

# Creative destruction and public policies – what kind of policies in a frontier economy?

- Case Finland

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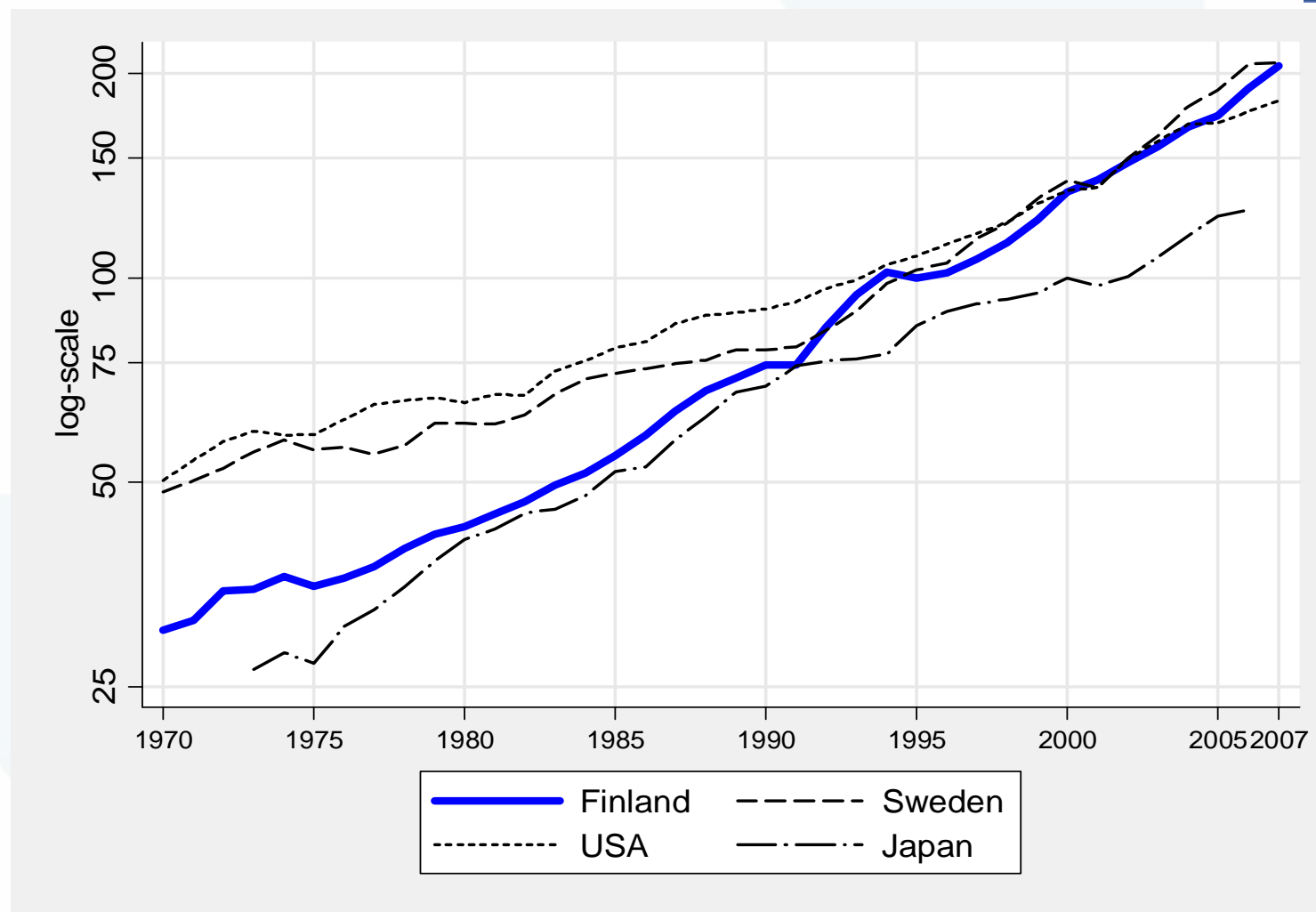
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# This talk

- Background: Finland's great leap in productivity
- Sources of productivity
  - Within industries
  - Productivity enhancing structural change – creative destruction
  - Creative destruction in a frontier economy
    - Experimentation
    - Reallocation
    - Selection
- What kind of policies at the frontier?
  - Long term: education policies
  - Short/medium term: competition & innovation policies

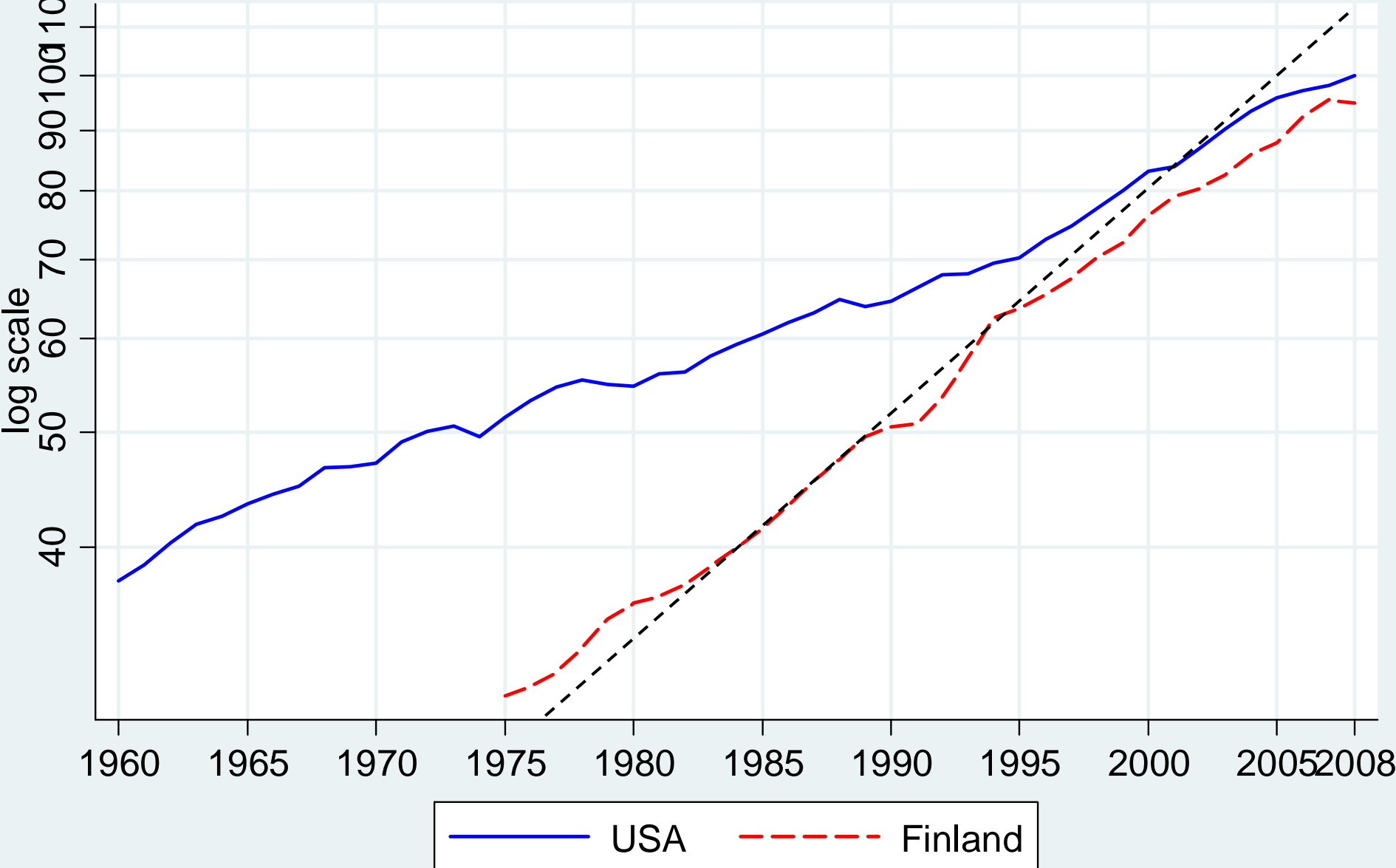
# **Aggregate productivity development – the great leap**

# Labor productivity levels in manufacturing, Finland 1995=100



Sources: Groningen University, EU KLEMS, Maliranta (2009)

# Labor productivity, non-financial firms, USA 2008 = 100



Source: National Accounts, Bureau of Labor Statistics and Nevalainen-Maliranta 2009

# Macro-level sources of productivity growth

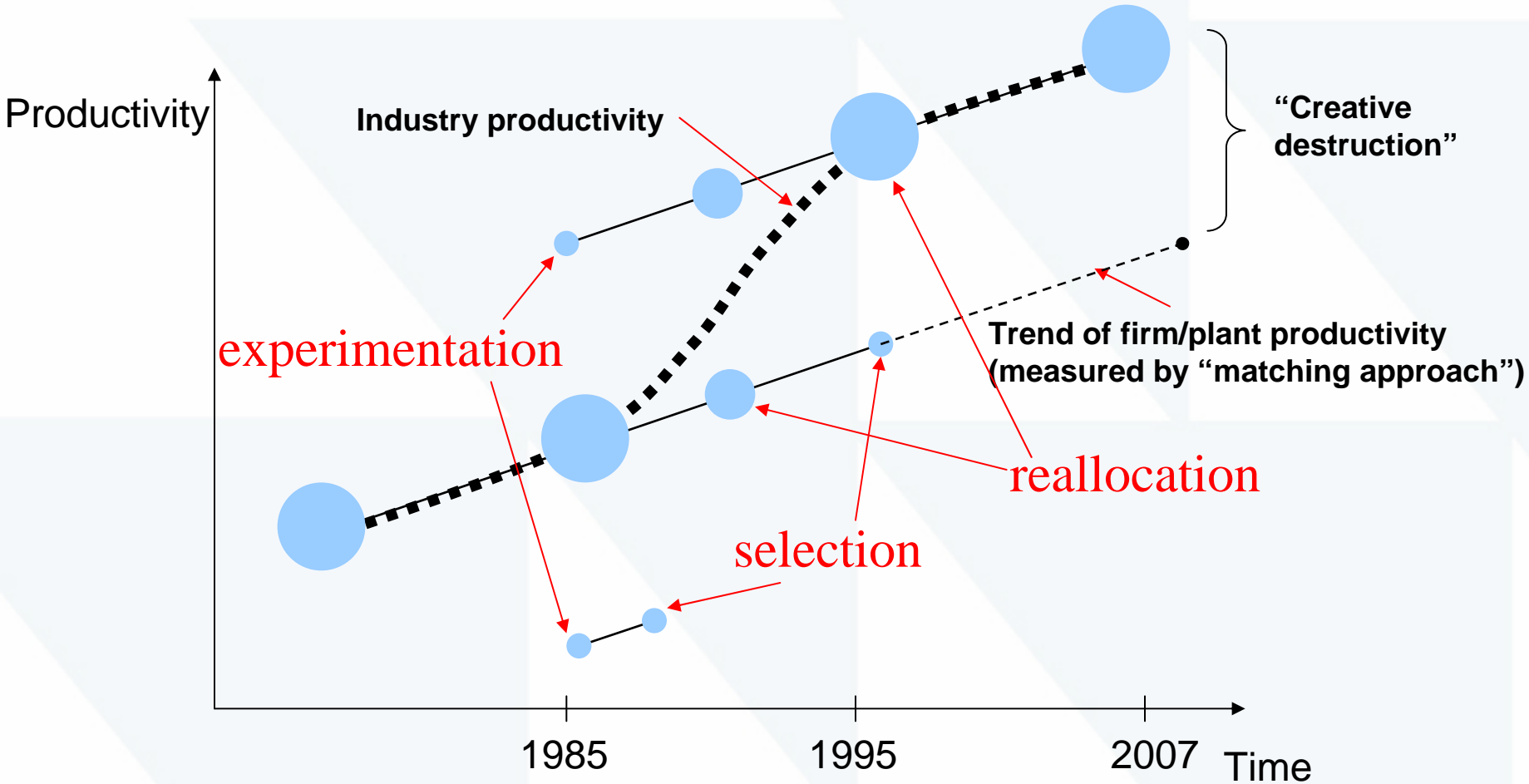
- Growth accounting decomposition of 3.2 % average (1995-2005) labor productivity growth (O'Mahony and Timmer, 2009):
  - Contributions from:
    - TFP 2.5 %-points
    - ICT capital 0.7 %-points
    - Non-ICT capital 0.2 %-points
- High TFP contribution indication of catching-up and technical change
- Growth accounting does not, however, reveal
  - Causal relations
  - Role of creative destruction

## Creative destruction - Digging beneath the aggregate productivity numbers



- Productivity enhancing restructuring – micro-level changes in productivity distributions
- Components
  - Entries (*experimentation*)
  - Exits (*selection*)
  - *Reallocation* of resources between continuing plants/firms

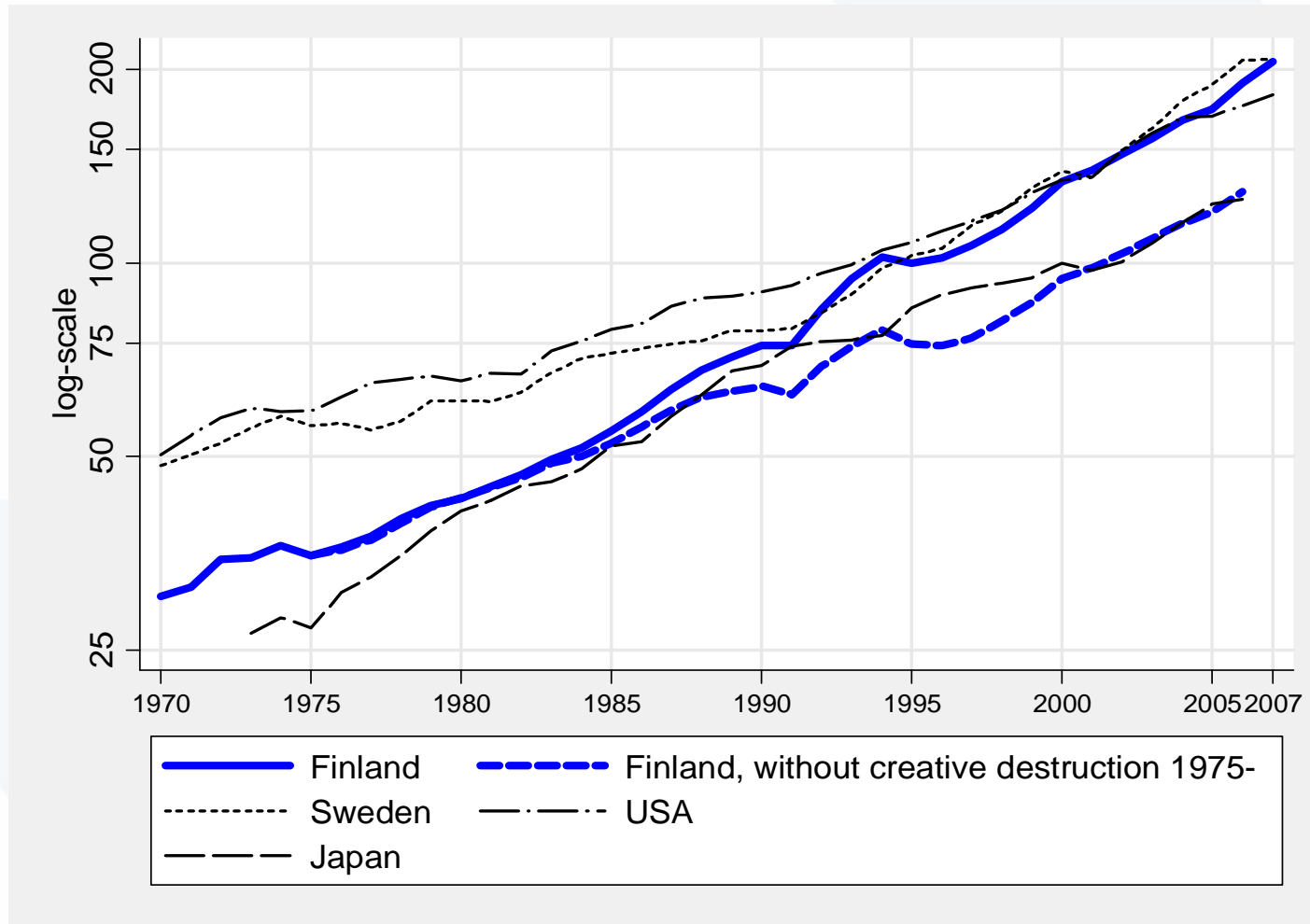
# "Creative destruction" in transition



LÄHDE: Hyytinen-Maliranta 2010

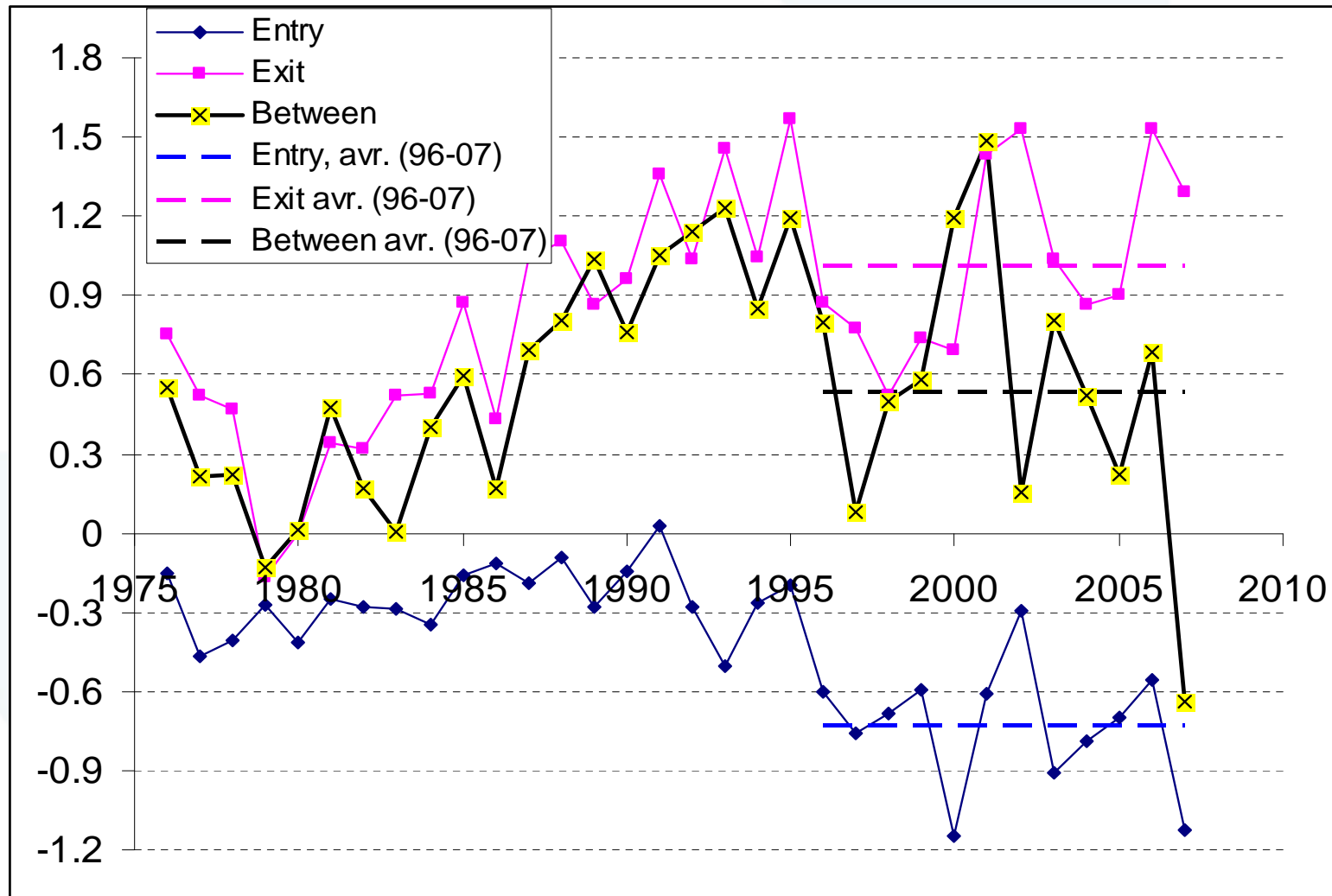


# The role of creative destruction in international comparisons of aggregate labor productivity (manufacturing)



Sources: Groningen University, EU KLEMS, Maliranta (2009).

# Components of creative destruction within manufacturing industries (%)



# Summary and conclusions – what kind of policies in a frontier economy?

# Summary – vital role of creative destruction

- In addition to macro-level sources of productivity growth, creative destruction has a vital role
- Creative destruction explains *one third* of the overall productivity growth in Finnish manufacturing and virtually *all* of the acceleration since mid 1980s
- In a frontier economy creative destruction is about
  - experimentation, reallocation,
  - selection among individuals (particularly managers) and businesses.

# Policies

- Competition enhances innovation
- Opening up the economy and increasing competition associated with innovation and productivity growth in Finland
  - Reducing product market regulation (faster than OECD average) coincides with high productivity growth
  - Further evidence from sectoral studies: manufacturing vs. services (retail trade)
    - Creative destruction effects later in services

## Sources:

**Maliranta, Mika** (2009), *n Search of an Ideal Method for Analyzing Micro-Level Dynamics of a Great Productivity Leap.*

Paper presented at the Comparative Analysis of Enterprise Data (CAED), Tokyo, Japan, 2-4.10.2009.

**Maliranta, Mika** (2005). R&D, International Trade and Creative Destruction - Empirical Findings from Finnish Manufacturing Industries. *Journal of Industry, Competition and Trade*, 5(1), 27-58.

**Maliranta – Rouvinen – Ylä-Anttila** (2010), Finland's path to greater well-being through creative destruction, forthcoming