

Krytyka rozumu cyfrowego

Zagadki rewolucji technologicznych

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Tygodnik POLITYKA
Gdańsk, 12 kwietnia 2019 r.

**Lekcja Donalda
Rumsfelda o rzeczach
znanych i nieznanych**

Znane znane

Google's Self-Driving Cars: 300,000 Miles Logged, Not a Single Accident Under Computer Control

AUG 9 2012, 12:29 PM ET 77

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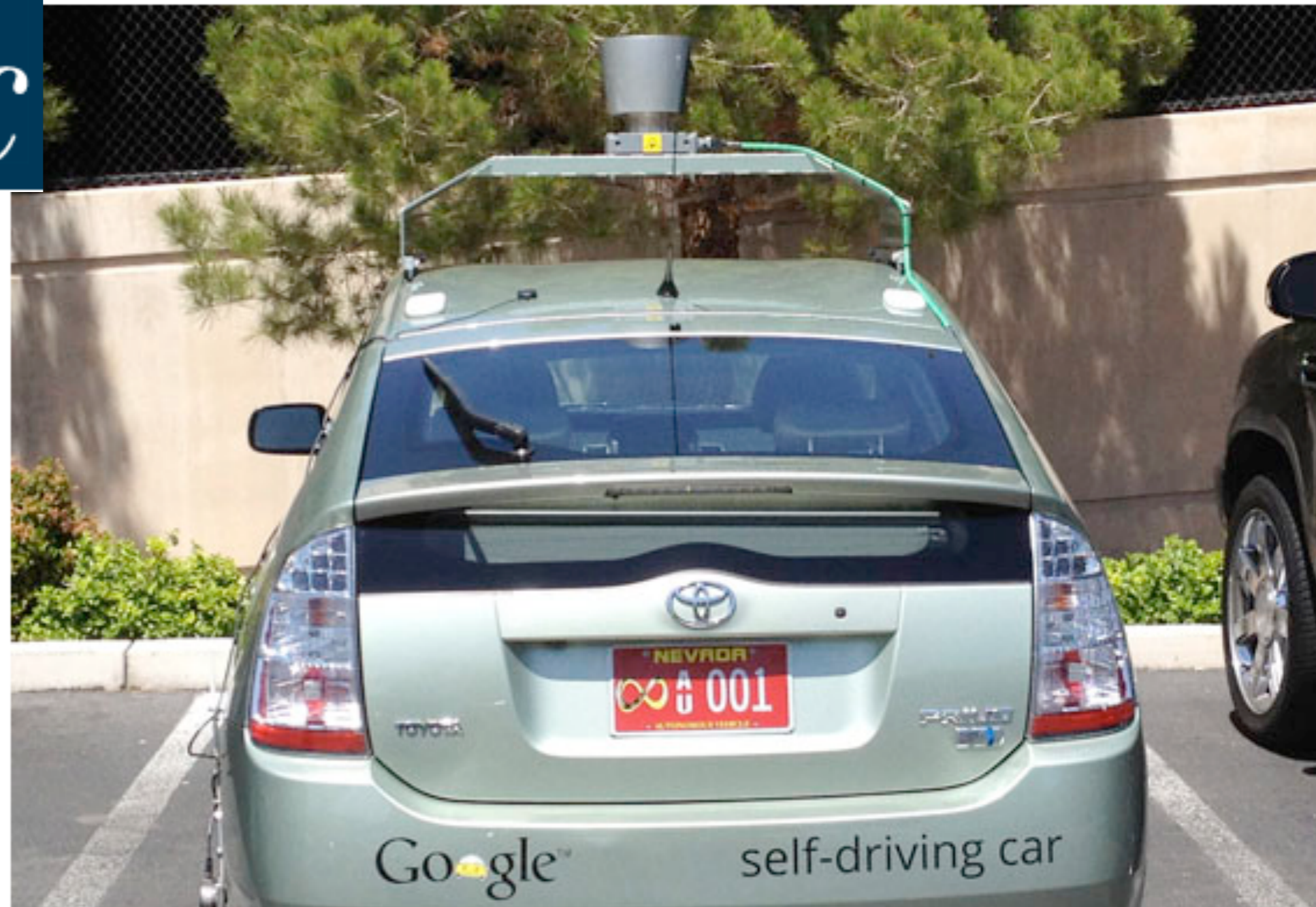
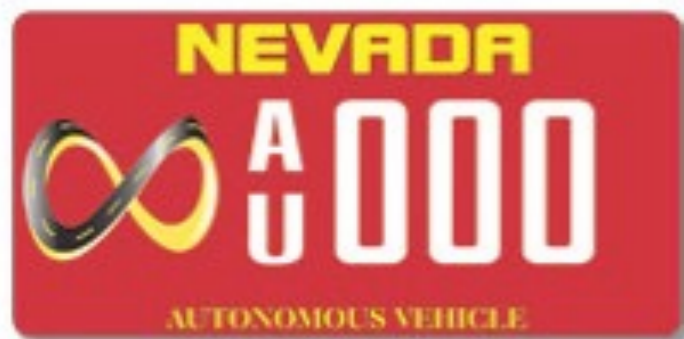
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The automated cars are slowly building a driving record that's better than that of your average American.

the *Atlantic*



Nakłady na B+R

Select Columns ▾ Find company in list 🔍

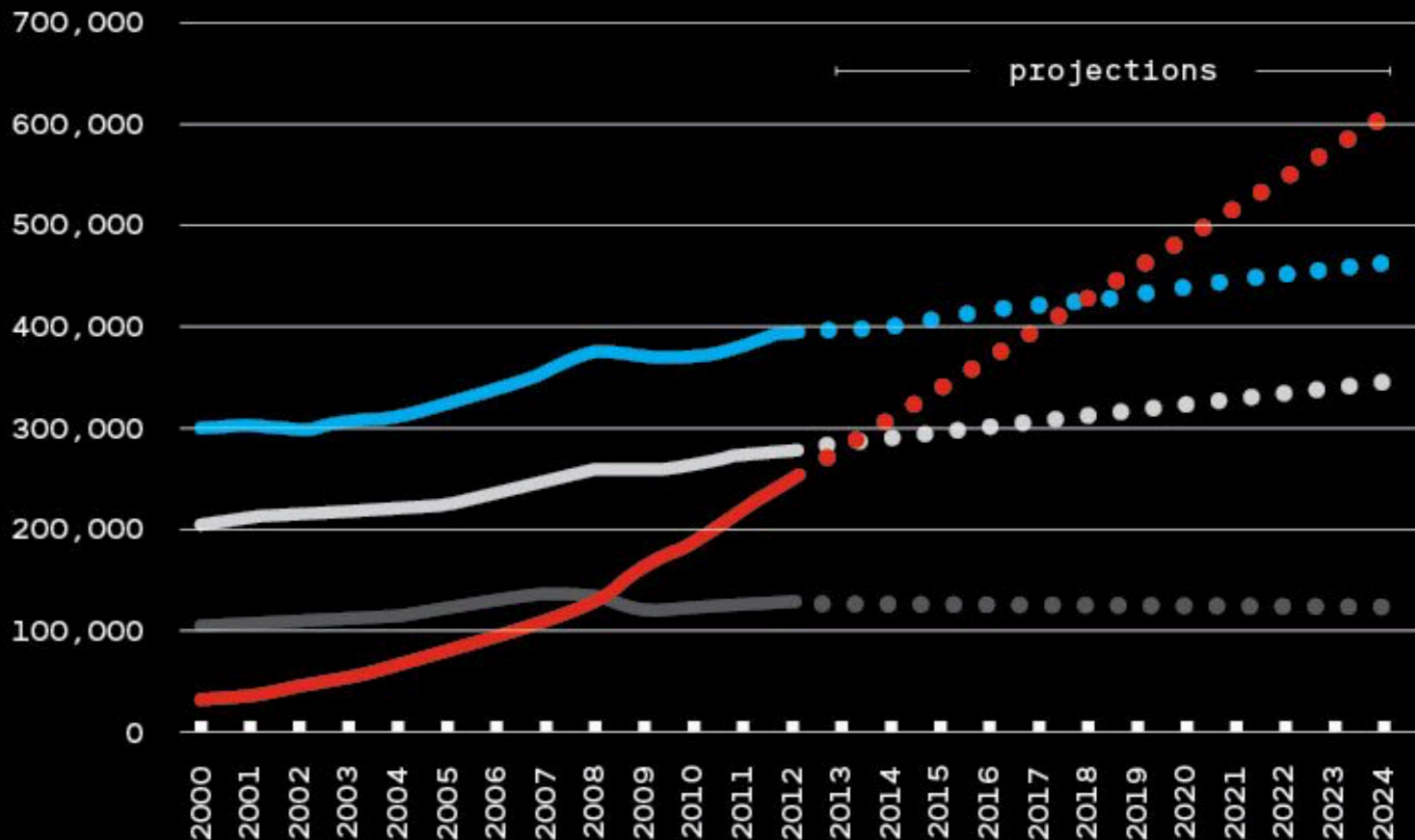
2018 Rank ▲	Company Name ▲	Country ▲	Industry group ▲	R&D Expenditures (\$US Billions)		Revenue (\$US Billions)		R&D Intensity	
				2017 ▲	2018 ▲	2017 ▲	2018 ▲	2017 ▲	2018 ▲
1	Amazon.com, Inc.	United States	Retailing	16.1	22.6	136.0	177.9	11.8%	12.7%
2	Alphabet Inc.	United States	Software and Services	13.9	16.2	90.3	110.9	15.5%	14.6%
3	Volkswagen Aktiengesellschaft	Germany	Automobiles and Components	13.8	15.8	260.9	277.0	5.3%	5.7%
4	Samsung Electronics Co., Ltd.	South Korea	Technology Hardware and Eq...	14.3	15.3	189.0	224.3	7.6%	6.8%
5	Intel Corporation	United States	Semiconductors and Semicon...	12.7	13.1	59.4	62.8	21.5%	20.9%
6	Microsoft Corporation	United States	Software and Services	13.0	12.3	85.3	90.0	15.3%	13.7%
7	Apple Inc.	United States	Technology Hardware and Eq...	10.0	11.6	215.6	229.2	4.7%	5.1%
8	Roche Holding AG	Switzerland	Pharmaceuticals, Biotechnolo...	11.8	10.8	54.0	57.2	21.9%	18.9%
9	Johnson & Johnson	United States	Pharmaceuticals, Biotechnolo...	9.1	10.6	71.9	76.5	12.7%	13.8%
10	Merck & Co., Inc.	United States	Pharmaceuticals, Biotechnolo...	10.1	10.2	39.8	40.1	25.4%	25.4%

Chińskie wyzwanie

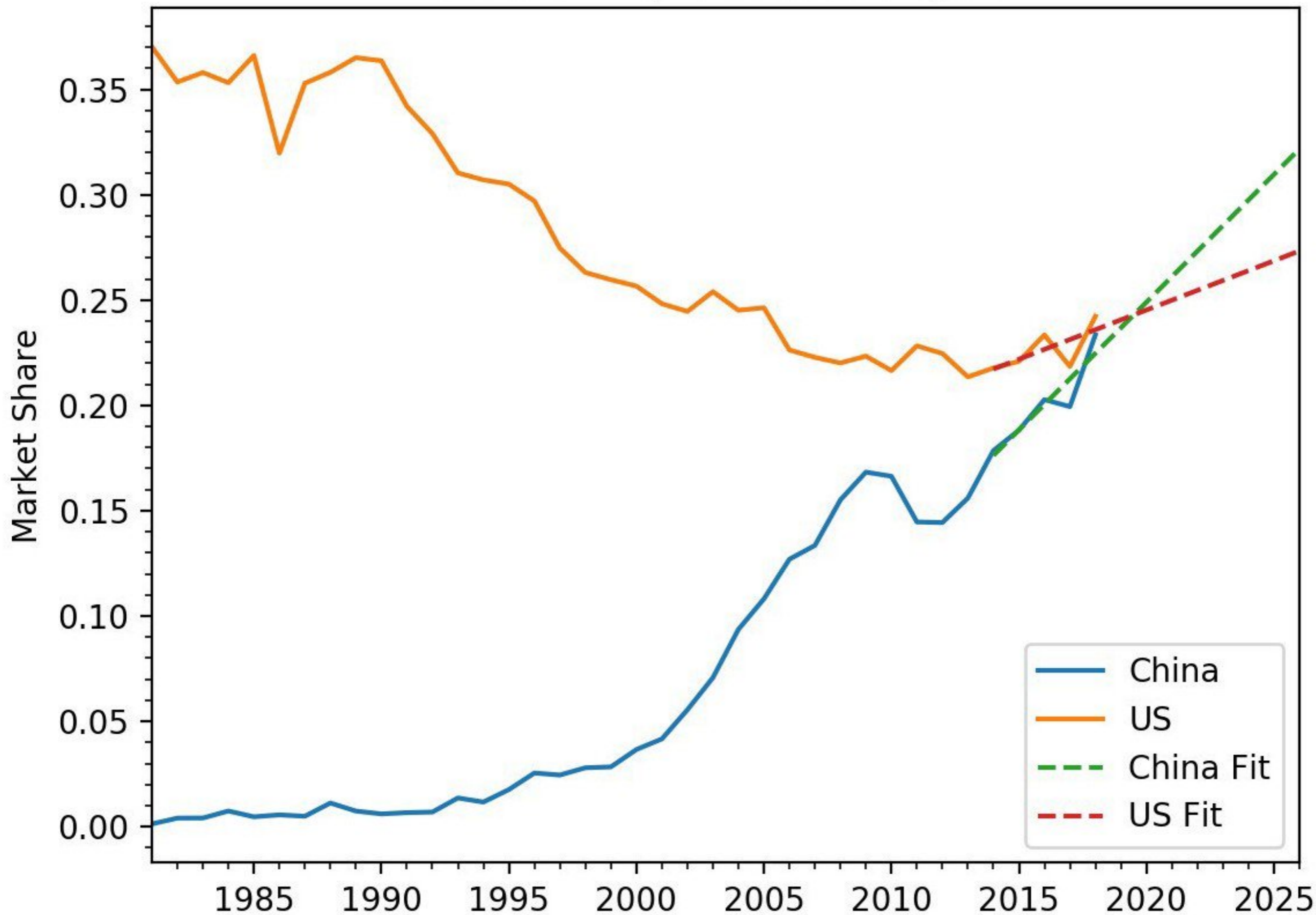
China is poised to outpace the US in R&D spending

Gross domestic expenditure on R&D in millions of 2005 USD at purchasing power parity, 2000–2012 and projections to 2024

- US
- EU28
- Japan
- China



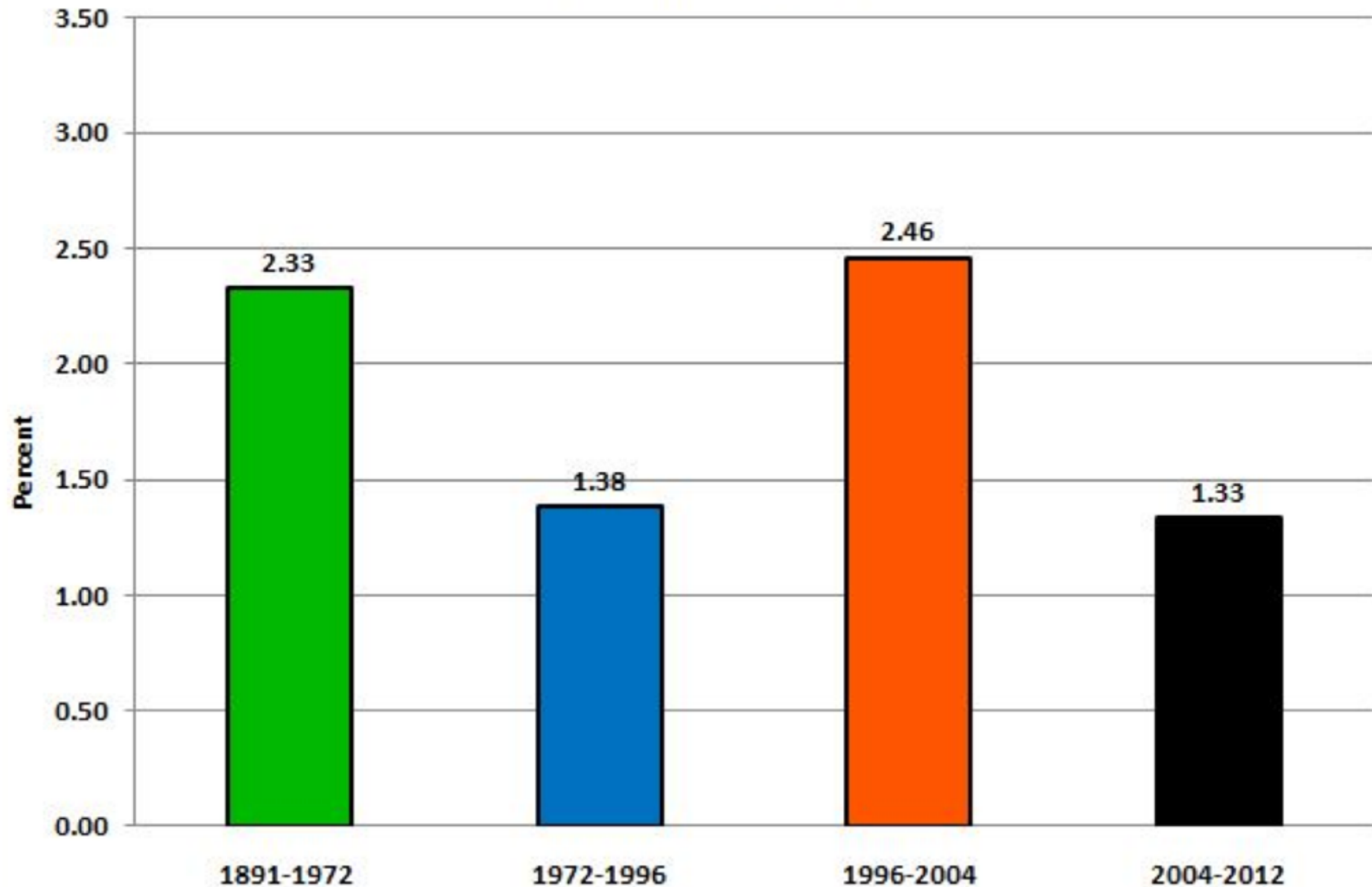
Share of top 50% of AI Papers



Znane nieznanne

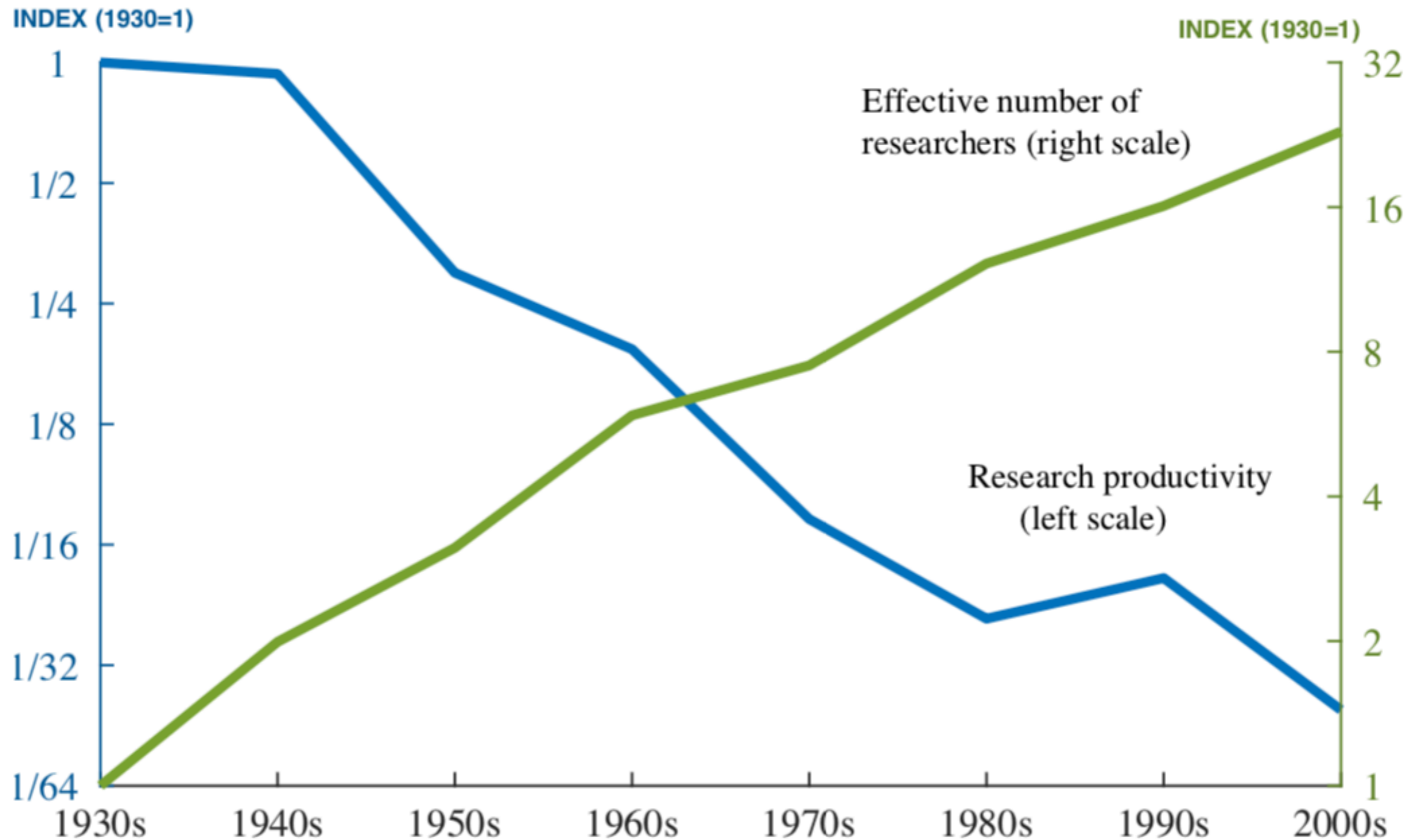
R. Gordon - koniec wzrostu

Figure 4: Average Growth Rates of US Labor Productivity Over Selected Intervals, 1891-2012



Produktywność R+B

Figure 2: Aggregate Evidence on Research Productivity



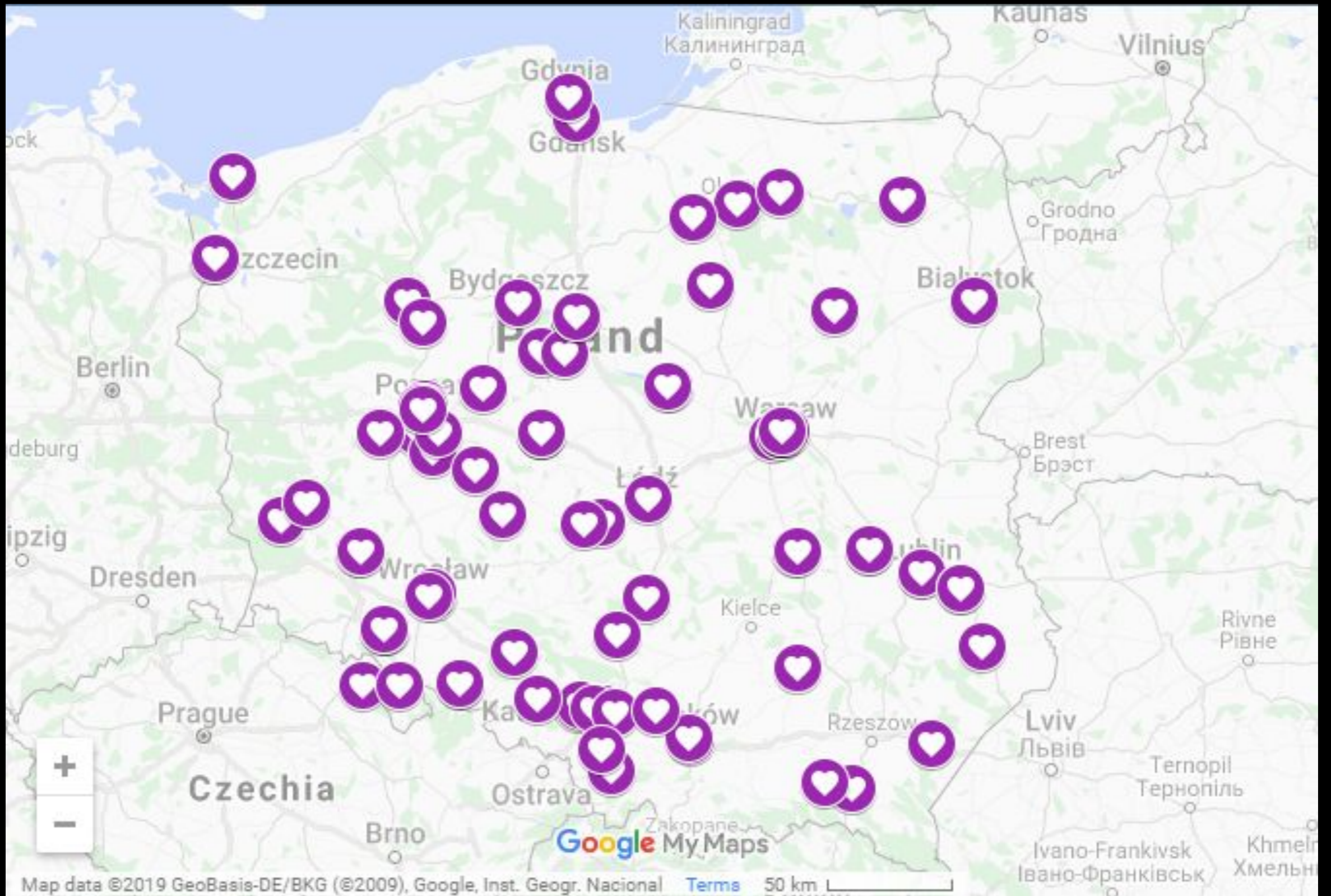
Nieznane nieznane

**Czarny łabędź,
czyli niezwykle rzadkie
zdarzenie**

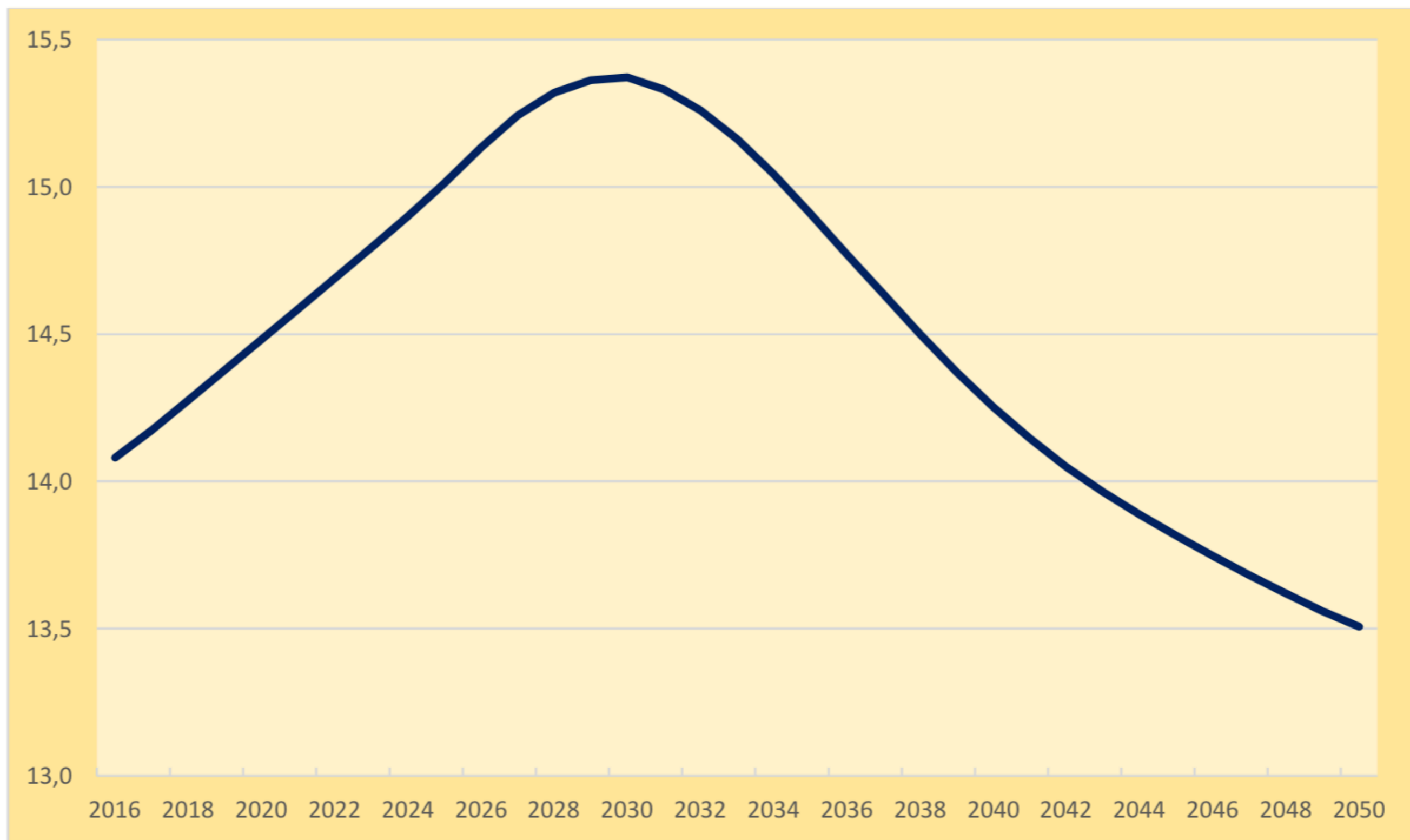




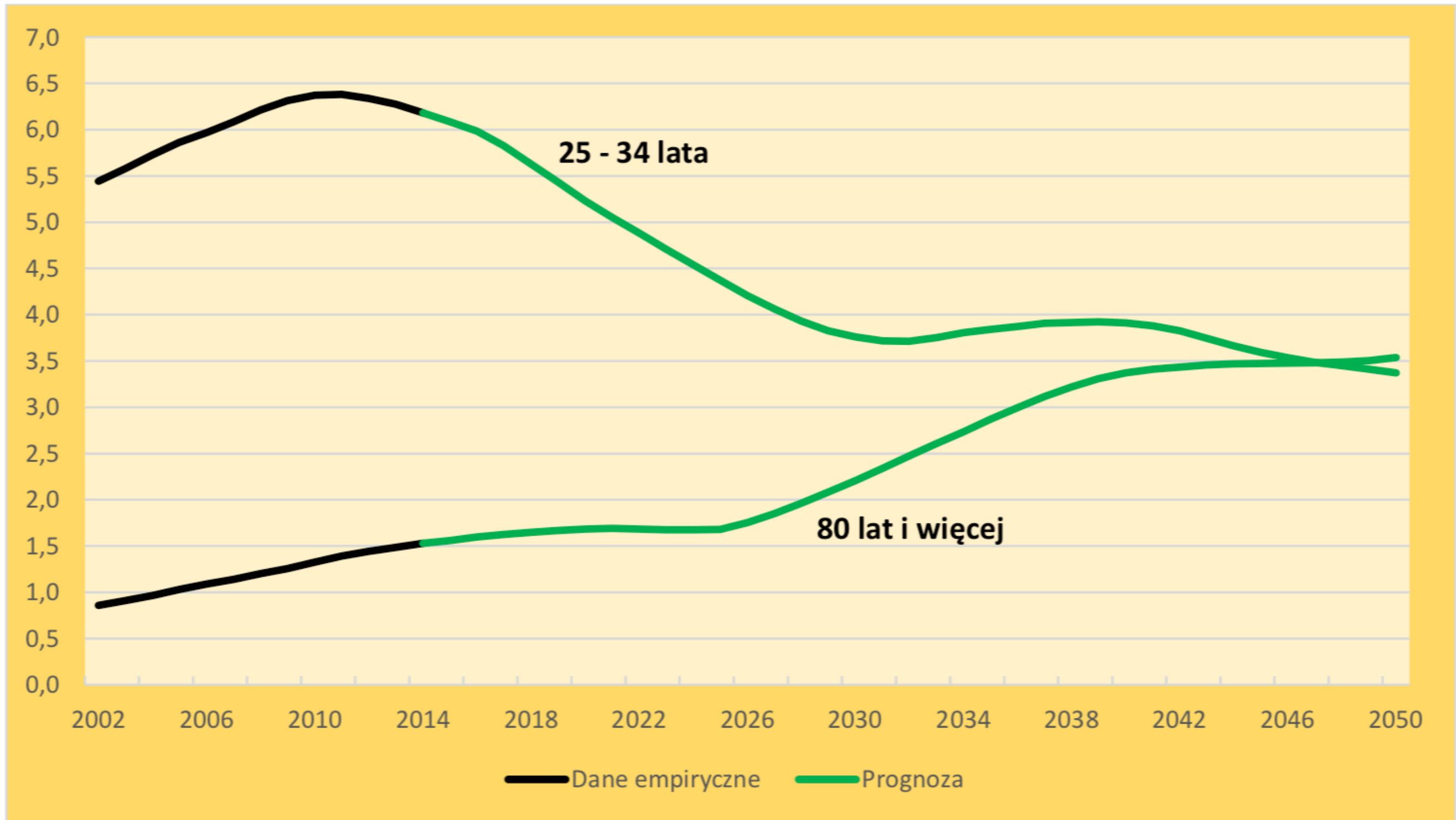
SKOLSTREJK
FÖR
KLIMATET



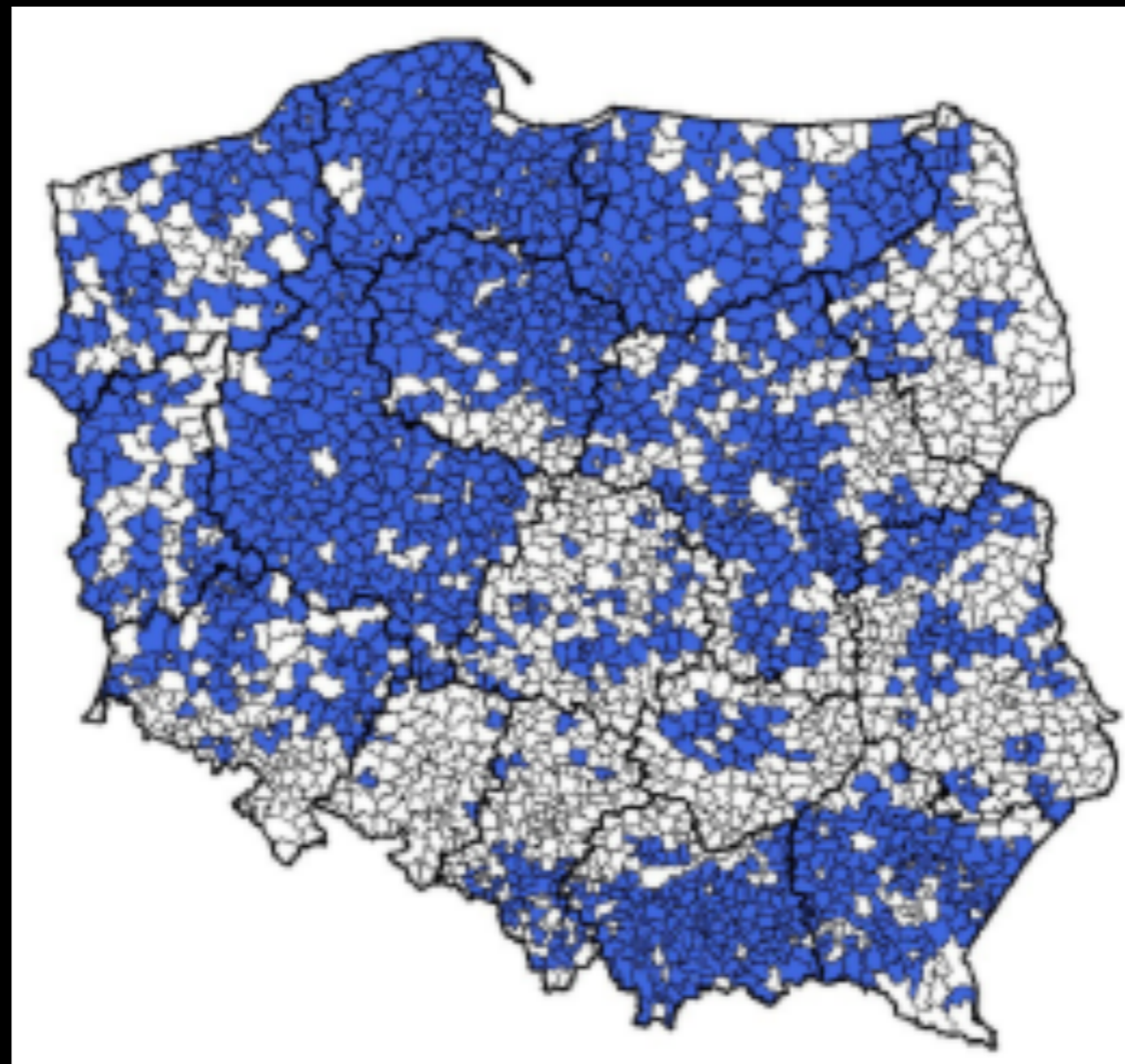
Wyk.2. Liczba gospodarstw domowych w latach 2016 – 2050 (w mln)



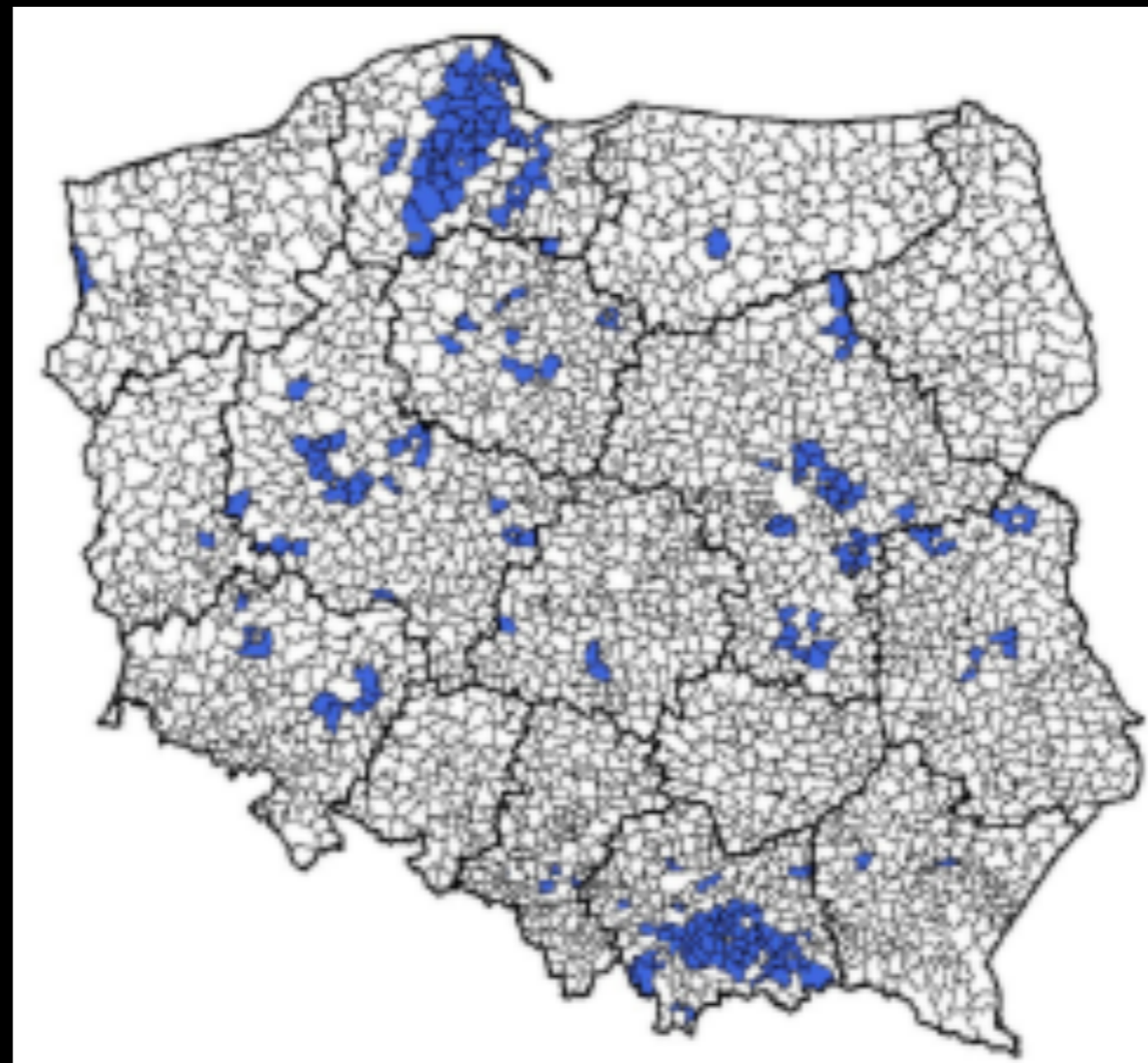
Wyk.1. Ludność w wieku 25 – 34 lata oraz 80 lat i więcej w latach 2002 - 2050



Gminy o większej liczbie osób w wieku przedprodukcyjnym, 2016



Gminy o większej liczbie osób w wieku przedprodukcyjnym, 2030



**Solidarność,
największa innowacja
drugiej połowy XX wieku**