The future of labor market participation – some comments on papers by David Autor and David Autor & Anna Salomons

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Main points

- Impressive papers and presentations
- Fundamental questions
- Thorough empirical work
Lessons from the China Shock

- Important findings in a series of papers
- Negative and long-lasting direct effects of trade shocks
- Self-stabilizing effects are not strong
  Also negative demand effects on other jobs

Does productivity growth threaten employment?

- Even more fundamental question
- Impressive empirical work
- Some remarks from a macro perspective
Does rising productivity raise or lower industry employment?

- Industry demand: \( Y_i = P_i^{-\epsilon} Y \)
- Price markup on cost: \( P_i = \frac{mW}{A_i} \)
- Employment: \( E_i = \frac{Y_i}{A_i} \)

- If industry elasticity of demand \( \epsilon < 1 \)
  - Reasonable empirical assumption
  - Higher productivity \( \Rightarrow \) lower employm.
  - No implications for agg. employment

Does it matter in which sector productivity growth originates?

- Least negative effect in manufacturing
- Distinguish between traded and non-traded sectors(?)
  - Country-specific productivity growth

- Higher country-spec. productivity in traded sector leads to lower price and higher market share
  - \( \Rightarrow \) higher empl. (relative to compet.)
Effect of productivity growth on employment (direct & indirect)

Difficult to interpret and no visible correl.

Alternative approach

1. Effect on equilibrium employment, $E^*$
   - Employment consistent with stable inflation
   - Central bank ensures that actual $E = E^*$

2. Skill biased technical change $\Rightarrow E^*$ down
3. Higher rate of job loss $\Rightarrow E^*$ down
4. Lower worker bargaining power $\Rightarrow E^*$ up
5. Higher country-specific productivity growth $\Rightarrow$ higher market share $\Rightarrow E^*$ up
BUT:
Lower bound on interest rate

. May prevent CB from stimulating the economy sufficiently

. Periods with insufficient aggregate demand are likely also in the future

. => actual $E < E^*$ (in some periods)

Effects of productivity growth on aggregate demand

. Lower investment rates because physical capital is less important (?)

. Higher saving due to increased income inequality
   . Higher profits in winner-takes-all firms
   . Lower labour share
   . Increased wage inequality

. => Lower aggregate demand
Maintain high employment under rapid productivity growth

- Not too rapid productivity growth
- Training of employees
- Stay ahead of competitors

- Maintain aggregate demand
- Dampen increase in income inequality

Extra slides
Loss of Manufacturing Employment Not Primarily Offset by Rising Non-Manufacturing Employment

Effects Much More Severe for Non-College Adults
Does rising productivity raise or lower industry employment?

- Industry demand \( Y_i = P_i^{-\epsilon} Y \)
- Price markup on cost \( P_i = mW/A_i \)
- Employment \( E_i = Y_i/A_i \)

\[ \Delta p_i = \Delta w - \Delta a_i \]
\[ \Delta e_i = \Delta y_i - \Delta a_i \]
\[ \Delta e_i = (\epsilon - 1) \Delta a_i - \epsilon \Delta w + \Delta y \]
\[ \Delta y = -\epsilon \Delta p_i - \Delta y \]

- At industry \( \epsilon < 1 \Rightarrow \Delta a_i \Rightarrow \Delta e_i \]
- Higher productivity \( \Rightarrow \) lower empl.