



**Strategies of incumbent firms in
the energy transition**

**Prof. dr. Marko Hekkert
dr. Simona Negro**



Transition = institutional battle

- New paradigms
- New laws and regulation
- New expectations
- New directions of search
- Shift towards a “new normal”

- Maybe: technological innovation is easy compared to institutional change



Incumbents

- Organizations who have participated in the previous generation of technologies
- Radical innovations often are developed by 'challengers'
- incumbents' efforts with respect to radically new technologies are characterized by "incompetence" and "underinvestment." (Henderson, 1993)
- Competence destroying innovations



Not so black and white

- Chandy and Tellis on the incumbent's curse:
- Incumbent firms developed over 50% of the radical innovations after WW2
- However, only focused on 2 product classes: consumer durables and office products
- In the Dutch energy transition we observe that most radical innovations are developed by challenger firms



- Key question: how do incumbent firms react when confronted with radical innovations?
- Strong focus on institutional strategies
- Synthesis of a program on incumbents and transitions at Utrecht University



Business Strategy and the Environment
Bus. Strat. Env. (2013)
Published online in Wiley Online Library
(wileyonlinelibrary.com) DOI: 10.1002/bse.1808

Keeping sustainable innovation on a leash? Exploring incumbents' institutional strategies

Magda M. Smink,* Marko P. Hekkert and Simona O. Negro

Utrecht University, Copernicus Institute of Sustainable Development and Innovation, Department of Innovation Studies, Utrecht, The Netherlands

ABSTRACT

This research aims to identify the institutional strategies of incumbent firms with regard to sustainable energy innovations that threaten their interests. This exploratory study contributes to the multi-level perspective by providing new insights into niche–regime interaction. The focus on actor behavior in transitions is informed by literature from institutional theory



Full force to slow down change

- Incumbents use many tactics to slow down radical innovation
 - Spreading of misleading information
 - Kicking the can down the road
 - Lock out of radical innovations through regulations / standards.
 - Defensive patenting
 - Acquisition of challenger firms



Turning point

- When incumbent realizes radical technology is the future
- Change of strategy
 - Active participation in new trajectory



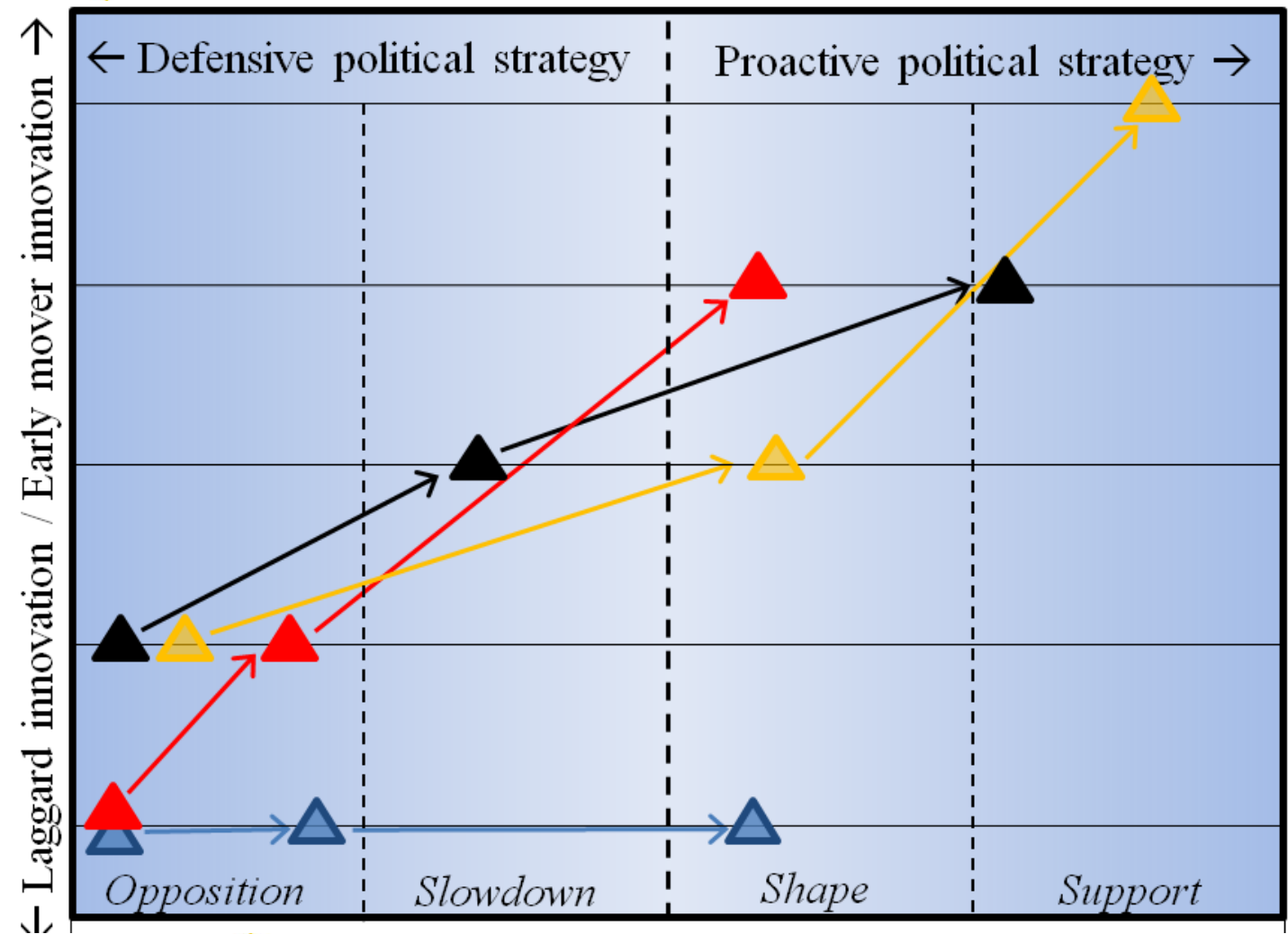
Closer look at changing strategies

- Automotive sector
- Development of zero emission innovations
- Primary reason: legislation in California
- Longitudinal case study of incumbent strategies
- Innovation versus institutional strategy
- Wesseling, J.H., Farla, J.C.M., Hekkert, M.P. Exploring car manufacturers' responses to technology-forcing regulation: The case of California's ZEV mandate (2015) *Environmental Innovation and Societal Transitions*, 16, pp. 87-105.



Relation innovation versus institutional strategy

| | | Value perspective | |
|-----------------------|---------------------|--|--|
| | | Value maintenance | Value creation |
| Strategic orientation | Innovation | <u>Laggard innovation strategy</u> Exploit status quo and comply cost-efficiently | <u>Early mover innovation strategy</u> Exploit early mover advantages reinforced by regulatory change |
| | Political influence | <u>Defensive strategy</u> Oppose regulatory change | <u>Proactive strategy</u> Shape regulatory change |



- ▲ = Toyota
- ▲ = Chrysler
- ▲ = General Motors
- ▲ = Nissan

- 1st ▲ = 1990-1999
- 2nd ▲ = 2000-2006
- 3rd ▲ = 2007-2013



- Strategy indeed changes
- More innovative firms increasingly support strict regulation
- Industry associations do not change their political strategy: always defensive



Lessons learned

- Consistent transition policy pulls incumbents into radical innovation
- Defensive strategies reduce over time
- Organized lobby falls apart

- Avoid industry association in times of transition



What if incumbents get involved in the innovation race?

- Biogas in NL – study of socio-political strategies
- Large differences in lobby strategies between new entrants and incumbents
- Large difference in result
- Smink, M., Koch, J., Niesten, E., Negro, S.O., & Hekkert, M.P. (2015). Institutional entrepreneurship in the emerging renewable energy field: incumbents versus new entrants., submitted for publication



Cooperation

| | Incumbents | New entrants |
|----------------------------------|---------------------|------------------|
| Actor variety | Public-private | Only producers |
| Members' interests | Different interests | Shared interests |
| Relation to external environment | Continuous | Ad hoc |
| Management | Professional | Voluntary |
| Funding | Substantial | Limited |



Framing

| | Incumbents | New entrants |
|----------------------|---|--|
| Alignment | Emphasis on growth opportunities for Dutch (regional) economy | Emphasis on benefits for agricultural sector |
| Problem definition | Strong | Weak |
| Tone | Positive | Negative |
| Level of abstraction | High: competitive biomethane market | Low: financial effects for new entrants |
| Summary narrative | 'You have a problem, we have a solution to help you' | 'We have a problem, we deserve your help' |



Lessons learned

- In general incumbents may be less inclined to pursue radical innovations
- However, institutional capabilities are well developed
- When they get involved, transition progresses more quickly



Overall conclusions

- Be aware of incumbents
- Their strategy has a large impact on transitions
- Initially defensive, but attitude may change (except for associations)
- Long term consistent policies may work best
- Actively involving incumbents in transition policy requires careful policy strategy