

The background features several large, overlapping, curved shapes in shades of purple, green, and blue. Interspersed among these are numerous small, yellow, triangular shapes that resemble rays of light or sparks, scattered across the white background.

The origins of the national innovation system concept and its usefulness in the era of the globalizing economy

EU-SPRI Helsinki
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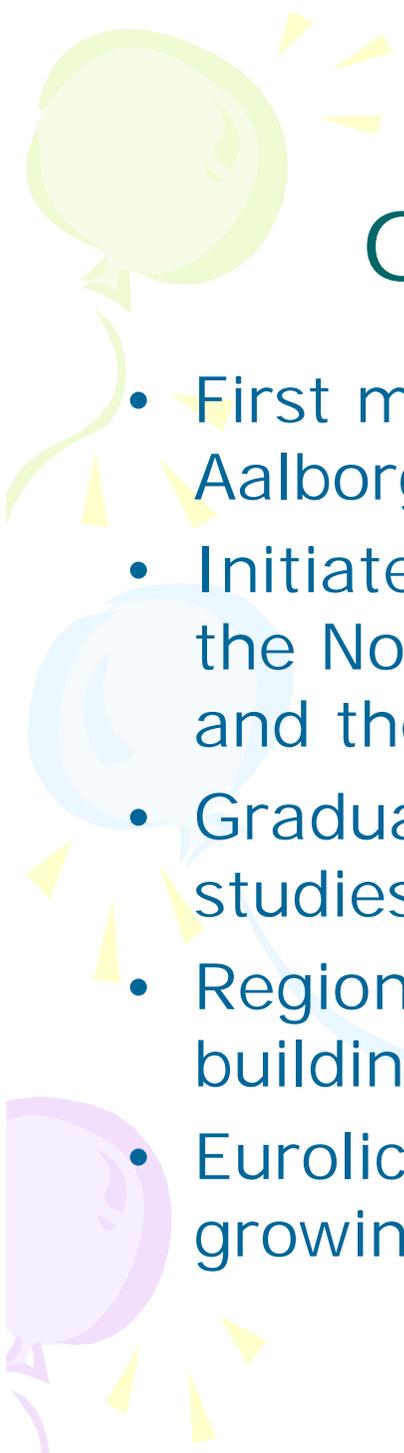
Contributions on European innovation policy

- *Lundvall, B.-Å. and Borrás, S. (1999), The Globalising Learning Economy: Implications for Innovation Policy, Brussels, DG XII.*
- *Archibugi, D. and Lundvall, B.-Å. (eds.) (2001), Europe in the Globalising Learning Economy, Oxford University Press.*
- *Lorenz, E. and Lundvall, B.-Å. (eds.) (2006), How Europe's Economies Learn, Oxford, Oxford University Press.*
- *Lundvall, B.-Å. (2009), 'The external implications of the Lisbon Agenda Europe', in Rodrigues, M. J. (ed.). Globalization and the Lisbon Agenda, Edward Elgar.*



Globelics – www.globelics.org

- Global network on the
 - economics of
 - learning,
 - innovation and
 - competence building
 - systems
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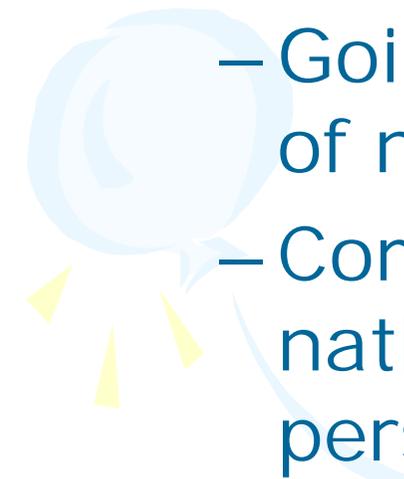


Globelics and EuroLics

- First meeting in Aalborg 2001 with support from Aalborg University and Vinnova, Sweden.
- Initiated by scholars from Innovation Studies in the North (Freeman, Nelson, Soete and Lundvall) and the South (Cassiolato, Gu, Joseph, Muchie).
- Gradually bringing in scholars from development studies.
- Regional ics: Asialics, Lalics, AfricaLics and now building EuroLics
- Eurolics is a response to underdevelopment and growing inequality in Europe.



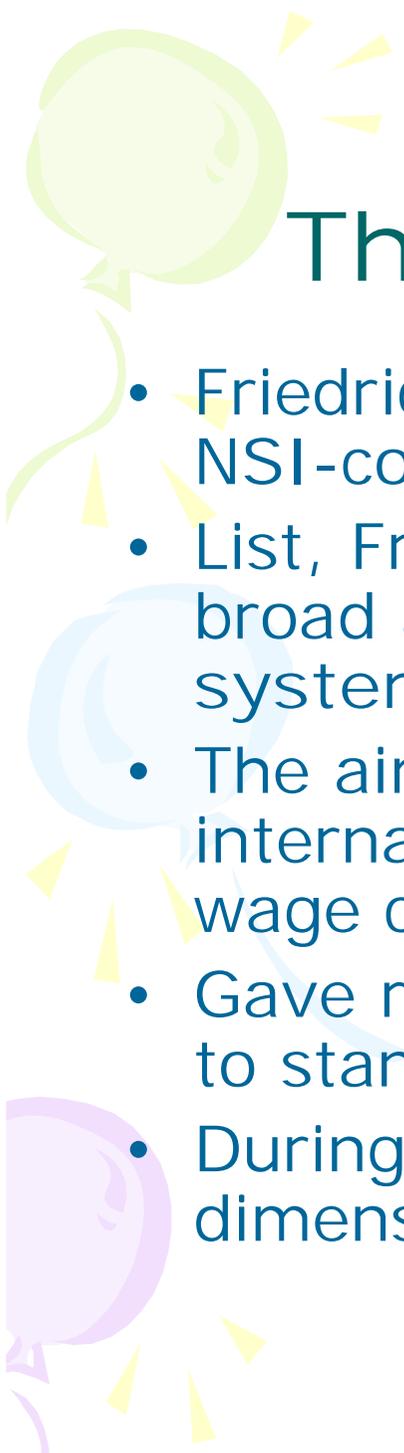
The structure of my lecture

- Develop a new theoretical framework for understanding catching-up.
 - Going back to the origins of the concept of national innovation systems.
 - Combining global value chain and national innovation systems perspectives.
 - Implications for Europe and for European innovation policy.
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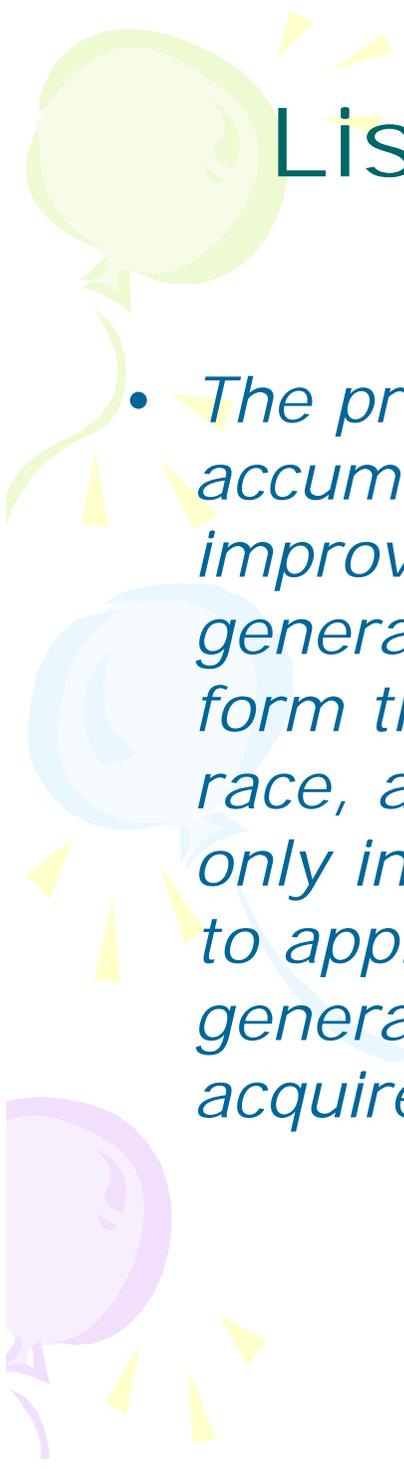
Back to the origins

- *Freeman, C. (1982) 'Technological infrastructure and international competitiveness', Draft paper submitted to the OECD Ad hoc-group on Science, technology and competitiveness, August 1982, mimeo. Later published as Freeman, C. (2004), 'Technological infrastructure and international competitiveness', Industrial and Corporate Change, 13: 540-52.*
- *Lundvall, B.-Å. (1985) Product Innovation and User-Producer Interaction, Aalborg: Aalborg University Press.*



The Original NSI -concept

- Friedrich List (1840) as the Grandfather of the NSI-concept and Freeman (1982) as the Father.
- List, Freeman, Nelson and Aalborg versions were broad and linked innovation to the production system and to the organisation of firms.
- The aim was to understand either catching-up or international competitiveness as being more than wage costs.
- Gave rise to criticism to standard economics and to standard economic policy.
- During the diffusion process the critical dimension was lost or diluted.



List on the role of 'mental capital

- *The present state of nations is the result of the accumulation of all discoveries, inventions, improvements, perfections and exertions of all generations which have lived before us; they form the mental capital of the present human race, and every separate nation is productive only in the proportion in which it has known how to appropriate these attainments of former generations, and to increase them by its own acquirements. (List 1841, p. 183).*



Freeman's reference to Aalborg

- *The research at Aalborg on the interdependencies between various groups of firms in promoting technical progress in certain key sectors of the Danish economy is also highly relevant here (Andersen et al 1981). (Freeman 1982, p. 550)*



Origins with spin-offs

- Freeman (1982) inspired catch up research.

- Fagerberg, Nelson and Malerba

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- Lundvall (1985) inspired economic geographers.

- Cooke, Morgan, Storper, Maskell and Asheim



In both cases the spin offs enriched the understanding of innovation systems.



Global value chain literature

- Gereffi, G. and Korzeniewicz, M. (1994) Commodity Chains and Global Capitalism, (ABC-CLIO).
 - Humphrey, J, and Schmitz. H. (2002) 'How does insertion in global value chains affect upgrading in industrial clusters?', *Regional studies*, 36.
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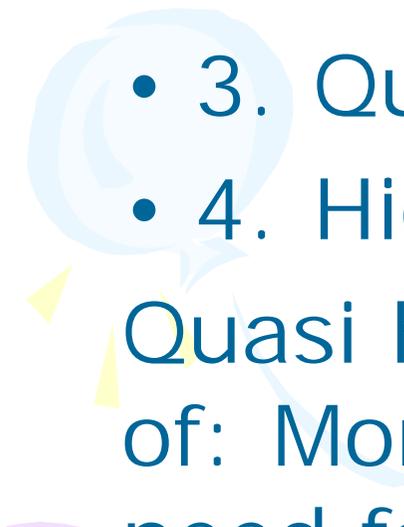
Four forms of upgrading

- New process
 - New product
 - New function
 - New sector
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- 'New function' refers also to branding and market control - technical innovation is not sufficient.
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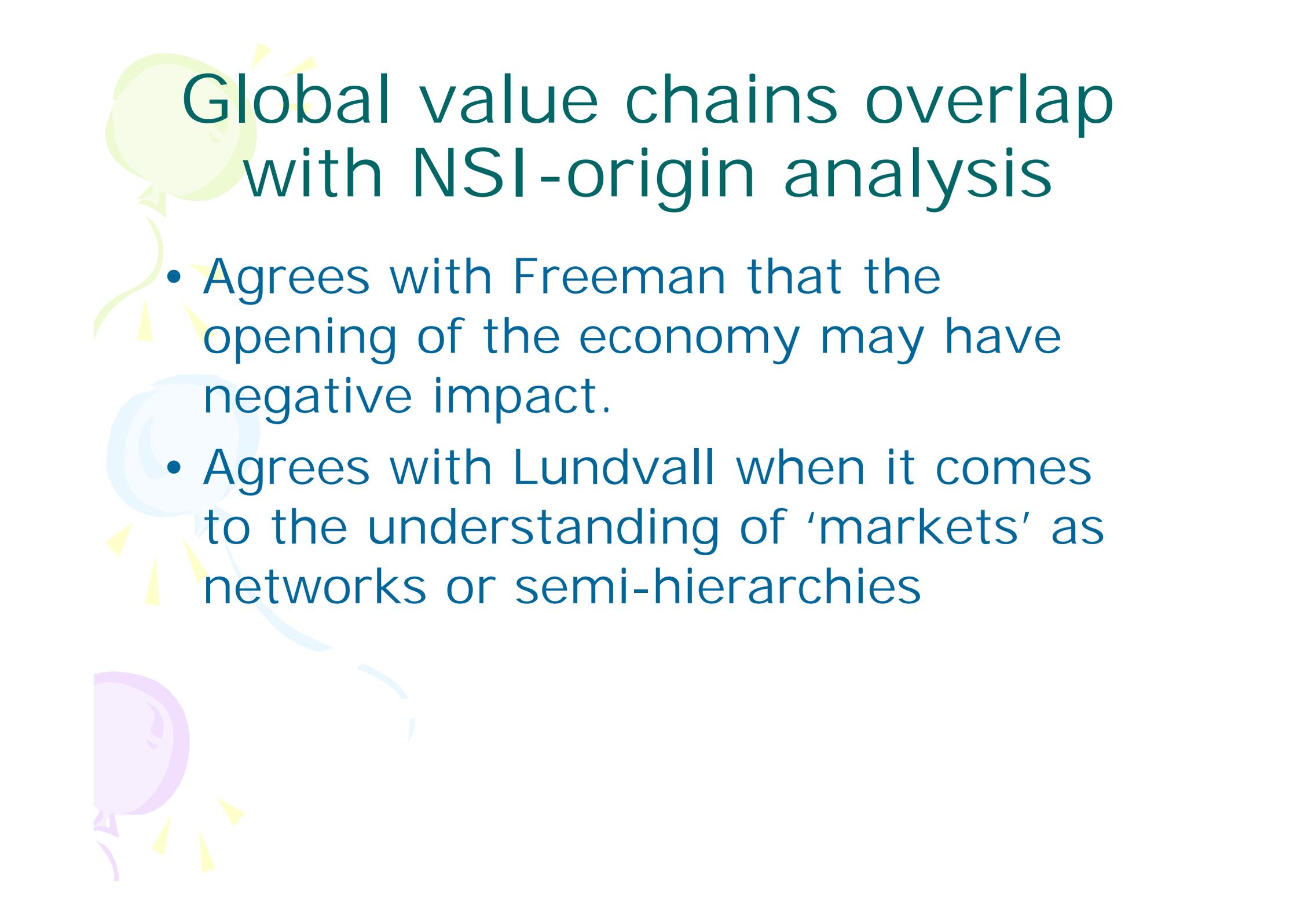
Four forms of governance

- 1. Arm's length market relations
- 2. Networks
- 3. Quasi Hierarchies
- 4. Hierarchy



Quasi hierarchies reflect a combination of: Monopoly position of the buyer, need for speedy response among suppliers, limited capacity of suppliers and complexity in the product





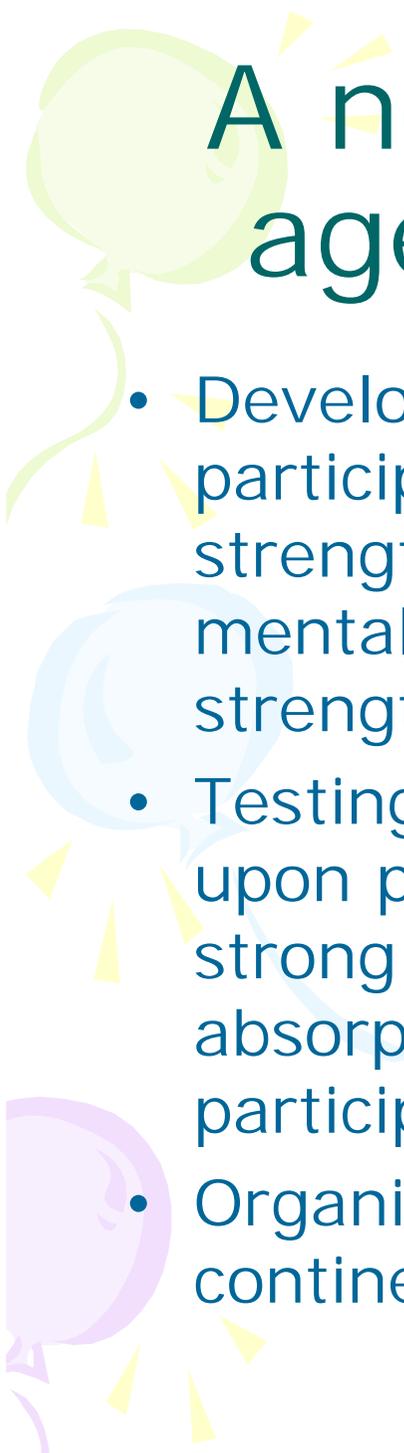
Global value chains overlap with NSI-origin analysis

- Agrees with Freeman that the opening of the economy may have negative impact.
- Agrees with Lundvall when it comes to the understanding of 'markets' as networks or semi-hierarchies



But also differences between GVC&NSI approach

- The link from micro to macro is not well developed in GVC-analysis – interesting case studies but not easy to aggregate to the macro level. Here the Catching Up spin off is crucial.
 - The analysis of the role geography is less developed in GVC analysis. Here the regional development spin off is important.
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A new combined research agenda for development

- Develop a distinction between patterns of participation in the global economy that strengthen the national knowledge base (enhance mental capital) and patterns that undermine the strength of the national innovation system.
- Testing the hypothesis that upgrading based upon participation in global value chain requires a strong national innovation system and strong absorptive capacity at the level of the participating firms.
- Organising projects with scholars from all continents in the world.



The Failure of the Lisbon Strategy

- The understanding of the role of innovation and learning as key to competitiveness was an integrated part of the Lisbon strategy. But it was never widely understood among mainstream economists and in Ministries of Finance.
- The Lisbon strategy could have served to close the gap between the strong and the weak innovation systems and hereby to avoid the euro-crisis.
- The crisis could have been used as an opportunity to take a step forward in terms of solidaric solutions with emphasis upon capacity building in the South of Europe.



Final words

- We cannot build a competitive, cohesive and sustainable Europe through national efforts alone.
- The fact that EU-member countries are wide open increases the need for a European wide solidaric innovation policy!
- Framework programs and regional funds can help but they are marginal given the dimension of the problems.
- An *Ambitious* Marshall Plan with focus on learning and innovation is required in order to move the European project ahead.



- THANK YOU FOR YOUR ATTENTION