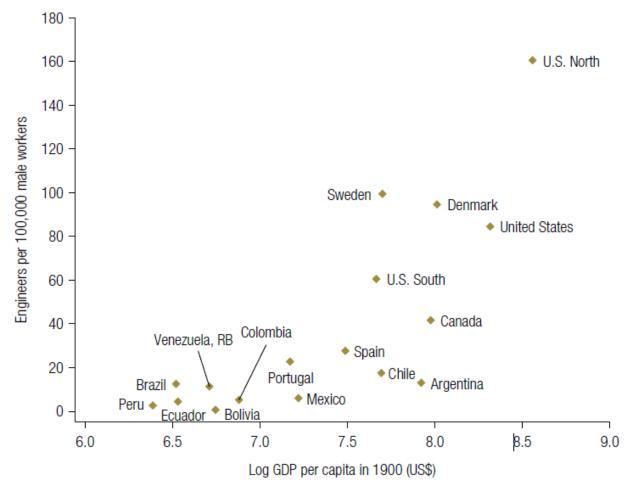
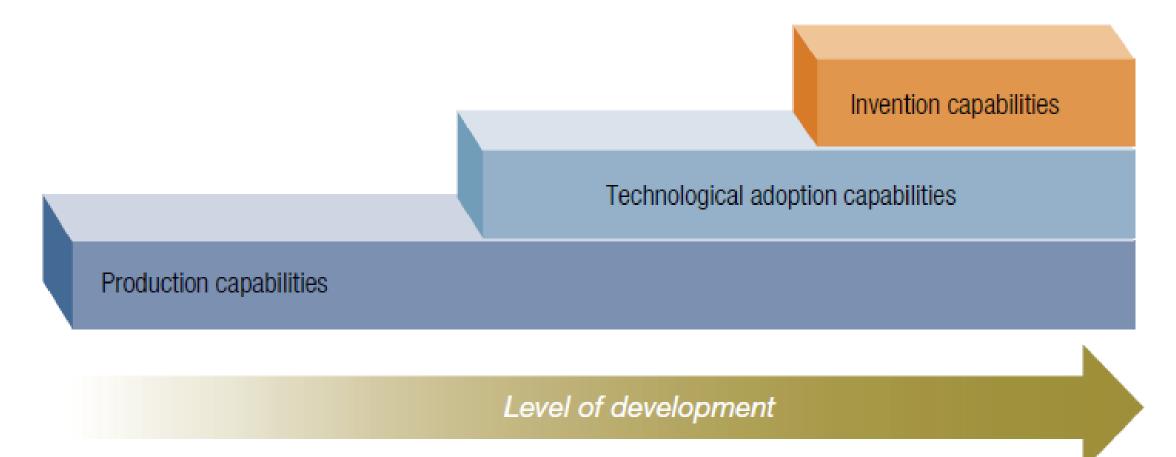
# INNOVACIÓN

FIGURE 1.1 The Capability to Innovate in 1900 Drives Income Levels Today

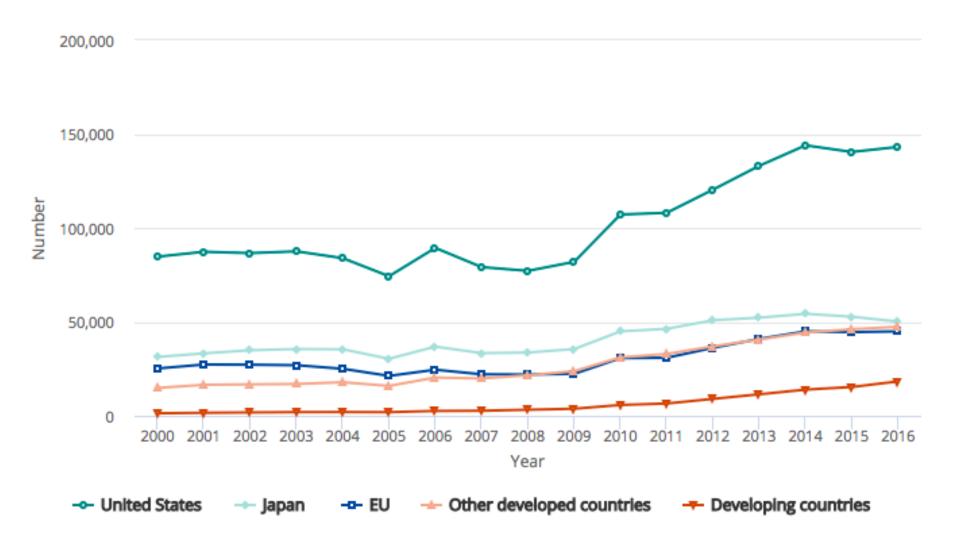


Source: Maloney and Valencia Caicedo 2017.

### FIGURE 1.2 The Capabilities Escalator



#### USPTO patents granted, by selected region, country, or economy of inventor: 2000-16

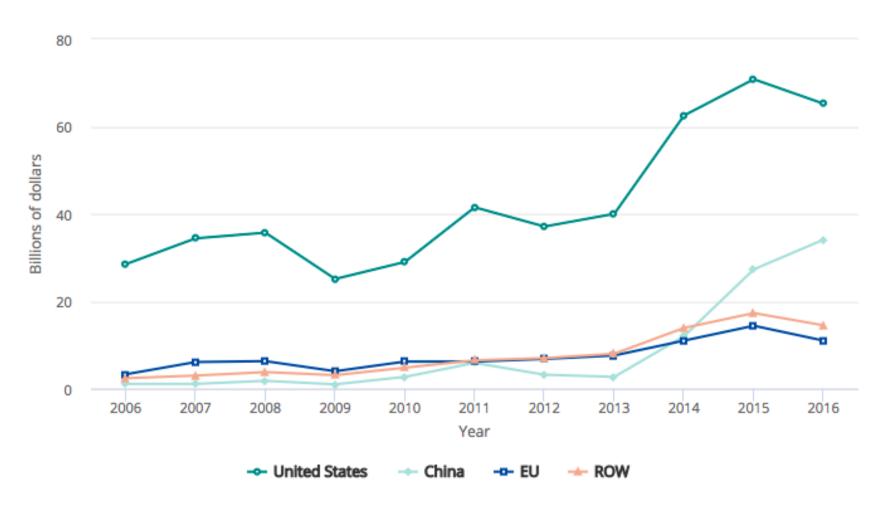


EU = European Union; USPTO = U.S. Patent and Trademark Office.

#### Note(s)

Patent grants are fractionally allocated among regions, countries, or economies based on the proportion of the residences of all named inventors.

Early- and later-stage venture capital investment, by selected region, country, or economy: 2006–16



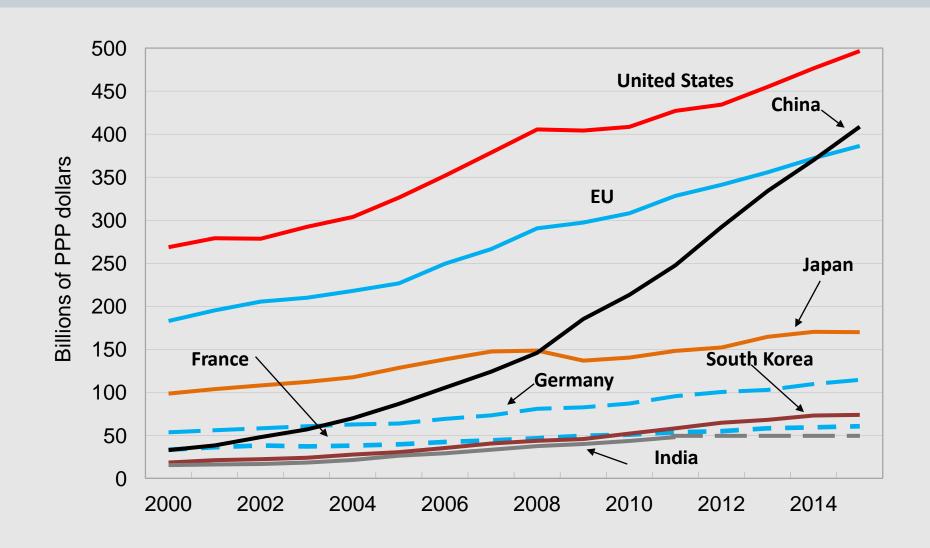
EU = European Union; ROW = rest of world.

#### Note(s)

Early-stage financing supports product development and marketing, the initiation of commercial manufacturing, and sales; it also supports company expansion and provides financing to prepare for an initial public offering. Later-stage financing includes acquisition financing and management and leveraged buyouts.

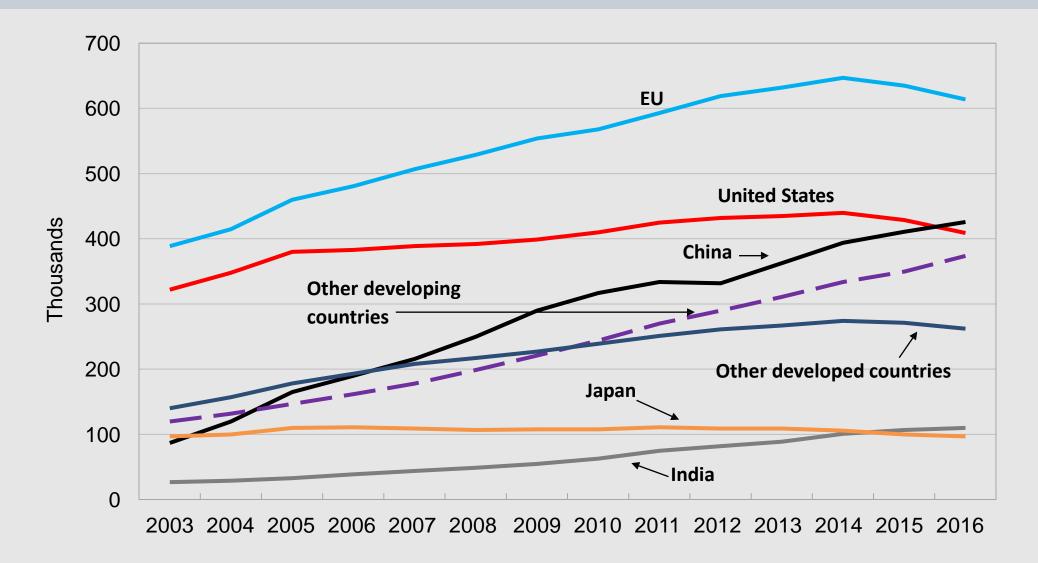
Investigación y desarrollo Innovación

### R&D expenditures: 2000–15



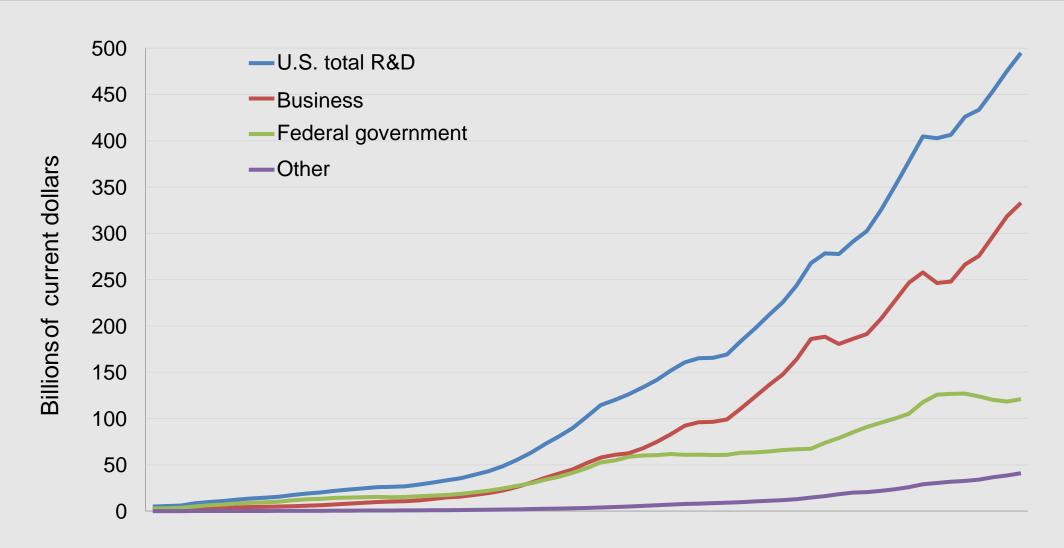


### Peer-reviewed S&E publications: 2003–16



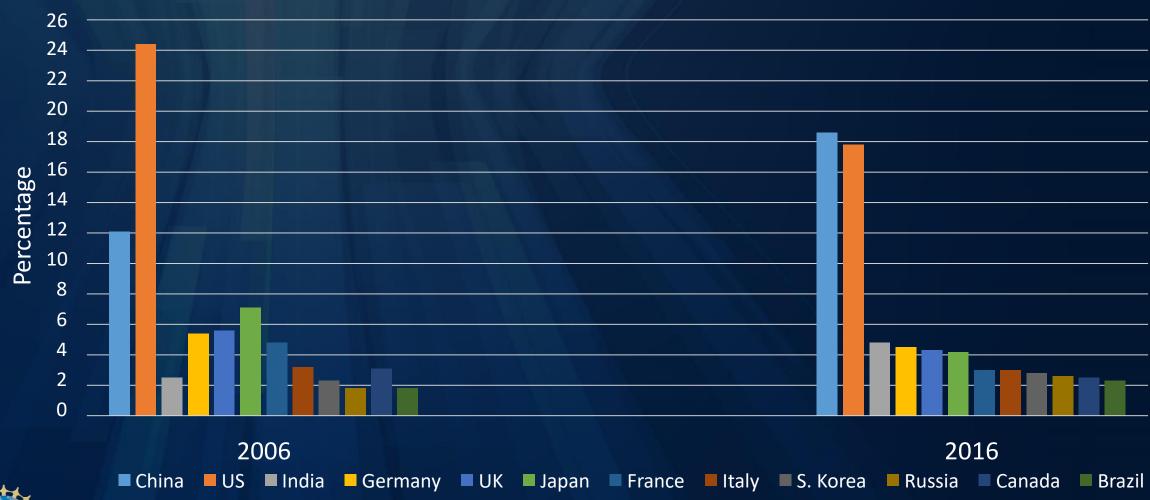


### U.S. R&D source of funds: 1953–2015



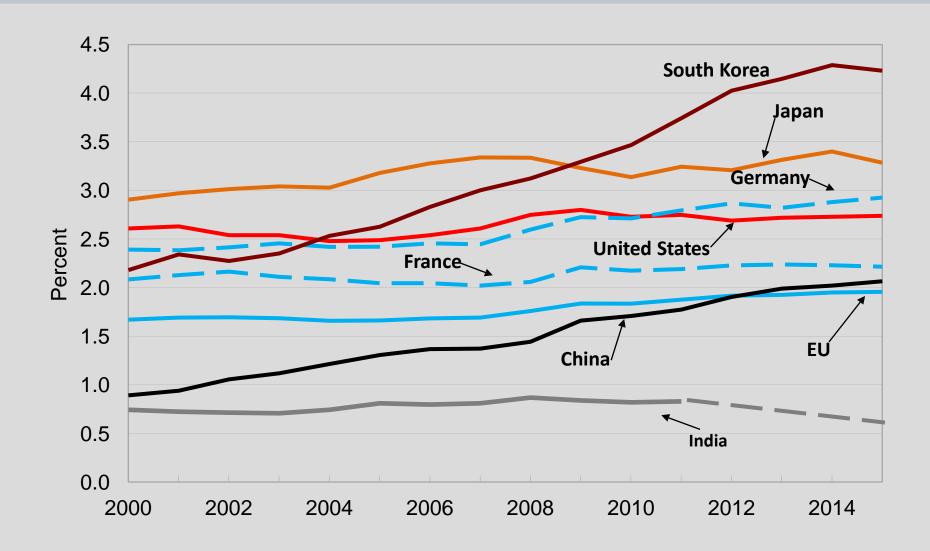


## S&E Articles (%) in all Fields by Top Countries





## R&D Intensity (R&D/GDP): 2000-15





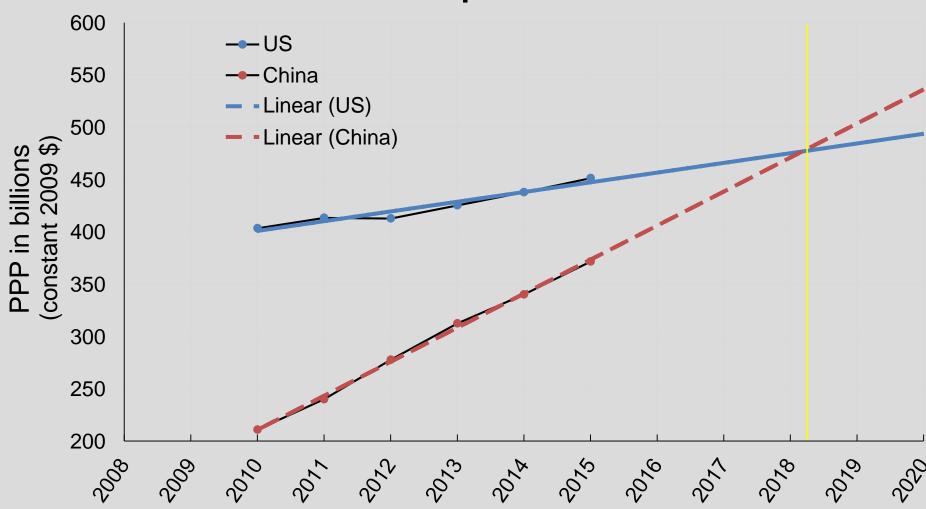
## Global R&D Expenditures by Region: 2015





# What might the future hold?

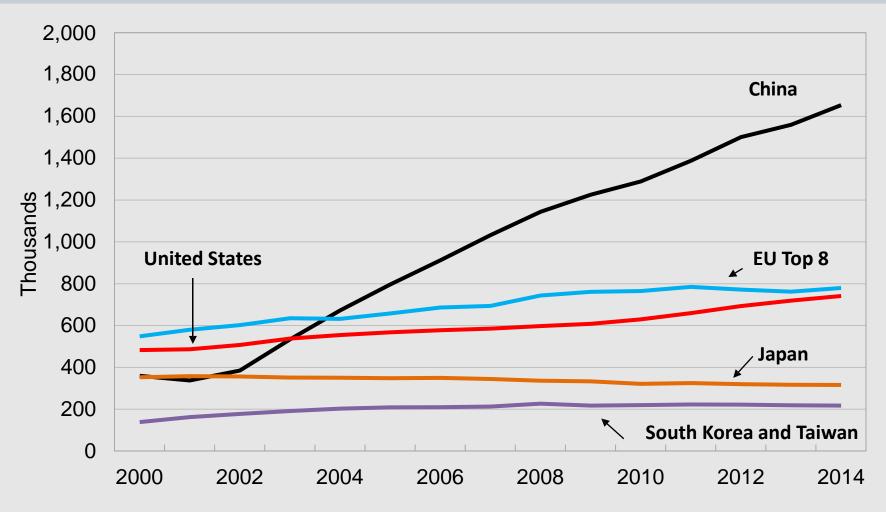
#### **Gross Expenditures on R&D**





Educación Investigación desarrollo Innovación

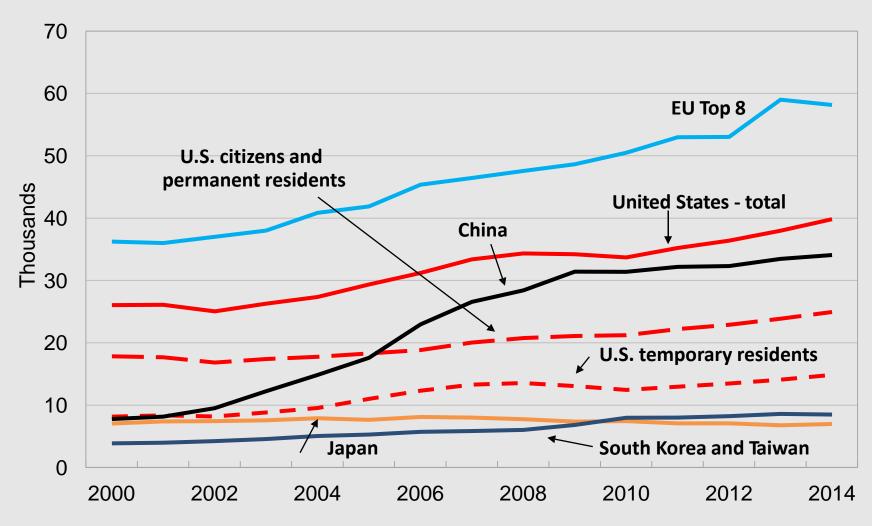
### S&E Bachelor's Degree Awards: 2000-14

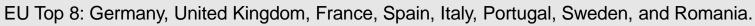






### S&E Doctoral Degree Awards: 2000-14







#### Academic Ranking of World Universities in Engineering/Technology and Computer Sciences - 2016

SCI ENG	LIFE MED SOC Methodology	Statistics		
World Rank	Institution	Country	Total Score	Score on HiCi ∨
1	Massachusetts Institute of Technology (MIT)		100.0	80.4
2	Nanyang Technological University	<b>©</b>	92.9	76.7
2	Stanford University		92.9	100.0
4	Tsinghua University	*)	87.6	42.0
5	King Abdulaziz University	200	87.4	87.4
6	National University of Singapore	<b>©</b>	84.7	59.4
	T			

### **PISA Test**

#### Which countries are best at reading and maths?



#### Reading Top 12

- 01 Singapore \*
- 02 China: Hong Kong \*
- 03 Canada \*
- 04 Finland
- 05 Ireland
- 06 Estonia
- 07 South Korea
- 08 Japan
- 09 Norway
- 10 New Zealand
- 11 Germany
- 12 China: Macao



#### Maths Top 12

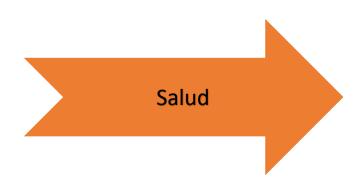
- 01 Singapore \*
- 02 China: Hong Kong \*
- 03 China: Macao \*
- 04 Taiwan
- 05 Japan
- 06 China: Beijing, Shanghai, Jiangsu and Guangdong
- 07 South Korea
- 08 Switzerland
- 09 Estonia
- 10 Canada
- 11 Netherlands
- 12 Denmark

Table 1: Ten countries with the most efficient education sectors

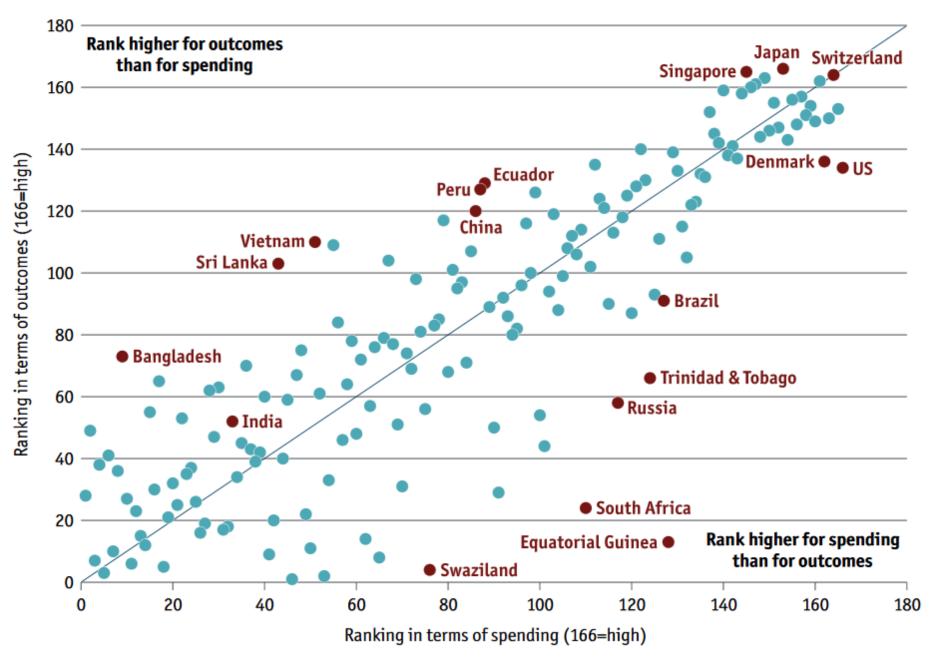
Rank	Country	GDP (PPP)	PISA surplus	GMAT surplus	Combined
1	China	\$15,399	115	94	209
2	Vietnam	\$6,429	93	63	156
3	Singapore	\$90,151	60	72	131
4	Georgia	\$10,044	22	106	128
5	Poland	\$27,764	39	69	108
6	New Zealand	\$37,294	18	83	101
7	Russia	\$26,490	40	53	93
8	Korea	\$37,740	41	49	90
9	Japan	\$41,275	61	28	89
10	Slovenia	\$32,085	34	50	84

Source: Author's calculations, GMAC, IMF, OECD, World Bank

El cambio en educación es fácil de proponer, difícil de implementar y extraordinariamente difícil de sostener".HARGREAVES &FINK (2006)

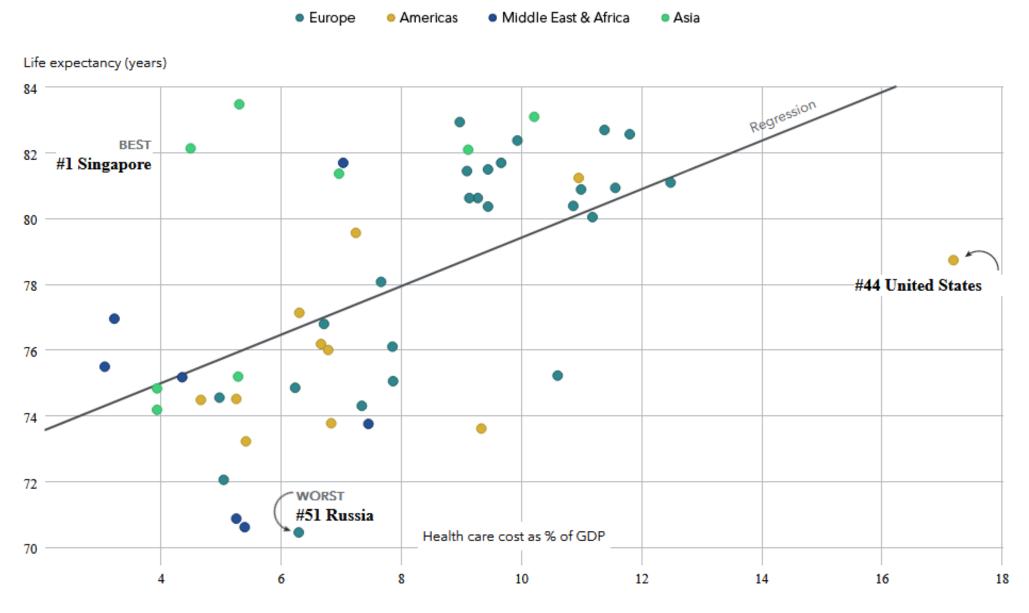


#### Outcomes rank versus spending rank



Sources: The Economist Intelligence Unit; World Health Organisation.

#### ESPERANZA DE VIDA VS COSTOS DE SALUD



Sources: World Bank, International Monetary Fund, World Health Organization, Hong Kong Department of Health
GRAPHIC: CHLOE WHITEAKER / BLOOMBERG VISUAL DATA; EDITORIAL: WEI LU / BLOOMBERG RANKINGS & ANNA EDNEY / BLOOMBERG
NEWS

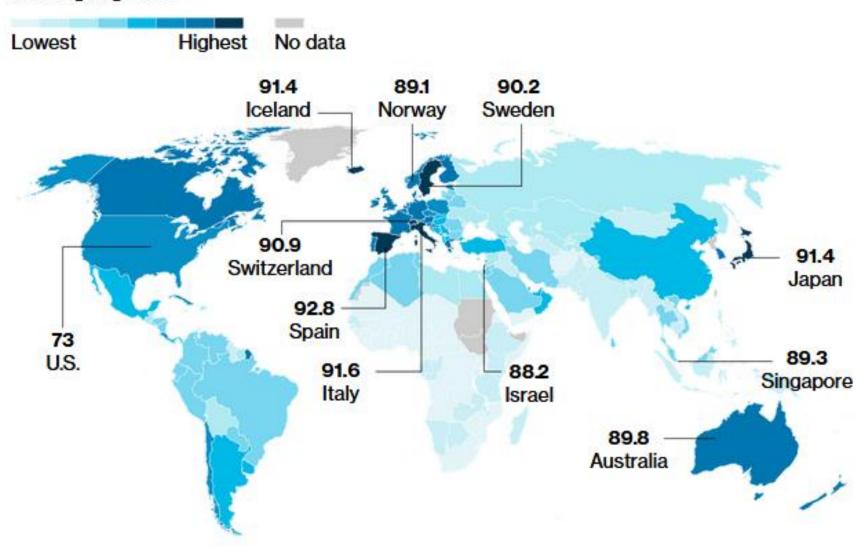
ASEAN Member Nation	Healthcare Expenditure Per Capita (USD), 2013	Healthcare Expenditure, Total (% of GDP), 2013
Singapore	2,507	4.6
Brunei	974	2.5
Malaysia	423	4.0
Thailand	264	4.6
Philippines	122	4.4
Vietnam	111	6.0
Indonesia	107	3.1
Cambodia	76	7.5
Laos	32	2.0
Burma	14	1.8

Source: World Bank

SINGAPORE - Singapore has been ranked No. 2 in the world for health-care outcomes, according to a report by The Economist Intelligence Unit (EIU). The Republic followed closely after Japan. South Korea was placed third. The report "Health outcomes and cost: a 166-country comparison" assesses the efficiency of health-care systems globally, looking at value for money.

#### **Healthiest Countries in the World**

Bloomberg Global Health Index scores for 169 countries, with the top 10 plus U.S. highlighted



Sources: Bloomberg analysis of World Health Organization data; United Nations Population Division and the World Bank

# CADENA DE INNOVACIÓN

## SUSTENTABILIDAD

**SALUD** 

**EDUCACIÓN** 

**INVESTIGACIÓN** 

**DESARROLLO** 

INNOVACIÓN

**INVENCIÓN** 

EMPRENDIMIENT