



# Panel II

*Corporate R&D investors in support of the twin green and digital transition*

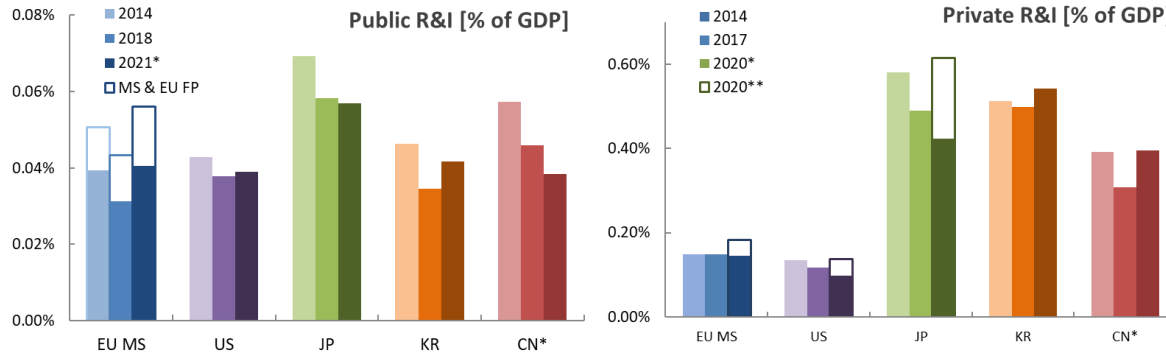
Aliki Georgakaki, JRC - Energy Insights for Policy

Corporate R&D investment for the support of EU's long-term competitiveness in a context of green and digital transition

22 May 2024, Fondation Universitaire, Brussels

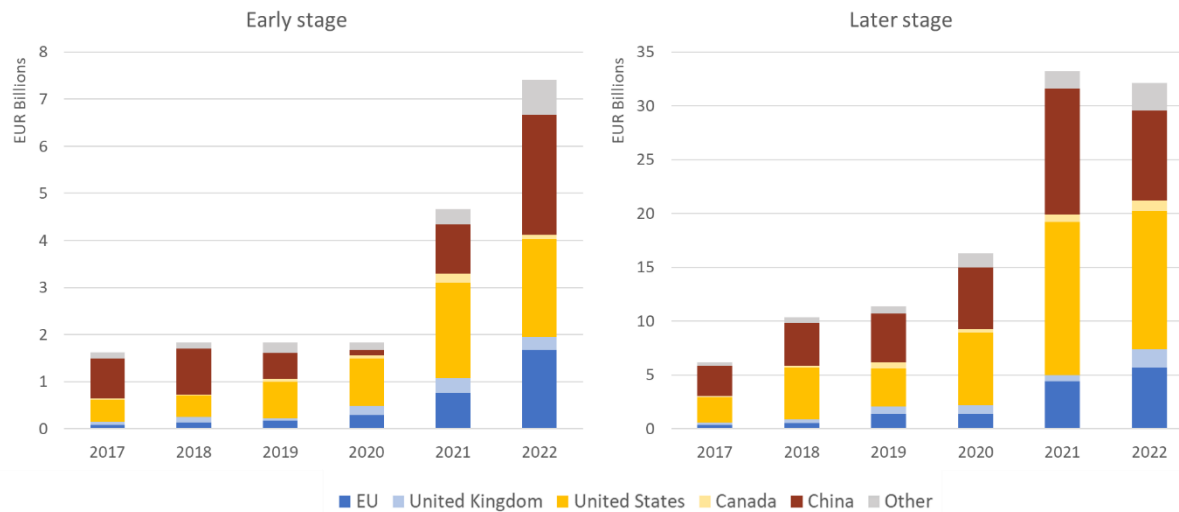
# Private sector investments in clean technology

Public and private R&I investments in major economies as a share of GDP



\*public R&I data for China and Italy (in EU total) refer to 2019; private R&I data for 2020 are incomplete; \*\* 3-year trend estimate

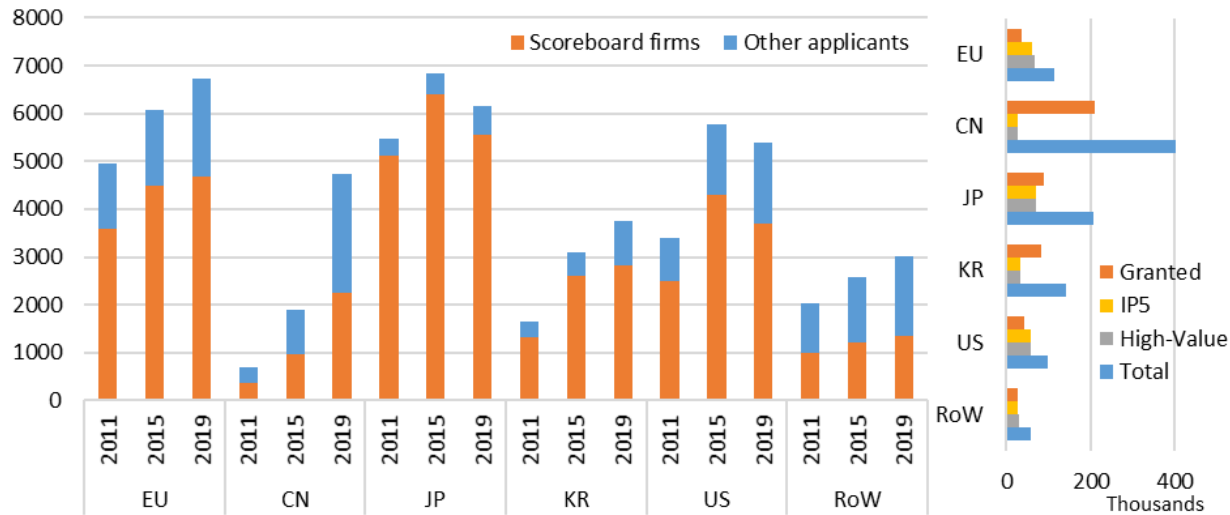
Venture capital investments in clean energy tech companies, by location



- the private sector contributes over  $\frac{3}{4}$  of the R&I investment
- 14% of the EU investment on 'smart systems'
- digitalisation applications across a number of areas such as energy efficiency and transport
- venture capital investment increasing but 'not to the level of the US or China'
- assessment through estimates – data not available at desired level of detail
- often not clear what terms such as 'green' or 'clean tech' refer to

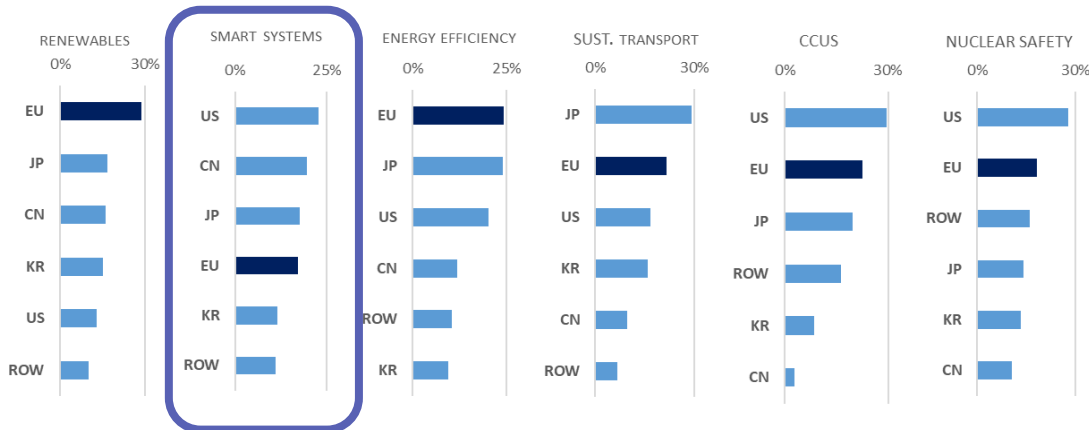
# Insights from 'green' patenting trends

Trends in high-value inventions in climate change mitigation technologies



- a quantifiable - if imperfect – indicator
- the EU is well positioned in climate mitigation and clean energy technologies
- not performing as well in 'smart' solutions
- not as specialised in ICT applications within climate change mitigation technologies

Share in global high-value patent filings relevant to the Energy Union R&I priorities 2014-2020



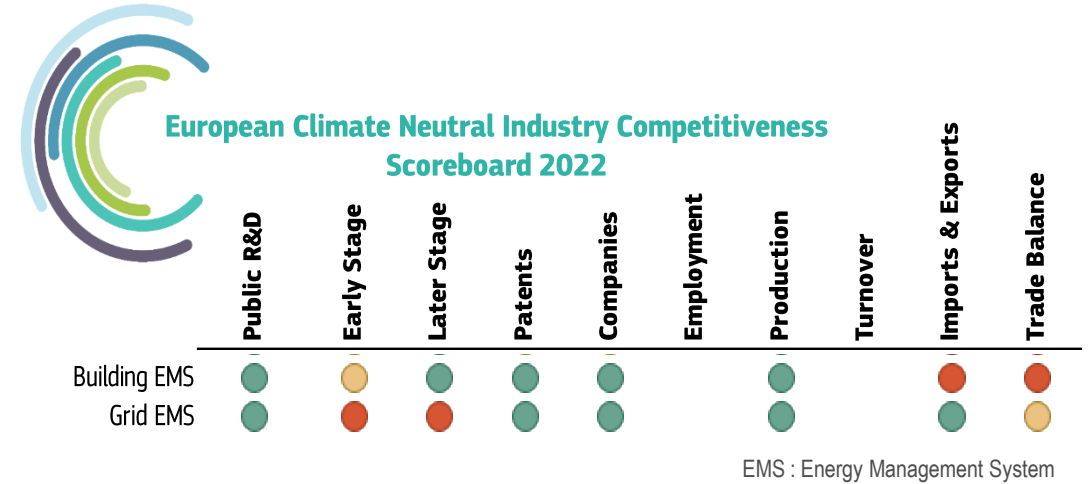
CCMTs	EU	
	Index	Change
Adaptation	-0.1	↔ -0.2
Buildings	0.2	↔ 0.1
CCS	0.2	↔ 0.0
ICT	-0.5	↔ 0.1
Energy	0.1	↔ 0.0
Production	0.3	↔ 0.3
Transport	0.6	↔ 0.3
Waste	0.5	↔ 0.2
Systems	0.2	↔ 0.3

### Specialisation Index

Based on high-value inventions. For each economy, the 2019 index is in the 1st column and the change with respect to 2010 is listed in the 2nd column.

# Towards the ‘twin transition’

- the US leads in hosting innovating corporates and VC companies with the EU second
- very different landscape of innovators – US large share of VC companies; Japan entirely corporate
- production in the EU increasing – but so is the trade deficit
- statistics designed for a different purpose



- the ICT sector has a very strong presence in ‘green’ innovation
- closer look at areas of interest, champions, partners and competitors

Share of high value CCMT inventions by the Scoreboard industry groups

ICB Industries	Climate Change Mitigation Technologies									
	Adaptation	Buildings	CCS	ICT	Energy	Production	Transport	Waste	Systems	TOTAL
Aerospace & Defence	3%	3%	3%	1%	2%	4%	16%	2%	2%	6%
Automobiles & o.t.	16%	9%	7%	2%	19%	8%	57%	4%	11%	26%
Chemicals	13%	1%	25%	0%	8%	8%	1%	20%	1%	5%
Health industries	25%	1%	4%	1%	2%	3%	0%	4%	1%	3%
ICT producers	16%	44%	15%	78%	32%	35%	8%	17%	43%	30%
ICT services	3%	2%	1%	9%	2%	2%	0%	1%	8%	2%
Industrials	12%	13%	23%	2%	18%	26%	15%	17%	17%	17%
Others	13%	28%	20%	7%	16%	13%	3%	34%	17%	12%
TOTAL	4%	7%	1%	9%	33%	16%	29%	1%	1%	100%

# Thank you! Meet the team!

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