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

- Authors 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 highproductivity 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?