.3%
10	Luxembourg	39.2%
11	Germany	38.8%
12	Greece	38.7%
13	Slovenia	37.7%
14	Iceland	36.1%
15	Hungary	35.8%
16	Poland	35.4%
17	Czech Republic	34.9%
18	Portugal	34.8%
19	Slovak Republic	34.7%
20	Spain	34.6%

21	Canada	33.5%
22	Estonia	33.1%
23	United Kingdom	33.0%
24	New Zealand	32.3%
25	Latvia	31.2%
26	Israel	30.5%
27	Lithuania	30.3%
28	Switzerland	28.5%
29	South Korea	27.4%
30	United States	24.5%
31	Turkey	23.1%
32	Ireland	22.7%
33	Chile	20.7%
34	Colombia	19.7%
35	Mexico	16.5%
	OECD Average	33.8%

?	CYPRUS	XX%
?	?	?%
?	?	?%
?	?	?%

4) Market Structure & Poverty

Are Oligopolies against Social policies?

APPLE



MARKET CAP COMPARED TO COUNTRIES' GDPs

● Countries with GDP less than Apple's market cap of \$2.1 trillion.



Countries closest to Apple's market cap:

Source: Mackeeper



APPLE
\$2.1T



ITA
\$2T



BRA
\$1.8T



CAN
\$1.7T



RUS
\$1.7T



KOR
\$1.6T



AUS
\$1.4T



ESP
\$1.4T



MEX
\$1.3T



IDN
\$1.1T



MICROSOFT

Microsoft MARKET CAP COMPARED TO COUNTRIES' GDPs

● Countries with GDP **less than** Microsoft's market cap of \$1.9 trillion.



Countries closest to Microsoft's market cap:

Source: Mackeeper



MS
\$1.9T



BRA
\$1.8T



CAN
\$1.7T



RUS
\$1.7T



KOR
\$1.6T



AUS
\$1.4T



ESP
\$1.4T



MEX
\$1.3T



IDN
\$1.1T



NDL
\$907B



AMAZON

amazon MARKET CAP COMPARED TO COUNTRIES' GDPs

● Countries with GDP less than Amazon's market cap of \$1.7 trillion.



Countries closest to Amazon's market cap:

Source: Mackeeper



AMZ
\$1.7T



KOR
\$1.6T



AUS
\$1.4T



ESP
\$1.4T



MEX
\$1.3T



IDN
\$1.1T



NLD
\$907B



SAU
\$793B



TUR
\$761B



CHE
\$703B



FACEBOOK

FACEBOOK MARKET CAP COMPARED TO COUNTRIES' GDPs

● Countries with GDP less than Facebook's market cap of \$939 billion.



Countries closest to Facebook's market cap:

Source: Mackeeper



FB
\$939B



NDL
\$907B



SAU
\$793B



TUR
\$761B



CHE
\$703B



POL
\$595B



THA
\$543B



BEL
\$533



SWE
\$530B



NGA
\$448B



Titans ...vs ...Knights

Country/ Company	Nominal GDP (country) or Market Cap (company)
USA	\$21,433 B
China	\$14,343 B
Japan	\$5,082 B
Germany	\$3,861 B
India	\$2,869 B
UK	\$2,829 B
France	\$2,716 B
Apple	\$2,125 B
Italy	\$2,004 B
Microsoft	\$1,942 B
Saudi Aramco	\$1,888 B

Brazil	\$1,840 B
Canada	\$1,736 B
Russia	\$1700 B
Amazon	\$1,688 B
Alphabet	\$1,656 B
South Korea	\$1,647 B
Australia	\$1,397 B
Spain	\$1,393 B
Mexico	\$1,269 B
Indonesia	\$1,119 B
Facebook	\$939 B
Netherlands	\$907 B
Saudi Arabia	\$793 B
Turkey	\$761 B
Tencent	\$736 B
Switzerland	\$703 B
Poland	\$596 B

5) INNOVATION ... the Solution ...

Competitive Advantage via Innovation ...

The History of

INNOVATION CYCLES

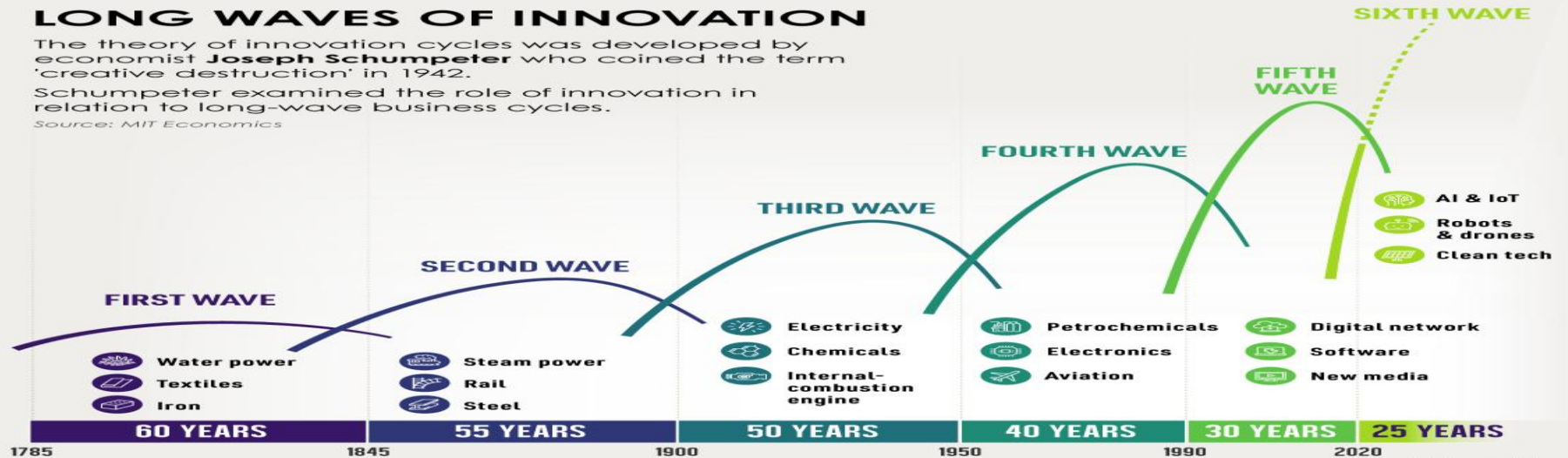
Below, we show waves of innovation across 250 years, from the Industrial Revolution to sustainable technology.

LONG WAVES OF INNOVATION

The theory of innovation cycles was developed by economist **Joseph Schumpeter** who coined the term 'creative destruction' in 1942.

Schumpeter examined the role of innovation in relation to long-wave business cycles.

Source: MIT Economics



KEY BREAKTHROUGHS

FIRST WAVE

During the Industrial Revolution, the first factory emerged—a cotton mill in Britain.

THIRD WAVE

Henry Ford's Model T introduced the assembly line, revolutionizing the automotive industry.

FIFTH WAVE

In 1990, 2.3M used the internet—by 2016 this reached 3.4B.

Source: World Bank

SECOND WAVE

As railways proliferated, their networks strongly influenced urban growth.

Source: Nacima Baron, HAL

FOURTH WAVE

Aviation gains mass adoption on a global scale, providing a lever to economic integration.

Source: OECD

SIXTH WAVE

As climate challenges intensify, clean tech may reshape business models and consumption patterns.

Riding the Waves ...

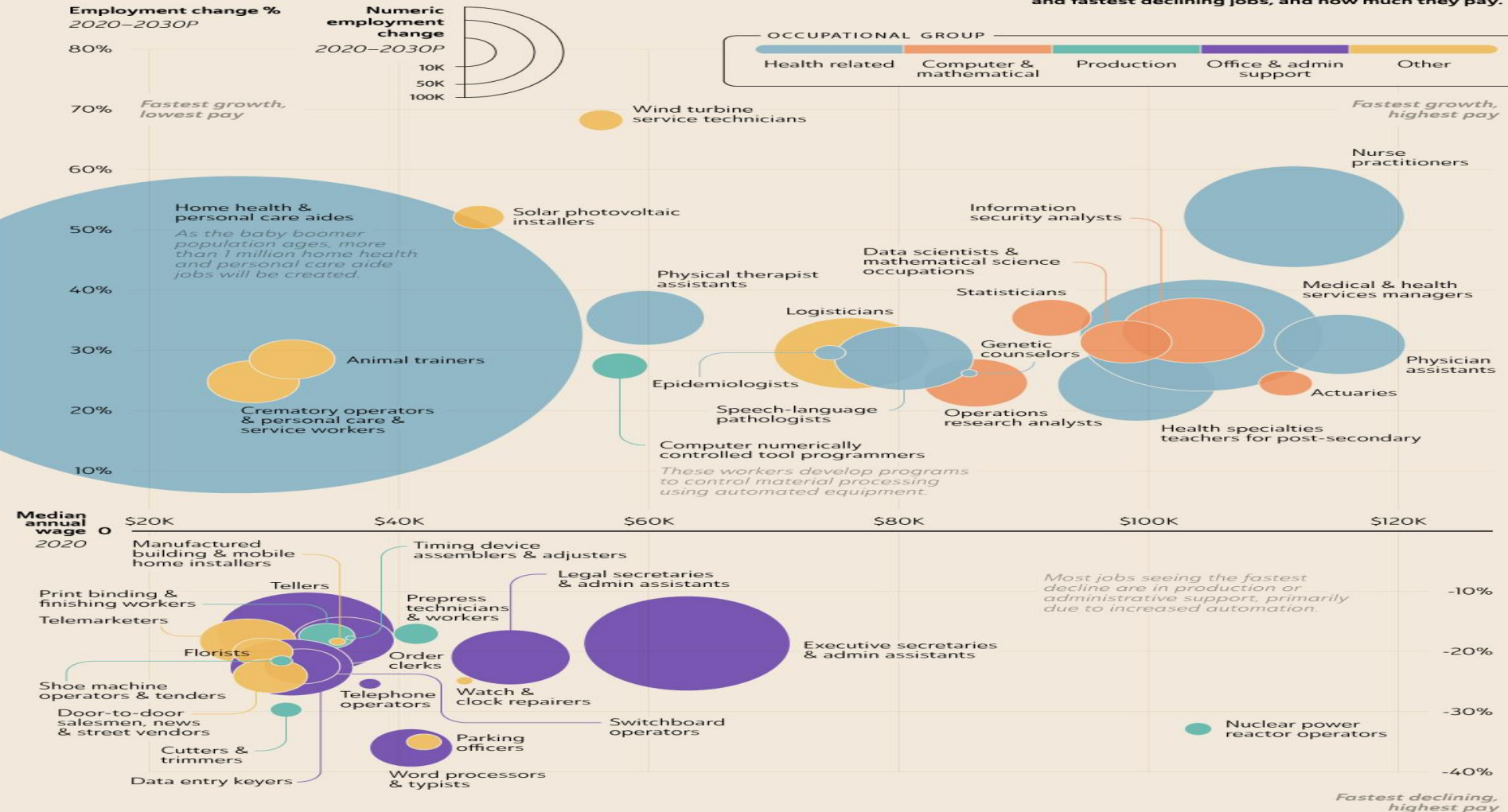
First Wave	Second Wave	Third Wave	Fourth Wave	Fifth Wave	Sixth Wave
Waterpower Textiles Iron	Steam Rail Steel	Electricity Chemicals Internal-Combustion Engine	Petrochemicals Electronics Aviation	Digital Network Software New Media	Digitization (AI, IoT, AV, Robots & Drones) Clean Tech
60 years	55 years	50 years	40 years	30 years	25 years

Innovation& Employment

Innovative Jobs ...

The 20 Fastest Growing + Declining Jobs OVER THE NEXT DECADE

The U.S. Bureau of Labor Statistics predicts that 11.9 million new jobs will be created from 2020 to 2030—a growth rate of 7.7%. Below, we show the fastest growing and fastest declining jobs, and how much they pay.



Source: U.S. Bureau of Labor Statistics
Note: The fastest growing occupation data excludes occupations with above average cyclical recovery (due to the COVID-19 pandemic) rather than structural growth.

The Top 20 Fastest Growing Jobs ...

Occupation	Percent employment change, 2020–2030P	Numeric employment change, 2020–2030P	Median annual wage, 2020
Wind turbine service technicians	68.2%	4,700	\$56,230
Nurse practitioners	52.2%	114,900	\$111,680
Solar photovoltaic installers	52.1%	6,100	\$46,470
Statisticians	35.4%	14,900	\$92,270
Physical therapist assistants	35.4%	33,200	\$59,770
Information security analysts	33.3%	47,100	\$103,590
Home health and personal care aides	32.6%	1,129,900	\$27,080
Medical and health services managers	32.5%	139,600	\$104,280
Data scientists and mathematical science occupations, all other	31.4%	19,800	\$98,230
Physician assistants	31.0%	40,100	\$115,390
Epidemiologists	29.6%	2,300	\$74,560
Logisticians	29.5%	56,400	\$76,270
Speech-language pathologists	28.7%	45,400	\$80,480
Animal trainers	28.5%	17,200	\$31,520
Computer numerically controlled tool programmers	27.4%	7,400	\$57,740
Genetic counselors	26.2%	600	\$85,700
Crematory operators and personal care and service workers, all other	24.8%	19,900	\$28,420
Operations research analysts	24.6%	25,600	\$86,200
Actuaries	24.5%	6,800	\$111,030
Health specialties teachers, post-secondary	24.3%	58,900	\$99,090

and the ... Fastest Declining Jobs

Occupation	Percent employment change, 2020–2030P	Numeric employment change, 2020-2030P	Median annual wage, 2020
Word processors and typists	-36.0%	-16,300	\$41,050
Parking enforcement workers	-35.0%	-2,800	\$42,070
Nuclear power reactor operators	-32.9%	-1,800	\$104,040
Cutters and trimmers, hand	-29.7%	-2,400	\$31,630
Telephone operators	-25.4%	-1,200	\$37,710
Watch and clock repairers	-24.9%	-700	\$45,290
Door-to-door sales workers, news and street vendors, and related workers	-24.1%	-13,000	\$29,730
Switchboard operators, including answering service	-22.7%	-13,600	\$31,430
Data entry keyers	-22.5%	-35,600	\$34,440
Shoe machine operators and tenders	-21.6%	-1,100	\$30,630

6) Is Defence Spending Productive?

Is Defence Spending socially inclined?

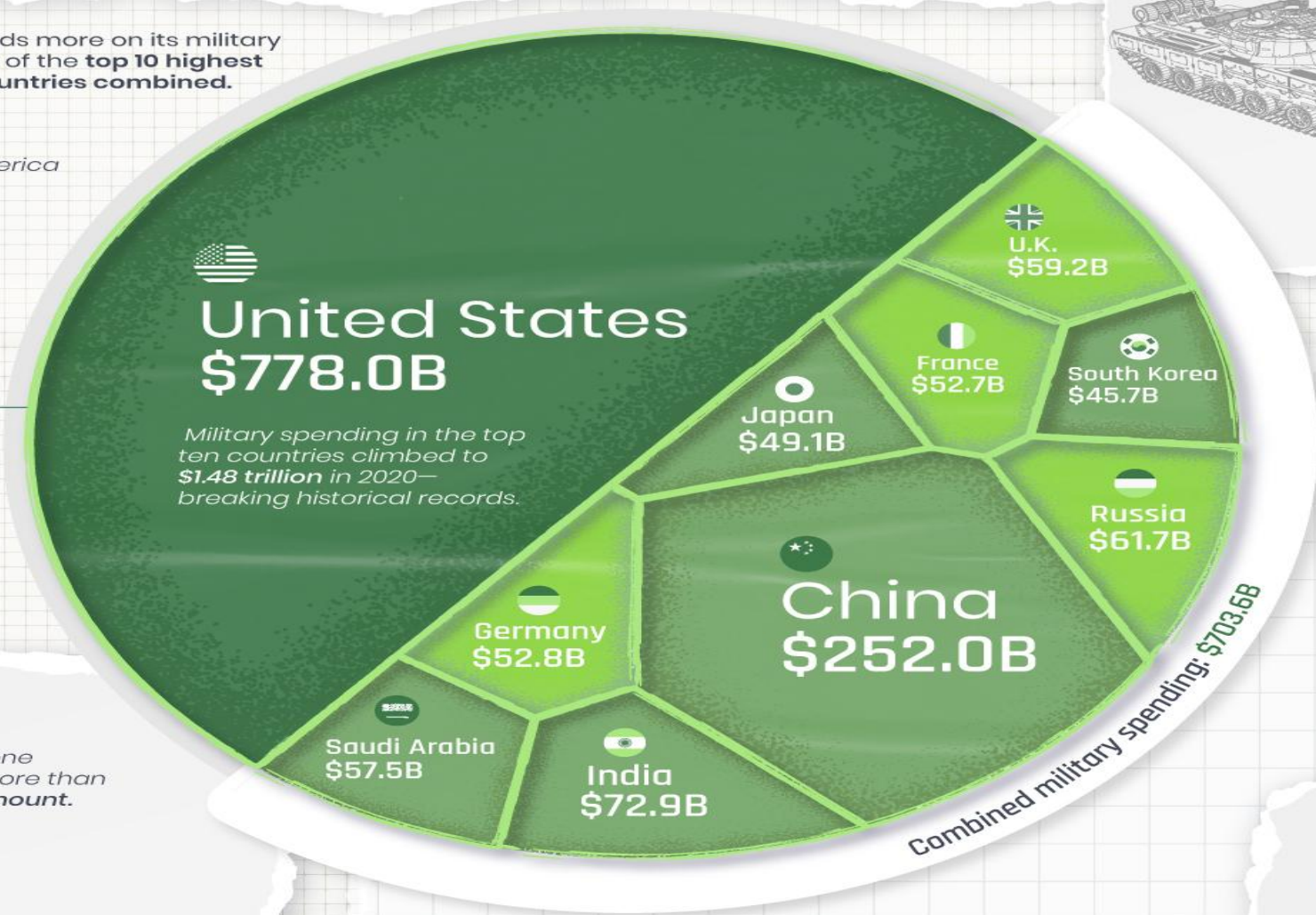
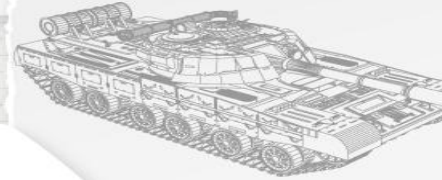
Investing in Guns ...

VISUAL CAPITALIST DATASTREAM

U.S. MILITARY SPENDING COMPARED TO THE REST OF THE WORLD

The U.S. spends more on its military than the rest of the **top 10 highest spending countries combined**.

- North America
- Europe
- Asia



• The U.S. alone made up more than **half that amount**.



How much they spend ...

Country	Active Military	Reserve Military	Paramilitary	Total Military
Russia	1,013,628	2,572,500	2,310,859	5,896,987
United States	1,374,699	845,000	2,918,161	5,137,860
India	1,440,000	2,096,000	1,585,950	5,121,950
South Korea	599,000	3,100,000	900,000	4,599,000
China	2,035,000	510,000	1,500,000	4,045,000
France	202,700	72,300	103,400	378,400
Japan	247,150	56,000	13,740	316,890
Saudi Arabia	227,000	0	24,500	251,500
United Kingdom	150,250	82,650	0	232,900
Germany	178,600	27,900	500	207,000

USA the King ...

A Breakdown of U.S. Military Spending

➤ Air	– \$57.7 billion
➤ Maritime	– \$34.7 billion
➤ Ground systems	– \$14.6 billion
➤ Space	– \$14.1 billion
➤ Cyber	– \$6.9 billion

GDP per Capita

GPD per Capita in USD, 2021

GDP PER CAPITA

AROUND THE WORLD, 2021

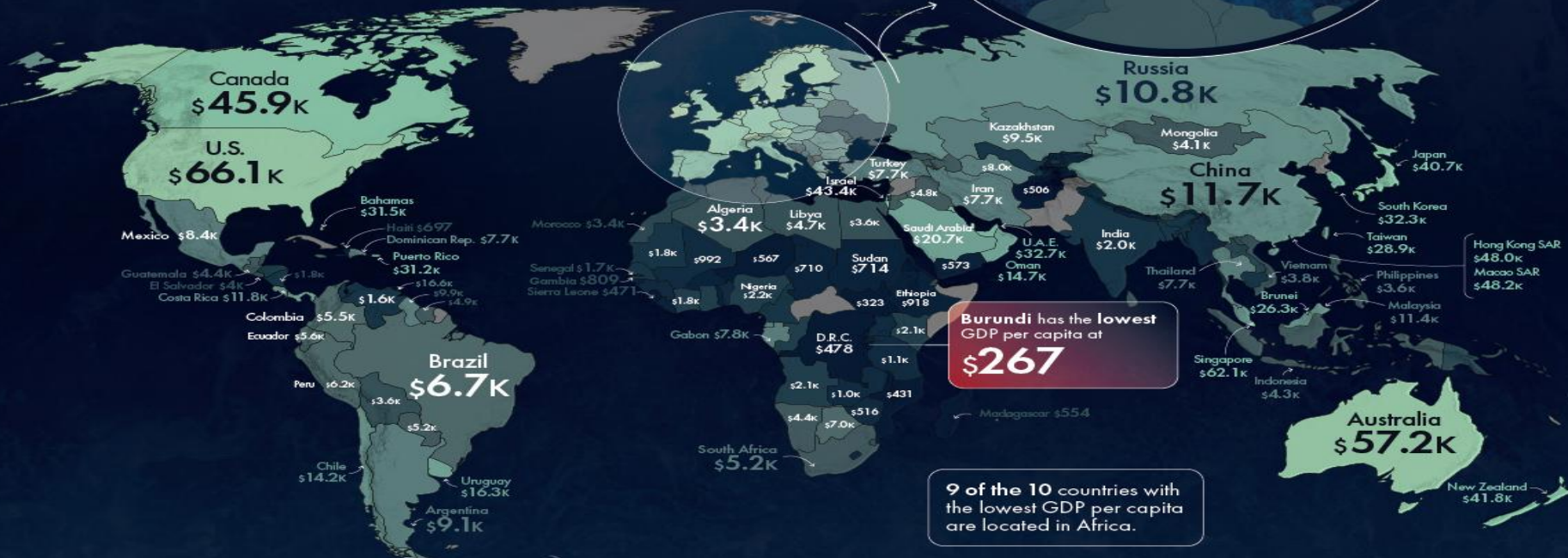
GDP PER CAPITA (Nominal)

\$200

\$100,000

9 of the 10 of the countries with the highest GDP per capita are located in the Northern Hemisphere.

Luxembourg has the highest GDP per capita at
\$126k



Burundi has the lowest GDP per capita at
\$267

9 of the 10 countries with the lowest GDP per capita are located in Africa.



VISUAL
CAPITALIST

Source: IMF, 2021



/visualcapitalist



@visualcap



visualcapitalist.com

Top ...

TOP 10 GDP PER CAPITA (2021)

GDP PER CAPITA (Nominal)

\$100

Each box this size
represents \$100



Laggards...

BOTTOM 10 GDP PER CAPITA (2021)

GDP PER CAPITA (Nominal)

Most of the bottom 10 countries are located in Africa, where the regional GDP per capita sits at \$1,960

\$100

Each box this size represents \$100

10



Madagascar

+8%

9



Central African Rep.

+9%

8



Zimbabwe

-44%

7



Afghanistan

+1%

6



Congo D.R.C.

+5%

% change
from 2020

5



Sierra Leone

-9%

4



Mozambique

-5%

3



Malawi

-1%

2



South Sudan

+7%

1



Burundi

+1%



GDP per Capita (Nominal, in \$US, 2021)							
Country	GDP per Capita (Nominal, 2021, USD)	San Marino	\$44,676	Aruba	\$22,710	China	\$11,713
		Israel	\$43,439	Slovakia	\$21,606	Malaysia	\$11,378
		UK	\$42,236	Saudi Arabia	\$20,742	Bulgaria	\$11,349
Luxembourg	\$125,923	New Zealand	\$41,793	Greece	\$20,521	Russia	\$10,793
Ireland	\$90,478	Japan	\$40,733	Latvia	\$19,934	Saint Lucia	\$10,636
Switzerland	\$90,358	Italy	\$35,062	Hungary	\$17,645	Grenada	\$10,211
Norway	\$76,408	UAE	\$32,686	Barbados	\$17,472	Guyana	\$9,913
United States	\$66,144	South Korea	\$32,305	Poland	\$16,740	Nauru	\$9,865
Denmark	\$63,645	Malta	\$32,099	Trinidad and Tobago	\$16,622	Mauritius	\$9,630
Singapore	\$62,113	The Bahamas	\$31,532			Kazakhstan	\$9,454
Iceland	\$58,371	Puerto Rico	\$31,207	Saint Kitts and Nevis	\$16,491	Montenegro	\$9,152
Netherlands	\$58,029	Spain	\$31,178	Croatia	\$16,402	Argentina	\$9,095
Sweden	\$57,660	Europe	\$31,022	Uruguay	\$16,297	Turkmenistan	\$8,874
Australia	\$57,211	Cyprus	\$29,686	Romania	\$14,916	Serbia	\$8,444
Qatar	\$55,417	Taiwan	\$28,890	Antigua and Barbuda	\$14,748	Mexico	\$8,403
Austria	\$54,820	Slovenia	\$28,734			Dominica	\$8,111
Finland	\$54,817	Estonia	\$26,378	Oman	\$14,675	Equatorial Guinea	\$8,000
Germany	\$51,967	Brunei	\$26,274	Panama	\$14,390	Gabon	\$7,785
Belgium	\$50,051	Czech Republic	\$25,991	Chile	\$14,209		
Macao SAR	\$48,207	Portugal	\$25,097	Maldives	\$14,194	Dominican Republic	\$7,740
Hong Kong SAR	\$47,990	Bahrain	\$23,710	Palau	\$13,180	Thailand	\$7,675
Canada	\$45,871	Kuwait	\$23,138	Seychelles	\$12,648	Iran	\$7,668
France	\$44,770	Lithuania	\$22,752	Costa Rica	\$11,805	Turkey	\$7,659

and ... the last & least ones ...

Eritrea	\$632
Yemen	\$573
Niger	\$567
Madagascar	\$554
Central African Republic	\$522
Zimbabwe	\$516
Afghanistan	\$506
Democratic Republic of the Congo	\$478
Sierra Leone	\$471
Mozambique	\$431
Malawi	\$397
South Sudan	\$323
Burundi	\$267

Money & Happiness

But is ... Money brings Happiness?

VISUAL CAPITALIST DATASTREAM

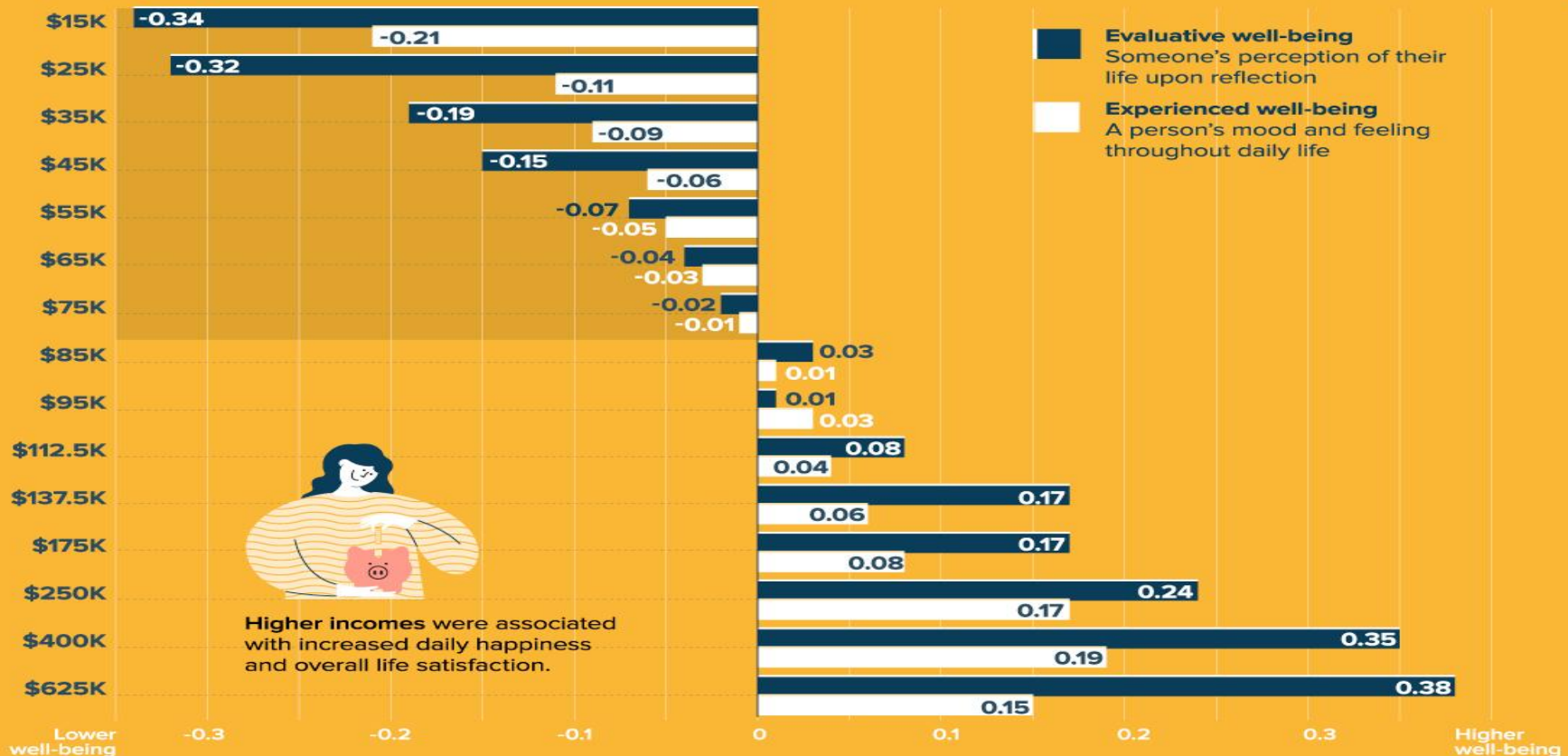
MONEY DOES BUY HAPPINESS AFTER ALL

Does money really buy happiness? New research suggests yes, it does.

And apparently, it doesn't plateau at **\$75,000/year**, as previous studies have indicated.



ANNUAL INCOME SURVEY OF WELL-BEING IN THE U.S. (Standard deviations from mean response)

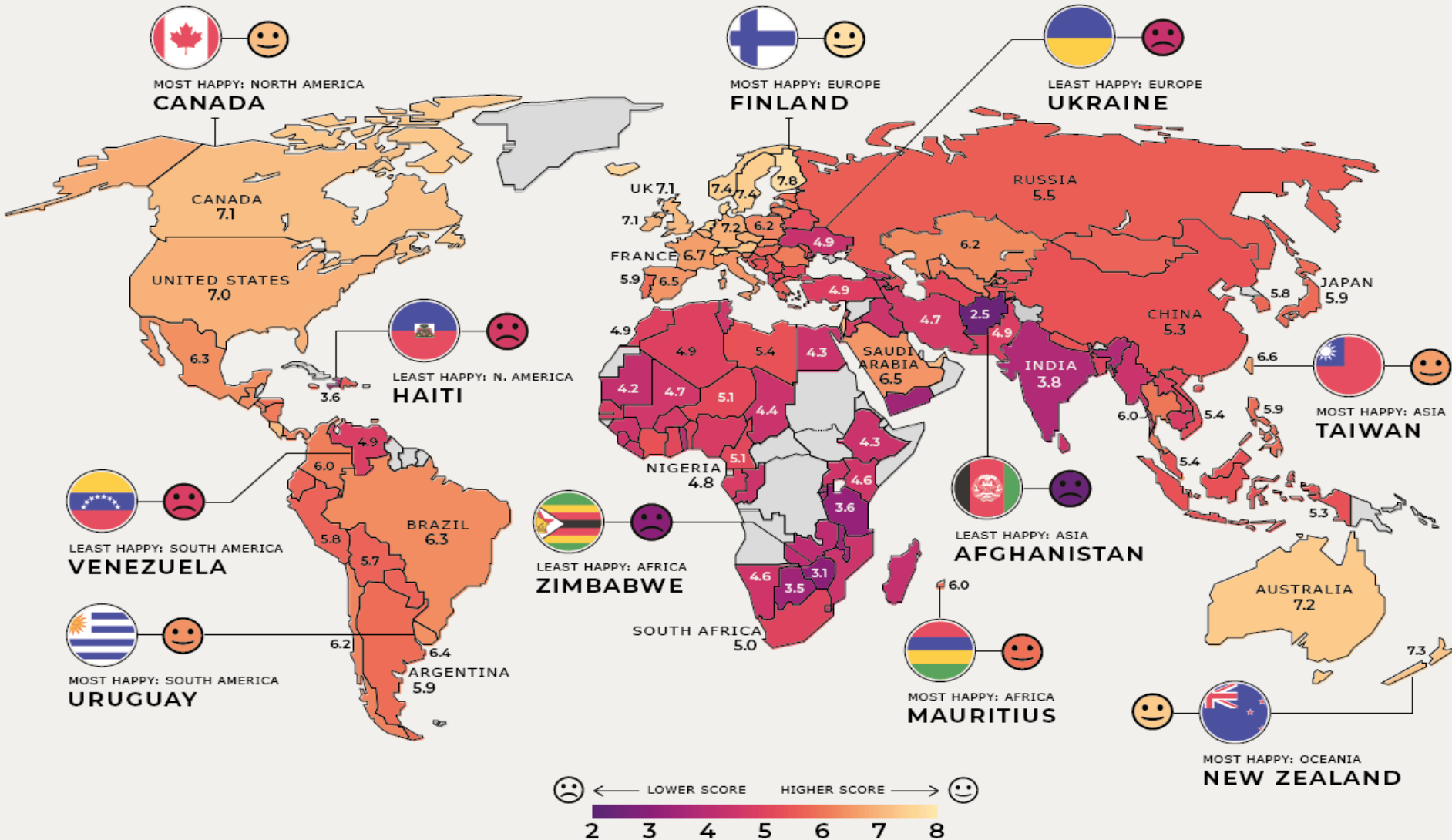


Source: Proceedings of the National Academy of Sciences



Prosperity, Well Being and Happiness ...

THE MOST AND LEAST **HAPPY** COUNTRIES AROUND THE WORLD 2021



Prosperity, Well Being and Happiness ... in

EUROPE

CURRENT MOOD



HAPPY

16.4% higher than the global average

ICELAND
7.6



MOST HAPPY
GLOBAL RANK 1
FINLAND

Finland has consistently held on to its #1 title as the happiest country in the world. This year's ranking, in particular, is influenced by high levels of trust in the handling of the COVID-19 pandemic.

IRELAND
7.1

UNITED KINGDOM
7.1

DENMARK
7.6

NETH.
7.5

NORWAY
7.4

SWEDEN
7.4

FINLAND
7.8

RUSSIA
5.5

POLAND
6.2

CZECH.
7.0

GERMANY
7.2

AUST.
7.3

HUNGARY
6.0

FRANCE
6.7

ITALY
6.5

ROMANIA
6.1

BULGARIA
5.3

UKRAINE
4.9

CROATIA
5.9



MOST IMPROVED

PORTUGAL
5.9

SPAIN
6.5

SWITZ.
7.6



6.6 MALTA



LEAST IMPROVED

LEAST HAPPY
GLOBAL RANK 110

UKRAINE

Conflicts continue to plague Ukraine, causing stress on the country's politics, security, and economy. In particular, lack of trust in the government and corruption remain big public issues.

LOW
AFGHANISTAN

2.5

UKRAINE

RUSSIA

FRANCE

UK

HIGH
FINLAND

7.8



Prosperity, Well Being and Happiness ... in

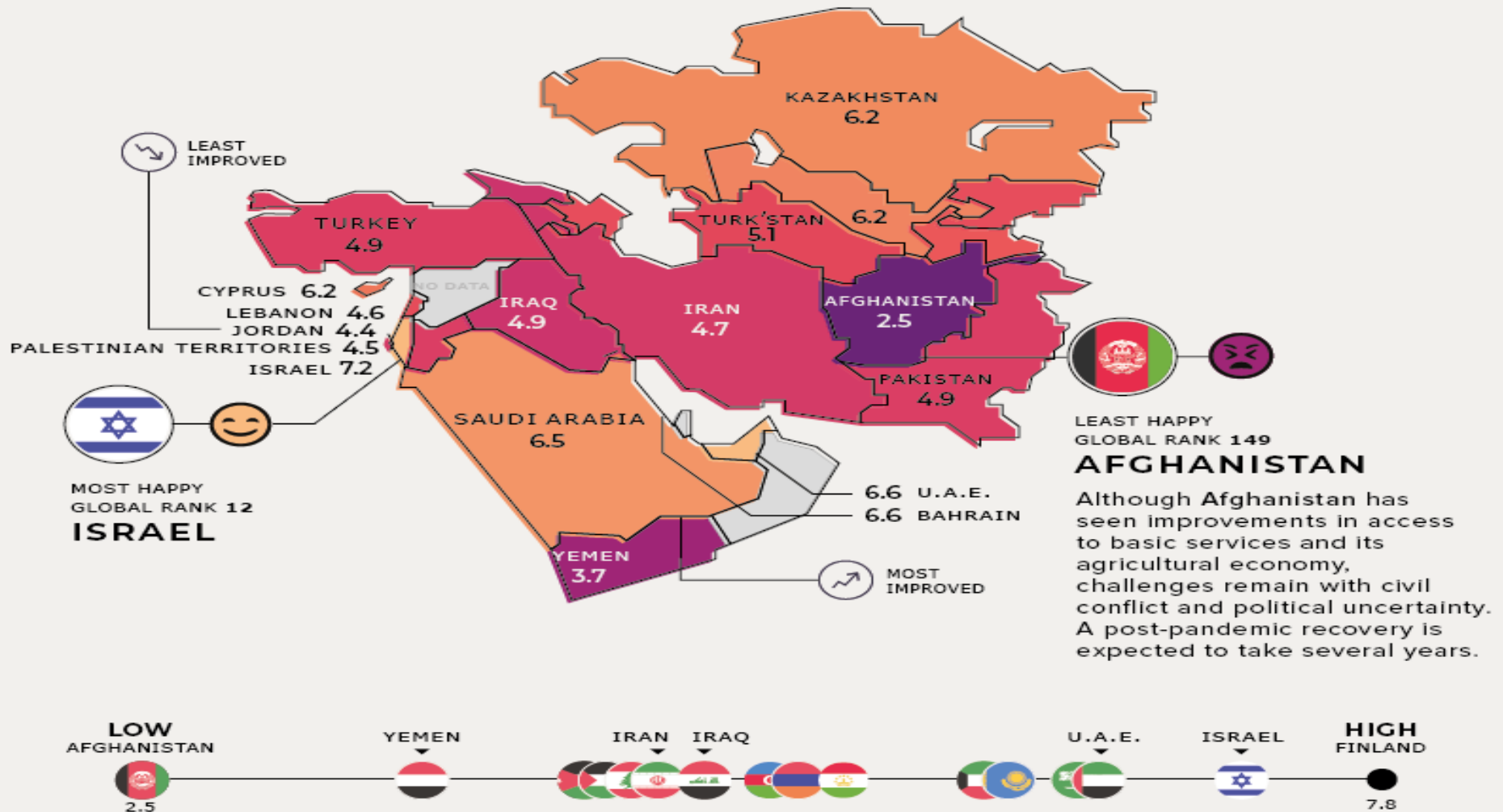
MIDDLE EAST AND CENTRAL ASIA

CURRENT MOOD



IT'S COMPLICATED

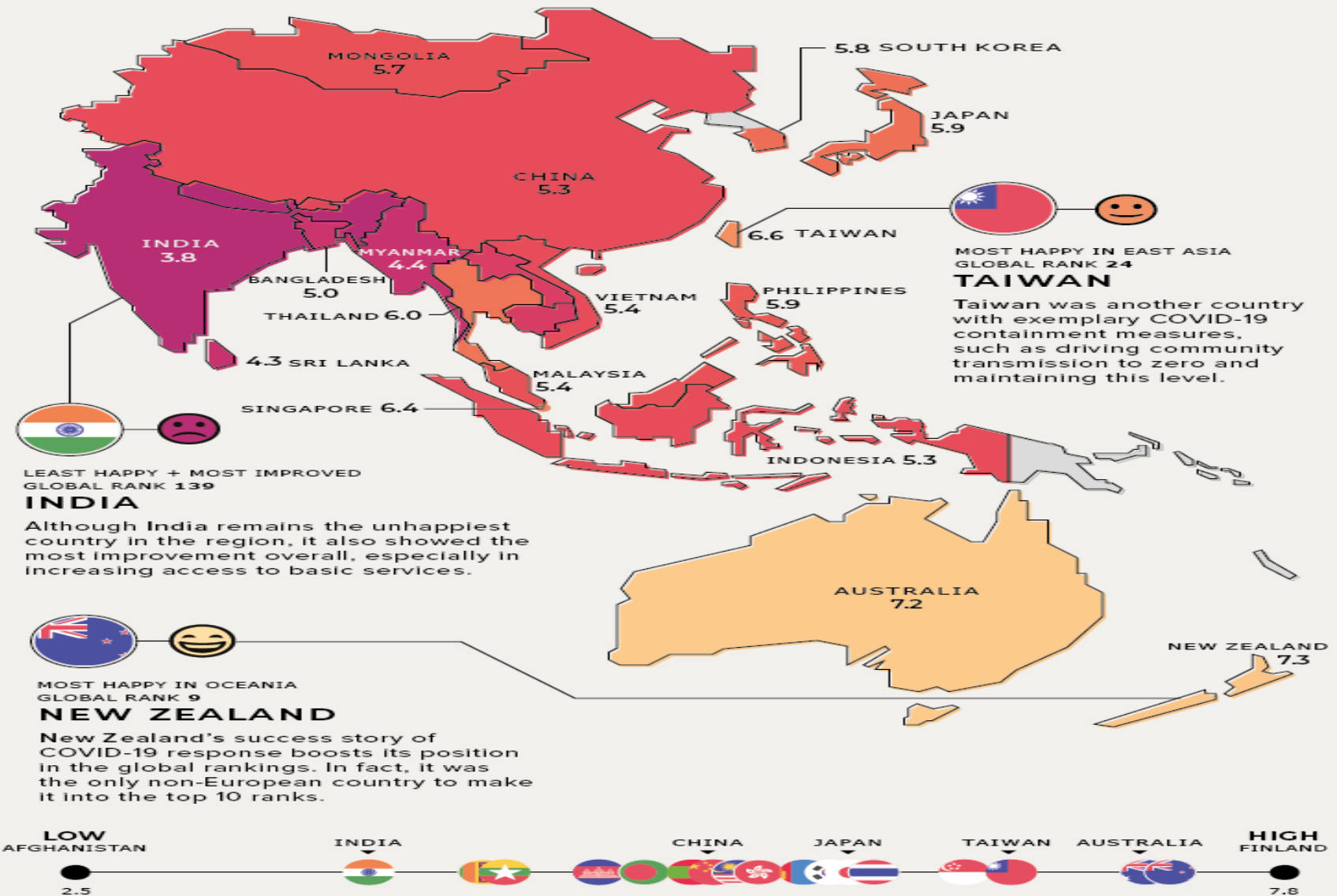
3.6% lower than the global average



Prosperity, Well Being and Happiness ... in

EAST ASIA AND OCEANIA

CURRENT MOOD **5.5**  NEUTRAL
Same as the global average



Prosperity, Well Being and Happiness ... in

AFRICA

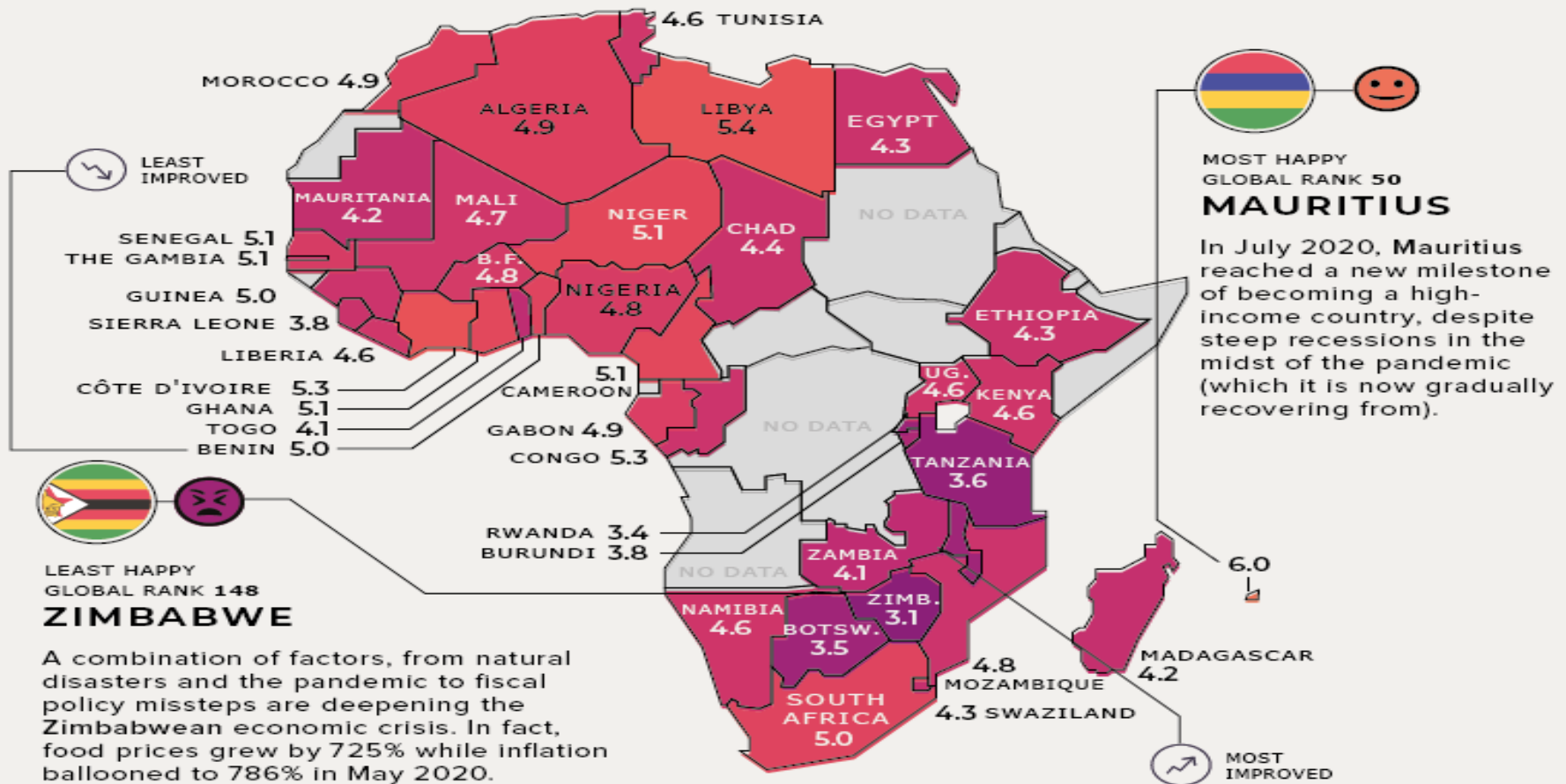
CURRENT MOOD

4.5



UNHAPPY

18.2% lower than the global average

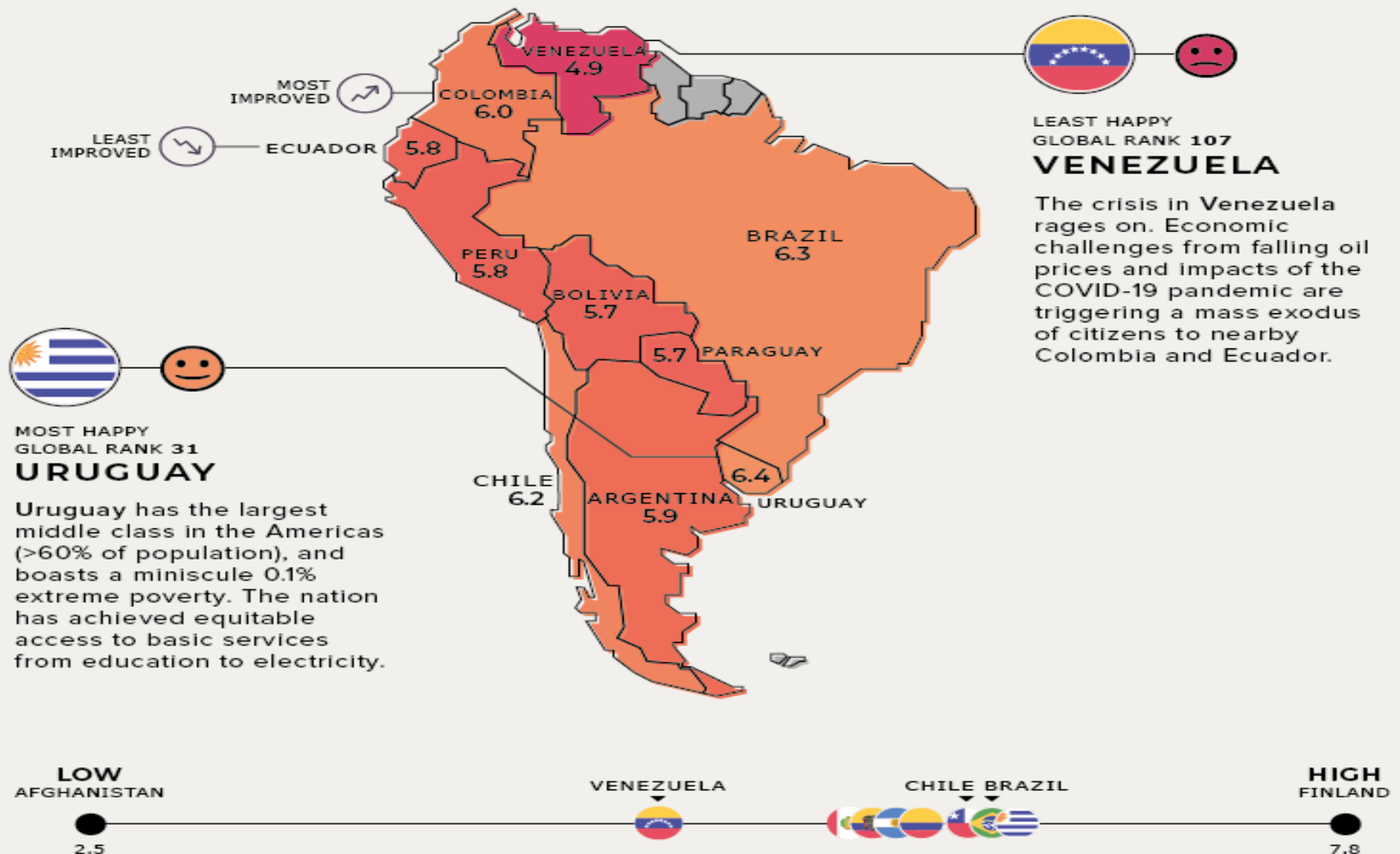


Prosperity, Well Being and Happiness ... in

SOUTH AMERICA

CURRENT MOOD **5.9**  **CONTENT**

7.3% higher than the global average



Prosperity, Well Being and Happiness ... in

NORTH AMERICA

INC. CENTRAL AMERICA AND CARIBBEAN

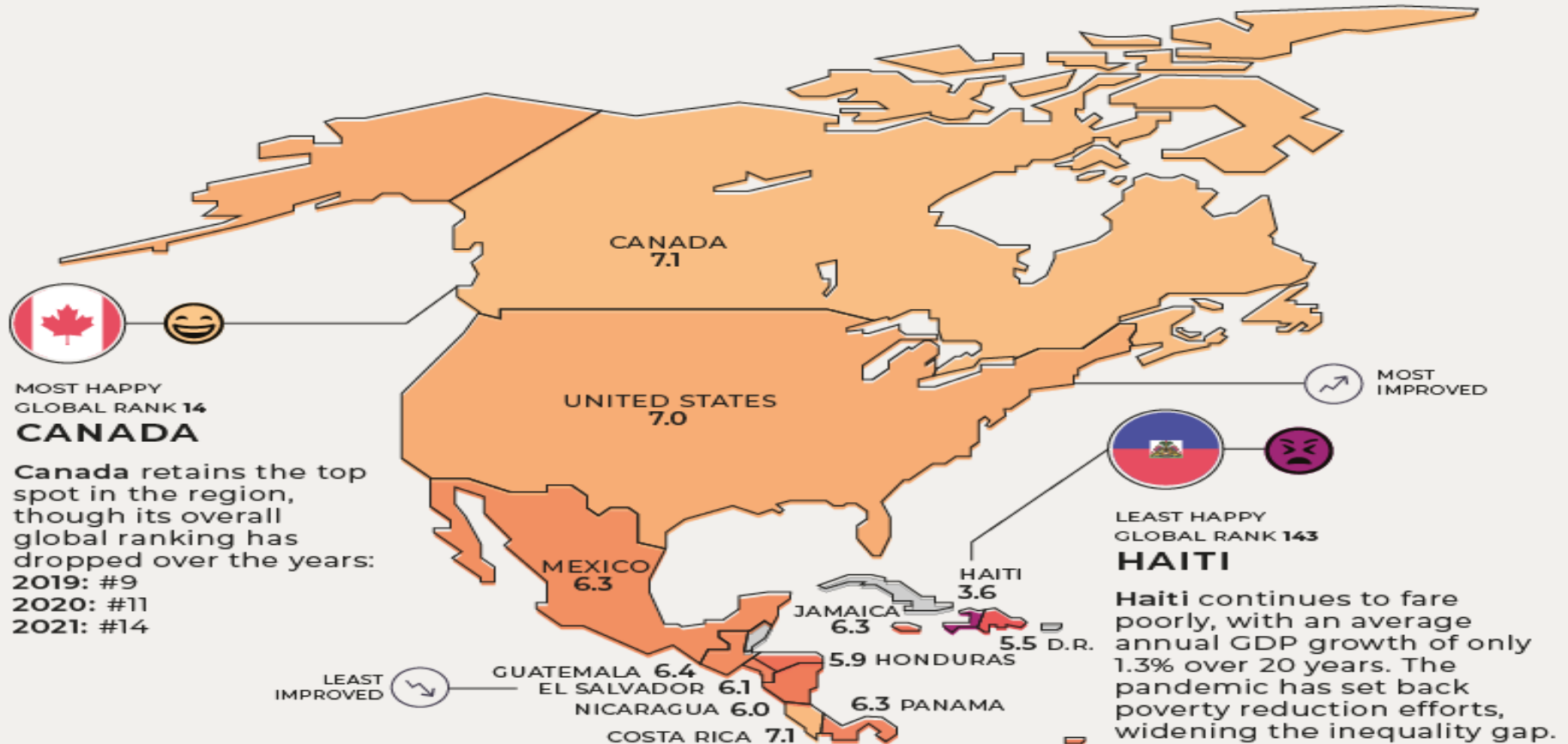
CURRENT MOOD

6.1



HAPPY

10.9% higher than the global average



**But please
do not forget
the Metals
for the new Technologic products
in high demand ...
That can make us
Happy or Depressed ...**

Visualizing the Critical Metals in a Smartphone

A BREAKDOWN OF THE CRITICAL

METALS IN A SMARTPHONE

Some vital metals used to build these devices are considered at risk due to geological scarcity, geopolitical issues or trade policy.

This infographic details the critical metals that you carry in your pocket.

ALKALI METAL ALKALINE EARTH TRANSITION METAL BASIC METAL LANTHANOID

TOUCH SCREEN

It contains a thin layer of **indium** tin oxide, highly conductive and transparent, allowing the screen to function as a touch screen.



MICROPHONE, SPEAKERS, VIBRATION UNIT

Nickel is used in the microphone diaphragm (that vibrates in response to sound waves). Alloys containing **neodymium**, **praseodymium** and **gadolinium** are used in the magnets contained in the speaker and microphone. **Neodymium**, **terbium** and **dysprosium** are used in the vibration unit.

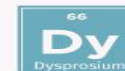


BATTERY

The majority of smartphones use **lithium-ion** batteries.

DISPLAY

The display contains several **rare earth elements**. Small quantities are used to produce the colors on the liquid crystal display. Some give the screen its glow.



ELECTRONICS

Nickel is used in electrical connections. **Gallium** is used in semiconductors. **Tantalum** is the major component of micro capacitors, used for filtering and frequency tuning.



CASING

Nickel reduces electromagnetic interference. **Magnesium** alloys are superior at electromagnetic interference (EMI) shielding.



Source: University of Birmingham

Critical Metals in a Smartphone

Smartphone Part	Critical Metal
Touch Screen	indium
Display	lanthanum; gadolinium; praseodymium; europium; terbium; dysprosium
Electronics	nickel, gallium, tantalum
Casing	nickel, magnesium
Battery	lithium, nickel, cobalt
Microphone, speakers, vibration unit	nickel, praseodymium, neodymium, gadolinium, terbium, dysprosium

Mandatory & Voluntary Social Responsibility

Government Social Responsibility

- 1) Governments ought to utilize:
 - a) *Social Policies to*
 - a) *Eradicate of Poverty*
 - b) *Eliminate Inequalities,*
 - c) *Terminate Discrimination, Exclusion, etc..*
 - b) *Economic Development by*
 - a) *Governments*
 - b) *Policy Makers*
 - c) *Global Institution*
- 2) Is it ethical to have Poor and Very Poor citizens and global people?
- 3) What the Local and Central Governments could or should do?
- 4) What we as individuals and citizens could or should do?
- 5) **Bad Leadership, Inefficiencies, Waste,, etc are major endogenous factors,...**
- 6) **Of course, there are too Uncontrollable, Exogenous variables that affect Poverty, like global trade, tariffs, immigration, etc.**

Government Social Responsibility

- Οι κυβερνήσεις οφείλουν να χρησιμοποιήσουν:
- Κοινωνικές πολιτικές για
 - την εξάλειψη της φτώχειας
 - την εξάλειψη των ανισοτήτων
 - τον τερματισμό των διακρίσεων, του αποκλεισμού κ.λπ.
- Οικονομική ανάπτυξη από
 - τις κυβερνήσεις
 - τους υπεύθυνους χάραξης πολιτικής
 - Παγκόσμιους θεσμούς
- Είναι ηθικό να υπάρχουν φτωχοί και πολύ φτωχοί πολίτες και παγκόσμιοι άνθρωποι;
- Τι θα μπορούσαν ή θα έπρεπε να κάνουν οι τοπικές και κεντρικές κυβερνήσεις;
- Τι θα μπορούσαμε ή θα έπρεπε να κάνουμε εμείς ως άτομα και πολίτες;
- Η κακή ηγεσία, οι ανεπάρκειες, η σπατάλη κ.λπ. είναι σημαντικοί ενδογενείς παράγοντες...
- Φυσικά, υπάρχουν και ανεξέλεγκτες, εξωγενείς μεταβλητές που επηρεάζουν τη φτώχεια, όπως το παγκόσμιο εμπόριο, οι δασμοί, η μετανάστευση κ.λπ.

Government Social Responsibility

Many factors and variables interplay and affect

- a) *Social issues and challenges*
- b) *Policies & proposals that try to solve these problems like Inequality and Poverty, etc*
- c) *Domestic government strategies*
- d) *International Institutions and NGOs efforts*

We should examine and understand how basic economics make or break poverty and inequality and how to tackle some issues with wise and sustainable economic decisions and solutions.

Economics mostly apply domestic (endogenous) parameters and tools, decided & induced by the government with the people's approval or disapproval.

We should also examine how global (exogenous) factors affect sometimes massively social coherence, discrimination, poverty, inequality, etc.

Government Social Responsibility

- **Πολλοί παράγοντες και μεταβλητές αλληλεπιδρούν και επηρεάζουν**
 - Κοινωνικά ζητήματα και προκλήσεις
 - Πολιτικές και προτάσεις που προσπαθούν να λύσουν αυτά τα προβλήματα, όπως η ανισότητα και η φτώχεια, κ.λπ.
 - Εγχώριες κυβερνητικές στρατηγικές
 - Προσπάθειες διεθνών οργανισμών και ΜΚΟ
- **Πρέπει να εξετάσουμε και να κατανοήσουμε πώς η βασική οικονομία δημιουργεί ή διαλύει τη φτώχεια και την ανισότητα και πώς να αντιμετωπίσουμε ορισμένα ζητήματα με σοφές και βιώσιμες οικονομικές αποφάσεις και λύσεις.**
- **Η οικονομία εφαρμόζει κυρίως εγχώριες (ενδογενείς) παραμέτρους και εργαλεία, που αποφασίζονται και προκαλούνται από την κυβέρνηση με την έγκριση ή την αποδοκιμασία του λαού.**
- **Θα πρέπει επίσης να εξετάσουμε πώς οι παγκόσμιοι (εξωγενείς) παράγοντες επηρεάζουν μερικές φορές μαζικά την κοινωνική συνοχή, τις διακρίσεις, τη φτώχεια, την ανισότητα κ.λπ.**

Sources

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- 2) World Bank – Copyright © The World Bank Group, All Rights Reserved.