

# Institutional context and policy feedback effects in the politics of low-carbon transitions

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# Policy feedback effects in path creation

- ‘Policies not only flow from prior institutions and politics; they also reshape institutions and politics, making some future developments more likely and hindering the possibilities for others’ (Skocpol 1979)
- Sustained consensus, i.e. political lock-in, requires increasing political returns (Pierson 2000)
- Major source of increasing returns in politics is positive policy feedback (e.g. Pierson 1993)
  - Creation and strengthening of interest groups, including via institutional change
  - Discursive effects that strengthen political identity
  - Mass feedback effects, including creation of new vested interests
- Increasing returns implies possibility of path dependence and divergence
- Importance of negative feedback effects (Béland 2010, Patashnik and Zelizer 2009)

# Positive and negative feedback in renewables growth

## Positive effects

- (Distributed) Ownership ('Your own pig doesn't smell')
- Employment in supply chain, export industry, innovation spillovers
- Ideological identity?

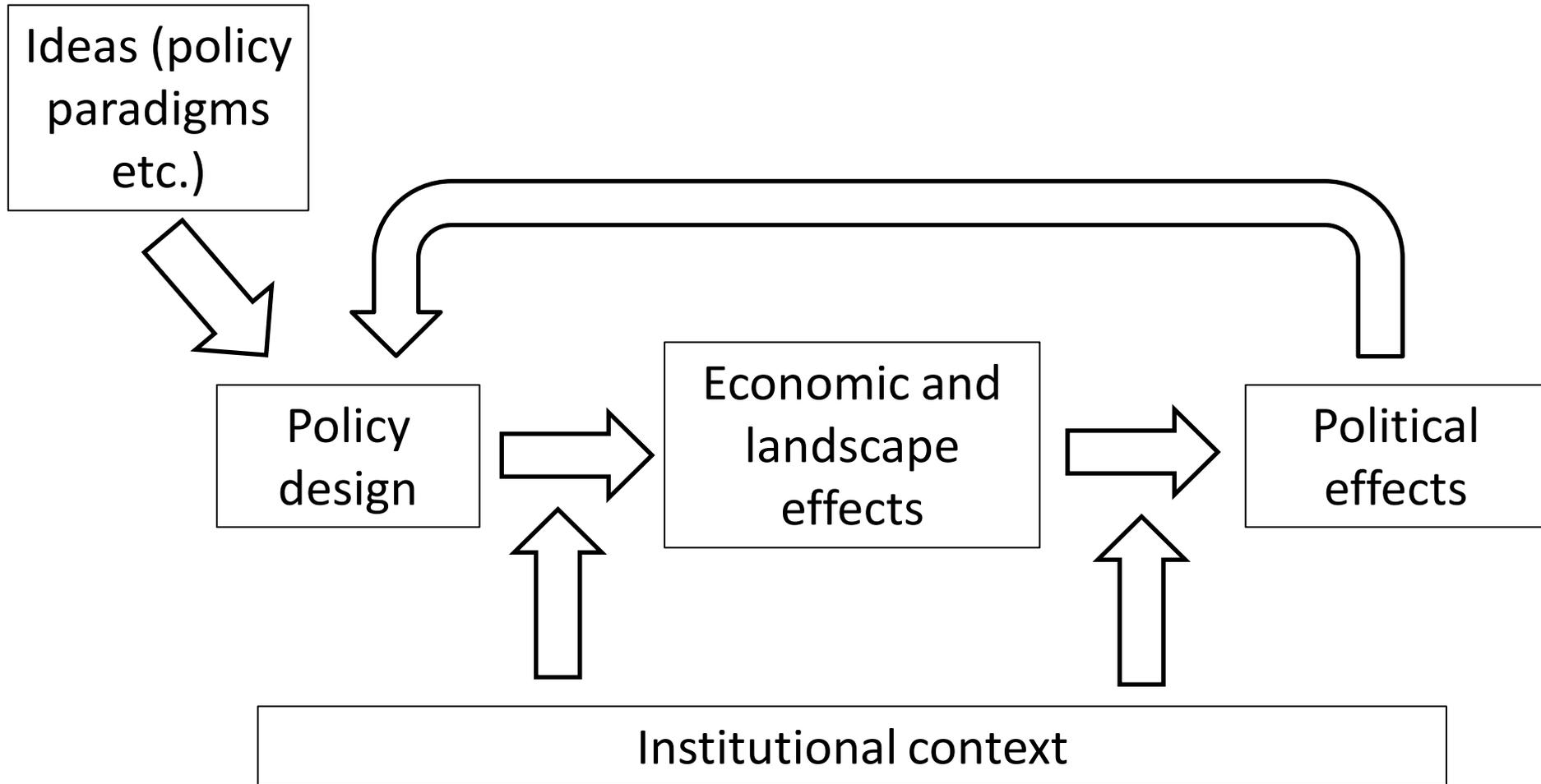
## Negative effects

- (Concentrated) Ownership
- Financial costs of support
- Landscape impacts
- Ideological identity?

# What determines feedback effects for renewable energy policy?

- **Policy design...**
  - FiTs (Germany, 1990-2014; Denmark 1984-2001) vs RO (UK 2001-2010)
  - Local content requirements (Spain vs UK)
  - Funded on bills (UK) vs funded via tax (Spain)
- **...and hence ideas**
  - ‘technology neutrality’/neoliberalism in UK
- **Institutional context**
  - Differential effects of FiTs in Denmark and Germany vs France
  - Organisation of distributed owners - *Danmarks Vindmølleforening* vs non-organised solar PV owners in UK
  - Strong welfare state and low inequality in Denmark vs ‘squeezed middle’ in UK

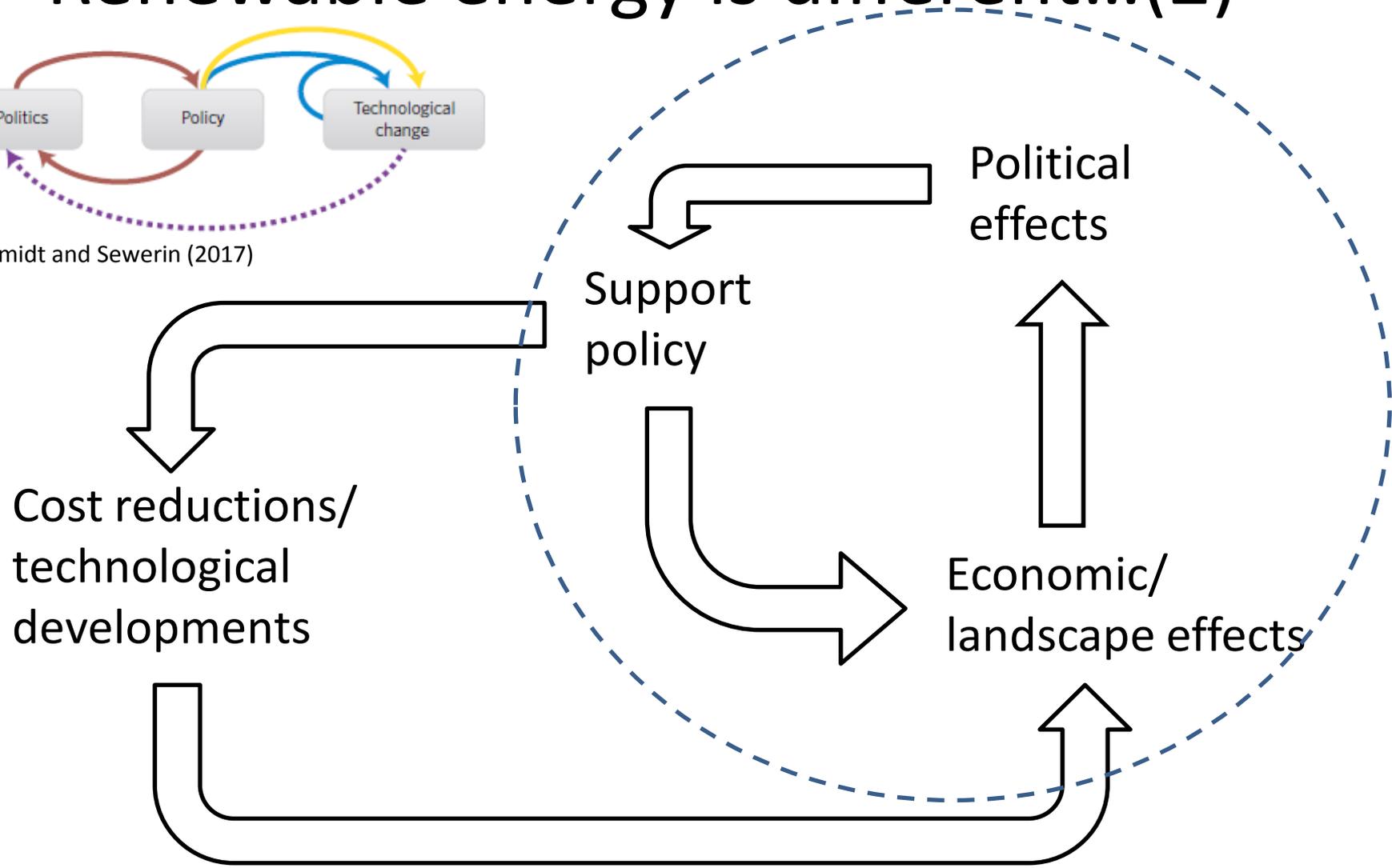
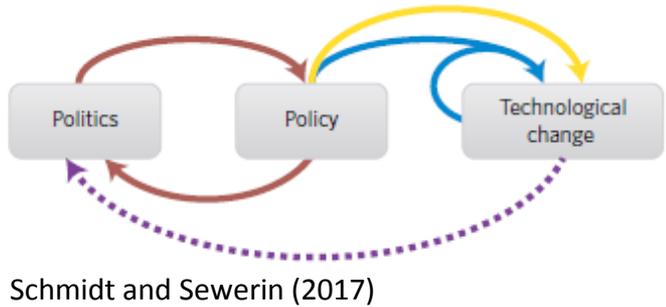
# Role of ideas and institutional context



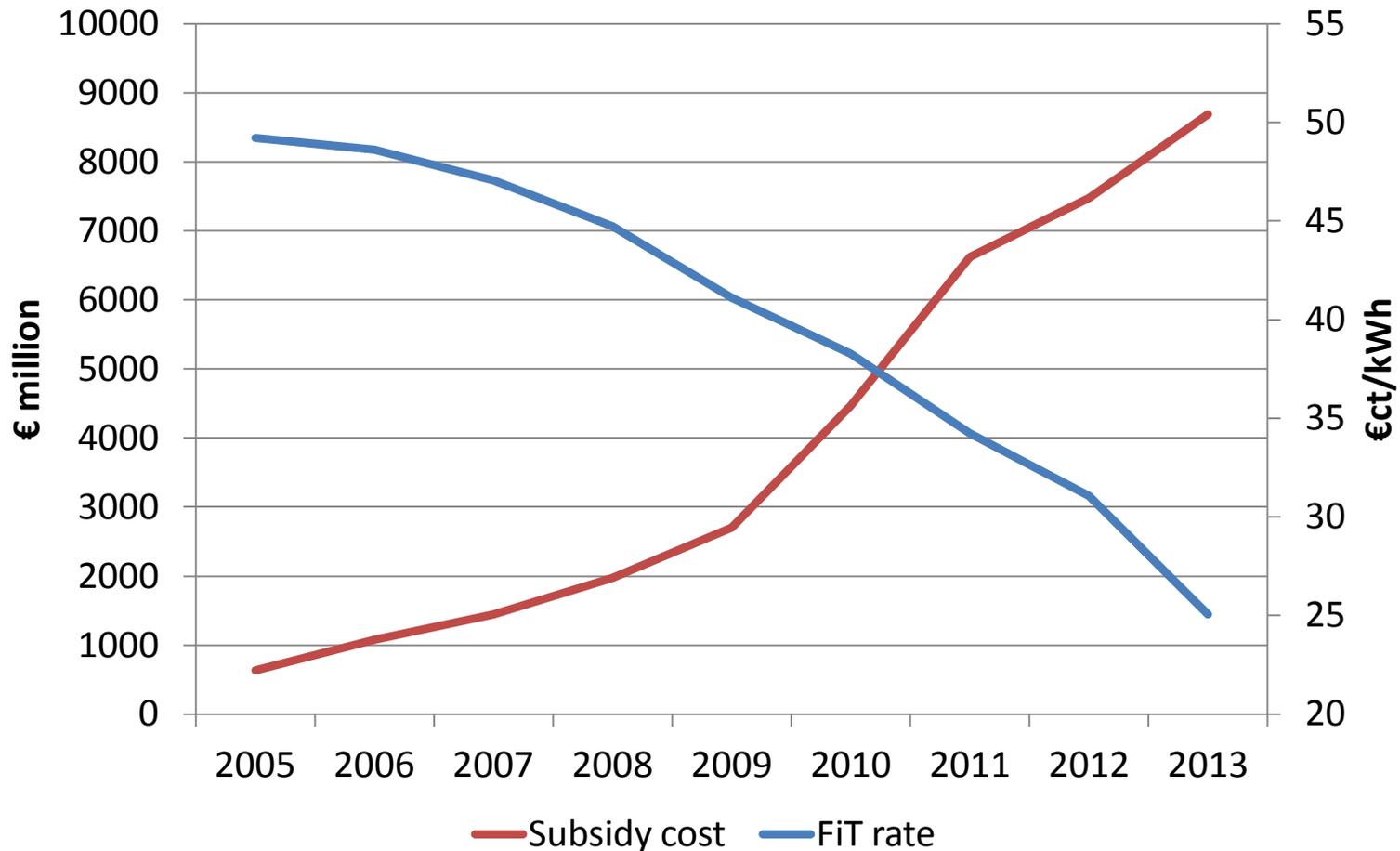
# Renewable energy is different...(1)

- Many policy feedback examples involve the one-off creation of new large-scale institutions or reforms (pensions, health care, tax reform, airline deregulation) and the issue is whether they achieve lock-in
- Renewables support is typically small at first, then positive and negative feedback effects grow over time.
- Then there are two distinct but usually elided issues
  - a) Maintaining existing support (i.e. resistance to retrospective policy changes)
  - b) Maintaining further expansion (i.e. resistance to prospective changes)
- Do distributed ownership coalitions care about b).?

# Renewable energy is different...(2)



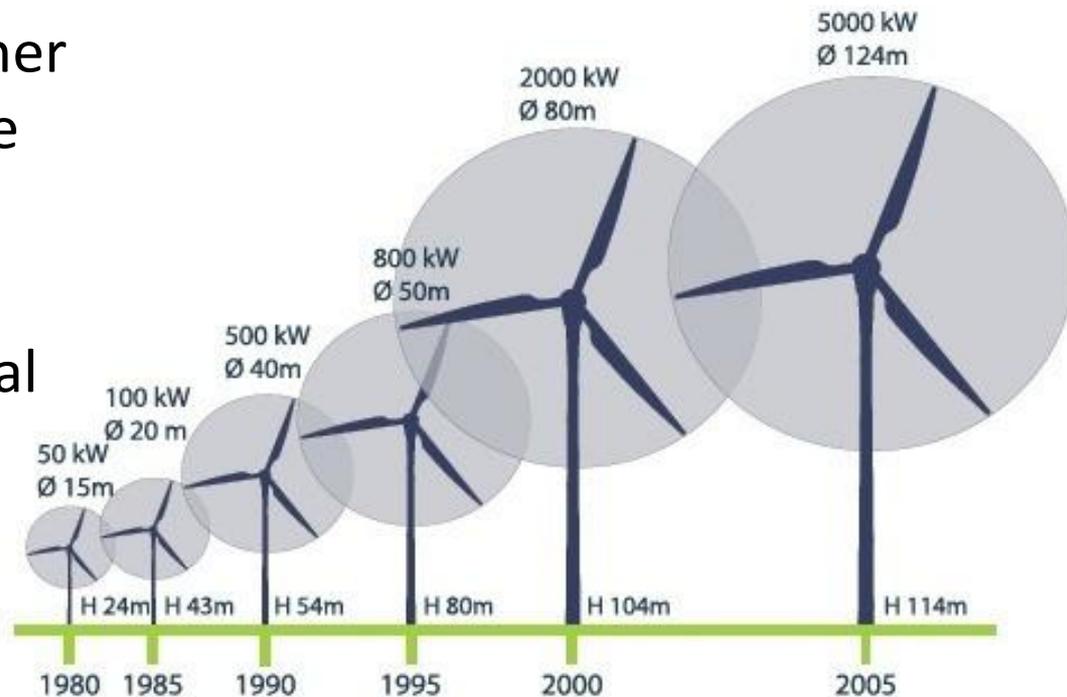
# Solar PV costs and subsidy booms



Source: Lütkenhorst and Pegels, A. (2012) *Germany's green industrial policy* DIE

# Denmark – path evolution

- Repowering with much larger turbines (average 50kW in 1990 => 1MW in 2012)
- Rising opposition to further onshore expansion, move offshore?
- But also a counter-movement to restore local ownership and smaller scale?



# A research programme

- Many studies draw on this framework (e.g. Lauber and Jacobsson 2006; Meyers 2007; Laird and Stefes 2009; Toke 2010; Stokes 2013), but largely implicitly and consideration of effects is partial and selective
- Making the theory explicit (Lockwood 2015)
- Incorporation of cost/technology feedback loops
- Systematic comparative research on how institutional context conditions feedback effects
- Beyond renewable support programmes:
  - Legacy costs?
  - Feedback effects from integration of renewables
  - Feedback effects from EVs?

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# Additional slides

# Historical institutionalism as an approach to LCTs

- Strengths
  - Central to modern analysis of politics
  - Focus on state-society relationships useful for mass deployment phase of transitions
  - Comparative methodology
  - Some testable hypotheses (e.g. Mahoney and Thelen on gradual institutional change)
- Weaknesses
  - Insufficient attention to independent role of ideas
  - Doesn't engage with materiality of technologies

# Research agenda (Lockwood et al 2017)

- ‘Initial conditions’
  - Electoral systems: PR vs majoritarianism
  - Constitutional arrangements (federalism vs centralised state)
  - Role of energy regulators
  - Routes to long-term policy stability
  - Nature of incumbent interests and power
  - ‘Varieties of capitalism’?
- Institutional change
  - Positive feedback effects and lock-in
  - Unintended consequences
  - Feedback effects in path creation
  - Layering vs drift vs conversion vs displacement

# A political puzzle....

	<b>Cost of renewables support as % of GDP in 2010*</b>	<b>EU 2020 package target for renewable energy</b>	<b>National targets</b>	<b>Position on national renewables targets in EU 2030 package</b>
UK	0.06	15%	No	No binding targets
Germany	0.22-0.27	18%	Yes (2025, 2035, 2050)	30% binding target
Denmark	0.09	30%	Yes (2020, 2050)	30% binding target

\* Source: OECD 2013