Innovation and Innovation Policy in the Nordic region

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Aims, scope and methods

- Desk-study on innovation performance and policies influencing it in four Nordic countries
- Entirely based on published sources
- Comparative analysis of innovation activities & performance in the Nordic area band Europe based on data from the Community Innovation Survey (CIS) and other relevant sources
- Descriptive analysis of the evolution and character of innovation policy in Sweden, Norway, Finland and Denmark
Preliminaries

What is “innovation policy”?

- Innovation policy: Policies that affect innovation?
- Or policies created with the explicit intent of doing so?
- Why do we care? Beneficial economic effects?
- Broad approach to innovation (not only “high-tech”) most relevant
- But difficult to apply empirically
- Rewrite history?

And “innovation”?

the entire innovation process from the creation new products, processes or ways to do things to the application and spread of these in the economic system.
Innovative firms, broadly defined 2010
(share of all firms)

Source: Authors’ calculations based on Eurostat (CIS 7)
Radical innovators, 2010

(share of all firms)

Source: Authors’ calculations based on statistics from Eurostat (CIS 7) on innovations that are “new to the market”
R&D as a share of GDP, average 2007-2011
(total and by funding sector, from Eurostat)
Innovation Cooperation, 2010
(share of all innovative firms)

Source: Authors’ calculations based on Eurostat (CIS 7)
Venture Capital, per cent of GDP, 2012
(Source: OECD)
Tertiary education, average 2000-2006
(Share of population age 25-64, Source: OECD)
Internet users, per cent, average 2008-2012,
(Source: World Bank)
Conclusions from the comparative analysis

- “Absorptive capacities” (skills, ICTs) among the highest in Europe. Why?
- Sweden, Finland and Denmark among the “innovation leaders” in Europe
- Norway more “average” both in terms of performance and innovation-cooperation
- How did they get there? Origins, development trends and governance
Origins

- National Innovation Systems: Evolve through interaction between economic and political system
- Sweden & Denmark: Strong nation-states with well developed university systems a century ago: Universities continue to play a central role
- Finland & Norway less so: PROs outside universities key actors (VTT (3000 employees), SINTEF (2000 employees) and receive ample public support
- Structurally different – equally efficient?
Trends

- Early post-war periods: Public **R&D support**, science policy, research councils – a “fragmented” system
- **Proactive, targeted innovation policies** emerge in Sweden & Norway from the 1960s onwards, later in Finland (1980s and 1990s) and not all in Denmark with “**mixed results**” or?
- 1990s onwards: Challenge from **globalization**, increasing emphasis on **R&D** (Lisboa process & the 3% target), supporting **excellence**, role of **universities** (Sweden, Denmark and Finland)
- 2000s: **Broadening of the agenda**? More than R&D & high-tech? **Entrepreneurship**? Dealing with **grand challenges**? Social innovation? Work organization?
Governance: Specialized innovation agencies emerge

- Finland: TEKES (1983)
- Sweden: VINNOVA (2001)

In terms of budget, TEKES is the largest, followed by Vinnova (OECD 2013)
The challenge from fragmentation & lack of coordination

- Innovation systems dynamics: Complementarities & coordination
- Coordination of policy – a long standing challenge (example Denmark)
- Fragmented – and inefficient? - systems have emerged (example Sweden and Norway?)
- Combatting fragmentation requires political leadership (example Finland?)
- But conflicts with democratic traditions (Miettinen 2013)?