

Digital General Purpose Technologies (dGPTs)

Evidence from AI Patent Landscaping & WIPR 2022

*WIPO Conversation on IP and Frontier Technologies,
6th Session*

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Diverse technologies have driven innovation growth over the past 100 years



**Engine &
Transport**

1895–1925



Biopharma

1930–1960



ICTs

1965–2000

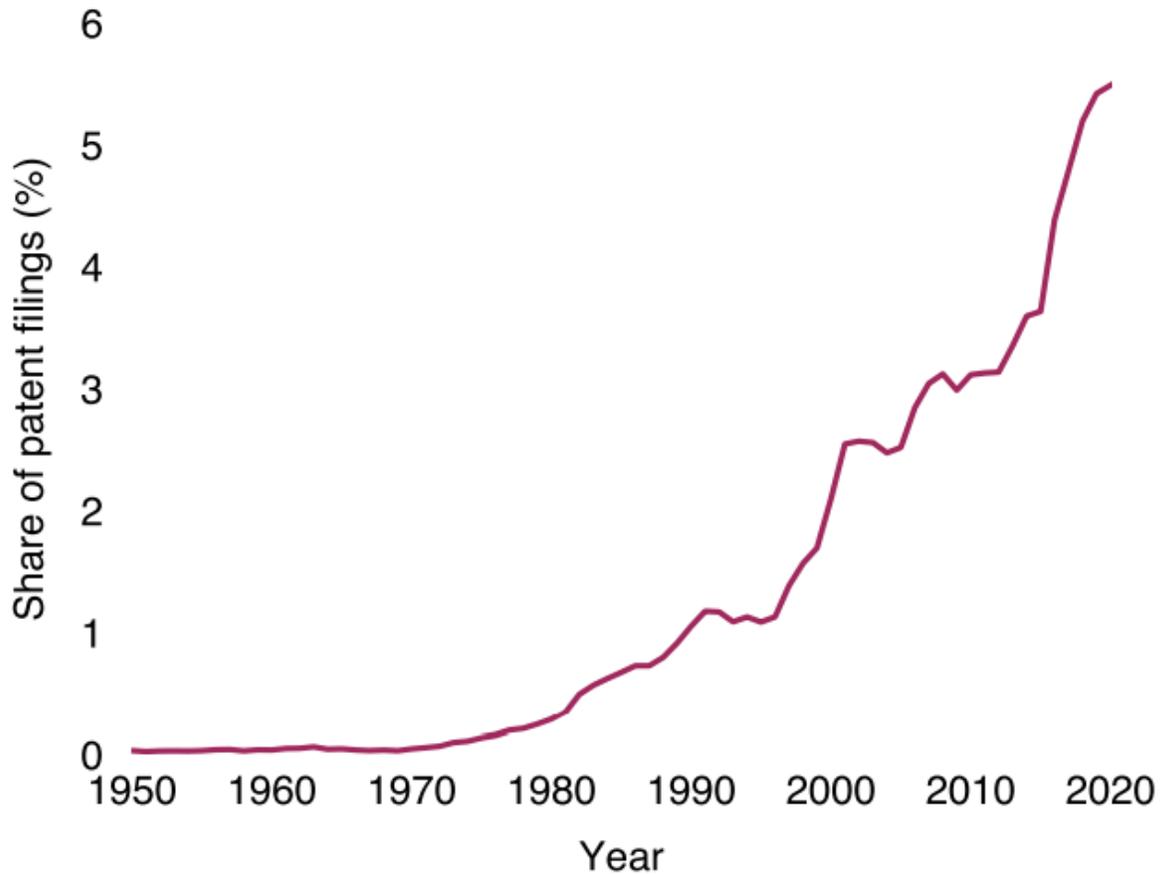


**Digital
technologies**

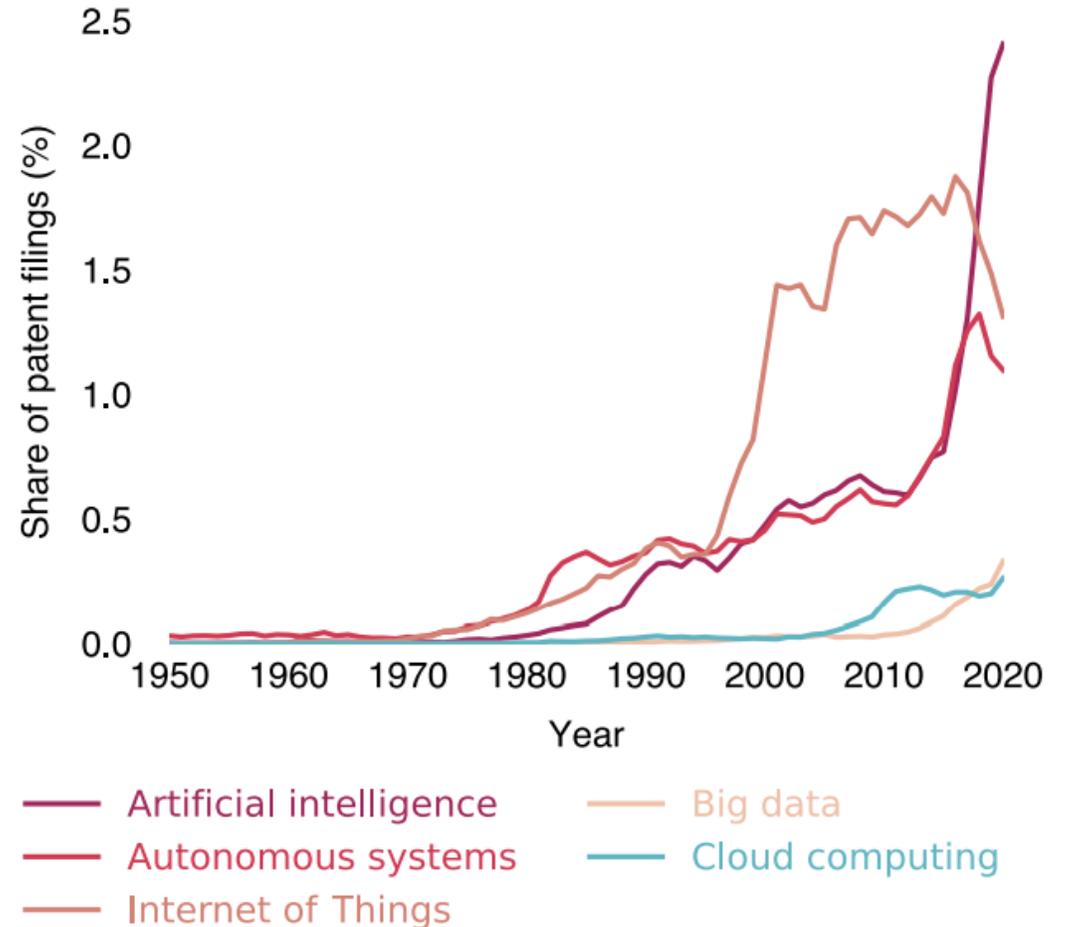
2000–2020

dGPTs boom is led by AI technologies

dGPTs are booming



dGPTs by subfields



Digital technologies

have grown 172% faster than average in the past 5 years



Artificial intelligence

+718%



Big data

+699%



Cloud computing

+122%



Autonomous systems

+109%



Internet of Things

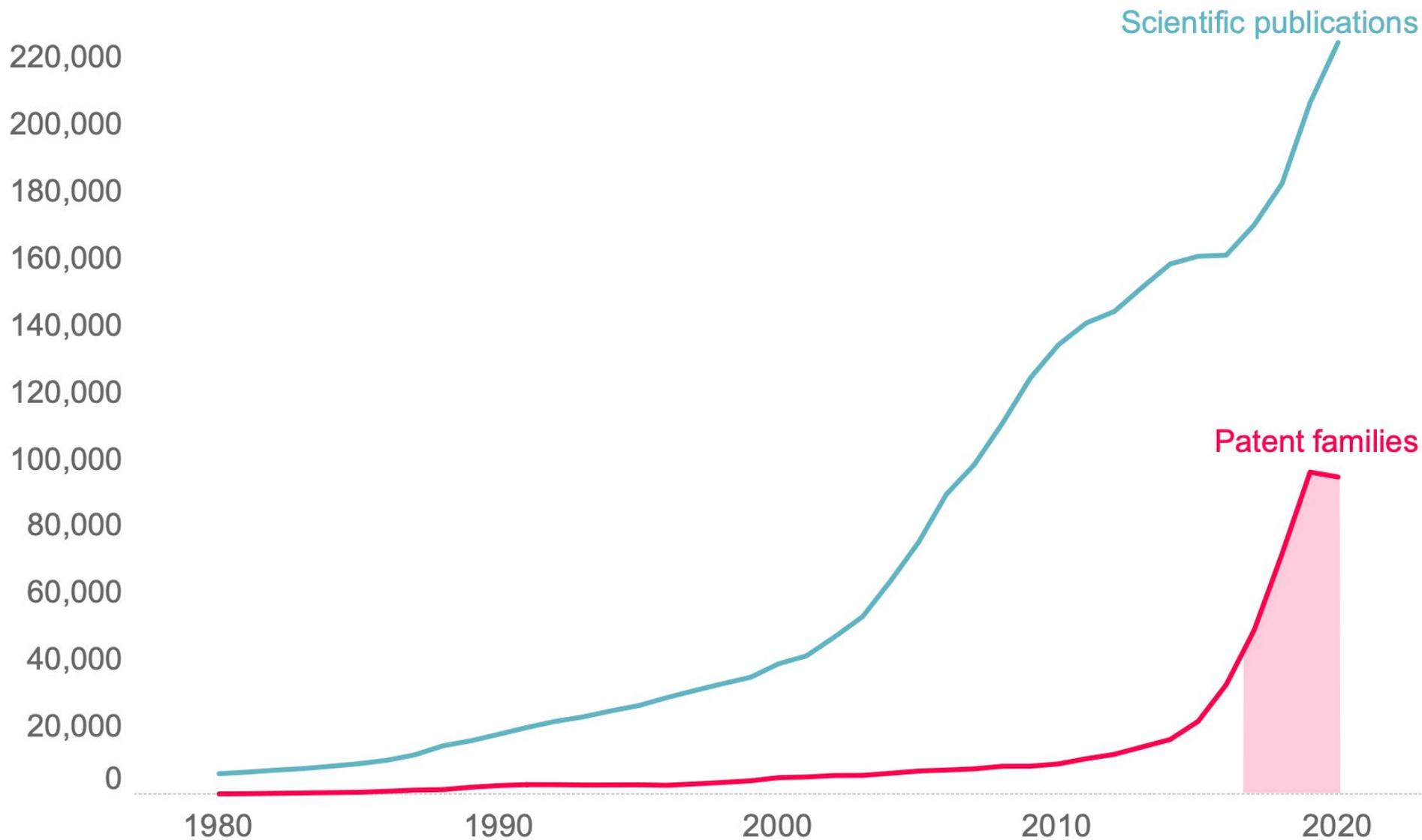
-81%



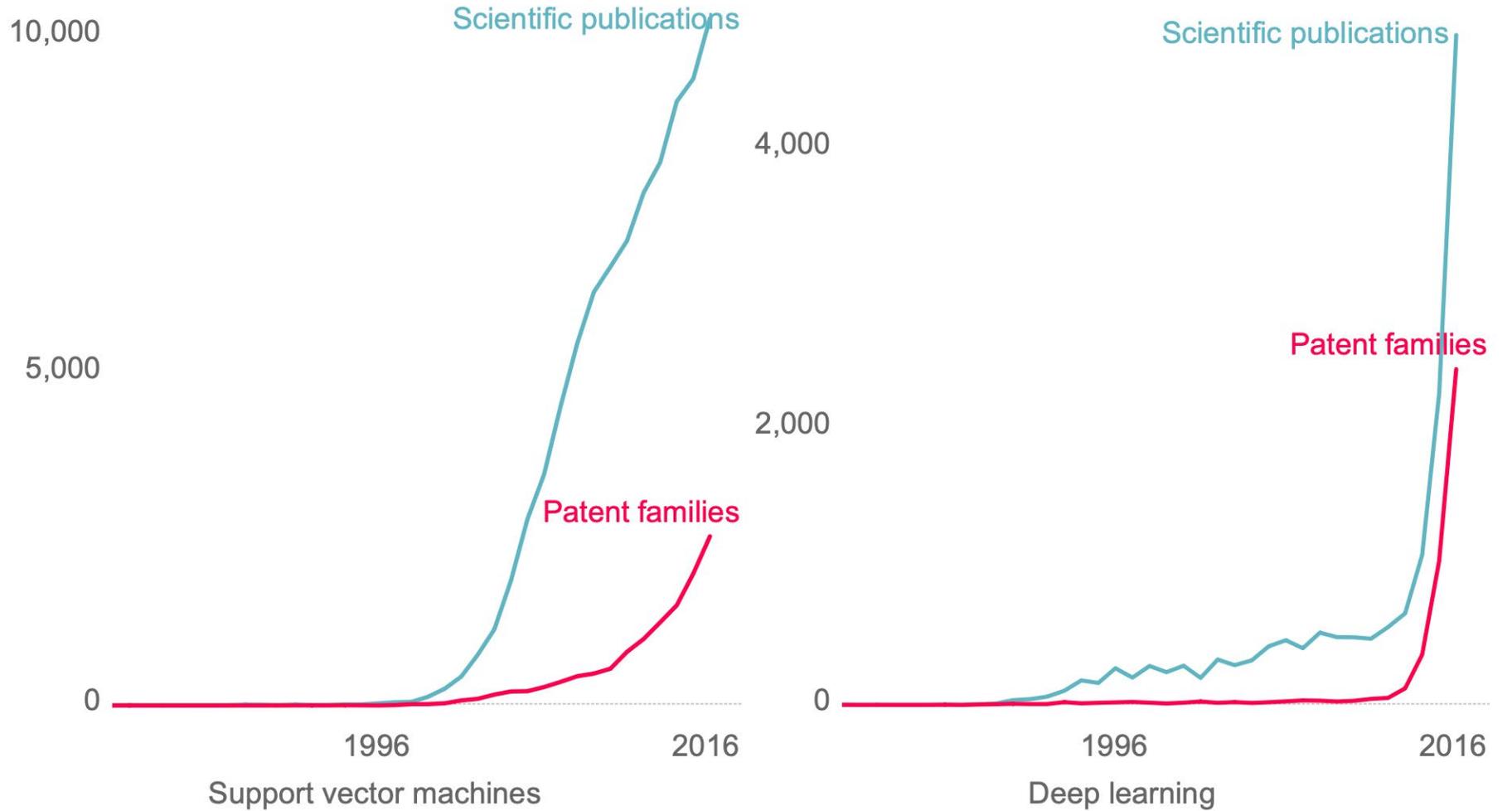
Digital technologies

+172%

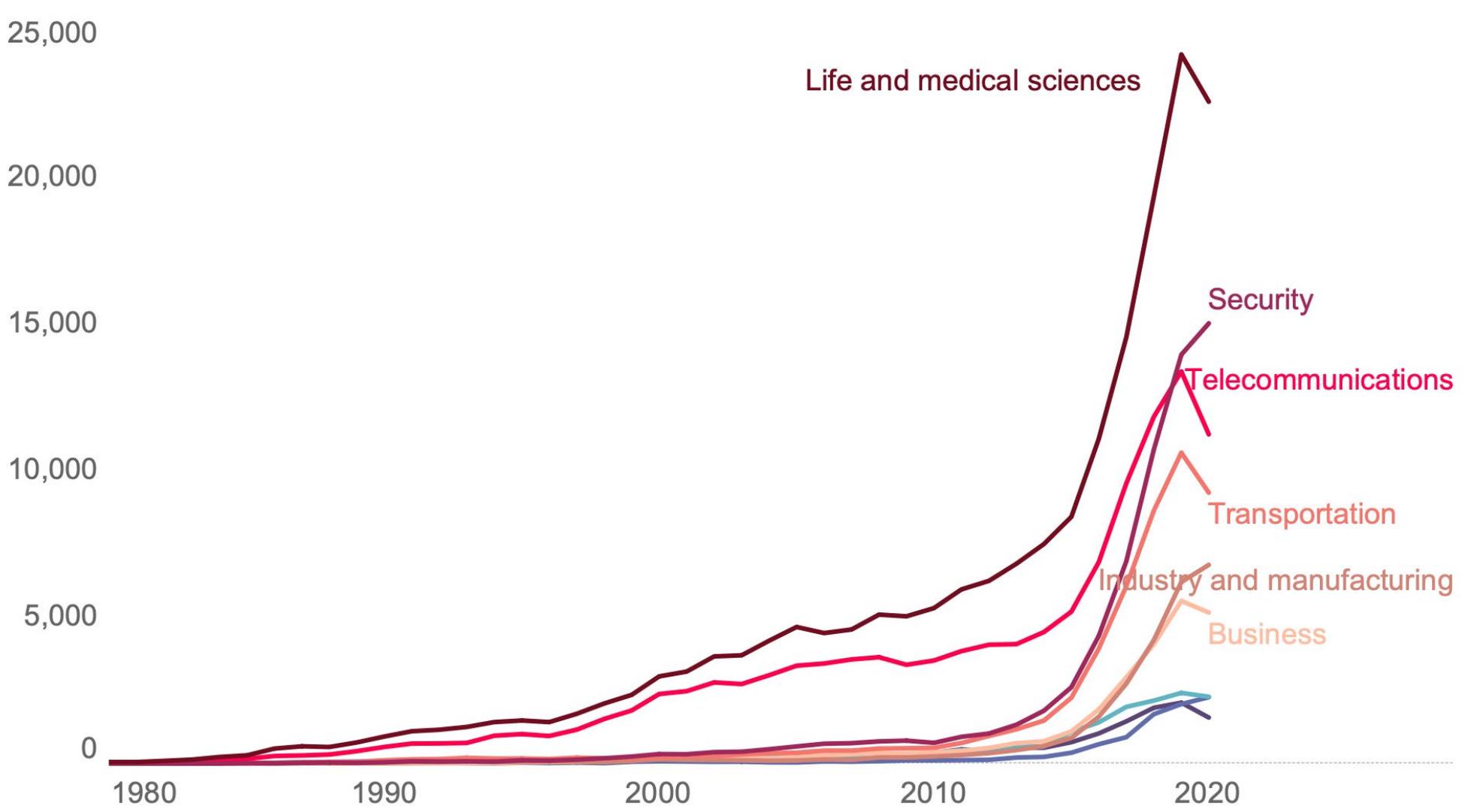
Shift from Research to Commercial Application



Deep learning tech boom follows closely scientific research boom

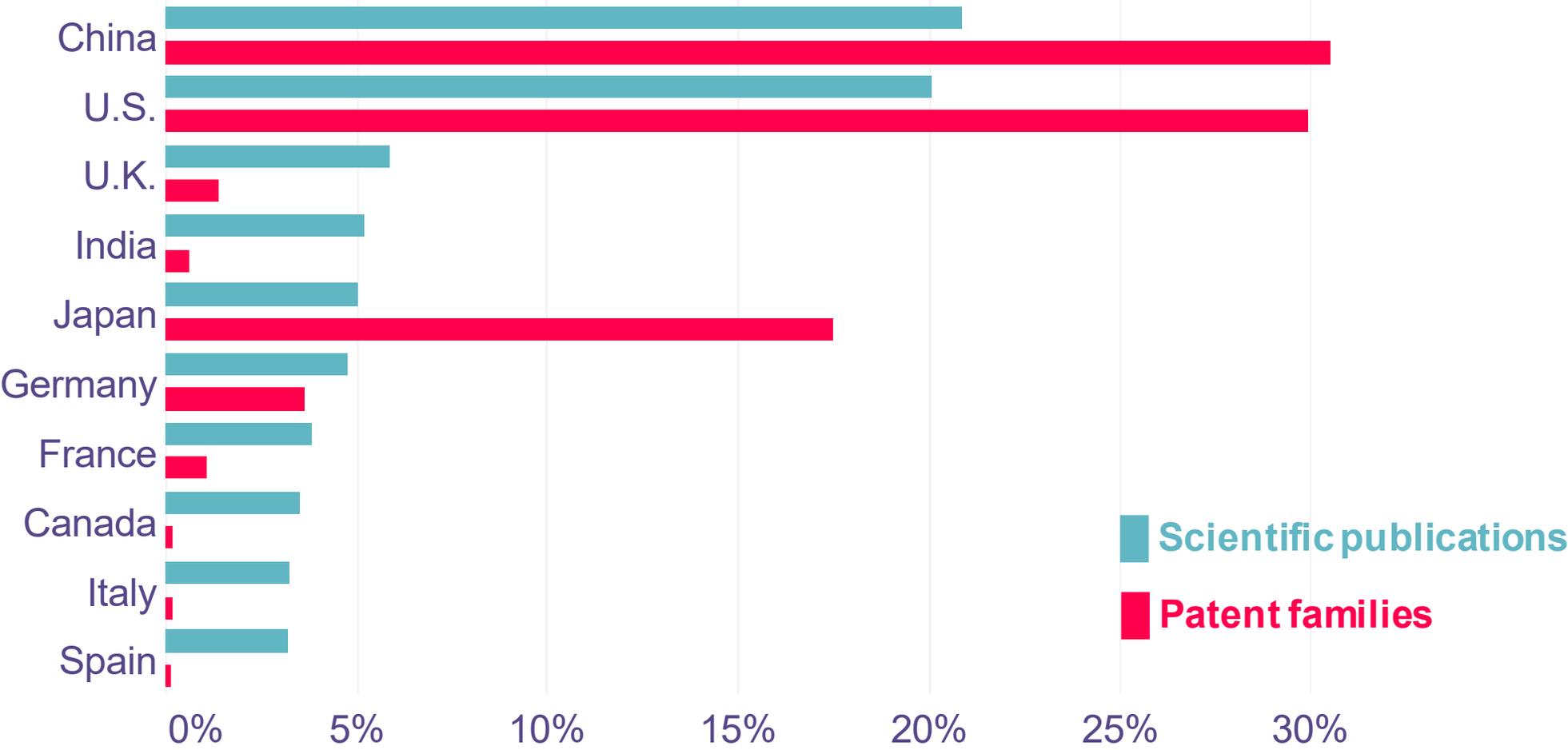


Life sciences applications lead the way



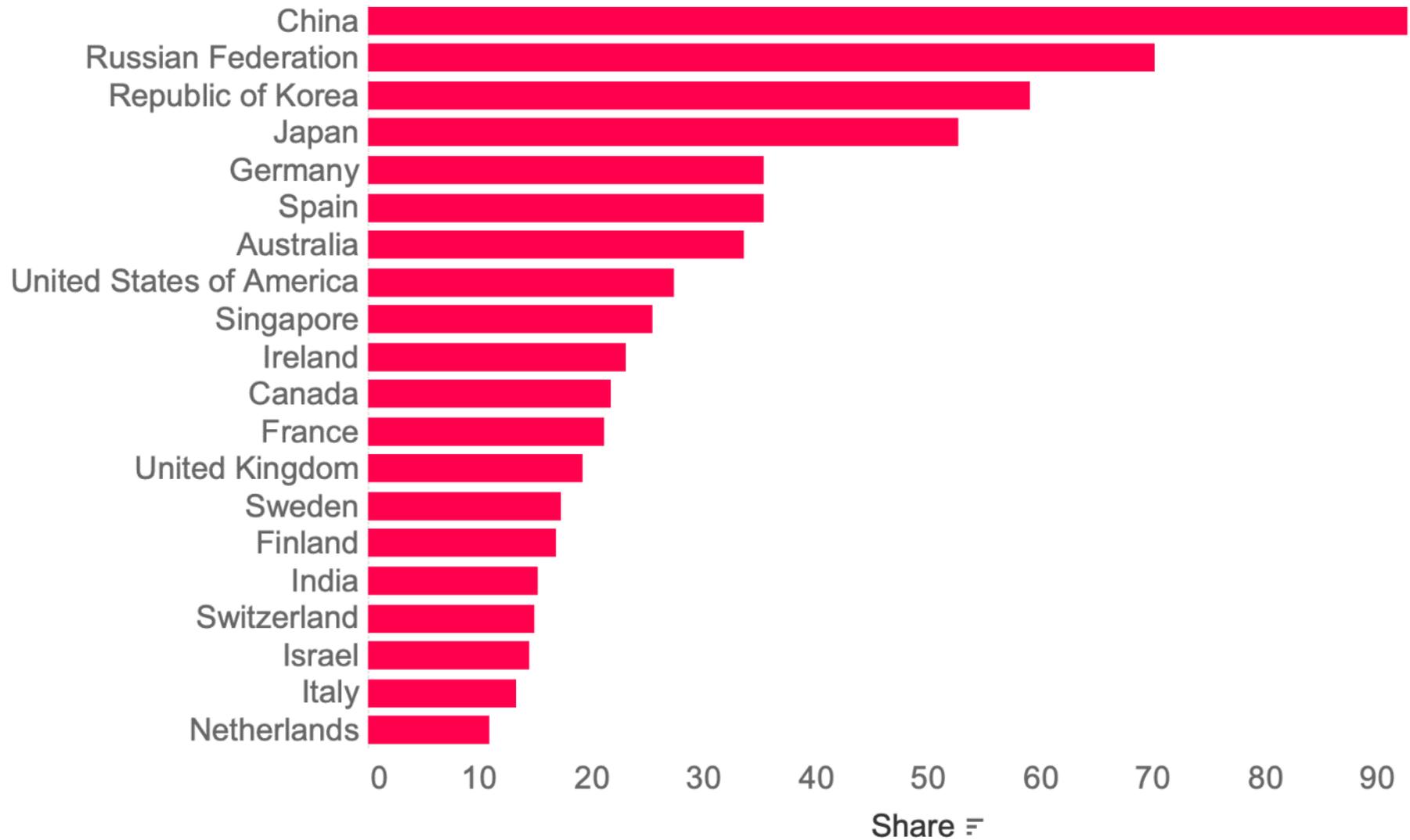


AI patents are more concentrated than publications

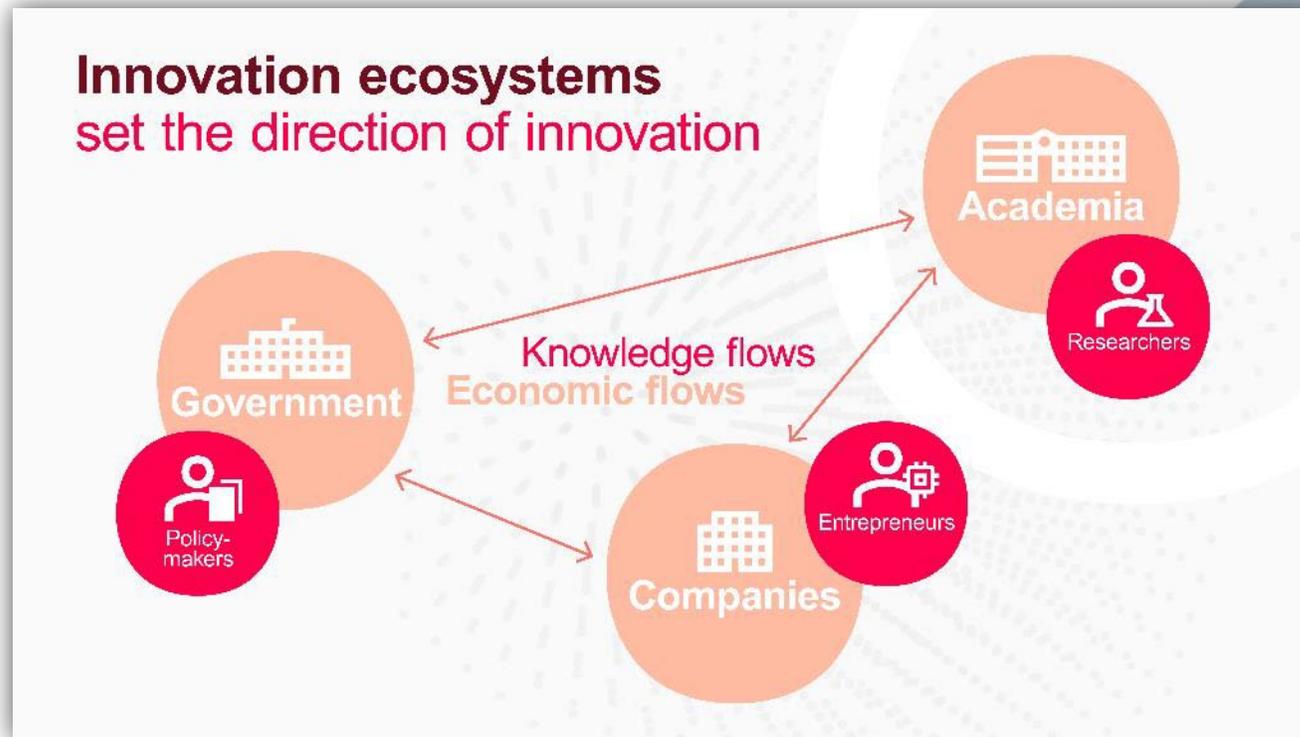




Most AI technologies seek protection in one jurisdiction only



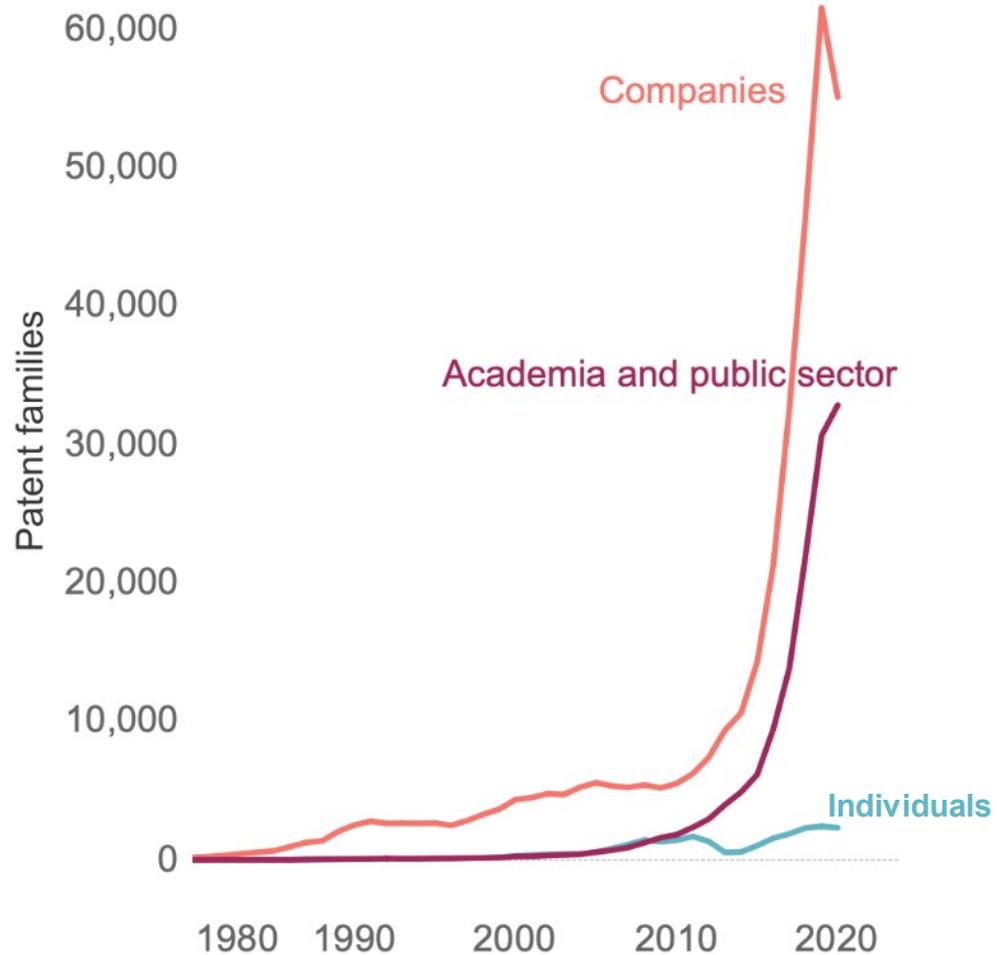
What sets the Direction of Innovation?



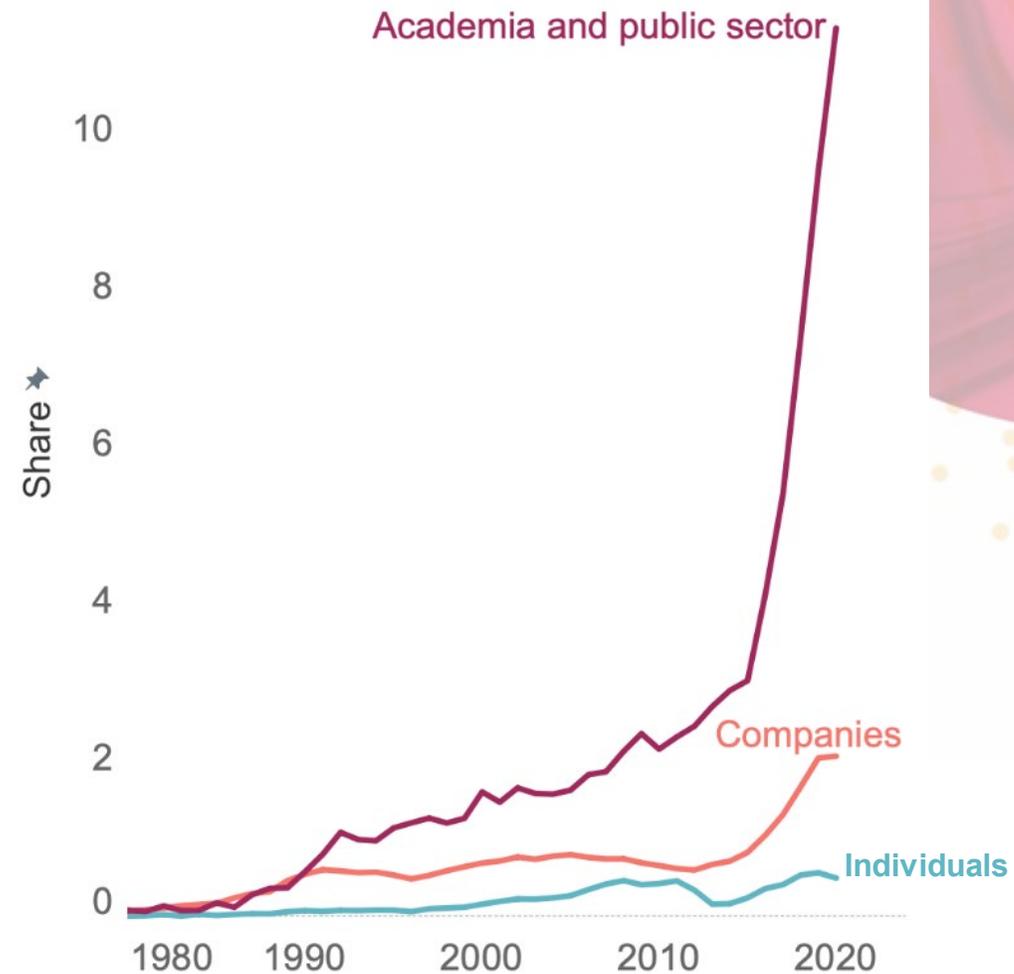
The allocation of **human and financial resources** to different innovation activities can set the direction of innovation of communities, countries and even the world for decades to come.

AI Innovation ecosystem is disproportionately academic

AI families by applicant type



AI share of total patents by applicant type





Thanks!

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