

A painting depicting a factory scene. In the center, a man in a suit and a light-colored hat with glasses looks towards the right. He is surrounded by workers in various work clothes and hats, some using tools like grinders. The background shows industrial machinery and a window with a grid pattern. The overall style is somewhat expressionistic with visible brushstrokes.

Job Turf or Variety

Task Structure as a Source of Organizational Inequality

Nathan Wilmers
MIT Sloan

Why is there so much pay inequality inside organizations?

- 65% is due to worker characteristics

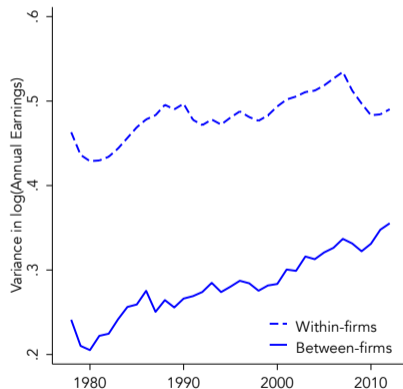
(Song, Price, Guvenen, Bloom, and von Wachter 2018)

- Is the rest due to fixed job structures, tournaments?

(Baron and Bielby 1980; Hedström 1991)

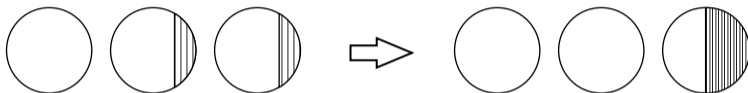
- Maybe... but flexible jobs and performance-based compensation

(Lemieux, MacLeod, and Parent 2009; Cappelli 1999)



Data: SSA Master Earnings File in Song et. al. (2018).

Task structure earning effects



- A ton of great work in labor economics focusing on tasks and wages
- But what about organizations? Add some firm-specific skills and bargaining
- Workers get **job turf** if they do tasks distinctive from co-workers
- Ex: plant electrician, hospital's pediatric rheumatologist

Unions as employers: quirky case, valuable measures

- Mandatory DoL OLMS reporting on union employment, 2005-2017
- Linked employer-employee data structure
- Worker-year [task shares](#)
- $N=$ 108,800 workers; 3,555 union-employers

SCHEDULE 12 – DISBURSEMENTS TO EMPLOYEES

	(A) Name Last, First, MI	(B) Title	(C) Other Payer	(D) Gross Salary Disbursements (before any deductions)	(E) Allowances Dis
1 A					
B					
C					
I	Schedule 15 Representational Activities	%	Schedule 16 Political Activities and Lobbying	%	Schedule 17 Contributions
2 A					
B					
C					
I	Schedule 15 Representational Activities	%	Schedule 16 Political Activities and Lobbying	%	Schedule 17 Contributions
3 A					
B					
C					
I	Schedule 15 Representational Activities	%	Schedule 16 Political Activities and Lobbying	%	Schedule 17 Contributions
4 A					
B					
C					
I	Schedule 15 Representational Activities	%	Schedule 16 Political Activities and Lobbying	%	Schedule 17 Contributions

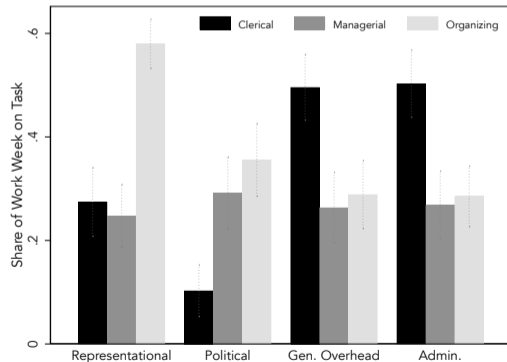
Measure validation

Macro orgs researchers neglect this

We wrongly think measurement error tends to be classical, so bias is 'conservative'

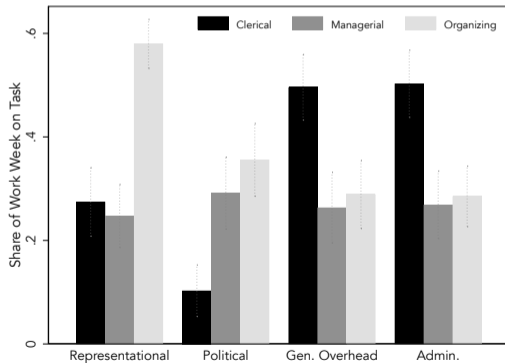
Two solutions in this paper:

- Directly surveyed admin data respondents to ask them what the measures meant
- Matched jobs to job postings

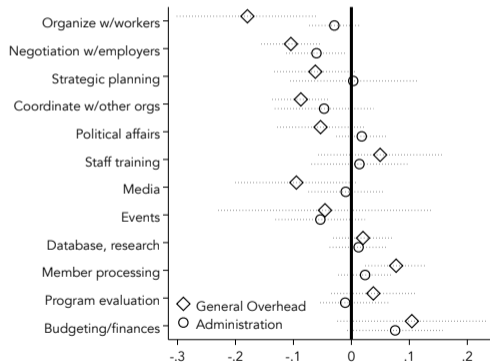
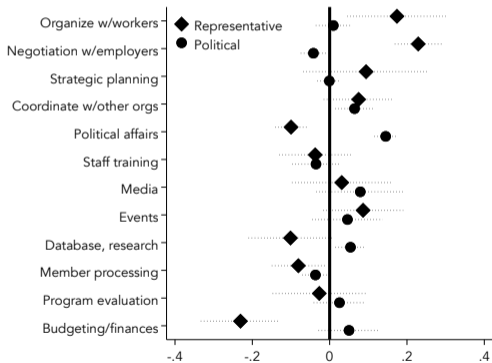


Online survey of admin data respondents

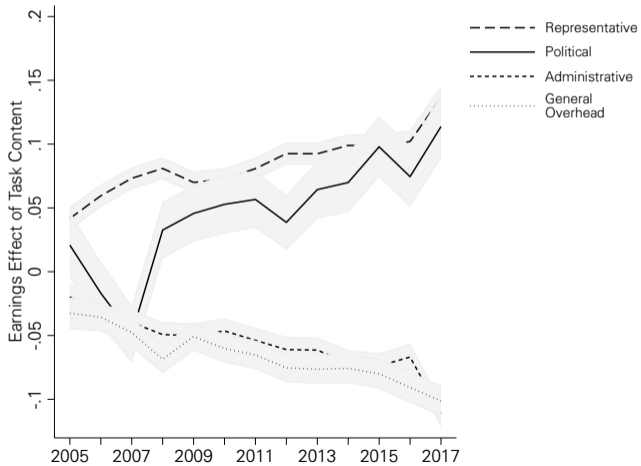
First, think of someone working at your union who does primarily **representational** activities. In a typical week, how much time does this person spend on the following tasks:



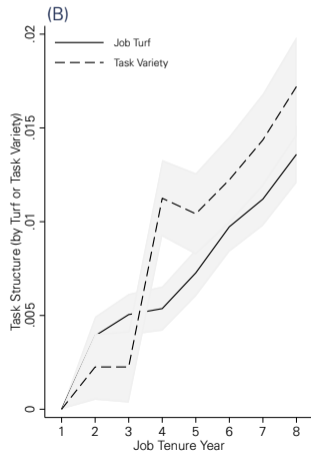
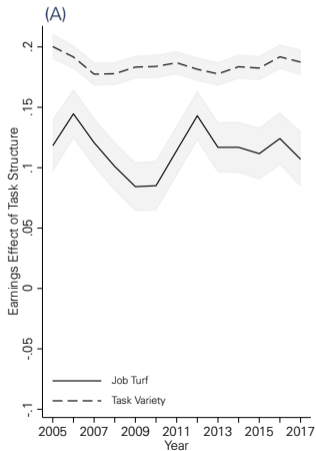
Compare admin data to public job postings



Measure validation: gut check



Is there anything there?



Modeling earnings effects of task structure

$$\log(w_{iut}) = \beta_1 x'_{iut} + \beta_2 z'_{iut} + \alpha' + e_{iut}$$

w_{iut} : earnings

x'_{iut} : E_{it}, N_{it} , task shares

z'_{iut} : Tenure, experience

α' :

Worker X Union

Worker X Union X Job title

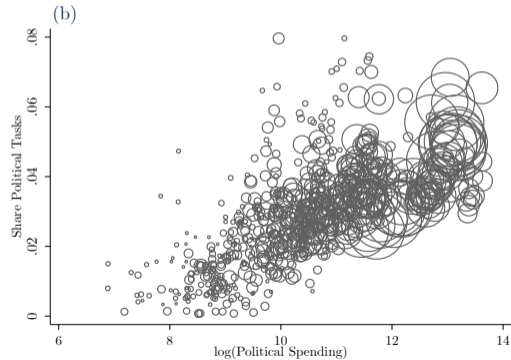
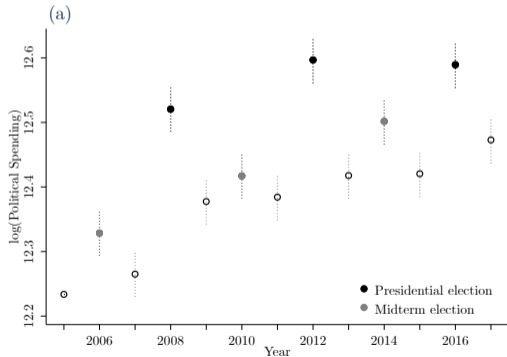
Union X Year

City X Main Task X Year

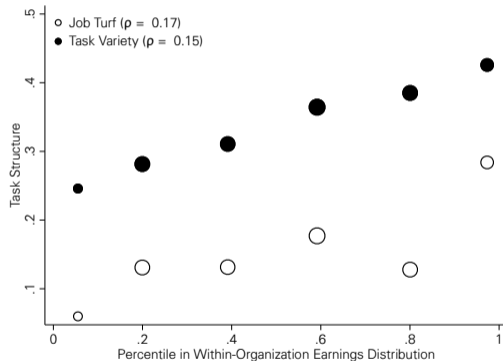
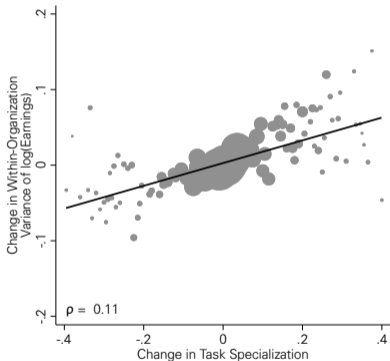
Are effects driven by job title, local labor market conditions, etc.?

Task Variety	0.36*** (0.02)	0.12*** (0.02)	0.08*** (0.01)	0.08*** (0.01)
Job Turf	0.10*** (0.02)	0.09*** (0.01)	0.09*** (0.01)	0.08*** (0.01)
Controls	Yes	Yes	Yes	Yes
Fixed effects:				
Union X Year	Yes	Yes	Yes	Yes
Indiv. X Union		Yes		
Indiv. X Union X Job			Yes	Yes
City X Task X Year				Yes
R ²	0.42	0.83	0.87	0.88
Observations	694325	644871	572496	561401

Political activities IV: are effects driven by time-variant worker selection?

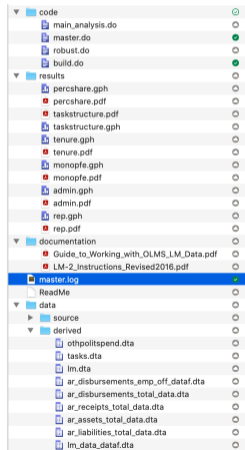


“Ok... but does task structure matter for inequality?” –Reviewer 2



Reproducibility

- “If it’s not reproducible, it isn’t science”
—Bruce Western, scaring me straight in grad school
- Planning to post replication code forces you to work more carefully
- In some cases, data absolutely cannot be shared: you can still post code
- Alyson Gounden Rock at McGill is currently working from my code/data to add gender



Discussion

- [Measure validation](#) is critical for novel measures, but also makes you link back to prior work
- [Show your data](#), try to think about how effects [aggregate up](#)
- Post [reproduction](#) data and code: this helps the next person engage with your work