Planetary Economics: international dimensions

- Integrating technology and carbon pricing for a 'Club Good'

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Special Session on

TECHNOLOGY INVESTMENT, FINANCE,
AND THE ROLES FOR PRICING CARBON

- Context
- Why a technology lens for international cooperation?
- What are the core problem(s) to be solved?
- The role(s) of carbon pricing
- International strategies and linkages?

Pillar II (Pricing) conclusions

‘Carbon pricing is political suicide’

-Stephan Dion,

former Canadian Environment Minister and (briefly) leader of the Liberal Party

Comment after losing the General Election to Stephen Harper

- *Economics* of carbon pricing: design and strategic credibility are just as important as present level
- *Politics* of carbon pricing are driven by distributional impacts *and the lack of clearly articulated positive narrative* for either industry or consumers
- Links to the other two pillars (broadly, efficiency and innovation) are central to a positive narrative which enhances development and competitiveness and avoids big impacts on energy bills

International – why technology?

- Many international efforts focus on targets or pricing
- Technology has a theoretical appeal in a global context
- …. And a very practical one
- But has a mixed record and a surprising low profile in the international negotiations
  - Major focus has been push by developing countries on technology transfer / cooperation
  - Which makes industrialised countries nervous both about IP and costs

We are seeking radical innovation in some of the least innovative sectors of our economies

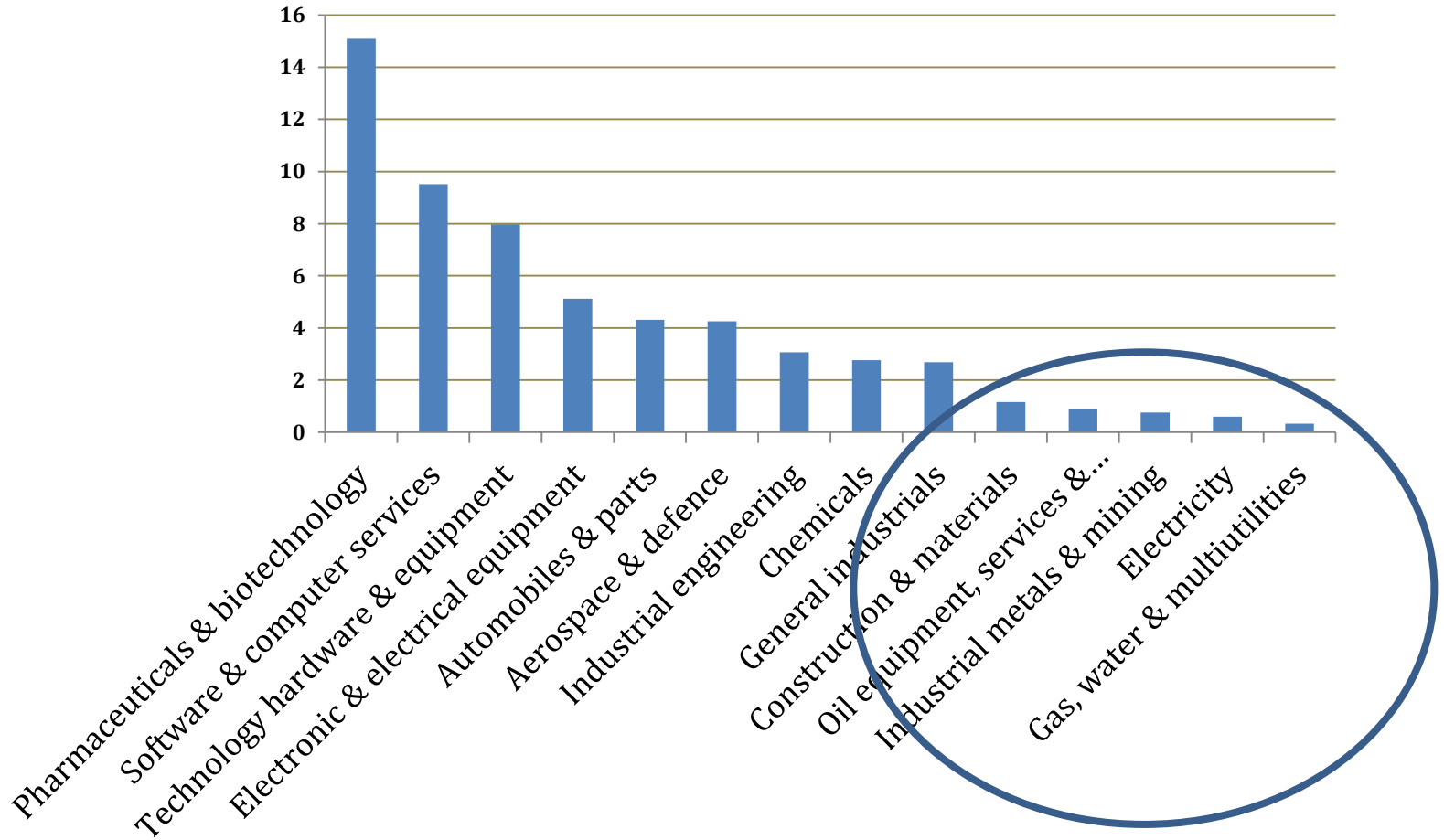


Fig.9.3 R&D expenditure by top companies in different sectors as % of sales, 2011

Data source: EU Joint Research Centre on Industrial Investment and Innovation, R&D Scoreboard 2012, http://iri.jrc.europa.eu/scoreboard12.html

What is missing?

Money ==========➔
(at rising scale)

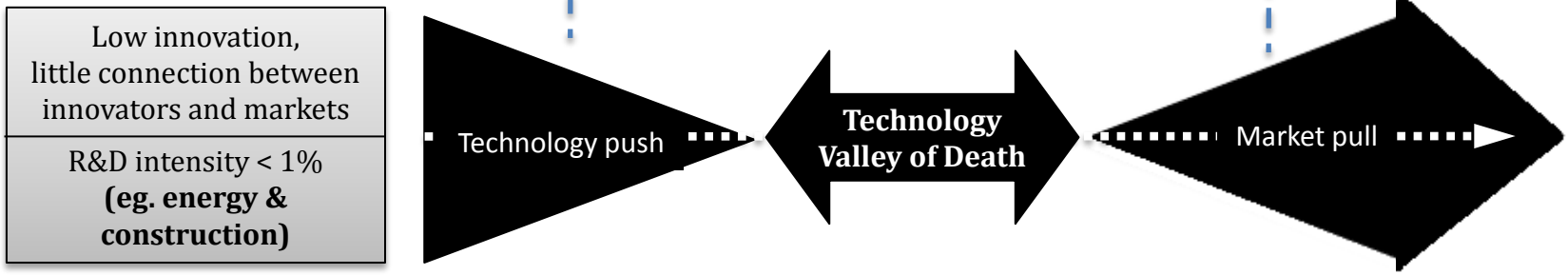


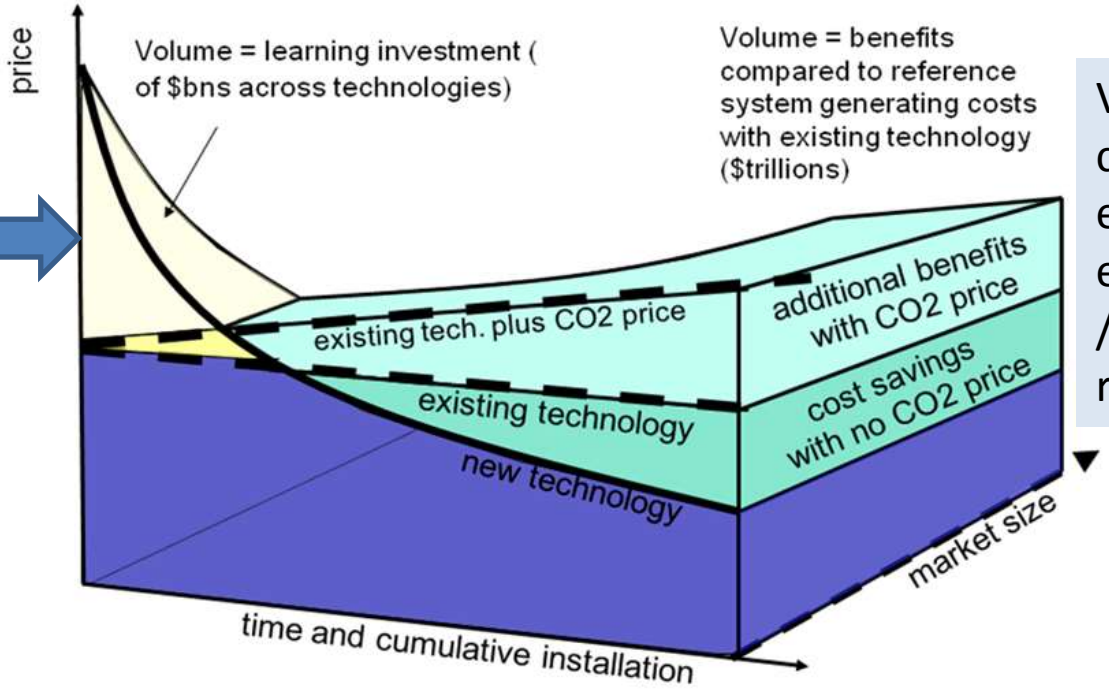
Figure 9.7. Innovation intensity and the broken chain

➔ ======= Markets
(credible and strategically growing)

Innovation offers a positive narrative to carbon pricing

Strategic investment can be costly but the returns can be huge …

Strategic investment for innovation in modern – clean energy systems



Value of low carbon innovation enhanced by externality pricing / rising carbon reduction value

- We have gained extensive experience of policies to span innovation chain
- Need integration between public and private, & strategic investment and markets
- Prices help with funding, redirection, market growth & credibility, and avoiding lock-in
- Regulatory structures and institutions must evolve along with technologies & systemsa

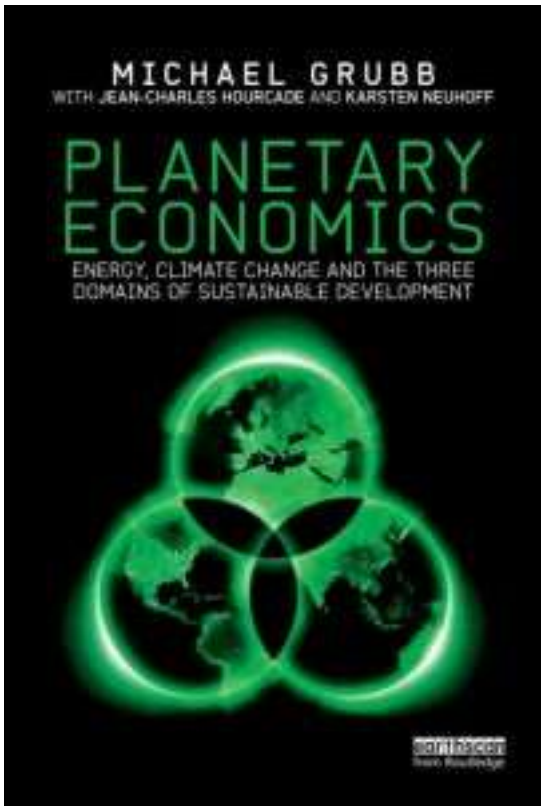
Some Questions …

- Is this linkage of ‘second and third pillars’ intellectually legitimate?
- Can linking carbon pricing and technology help to ‘detoxify’ the politics of carbon pricing?
- What role for ‘shadow carbon pricing’/AVCR in leveraging innovation investments?
- Can the link with technology credibly create a ‘net surplus’ sufficient to form a glue for international cooperation?
- What is the stake, interest & contribution of business & private finance in this?
- [How] might this relate to existing
  - UNFCCC technology institutions
  - World Bank carbon market networks + ?
  - We Mean Business coalition efforts?
- Given the obvious impediments to global deal on such specifics, should & can one design a club of cooperation around these conjoined agendas?
- *What are the **practical** linkages, and how might this relate to Paris agenda?*

Planetary Economics:

Energy, Climate Change and the Three Domains of Sustainable Development

Grubb, Hourcade and Neuhoff (2014)



1. **Introduction: Trapped?**
2. **The Three Domains**

Pillar 1

- **Standards and engagement *for* smarter choice**
- 3: Energy and Emissions – Technologies and Systems
- 4: Why so wasteful?
- 5: Tried and Tested – Four Decades of Energy Efficiency Policy

Pillar II

- **Markets and pricing *for* cleaner products and processes**
- 6: Pricing Pollution – of Truth and Taxes
- 7: Cap-and-trade & offsets: from idea to practice
- 8: Who's hit? Handling the distributional impacts of carbon pricing

Pillar III

- **Investment and incentives for innovation and infrastructure**
- 9: Pushing further, pulling deeper
- 10: Transforming systems
- 11: The dark matter of economic growth

12. **Conclusions: Changing Course**

Kindle: http://www.amazon.co.uk/Planetary-Economics-Sustainable-Development-sustainable-ebook/dp/B00JQFBWDO/ref=tmm_kin_swatch_0?_encoding=UTF8&sr=8-1&qid=1415625933

http://climatestrategies.org/projects/planetary-economics/
for information and register of related events.