

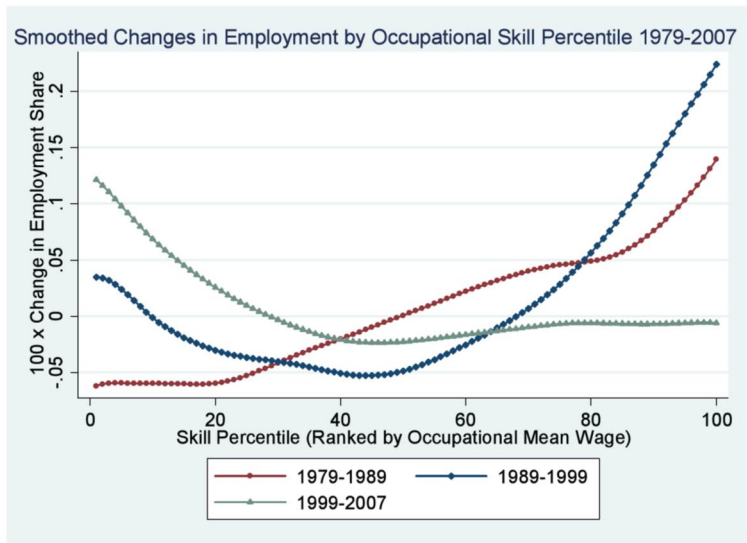
The Growing Importance of Social Skills in the Labor Market

David Deming

Harvard University and NBER

December 2015

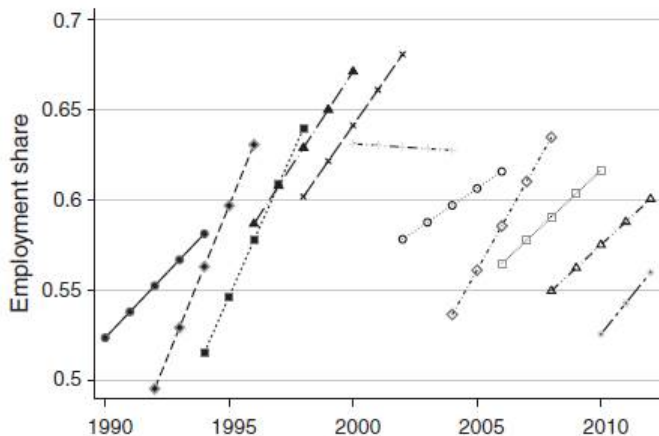
SBTC and Job Polarization



Source: Acemoglu and Autor (2011)

Slowdown in demand for cognitive skills among college grads

Panel A. Cognitive employment profiles



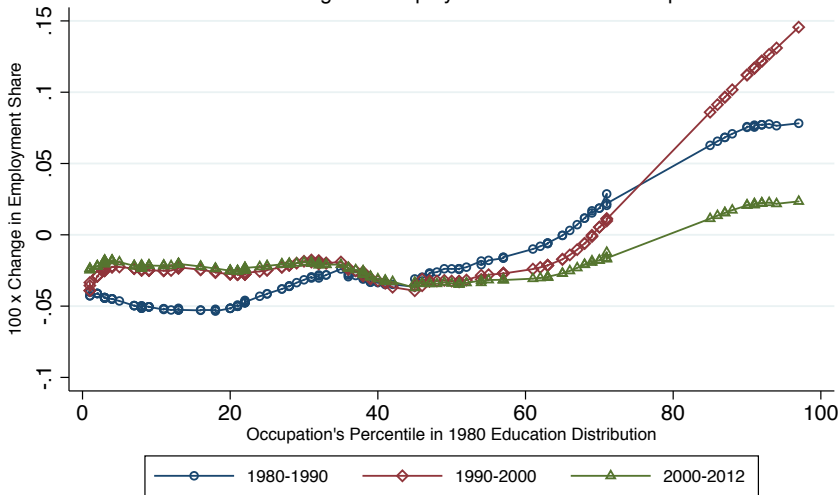
Source: Beaudry, Green and Sand (2014)

Lower return to cognitive skills in later NLSY cohort

	AFQT80			
	NLSY79 (1)	NLSY97 (2)	NLSY79 (3)	NLSY97 (4)
Men:				
Test score			.0956 (.0088)	.0328 (.0079)
High school	.2012 (.0161)	.1901 (.0193)	.1239 (.0176)	.1679 (.0197)
Associate's	.3836 (.0335)	.4415 (.0445)	.2727 (.0357)	.4143 (.0446)
Bachelor's	.5248 (.0233)	.5972 (.0279)	.3845 (.0264)	.5481 (.0300)
Master's	.8308 (.0510)	.9112 (.0824)	.6520 (.0531)	.8552 (.0819)
<i>R</i> ² (adjusted)	.1405	.1498	.1661	.1535

Source: Castex and Dechter (2014)

The Disappearance of Routine Jobs Higher Up the Skill Distribution Smoothed Changes in Employment for Routine Occupations



Occupations with above median routine task intensity based on 1998 O*NET

Sources: 1980-2000 Census, 2011-2013 ACS

Growing Importance of Social Skills

Computers are replacing cognitive tasks of rapidly increasing cognitive complexity. Is there anything that still cannot be automated?

- *Social interaction*
- Skill in social settings is based on tacit knowledge and evolved over thousand of years - we don't know "the rules" (Autor 2015)
- Theory of Mind and the Turing test

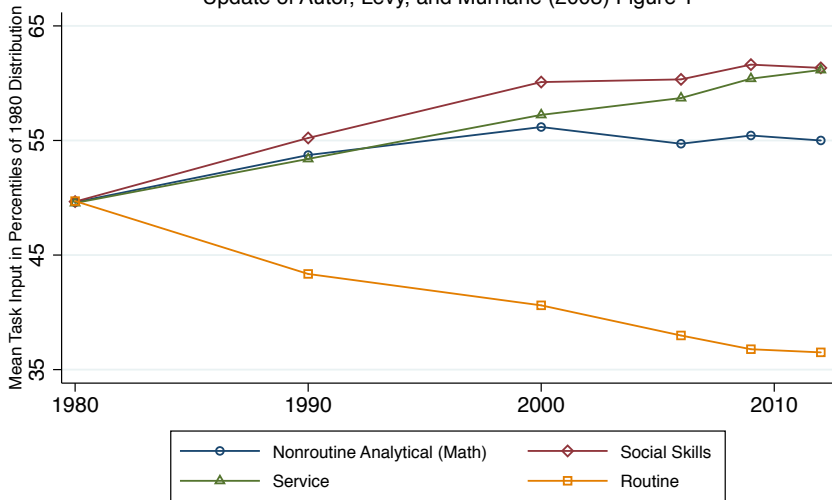
Labor Market Trends

Three key facts about the U.S. labor market:

1. Employment growth in social skill-intensive occupations *throughout the wage distribution*
2. Growing *complementarity* between cognitive skills and social skills (Weinberger 2014)
3. Inverse relationship between social skill intensity and *routineness* of an occupation

Worker Tasks in the U.S. Economy, 1980-2012

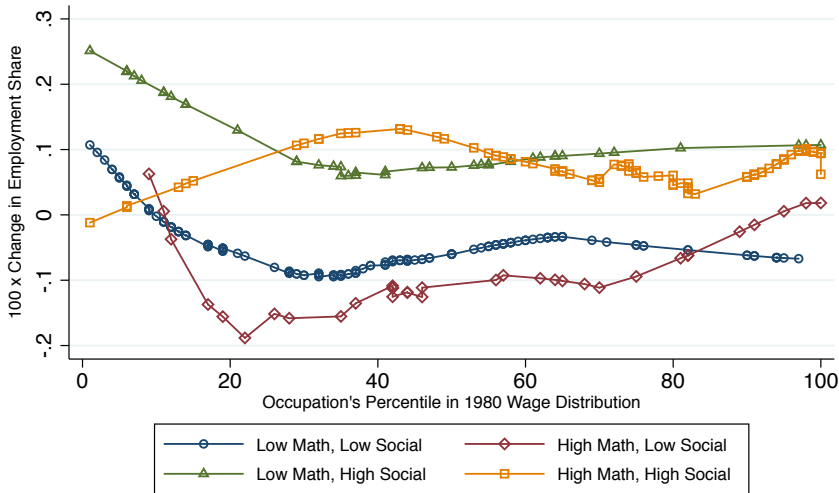
Update of Autor, Levy, and Murnane (2003) Figure 1



Occupational Task Intensity based on 1998 O*NET

Sources: 1980-2000 Census, 2005-2013 ACS

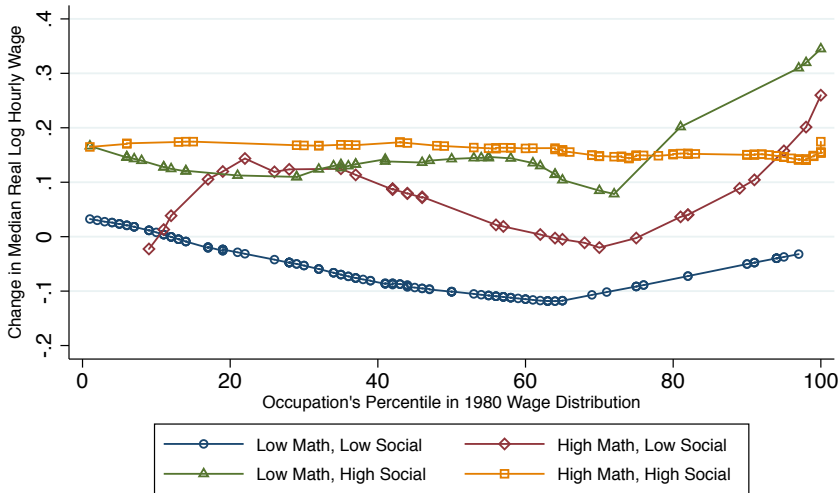
Smoothed Changes in Employment by Occupational Task Intensity 1980-2012



Occupational Task Intensity based on 1998 O*NET

Sources: 1980 Census, 2011-2013 ACS

Smoothed Changes in Median Wages by Occupational Task Intensity 1980-2012

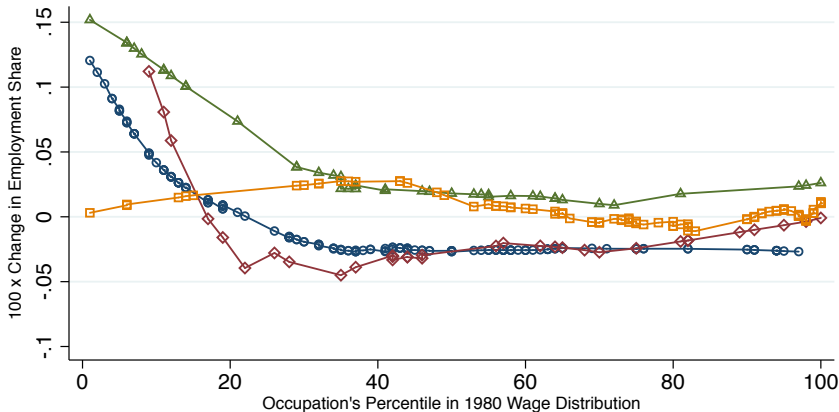


Occupational Task Intensity based on 1998 O*NET

Sources: 1980 Census, 2011-2013 ACS

Since 2000...

Smoothed Changes in Employment by Occupational Task Intensity 2000-2012



Occupational Task Intensity based on 1998 O*NET

Sources: 1980 & 2000 Census, 2011-2013 ACS

Returns to Skills in the NLSY

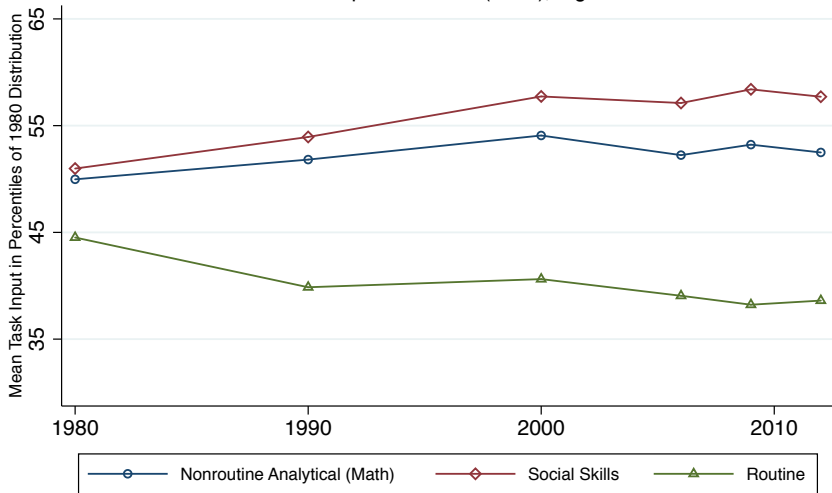
- Standard wage regressions for prime-age adults
 - AFQT, social skills index
- Test and find support for three main predictions:
 1. Positive return to social skills - controls for cog. and non-cog. skill, education/occ/industry
 2. Skill complementarity
 3. *Increasing returns* in non-routine, social skill-intensive occupations
 - 3.1 Holds within-worker (job transitions)

Three implications

1. ICT and shifting of the organization of work - “Taylorist” to flexible team structures
2. Social skills and gender gaps in labor market outcomes
 - 2.1 Women consistently score higher on test of emotional and social intelligence
3. Early childhood interventions and “non-cognitive” skills

Worker Tasks in the U.S. Economy, 1980-2012

Males - Update of ALM (2003), Figure 1

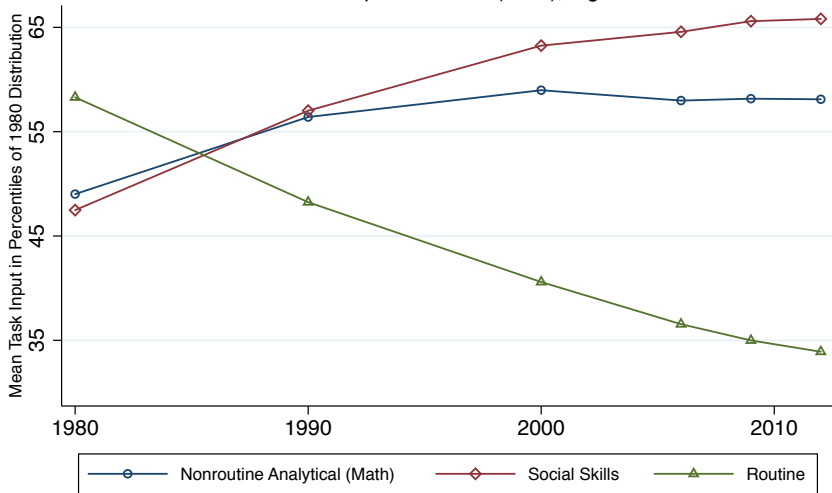


Occupational Task Intensity based on 1998 O*NET

Sources: 1980-2000 Census, 2005-2013 ACS

Worker Tasks in the U.S. Economy, 1980-2012

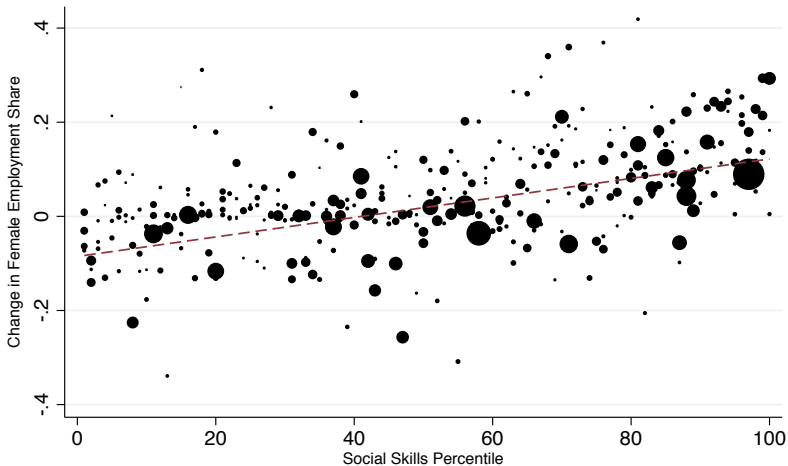
Females - Update of ALM (2003), Figure 1



Occupational Task Intensity based on 1998 O*NET

Sources: 1980-2000 Census, 2005-2013 ACS

Change in Female Employment Share by Social Skill Task Intensity 1980-2012



Social Skills Task Intensity based on 1998 O*NET

Sources: 1980 Census, 2011-2013 ACS

Measuring social skills

Are social skills conceptually distinct? Can they be measured?

- Social intelligence tests formally developed and validated - correlation with IQ about 0.3 (e.g. Salovey and Mayer 1990, Mayer et al 2008)
- “Reading the Mind in the Eyes” test predicts team performance even after controlling for team IQ (Woolley et al 2010)

despondent

relieved



shy

excited

Perry Preschool (Heckman et al 2013)

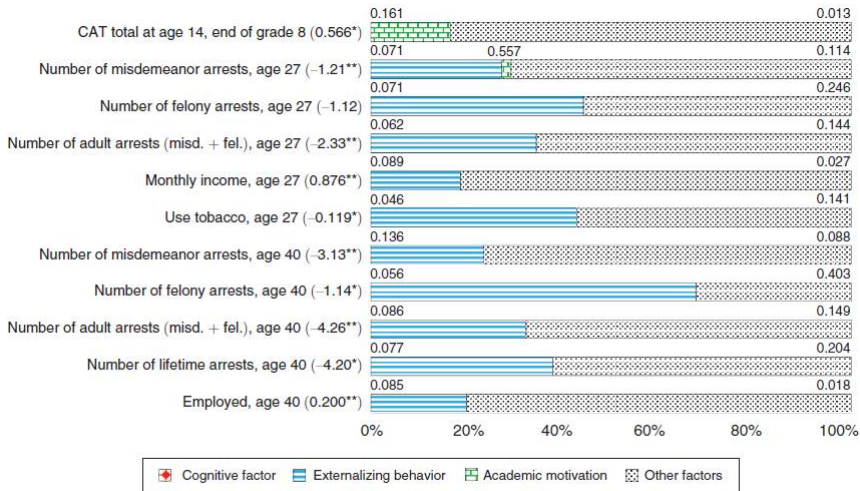


FIGURE 6. DECOMPOSITIONS OF TREATMENT EFFECTS ON OUTCOMES, MALES

Thanks!

This is work in progress, and I appreciate your thoughts, suggestions and criticisms.

david_deming@gse.harvard.edu