

Dynamic and multi-scalar considerations in hospital-industry interaction: Insights from the case of med-tech in Southern Sweden

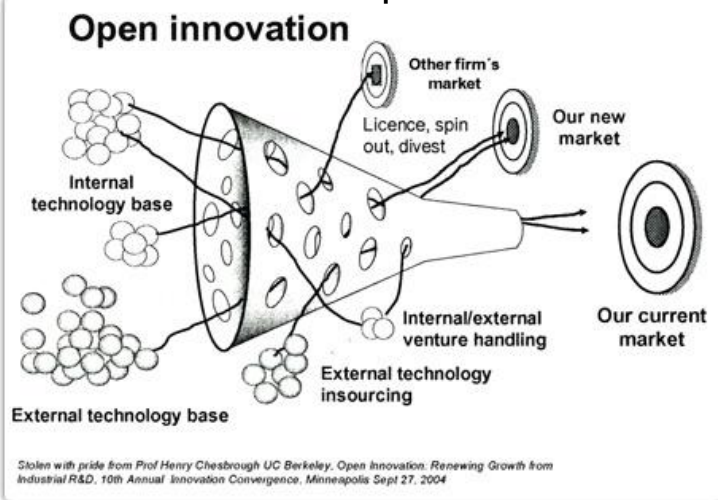
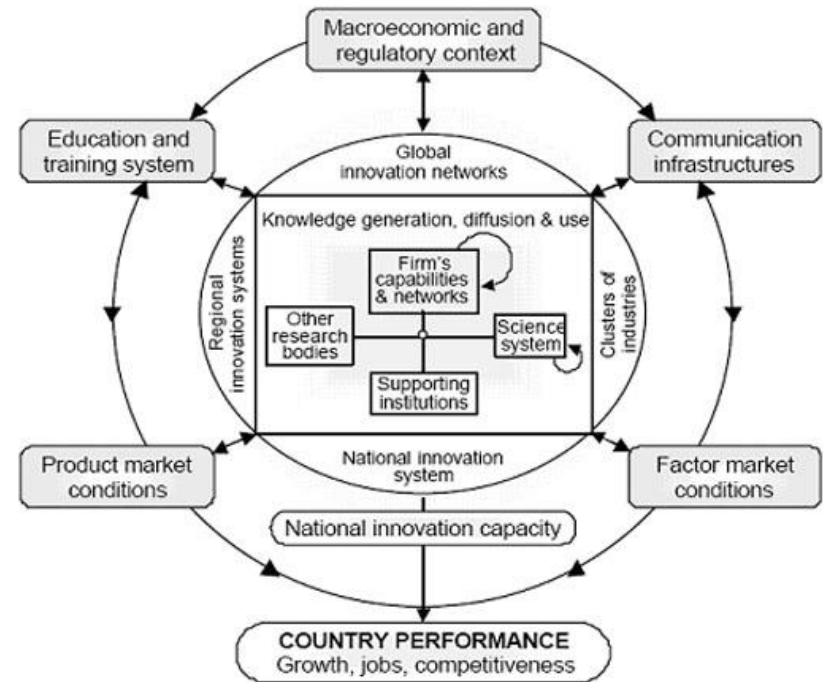
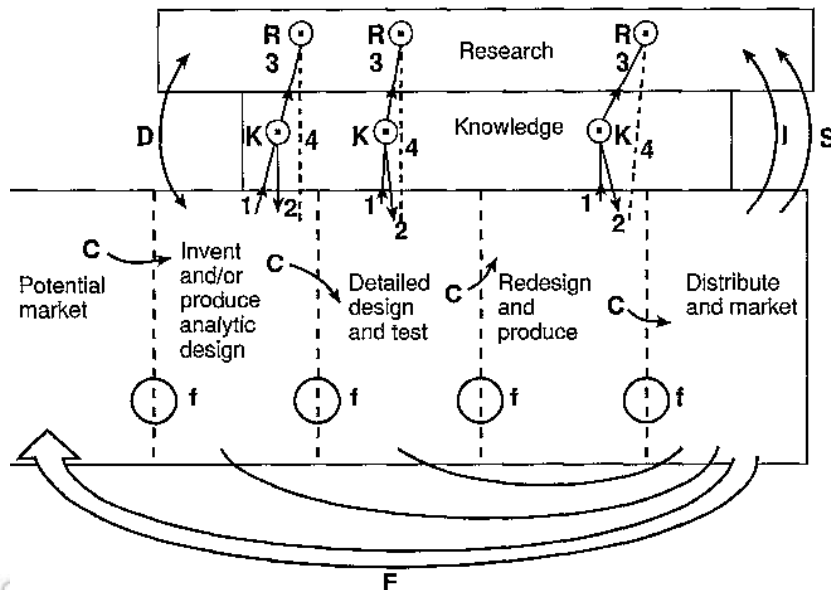


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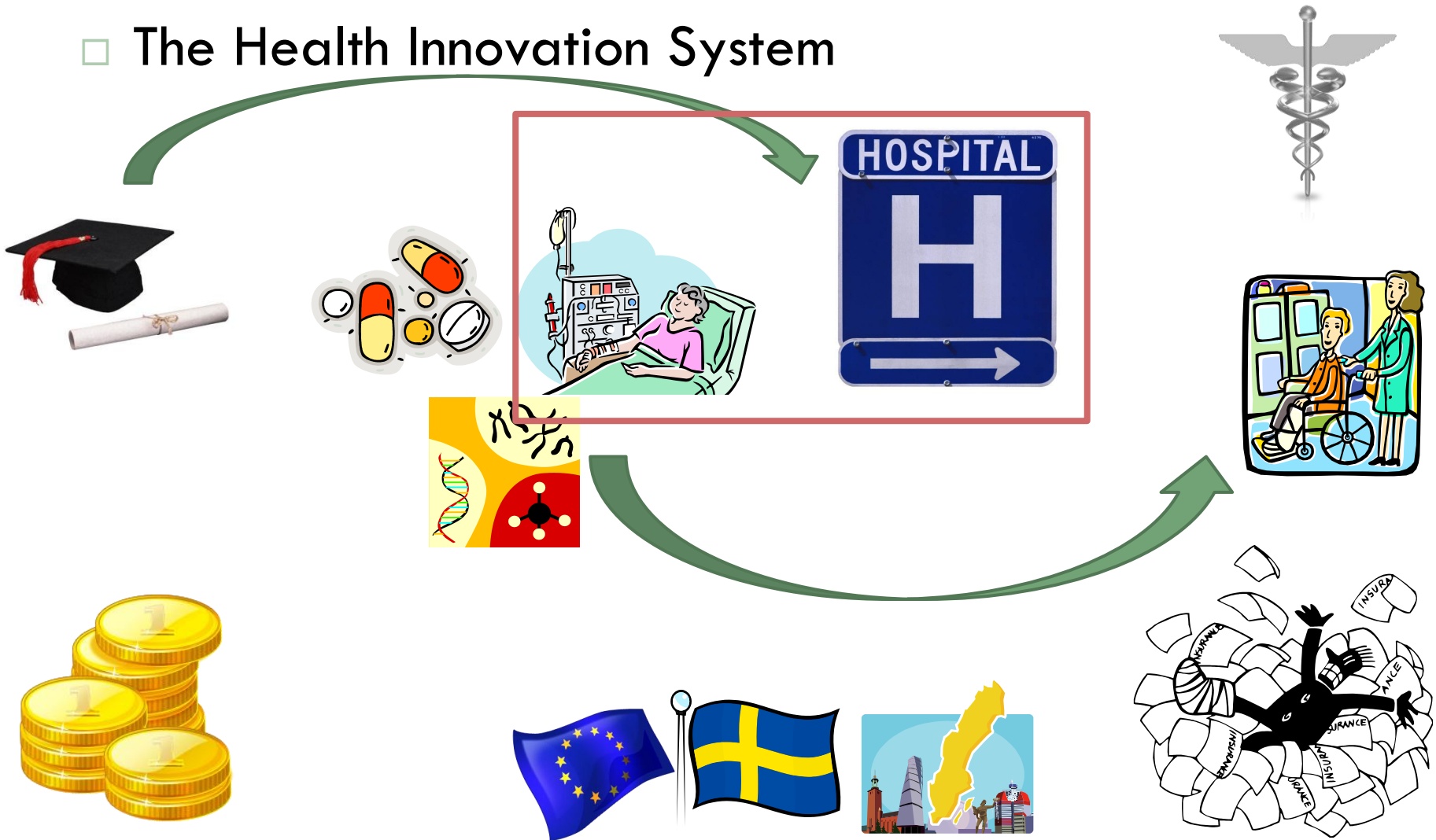
Innovation as an interactive process



- RIS (Asheim, Cooke, Gertler, etc)
- Knowledge subsystems – generating and exploiting (Autio 1998; Tödtling and Trippl 2005)
- RIS and system failures

Innovation as an interactive process

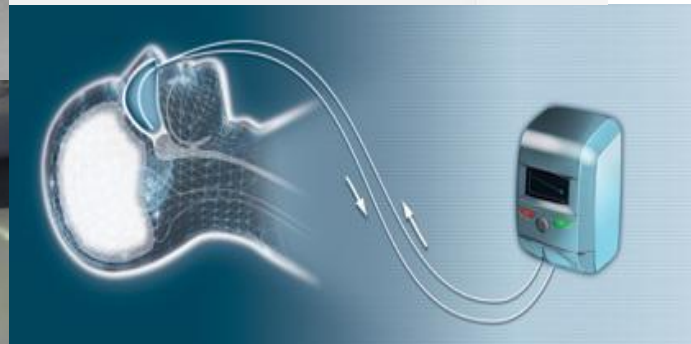
□ The Health Innovation System



Med-Tech



Interactive learning,
geography matters



User involvement:

- Identify need
- Prototypes
- Reference site



Heterogeneous in
terms of product/
technology

Industry structure
dominated by small
firms

(University) Hospitals

- Generate new knowledge AND utilize new technologies
- Patient care
- Education
- Research
- 'Innovation'

User-Producer interaction:

Rothwell 1977; Lundvall 1985; Porter 1990;
Gertler 1993; Jeppesen and Frederiksen 2006;
Grabher et al 2008



Hospital-MedTech firm relationship

Firms and Hospitals have different mandates, goals and incentive structures

Hospitals have limited resources to allocate to different activities

"The hospitals are so busy, you need to really be very precise, have something that is attractive for them so that they could feel 'Okay, if I participate in this, I could benefit from it'" (10)

Why are some relationships more easily established and function more smoothly than others?

Challenges:

Lacking "proximity"

- Cognitive / Institutional

Boschma 2005; Knoben and Oerlemans 2006; Gertler 2008

Hospital-MedTech firm relationship



Why are some relationships more easily established and function more smoothly than others?

Challenges:

Lacking "proximity"

Cognitive / Institutional

But: **static/dynamic** - How do these challenges, and strategies to overcome them, change over time and in response to which forces on the HIS?

Boschma 2005; Knoben and Oerlemans 2006; Gertler 2008

Case Study Research Design

- Desktop research & industry data
- 18 semi-structured interviews
 - MedTech firms (stratified sample by firm size and therapeutic area)
 - industry organizations
 - regional authorities
 - hospital administration
- How do 'proximities' change over time:
 - The value of frequent interaction and geographical proximity
 - The changing institutional framework
 - The changing role of social proximity

The value of frequent interaction and geographical proximity

- Very important and increasingly necessary
 - ▣ *"Companies need to test their products in clinical settings to get validation. Also they need to say that hospitals in their home market at least are using their product if they are to sell them in other countries "* (11)
 - ▣ *"A local partner makes it easier because you speak the same language, it is easier communication"*(6)

Increasing regulatory requirements on safety and efficacy, and a need to demonstrate (cost-) effectiveness to buyers. (EBM)

▣ MedTech vs Pharma companies

- ▣ Mode of innovation
- ▣ Industrial structure
- ▣ Heterogeneous products



"The regulation for clinical trials for pharmaceuticals is so strict and it's standardized, it's easy, you have this recipe and you have this organization for it" (18)

Changing institutional framework: The challenge of low institutional proximity

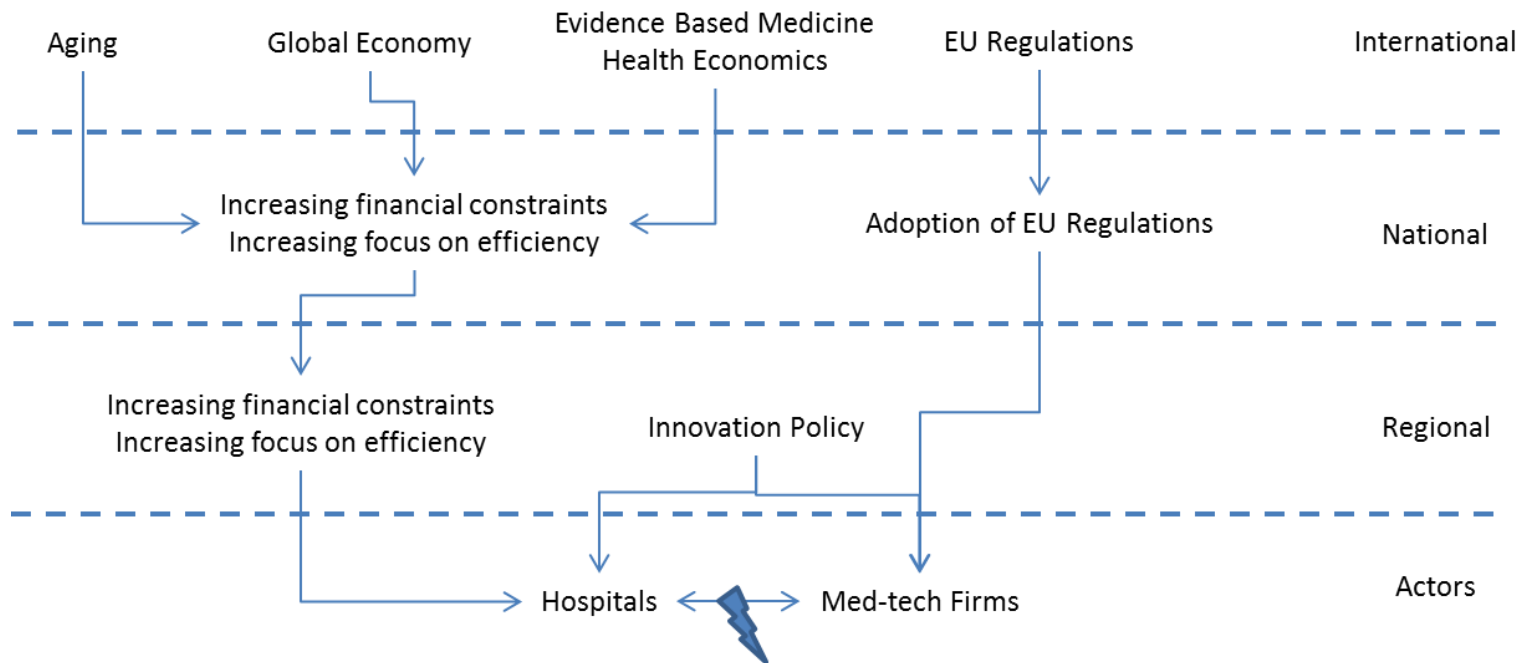
- Big challenge and increasingly so
 - ❑ Greater need by firms (safety, efficacy and (cost-) effectiveness)
 - ❑ Fewer resources at the hospital (fiscal pressures on health care system, aging society)
 - “[national] governmental pressure is leaving less time for doctors to do studies or research” (5)
 - ❑ Hospital adaptation: towards formalization of firm-hospital interaction, modeled on experience with pharma
- ❖ *Barriers to interaction are not static but may change over time, in response to forces at various scales*



The changing role of social proximity

- Social proximity is losing effectiveness in overcoming barriers to interaction
- before: Dense local networks – bottom-up access
 - ▣ *"Customers that we have been working with, we had good relationship with them and they could see 'ok, perhaps we could do this together'" (10)*
- recently: hospital's organizational restructuring, formalization of innovation project initiation
 - ▣ *"we talk with the doctors and they have to try to persuade the administration to go for it" (13)*
- ❖ *Strategies to relationship-building are not static or permanently available once developed*

Inter-organisational ties: Dynamic and multi-scalar considerations



Firms demand more hospital-firm interactions but hospitals have less resources to engage in hospital-firm interactions

Hospitals increasingly formalise routines mirroring interactions with pharma but med-tech firms have different knowledge base and mode of innovation, which reduces institutional proximity

Formalised processes and restructuring within hospitals reduce the value of social networks and social proximity

Inter-organisational ties:

Dynamic and multi-scalar considerations

- Proximity dimensions and the RIS as a whole change over time and in response to forces operating at different scales. (and 'interscalar institutional interaction)' (Gertler 2010)
- Policy implications: eg demand-driven innovation policies for sectors where there is a large role for the public sector

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