The Growth of Low-Skill Service Jobs and the Polarization of the US Labor Market

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Presented by Julian Kozlowski

Sargent Reading Group

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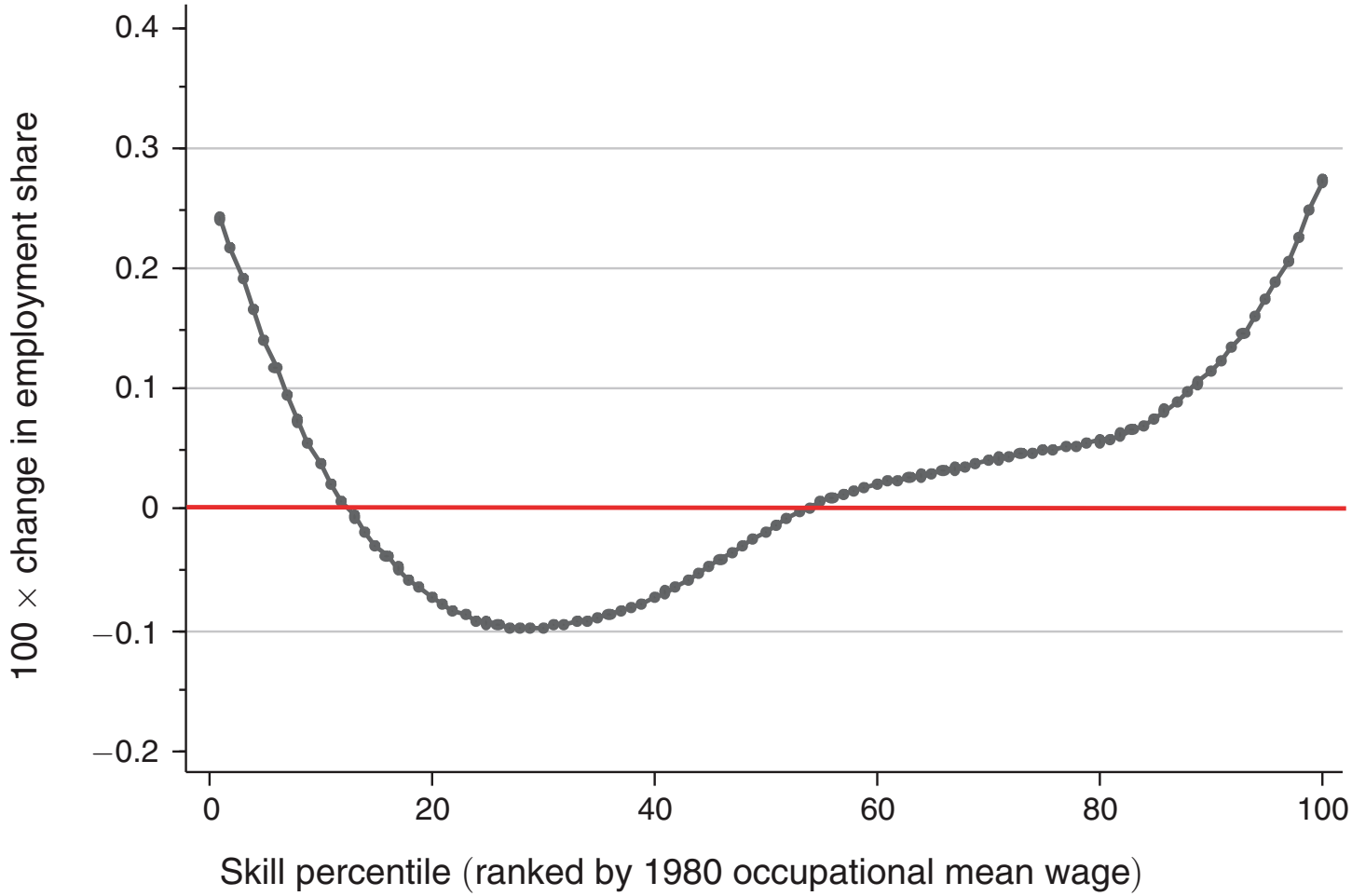
Polarization of the Labor Market



- Wage Polarization. ▸ wages
- Cannot be accounted by the canonical model of SBTC.

Low-skill Occupations: Rise of Services

- Low-skill labor share: $\Uparrow$ 30% in service, $\Downarrow$ in non-service.
- This paper: **SBTC** $+$ **Services** $\Rightarrow$ **Job Polarization**.

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β: routine-task intensity.

μ: L_r and K substitution.

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Missing: endogenous labor supply, heterogeneous households, endogenous SBTC, dynamic model, etc.

Job polarization

- *Employment Polarization:* U reallocates from L_r toward L_m.
- *Wage Polarization:* $\Downarrow \frac{w_r}{w_m}$ and constant $\frac{w_a}{w_m}$.

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SBTC

- If the elasticity of substitution between K and L_r exceeds the elasticity of substitution between c_g and c_s then:

Shares: reallocates U labor from L_r toward L_m.
Wages: $\Downarrow \frac{w_r}{w_m}$.

- If c_g and c_s are gross complements, w_m grow at least as rapidly as w_a.

Mechanism: $\downarrow p_k \rightarrow$ substitutes L_r by $K \rightarrow\uparrow L_m$ and $\downarrow \frac{w_r}{w_m}$.
If services and goods are complements: w_m and w_a grow at the same rate.

Spatial Model

- Extend to a spatial model to get testable implications.
- J sectors, differentiated by goods c_j and routine-task intensity β_j.
- Trade: goods and high-skill workers.
- Nontradable: services and low-skill workers.

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SBTC

Regions with larger β_j will experience:

1. Greater adoption of information technology and displacement of L_r.
2. *Employment polarization:* Greater reallocation of low-skill workers from L_r to L_s.
3. *Wage polarization:* Larger increases in w_a and w_m.

Empirical Results

- Local labor markets: Commuting Zones (CZ, 722 in U.S.) for 1950-2005.
- Routine Employment share:

  [1] Create a measure of routine task-intensity for each occupation in DOT.

  [2] Routine-intensive occupations: top 1/3 of the index.

  [3] Calculate the routine employment share for each CZ.

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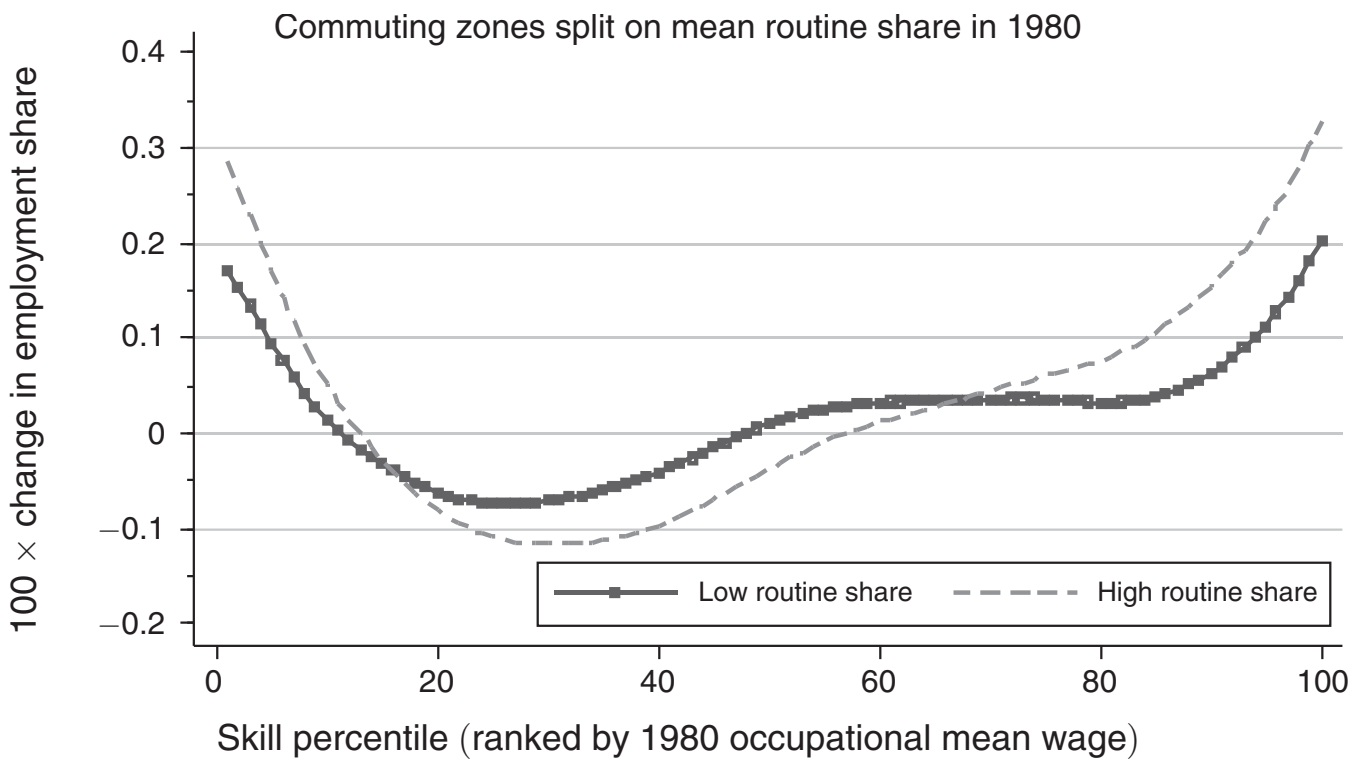
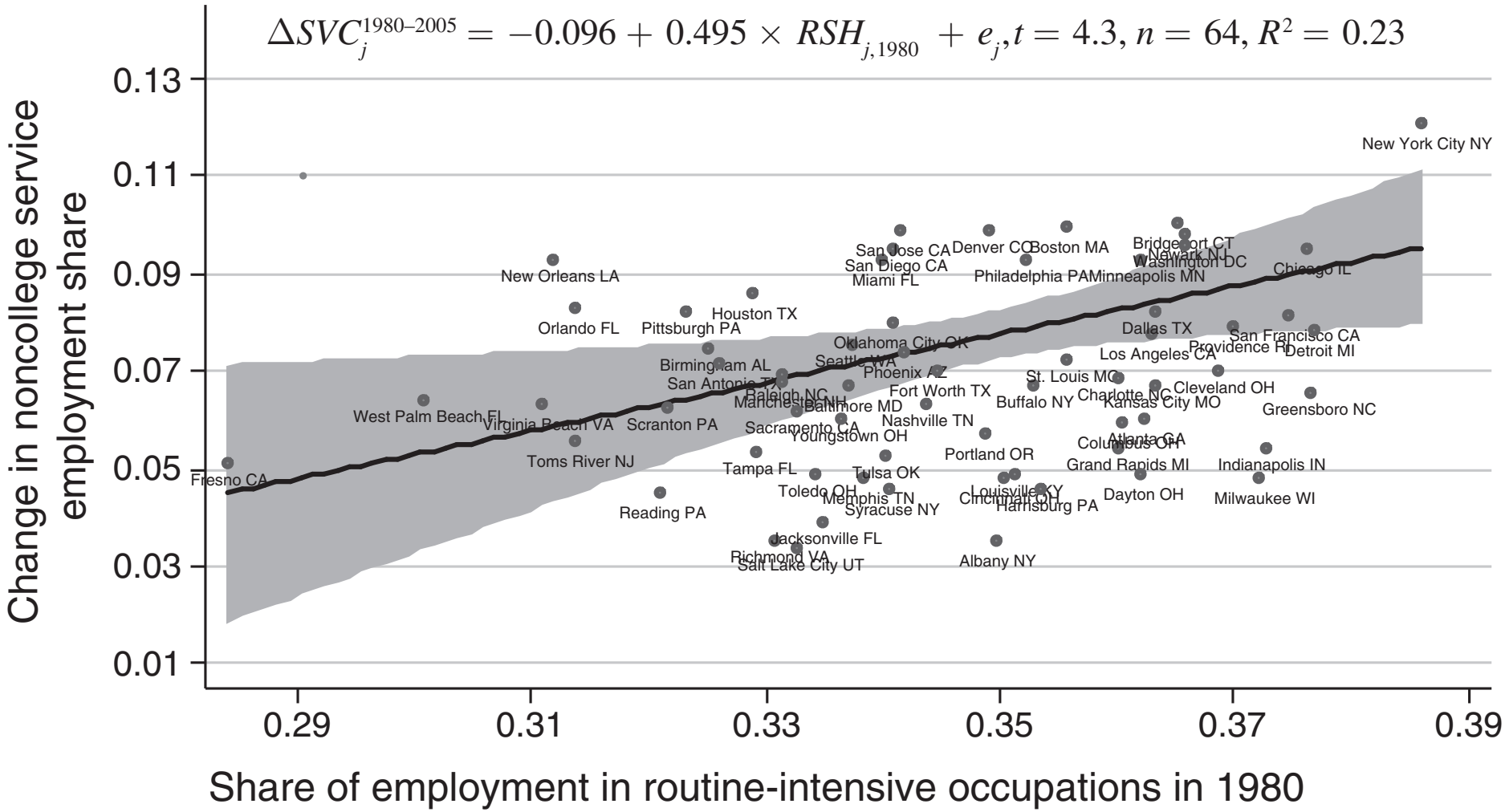
Job polarization in routine-intensive CZ



Growth of Services



Facts

Routine-intensive CZ experienced:

- ⇑ Computer adoption.
- ⇓ Employment and wages in routine-intensive occupations.
- ⇑ Service occupation.
- ⇑ Employment and earnings of noncollege workers in non-routine intensive occupations.
- ⇑ Employment polarization and wage polarization.

Take-out: Job polarization explained by service occupations

1. Rising employment and wages in service occupations may account for the job polarization.
2. *Mechanism:* SBTC substituted low-skill workers performing routine tasks. Low-skill workers reallocated their labor to service occupations (which demand increases due to the complementarity between goods and services).
3. Routine-intensive CZ exhibited greater job polarization.

Polarization in employment wages

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