

Why Did Europe's Productivity Growth Catch-up Sputter Out? A Tale of Tigers and Tortoises

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The U. S. Accelerates, Europe Decelerates

- The last half-decade has witnessed
 - An explosion in U. S. productivity growth
 - An explosion in research on the U. S. takeoff and Europe's failure to match it
 - Much of the research by Bart and his co-authors
- The magnitude of the shift
 - EU/US level of labor productivity (ALP)
 - 1979 1995 2004
 - 77% 94% 85%

Primary Attention in Past Research: The U. S. Revival

- Consensus view has formed: explanation is TFP growth in information and computer technology using industries
- TFP accounts for most of the ALP gap, capital-deepening relatively little
 - ICT Production TFP Explains a Relatively Small Share of EU-U.S. Difference
 - Most of the Difference is TFP in ICT-Using Industries
 - Of these the Most Important are:
 - Wholesale trade
 - Retail trade
 - Financial/securities

Complementary Research on Retailing

- Foster *et. Al.* on new retailing establishments and disappearance of old establishments
 - Not just the acceleration – all the growth
- Big boxes at freeway intersections
- Contrast to Europe:
 - Land-use planning restrictions
 - Protection of central-city pedestrian precincts
 - McGuckin *et. Al.* on Europe: later and less complete deregulation of trucking, cross-border supply chain

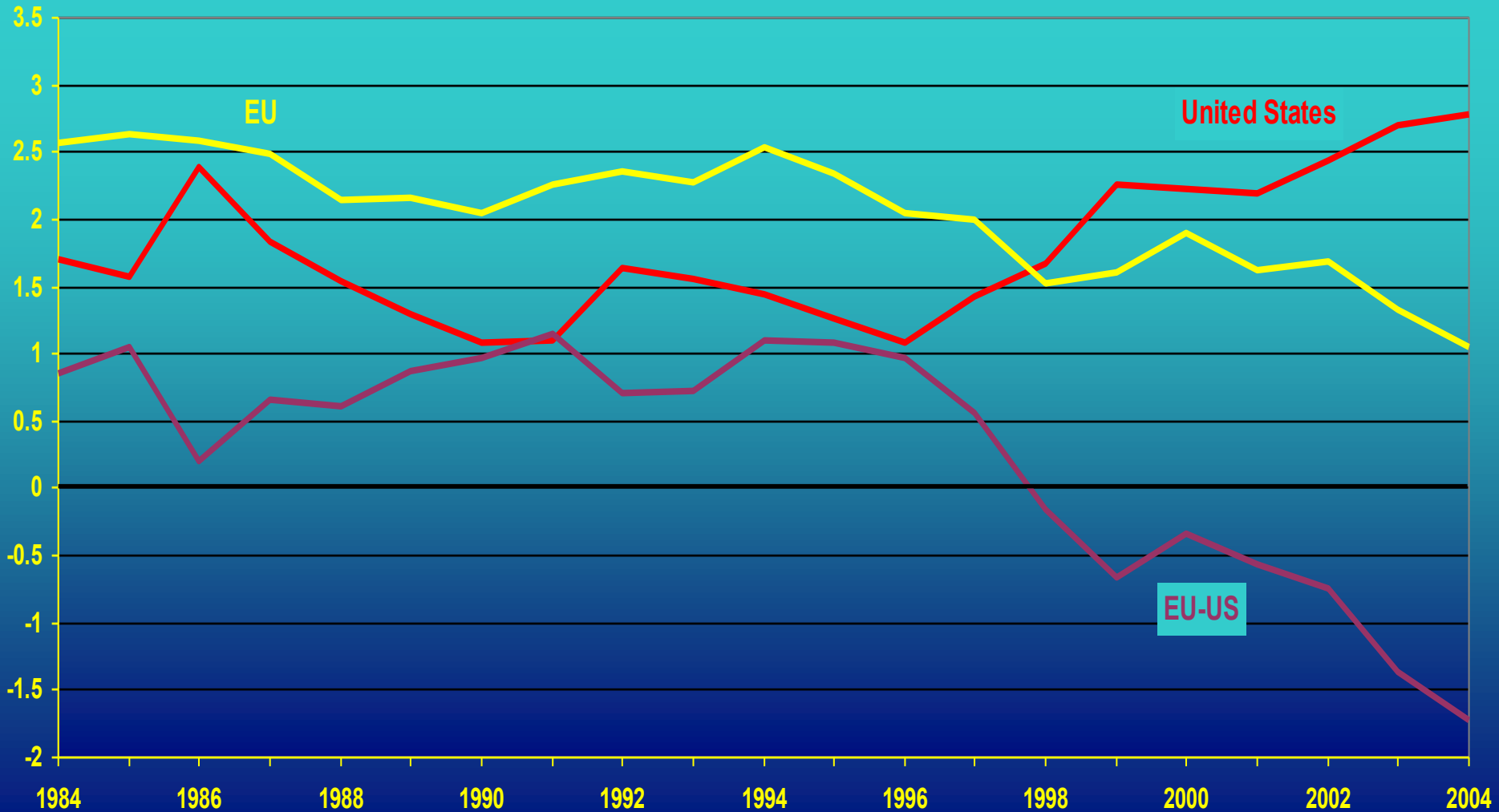
This Paper: There is Another Half to the Puzzle

- The EU-U.S. turnaround is the 1995-2004 U. S. acceleration minus the EU deceleration
- Almost half of the turnaround represents Europe's deceleration, the rest the U. S. Acceleration
- All the literature on ICT and retailing refers to only half the puzzle
- This paper is about the other half

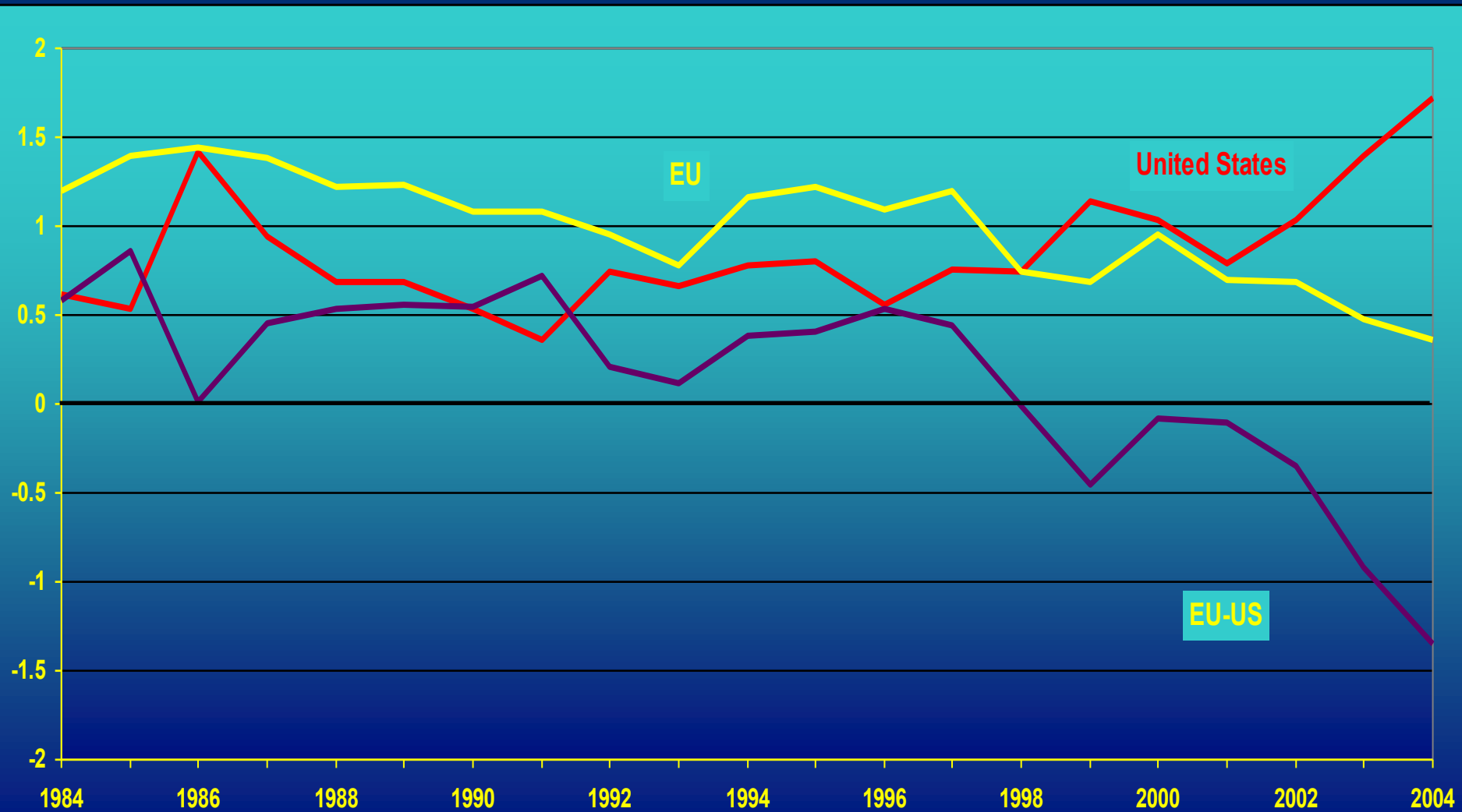
Our Main Findings

- Almost half of the turnaround of ALP growth is happening in Europe, not in the U. S.
 - This applies both to ALP growth and TFP growth
- A simultaneous turnaround in capital deepening explains about 1/3 of turnaround, TFP the rest
- **The divergence within Europe is just as interesting as the EU-US gap**
 - And it has totally different causes

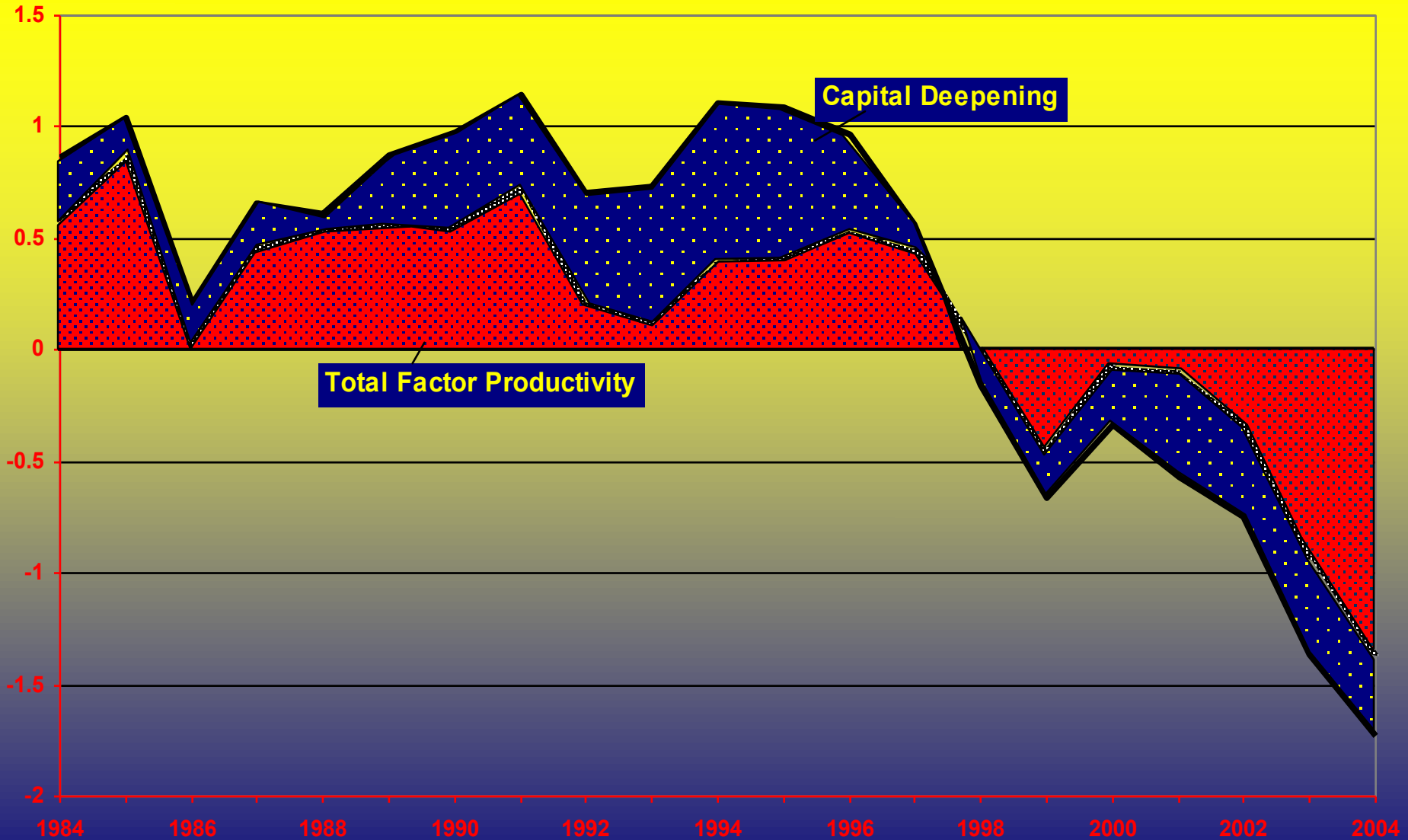
What We're Working With: EU and US ALP Growth



EU and US TFP Growth: Whose fault is it?



Components of ALP Gap



Trends in ALP

- Both capital deepening and TFP turn around in 1998
- Fully 1/3 of the 2% gap in ALP growth is due to capital deepening
- ALP gap is not just due to US acceleration, but also EU decline

How does ICT Factor in?

- TFP: Only 0.18 points of 1.33 are due to ICT producing industries
 - Consistent with standard retail and finance story
- Capital deepening: Only 0.09 points of 0.67 due to ICT production
 - Of the 0.67, 1/3 due to rise in US, 2/3 to fall in EU
 - Lots of factors influencing investment different ways

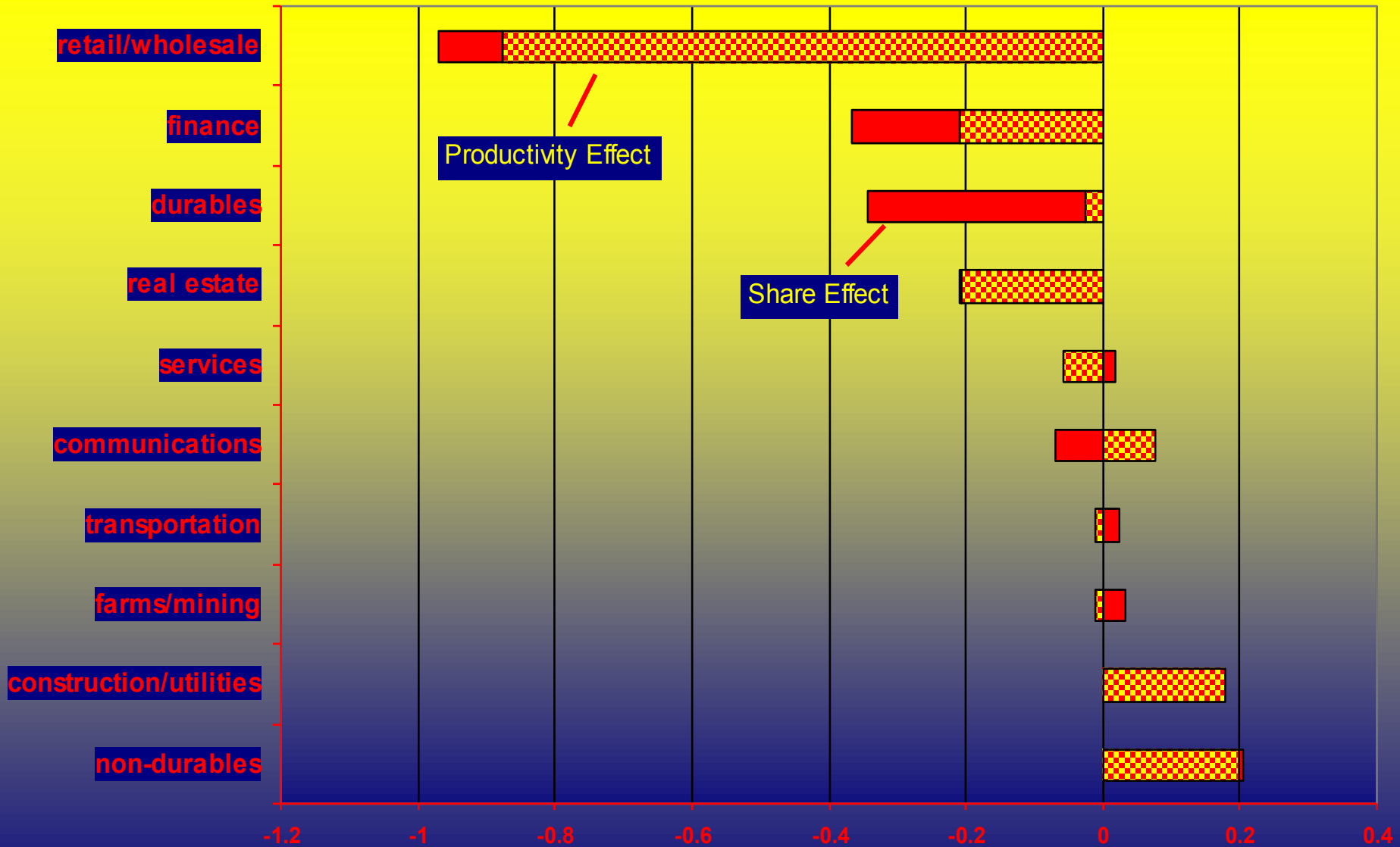
Defining Tigers and Tortoises

- Tigers: Ireland, Greece, Finland, Austria
 - Share: 8% ALP: 3.42%
- Middle: Sweden, Portugal, UK, Germany, Denmark, France
 - Share: 58% ALP: 1.87%
- Tortoises: Netherlands, Belgium, Luxembourg, Italy, Spain
 - Share: 36% ALP: 0.72%

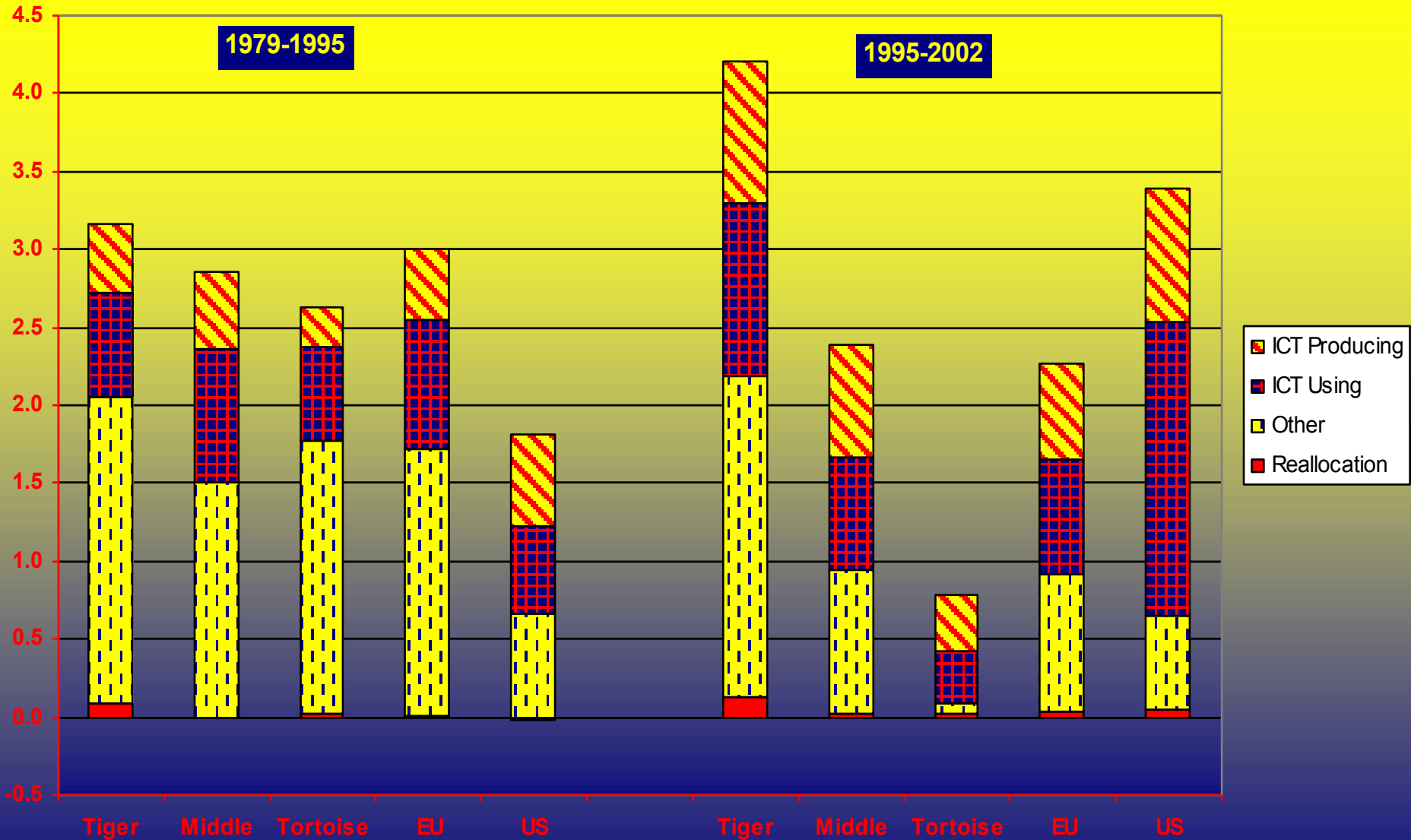
What Else Changed after 1995?

- Variance across countries rises
 - SD of ALP rises from 0.8 to 1.23
 - TFP goes from 0.7 to 1.04
 - *But*, SD decreases for TFP and capital deepening in ICT producing industries
 - So the distinctions must come from non-ICT producing industries
- Where has the non-ICT differential within Europe come from?
 - Same as EU-US gap, or different factors?

Contributions to EU-US ALP GAP



Contributions to ALP Growth



Contributions to Change in Tortoises

