WP5: Strategies of EU (Danish) MNCs for offshoring and outsourcing innovation

The agro-food sector

Stine Haakonsson, CBS

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INGINEUS case selection

- Agro-food industry: 'low tech' sector of INGINEUS with 'Born local' companies. But some GINs as results of corporate strategies of internationalisation…

- 4 case studies (2 are in GINs):
  - firm1 and firm2 (bio-tech, 70% of global enzyme market)
  - firm3 and firm4 (trad. production and market expanding strategies)

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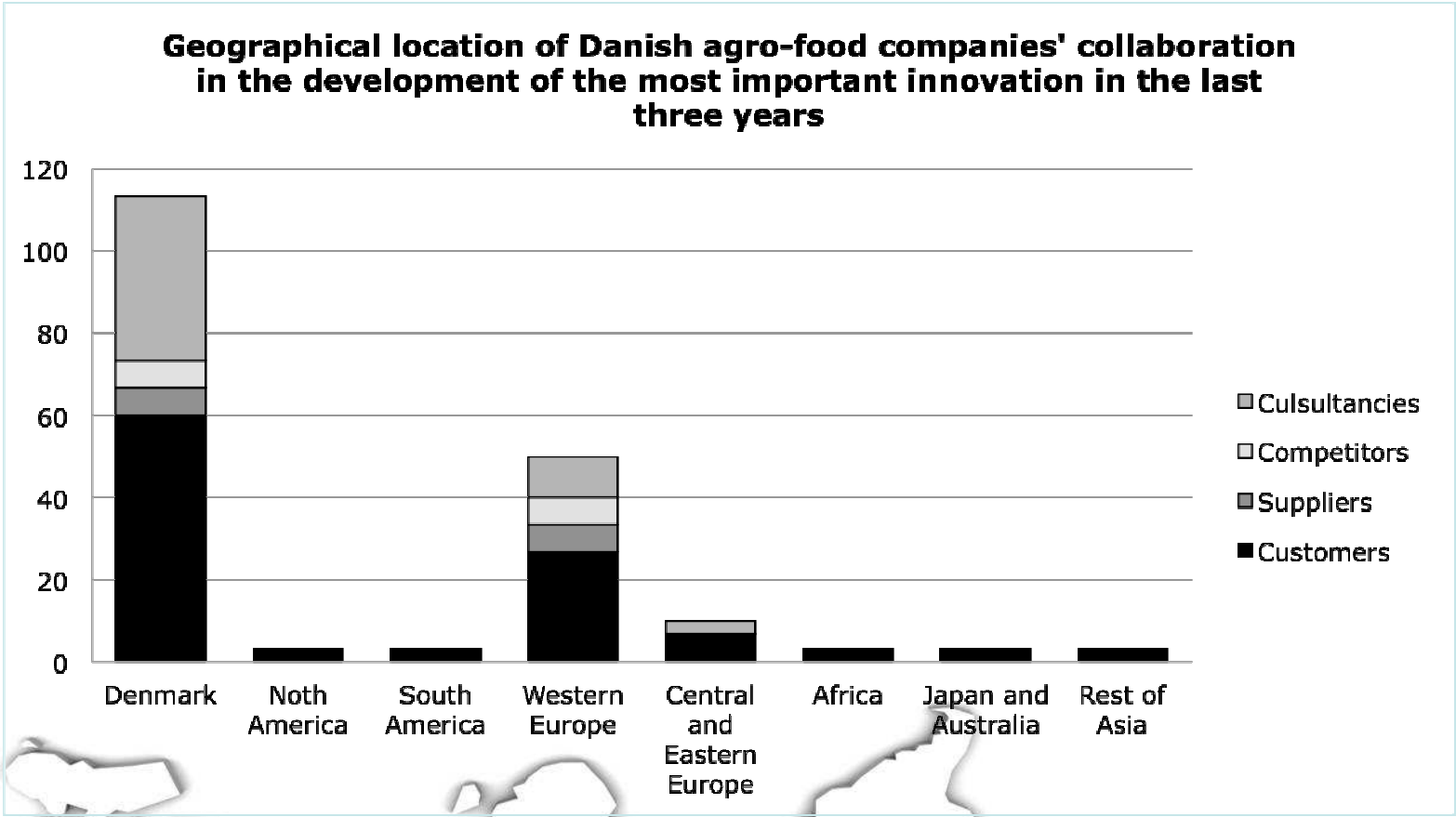
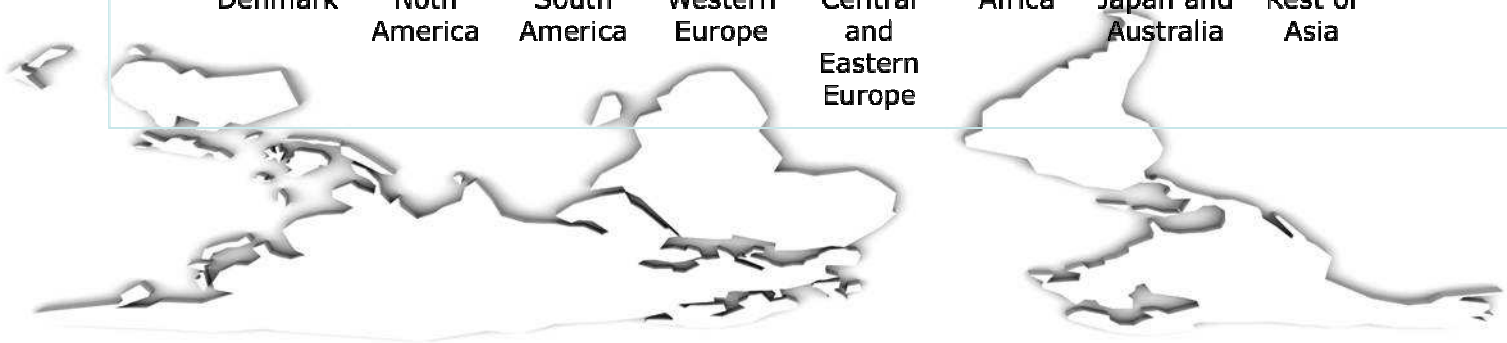
GINs in Agro and Denmark

- DK Agro-food industry representative of the EU?
  - No: but large, international and innovative, an extreme case.
  - 'Agro food valley'
  - Strong national networks (universities and companies), co-location, joint research, sponsoring
  - Strong policy support (important sector in exports and employment)
  - High level of knowledge capacity at home

Vertical collaboration: 'farm to fork' integration





So – why talk about GINs in Agro-food?

- Increasing costs of R&D in MNCs
- DK companies first movers in internationalisation – SOE tendency to look for new markets

- Push-factors:
  - Locals know local tastes better and also the varieties of produce available (+quality)
  - 'All good innovations cannot take place in Denmark'
  - 'Practically easier to to talk with people in Beijing if we have research there'

A typology of GINs (Christina + strategy)

	Global	Innovation	Network
High	World wide "G"	Exploration "I" (Research related)	Beyond the value chain /GPN "N"
Low	Denmark/Europe "g"	Exploitation "i" (Dev. related)	Within value chain /GPN "n"

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	Global (G / g)	Innovation (I / i)	Network (N / n)
Company I **GIN**	5 large R&D platforms Europe, US, China Setting up an R&D satellite in South Africa	Future oriented, new to the world innovation. 6 % of turnover into R&D	Development: customers 10% of R&D spending outside the company (universities)
Company II **GIN**	R&D projects managed globally 10 R&D locations spanning 5 continents	14.3% of turnover into R&D Bio-tech	Collaborations with companies in China, universities in Bangalore (IIT & IIS) DK universities
Company III **giN**	Sample collections internationally R&D at head quarters in Denmark	Market driven research Focus on end-customer	Collaboration with University A high number of co-sponsored professors, PhDs and post docs in Denmark
Company IV **gi/IN**	6 R&D centres in Europe	R&D is predominantly market oriented Some research into milk-genome	Public research funding University partners 10-15% of R&D budget is spent externally

Two types of agro-food MNCs

1. Producers for the end-market (consumers): firm3 & firm4

   Not GINs

1. Knowledge suppliers, global lead firms: firm2 & firm1

   GINs

Why firm3 and firm4 are gi/IN - not GINs

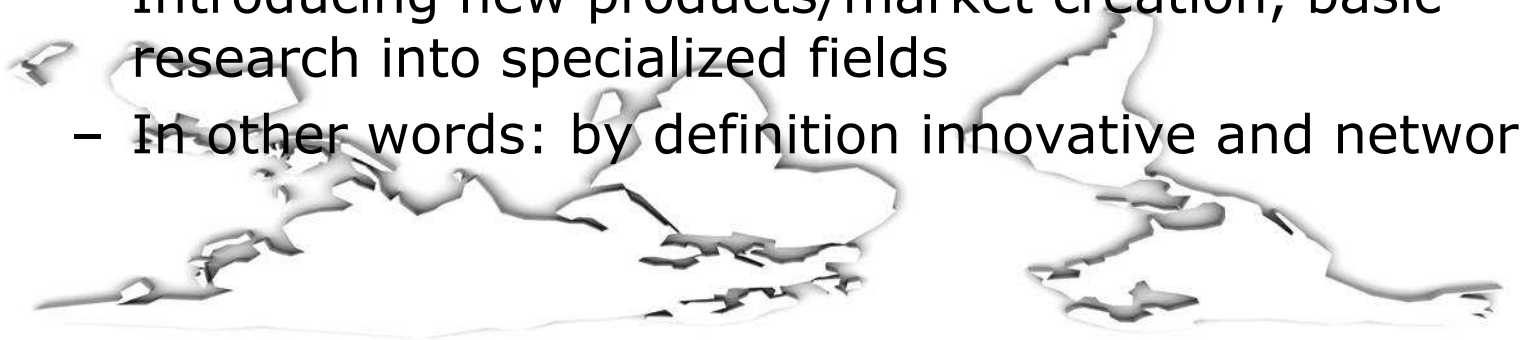
- Producing relatively simple products for end-markets
- Main driver of internationalisation: Expansion of market beyond Europe
- Internationalisation of innovation is costly (coordination and communication): ”We do not need to” (‘too difficult’)
- ”We know” - Human resources are available at home
- Innovation: into new market segments
  - (beer for women, functional foods)
  - (or shelf life/packaging)

The GINs…..

'The formula for our success is a good balance between short-term product improvements, mid-term development of new concepts, and long-term radical innovation in our pipeline'

- R&D investment: 16% and 6% of turnover
- Patents: 62 and 39 between 2004 and 2008

- Key business:
  - Providing knowledge solutions to customers, application of innovation lead-firm customers, 'experts'
  - Introducing new products/market creation, basic research into specialized fields
  - In other words: by definition innovative and networks



Tools and rutines for GIN formation/configuration

- CULTURE: Training of employees into the corporate culture – sence of belonging + turnover + co-creation. Translation of the 'Scandinavian model', 'failure of the month award'

- ICT: electronic lab journals/log books, search engines, conference calls

- TRAVELLING: people move a lot..

Differences in mode of organisation

Company I	Company II
Global teams	Specialised teams
Virtual centers of excellence	Physical centers of excellence
5 R&D centers with the same structure + knowledge (+/-)	Surface grown enzymes in India, 2nd generation bio-eth in China & US etc.
Central coordination and selection process	Decentralized coordination, coordinators needed at home
GPN => GIN	**GPN and GIN**

Strategies of collaboration

- Inter-chain collaboration: suppliers for tyre production, pharmaceuticals, bio-fuel industry; buyers of robotics, GIS etc.

- Catching talents in academia: awards and innosearch

- Recruiting people with strong local networks

Other interesting findings..

- Internationalisation location choices based on market and growth – IPR not a barrier
- Different locationally specific entry strategies: India – take over and immediately into the GIN, China – developed over 20 years (from GPN!)
- Concern: Difficult to attract people to Denmark

Conclusions

- GINs exist in the agro-food industry
- Different strategy models (augmenting and exploitation):
  - Based on products and customers
  - Tradition of internationalisation
  - Location for internationalisation of innovation
- GIN terminology, are MNCs drivers of GINs? Or are they actors? How does location matter for company strategies?

Thanks for your attention/questions

Stine Haakonsson
Sh.dbp@cbs.dk

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