

Nemet, Zipperer, Kraus (2016)

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# Valley of Death, Technology Pork Barrel, and support for large demonstration projects

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Climate-friendly Materials Sector – Brussels, 16th September 2016

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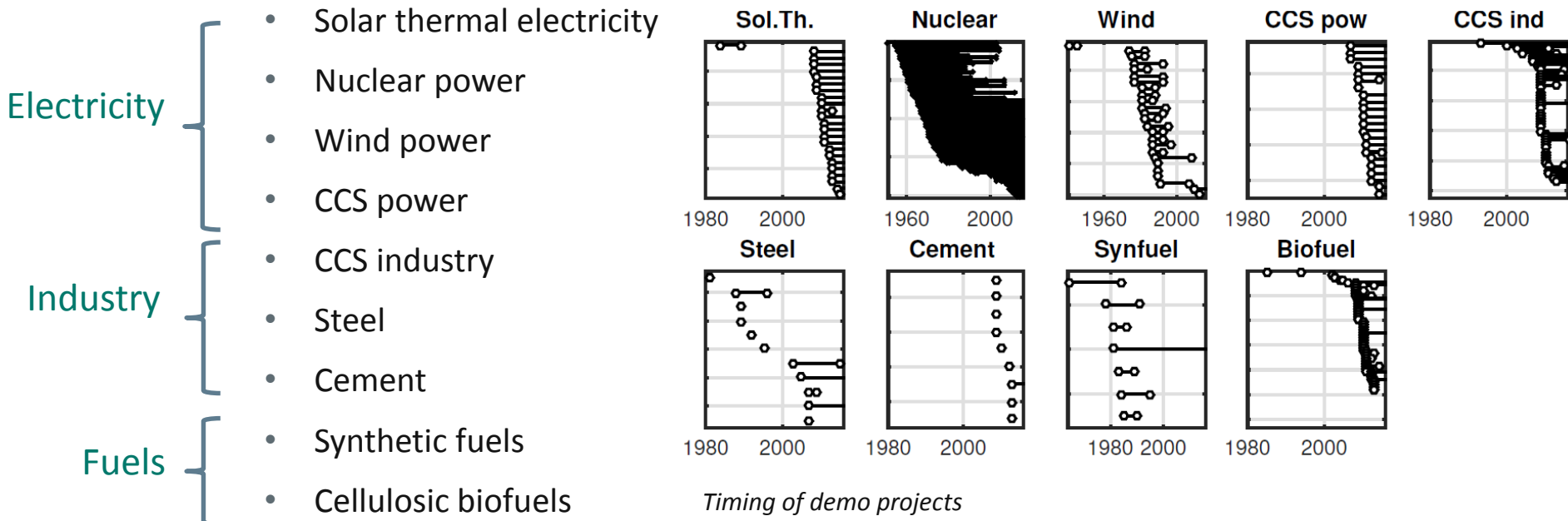
# How to design innovation policy: learning from the past

## Motivating question:

- How can public support for technology demonstration projects be structured to be most effective? (Mission Innovation, NER 400...)

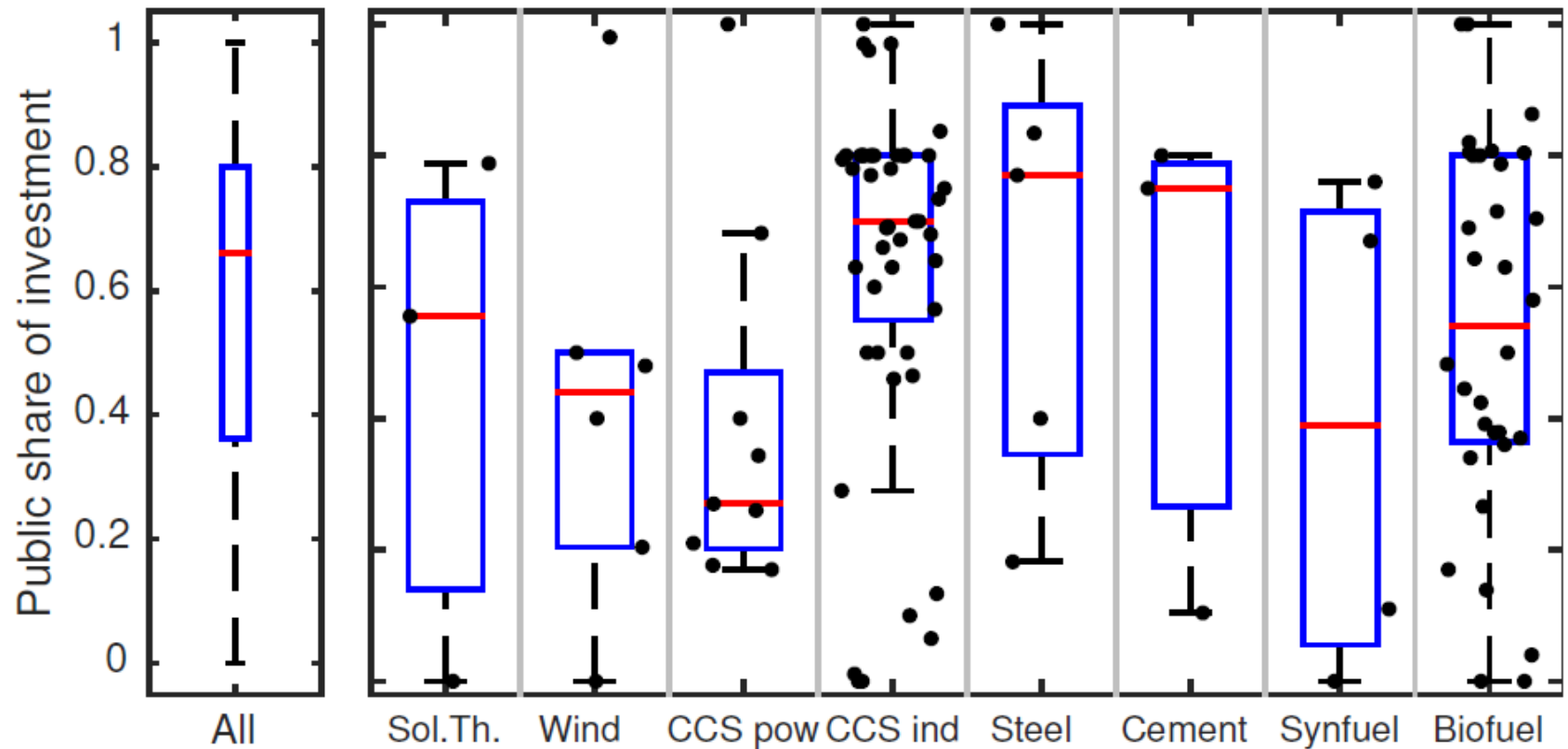
## Approach:

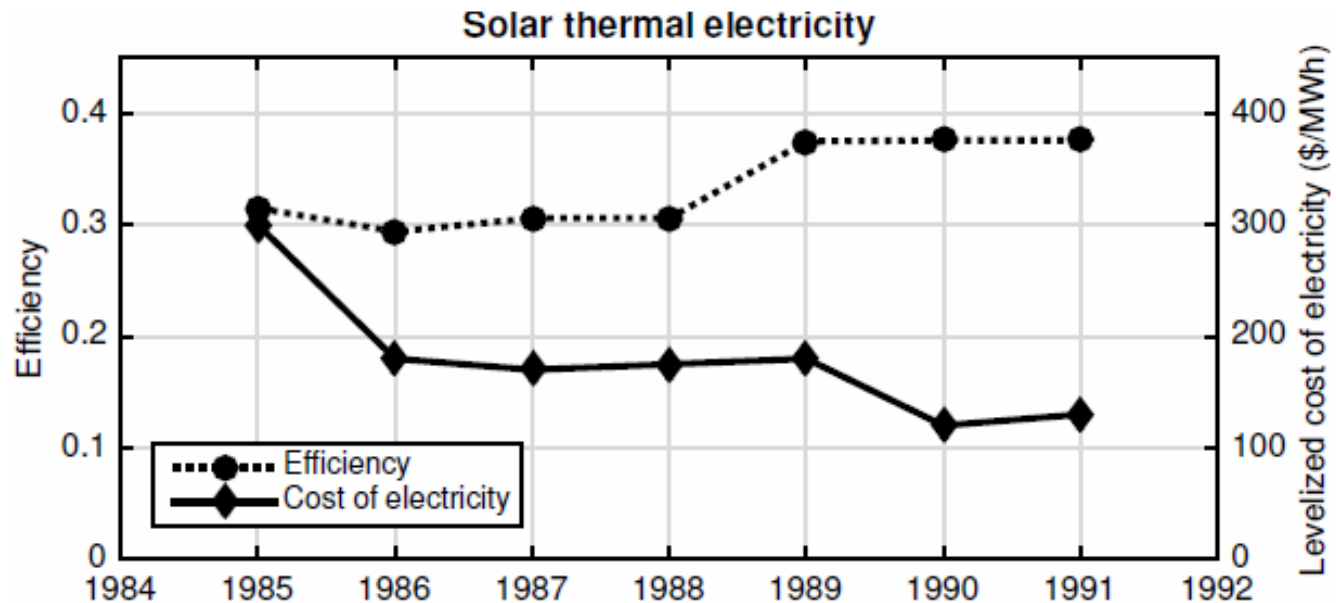
- Coding characteristics of 270 cases of large-scale demonstration projects

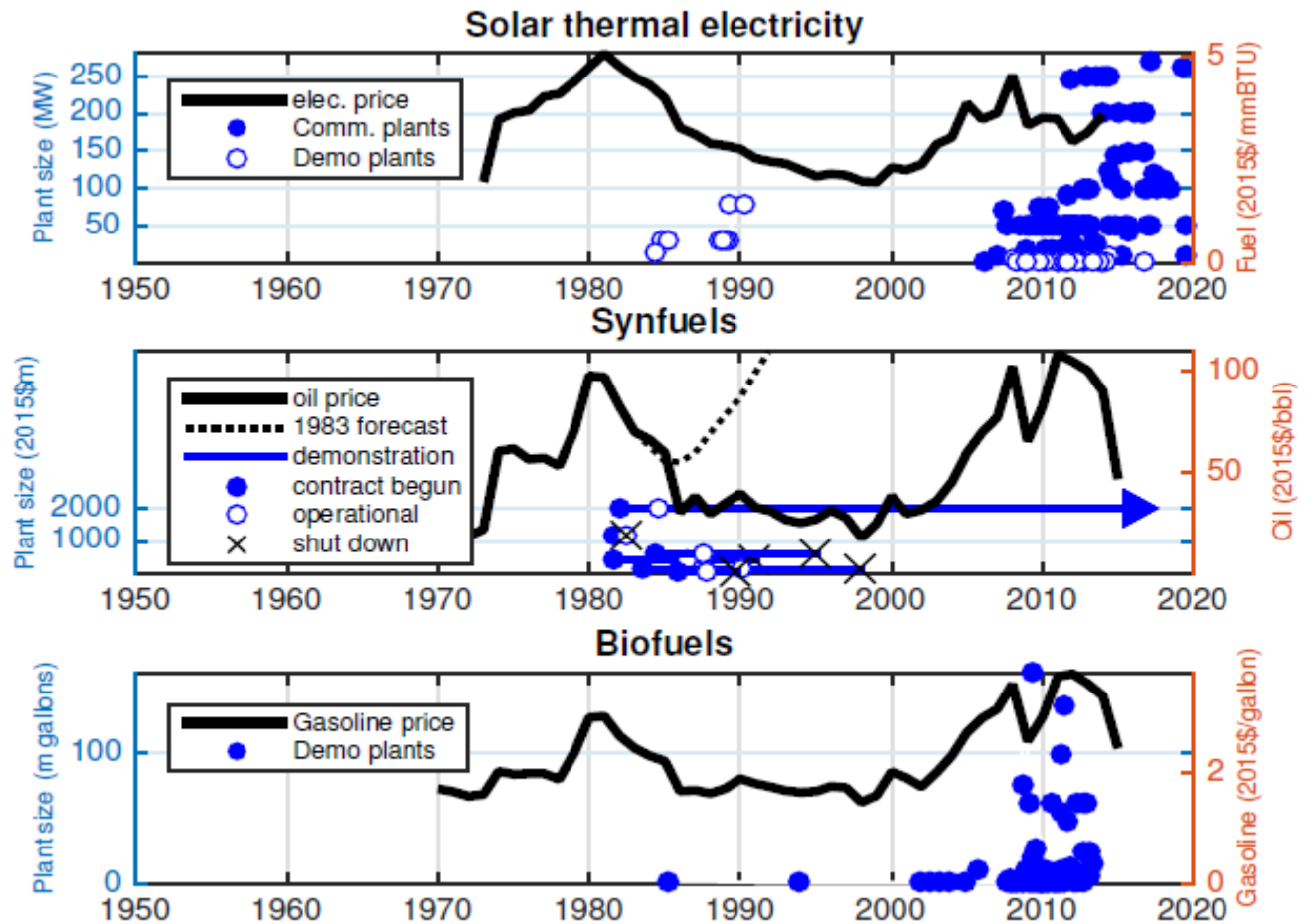


## Stated motivation for public support of projects

Technology	Production	Proving	Scale up	Learning	Other	N
1) Sol. Th. Elec.	29%	33%	21%	17%	29%	24
3) Wind Power	43%	26%	78%	13%	0%	23
4) CCC Power	52%	64%	45%	50%	25%	44
5) CCC Industry	29%	40%	31%	34%	19%	62
6) Steel	46%	62%	38%	54%	15%	13
7) Cement	56%	89%	67%	89%	33%	9
8) Syn. fuels	56%	56%	56%	56%	44%	7
9) Cell. biofuels	6%	12%	6%	13%	2%	126
All Sectors	27%	34%	28%	29%	14%	308







Results from 270 case studies show:

- Learning and upscaling are important
  - Need many demos, increasing in size
  - Sequential to enable iterative learning
- Market demand (e.g. oil price) differed from expectation
  - Technologies did not diffuse also because of changing demand
  - Technologies succeeded where learning/scale up fast enough to survive next (oil) price drop
- Public co-funding largely between 40% and 80%
  - Co-funding share increased over time and over projects
  - No correlation with project size

# Up-scaling needs time and is not trivial

