Analysis of IR

PS 1599 | Week 5: Non-market competition

Michaël Aklin
University of Pittsburgh

Administration

- Office hours
- aklin@pitt.edu
- Workshops: rescheduling
- Slides
- Readings

What did we talk about last time?

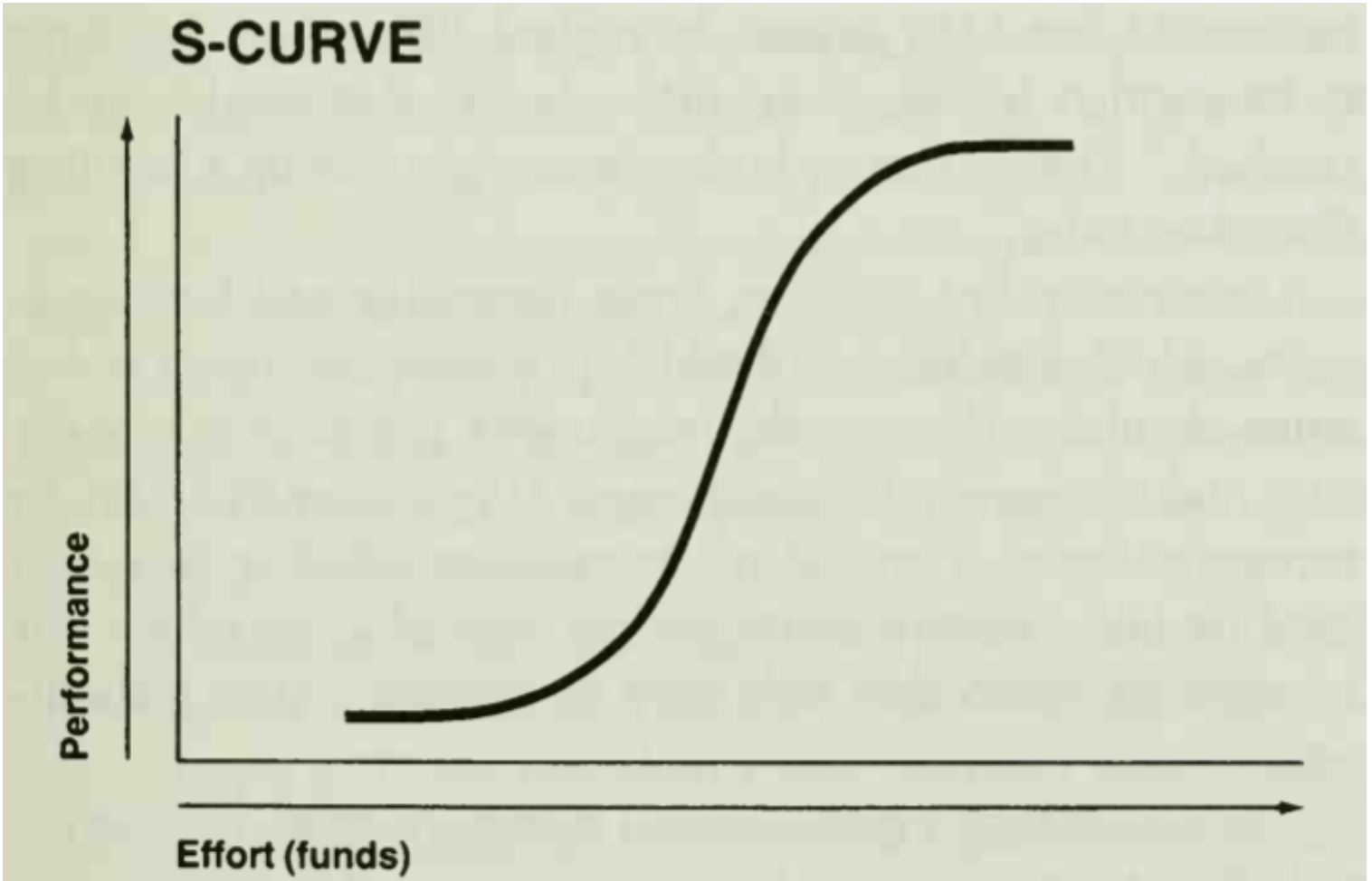
Next

- Politics of innovation, technology, development
- Politics matters in several ways
  - At inception of new prods
  - At diffusion of new prods
- Today: diffusion

Non-market competition

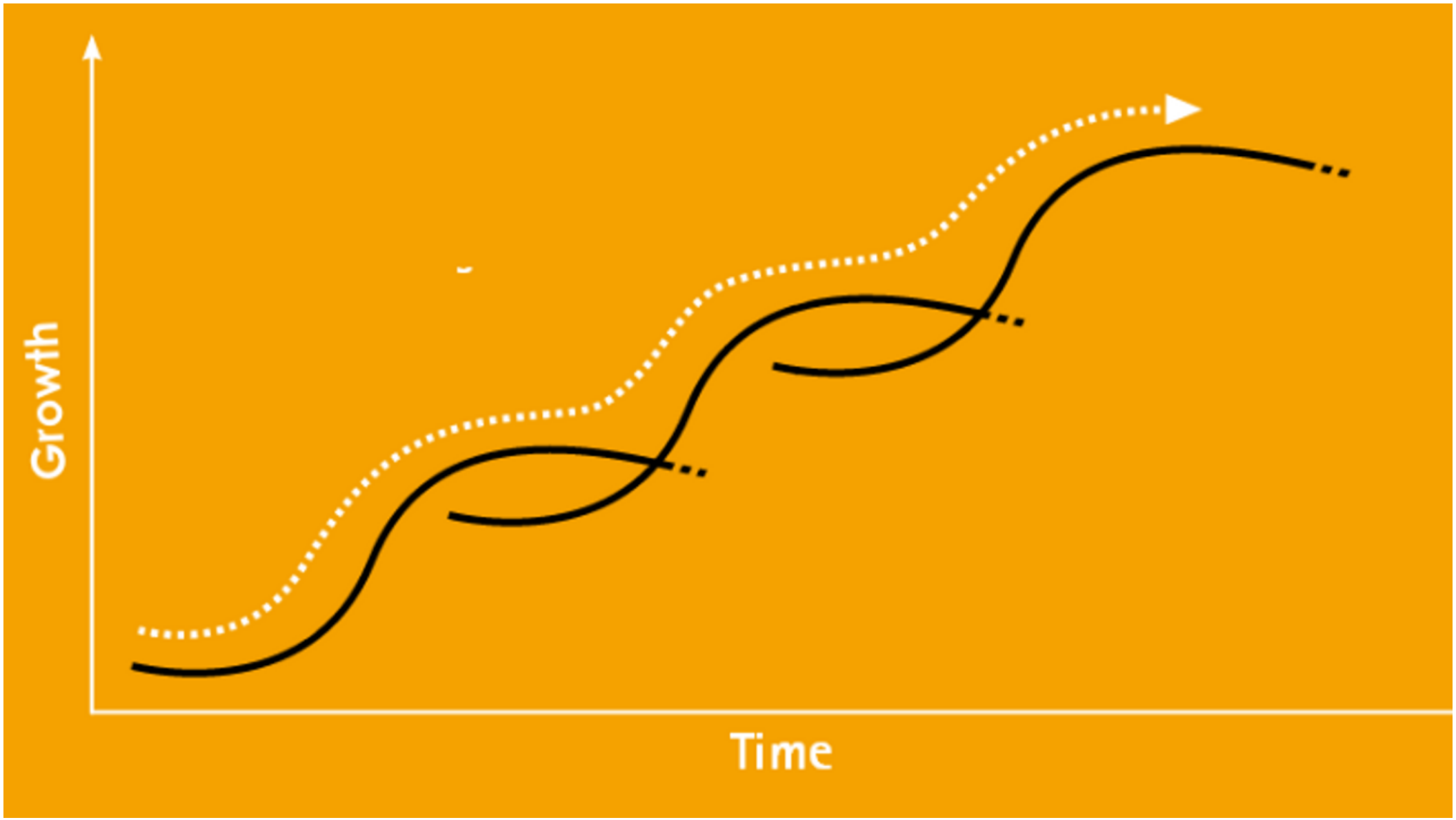
- So far: (international) politics of early innovations
- Can happen in any market, even w/ perfect competition
- Happens under other systems too!
- Next: non-market competition.
  - =Competition that isn't occuring via price or quality
  - Diffusion stage of innovation

Context



2 The S-Curve.
The infancy, explosion, then gradual maturation of technological progress.

Source: Foster (1986).



Source: Future Business Tech

Why might firms and workers try to slow down these transitions?

- Competitive market: near zero-sum game for producers
- Market strategies
  - Cut prices (maybe after invest in new tech)
  - Differentiate products
- Not always feasible, affordable, efficient
- Esp. problem when new technologies appear

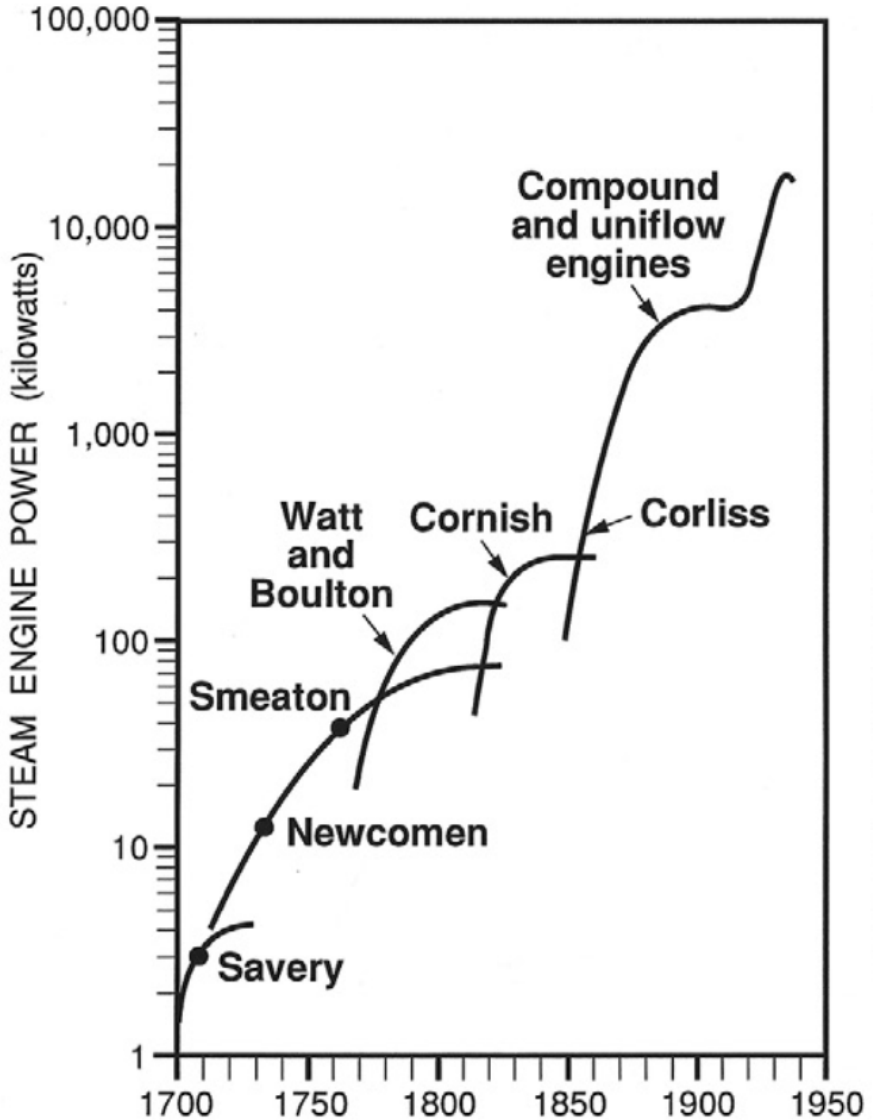


Figure 5.5

Source: Smil (2018)

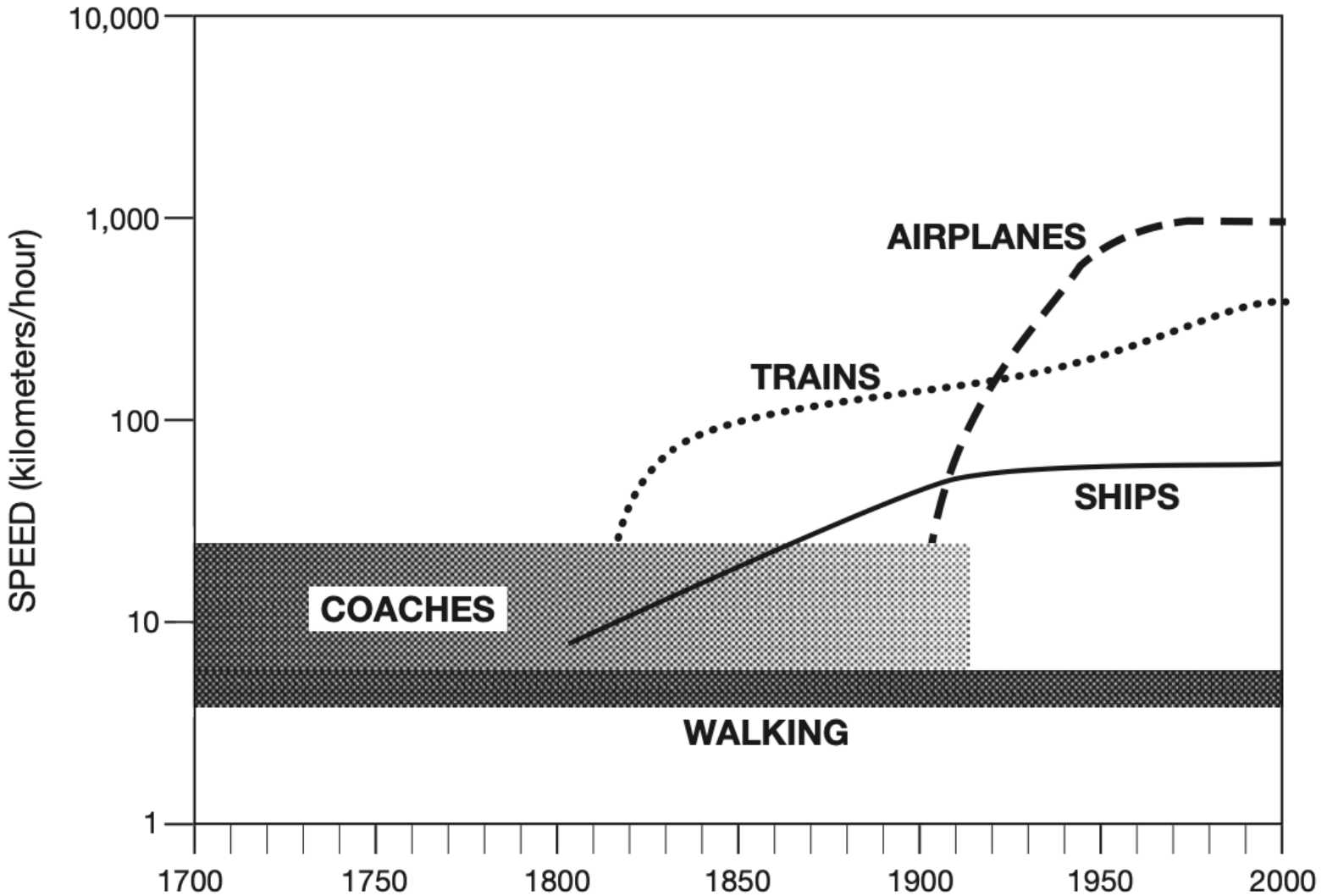


Figure 7.7

Maximum speeds of passenger transportation rose from less than 20 km/h for coach-

Source: Smil (2018)

Why don’t firms adapt to new technologies?

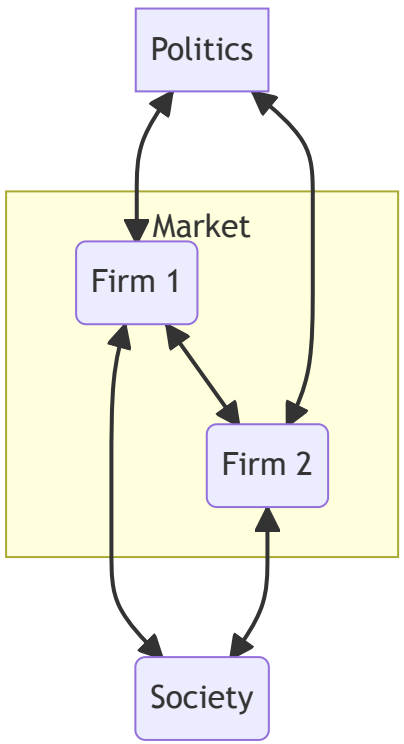
Puzzle

- Before we go into NMS: why don't firms adapt?
- Firms adapt sometimes (Apple)
- Problem for firms: disruptive tech
- Tech can represent an existential threat
  - Sustaining vs. disruptive tech
  - Hard to switch to disruptive tech: inv. in capacity, relation w/ existing customers, etc.
  - Thus NMS

Non-market strategies

- NMS: firms modify (business) environment, not product
- Some is “good”: corporate social responsibility, ESG, …
- But some is “bad”: eliminate competition
- Bad = bad for consumers, society
  - Higher prices
  - Slower adoption of new tech
- Happens: (1) politics + (2) society + (3) within markets

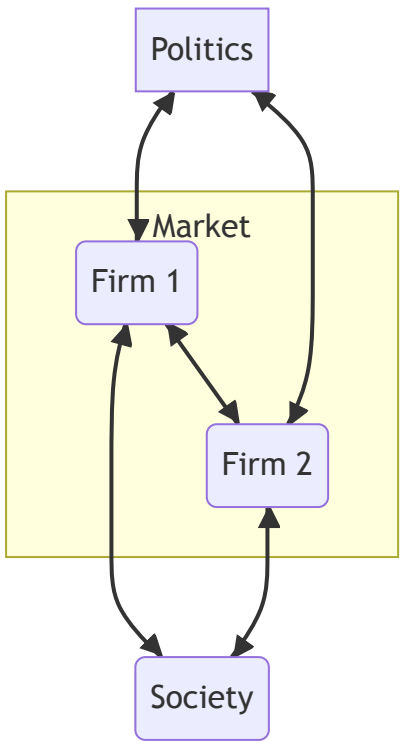
Non-market strategies



If you were a strategist for a traditional firm…

how would you fight new competitors?

Use our problem-solving strategy!

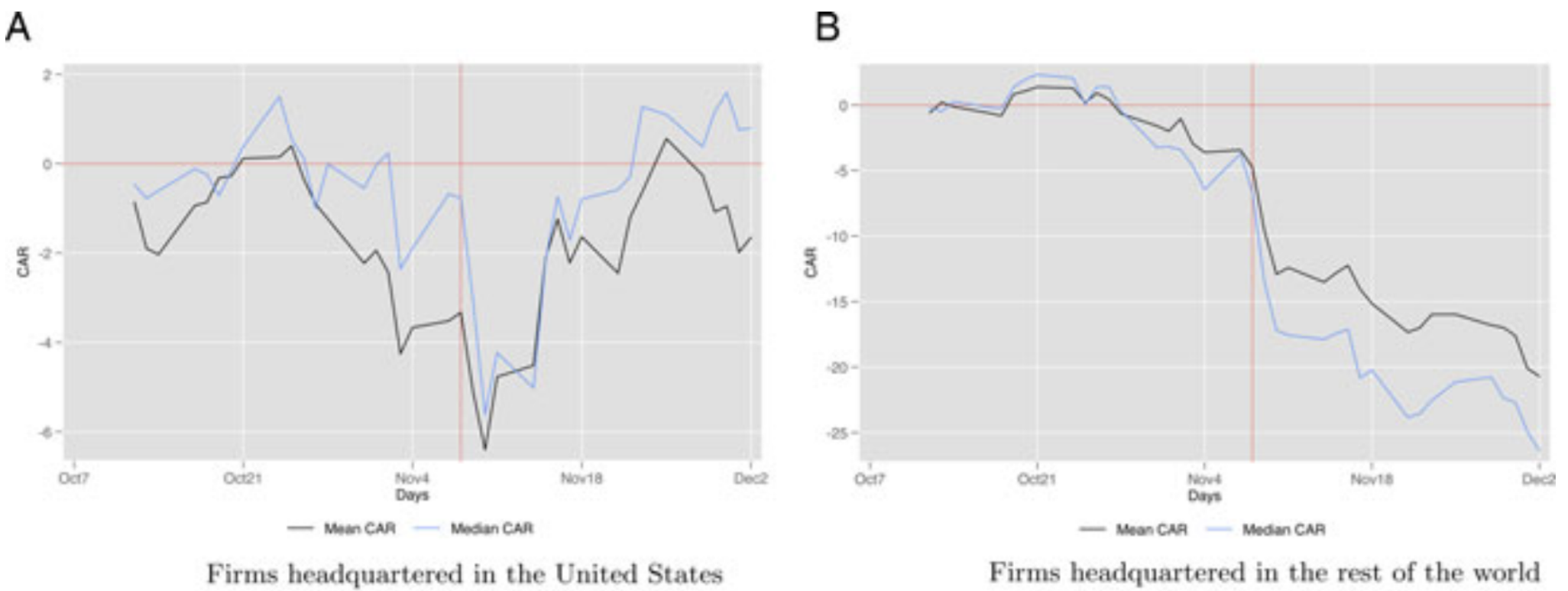

Politics
Market
Firm 1
Firm 2
Society

Politics (1): ideology

- Ideology: policy preferences of govs
- Everyone has preferences!
- Rulers: incentives to intervene to shape world accordingly
- Myth of neutral/benevolent/scientific ruler
- Problem: firms w/ risk of market failures are vulernable to change in gov preferences
- Reason: public goods often prod by gov (political risk)

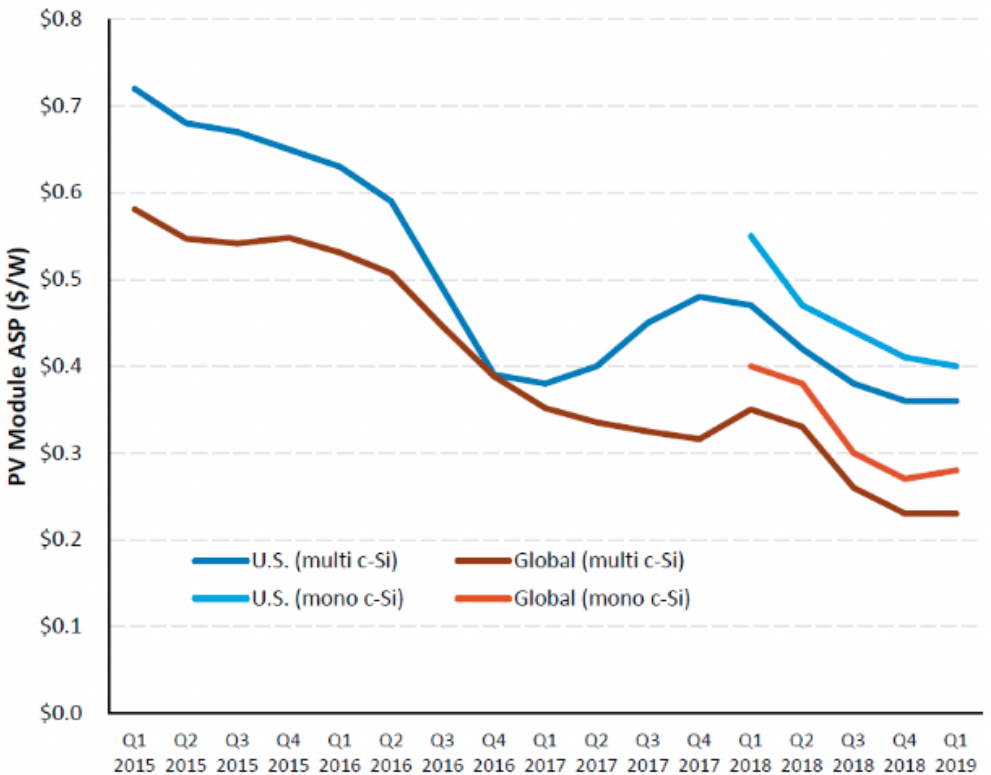
Example

- Trump admin: opposed to climate policy
- Clean energy: primary tool to cut US GHG
- US clean energy depends on imports
- 2019: 30% tariff (tax) on imports of solar equipment
  - (Small) dom solar panel producers win (First Solar)
  - Installers lose



Effect of Trump surprise election on value of dom and international renewable energy firms. Source: Aklin (2018)

Tariff Impact: Higher U.S. Prices



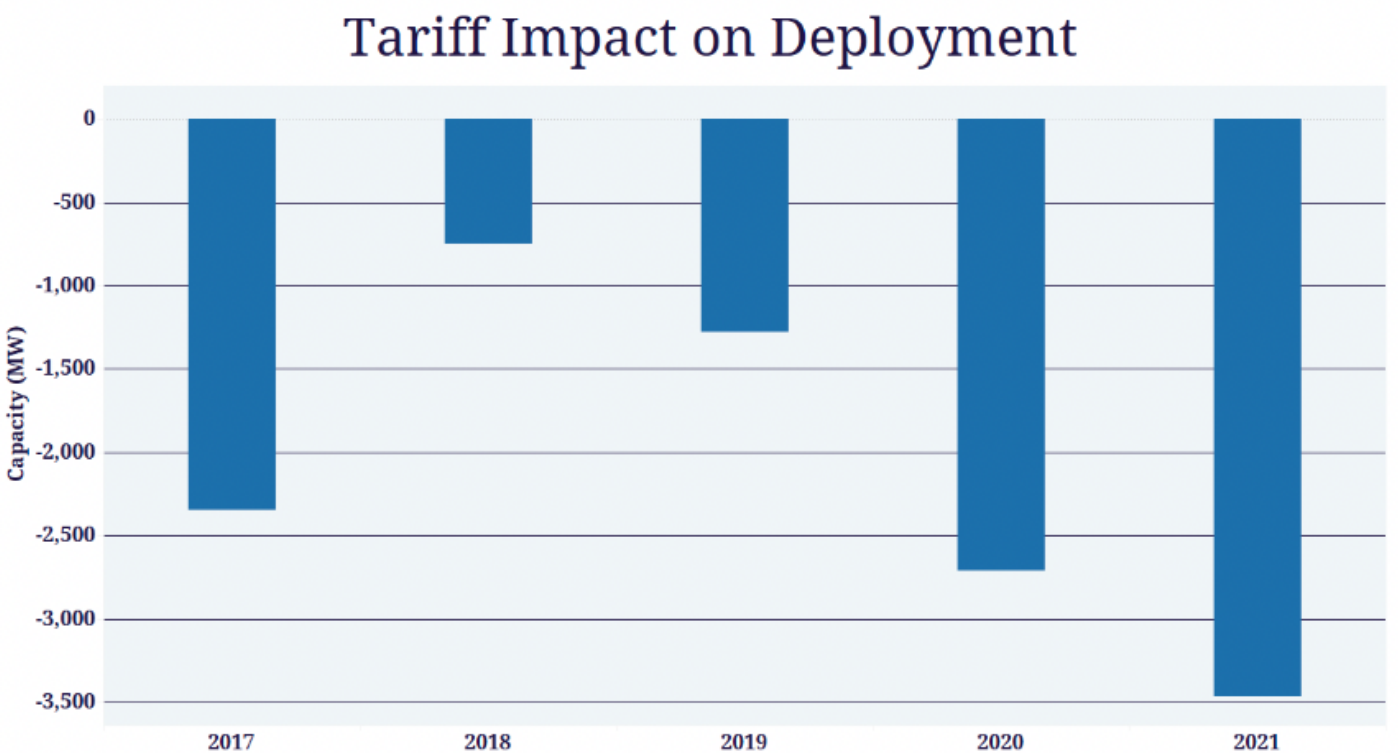
Technology advances have helped lower solar prices around the world.

In the United States, however, price declines have been significantly undercut by the safeguard tariffs—with U.S. prices now among the highest in the world.

Higher prices reduce the size of the addressable market by pushing economics in favor of substitutes (existing generation, gas and wind) in marginal markets.

Source: NREL, *Q1/Q2 2019 Solar Industry Update*

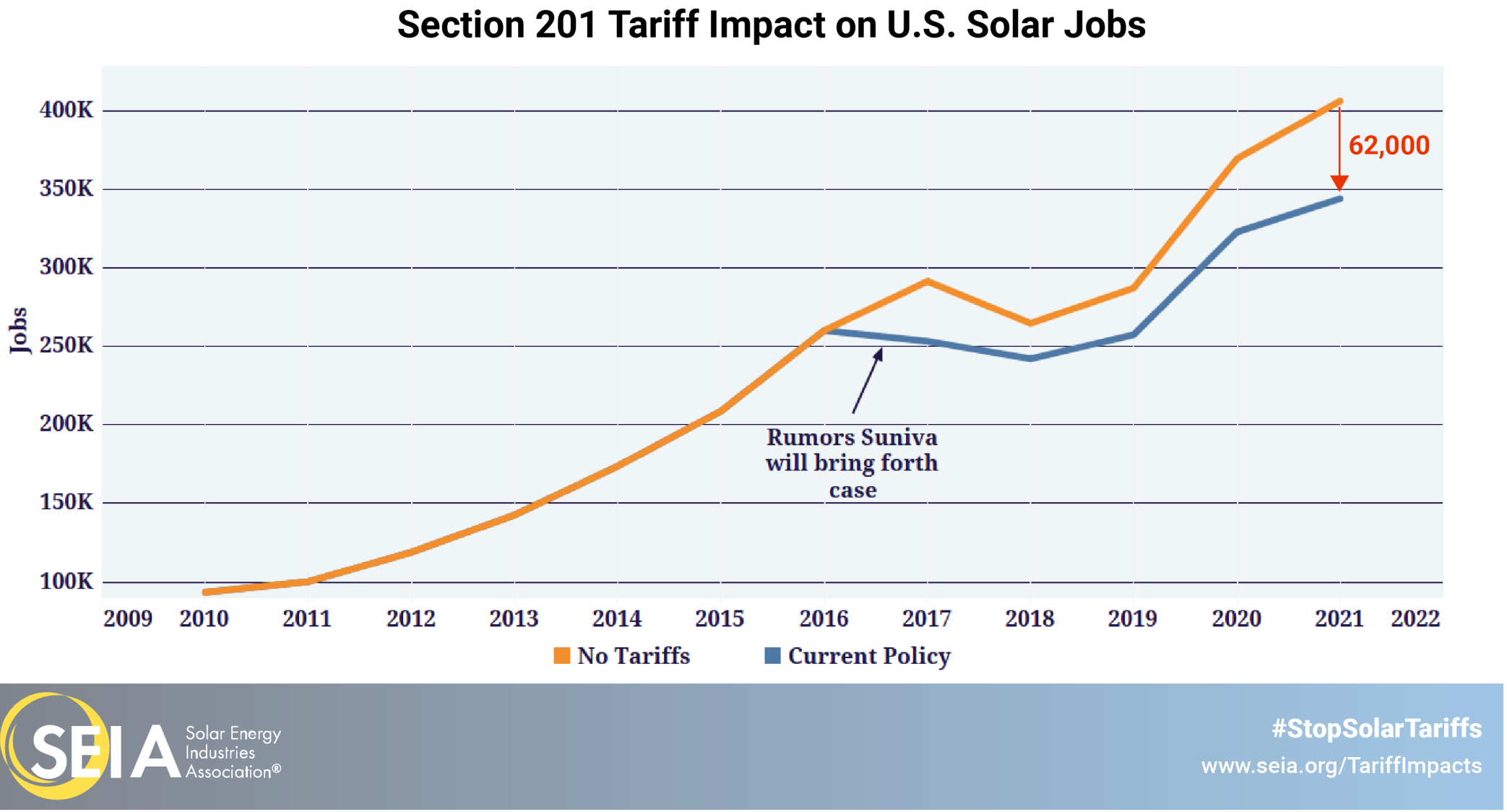
Source: SEIA (2019)



Uncertainty caused the market to **lose out on 3 GW of installations** as rumors and actual tariffs disrupted contracts in 2017 and 2018.

The safeguard tariffs **reduce the market for new projects by 7.5 GW** from 2019 - 2021.

Source: SEIA (2019)



Source: SEIA (2019)

Politics (2): lobbying

Example

- FirstEnergy (Ohio): investor-owned utility that serves ~6m people ($10b+ in annual revenues)
- Problem: it relies heavily on old coal nuclear plants
- Not competitive against up-and-coming renewables
- Solution: lobby Rep majority in Ohio House to subsidize their plants (2020) (House Bill 6): $1.3b bailout
- Problem: illegal contributions (about $60m in exchange for $1.3b subsidies – NB: not bad!)
- Ongoing legal battles; Ohioans pay $130k per day…

Is lobbying always a bad thing?

- So far: lobbying=slow down transition=bad
- But: good reasons for gov intervention exist!
- First: help innovation (already discussed)
- Second: address inequality between ‘good’ and ‘bad’ tech

Bad tech lock-in

- Perfect market: superior tech replace inferior tech
- Market failures: problem of externalities
  - ‘Good’ tech produces positive externalities
  - ‘Bad’ tech produces negative externalities
- ‘Good’ tech cannot win alone **even** when it’s socially desirable
- Example: carbon lock-in

Within markets

- Next: within-markets
- Note: not *exactly* an NMS…
- But still about changing business environment

- Predatory pricing and dumping
  - Idea: reduce price below prod cost
  - Dumping: same but export
  - Makes it impossible to newcomers to compete
  - Example: Walmart. But: hard to prove
- Monopolistic acquisition(s): acquire firm/talent (human capital)
  - Example: facebook and drop.io (Sam Lessin)

Conclusion

- Price/product competition is good…
- Disruptive tech is a threat to firms
- Response is often: non-market strategies
- Some are ‘good’! But many are ‘bad’
- Threatens development
- What about *society* NMS? Next topic!

Questions?

aklin@pitt.edu

Source for title page painting: Stoyanka Ivanova, *Clock of Universe*

References

Aklin, Michaël. 2018. “How Robust Is the Renewable Energy Industry to Political Shocks? Evidence from the 2016 U.S. Elections.” *Business and Politics* 20 (4): 523–52.

Christensen, Clayton M. 2013. *The Innovator’s Dilemma*. Harvard Business Review Press.

Foster, Richard. 1986. *Innovation*. Summit Books.

Mellahi, Kamel, Jędrzej George Frynas, Pei Sun, and Donald Siegel. 2016. “A Review of the Nonmarket Strategy Literature: Toward a Multi-Theoretical Integration.” *Journal of Management* 42 (1): 143–73.

SEIA. 2019. “The Adverse Impact of Section 201 Tariffs.”

Smil, Vaclav. 2018. *Energy and Civilization: A History*. MIT Press.

Unruh, Gregory C. 2000. “Understanding Carbon Lock-in.” *Energy Policy* 28 (12): 817–30.

———. 2002. “Escaping Carbon Lock-in.” *Energy Policy* 30 (4): 317–25.