Comments on “The Slowdown in German Productivity Growth”
by
Elstner, Feld, and Schmidt

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General Thoughts

- Outstanding and highly informative paper that deserves more discussion time than we can devote to it.
  - Covers a very wide range of topics that are relevant to an investigation of the slowing pace of productivity growth in Germany.
  - Provides additional evidence of the universality of the slowing of growth in most industrial countries.
Aggregate Productivity Slowdown

- Labor productivity growth has been slowing since at least the mid-1990s
  - Apparent in both capital intensity and TFP.
    - Most pronounced for capital intensity
    - Some evidence of moderation since 2010
  - Also observable in both manufacturing and services.
  - Analysis is largely based on value added measure as opposed to gross output
    - Some discussion of role of intermediate purchases and outsourcing in section 4 (figure 6).
    - No direct information on changes in labor composition.
Causes of the Slowdown

Author focus on

- Low productivity among new additions to workforce, and
- Restructuring (outsourcing) within manufacturing.

Both explanations seem very reasonable, but the amount of evidence is limited

- Shifts in the mix of total employment across low and high-productivity industries cannot be causally-linked to shifts in new worker characteristics.
- Paper would benefit from a decomposition of gross output that highlights role of intermediate purchases as opposed to simple valued-added measures.
Causes of the Slowdown (2)

- Authors find that a significant portion of the slowdown can be traced to a negative reallocation across industries (table 2).
  - Comparing 1995-2005 to 2005-2014,
  - Reallocation across industries contributed -0.4 percentage points of
  - A total change of 1.1 percentage points.
  - There were within-industry contributions of
    - -0.4 percentage points for manufacturing, and
    - -0.2 for services.
Causes of the Slowdown (3)

- **Automotive industry**
  - How should we treat outsourcing of final assembly stage.
    - Normally refers to intermediate inputs
    - Not part of value added or gross output (production)
    - Important for German automotive sales in third countries
  - Continued strong labor productivity growth that appears to be associated with increases in R&D investment.
    - Show changes in gross output and intermediates?
Digitalization and Productivity

- Very interesting comparison to the United States
  - Role of ICT production does appear low in Germany
  - ICT related sectors account for a large share of the gains in TFP. (not sure I believe the result for the US in 2010-13).
  - Contribution in growth accounts is largely based on assumptions of equivalence to other capital rather than direct measurement.
  - I am not sure that economies of scale lose significance (p.19), since marginal cost of many digital products (software) is nearly zero.
  - Are there any company surveys outside of Germany measuring Industry 4.0 interest?