Comments on:

1. "Do Women in Top Corporate Management and Governance Help Women to Advance?" by Lois Joy and Sarah Lang
2. Women in Science – Fulfillment or Frustration" by Sara Connolly and Susan Long

Both papers:

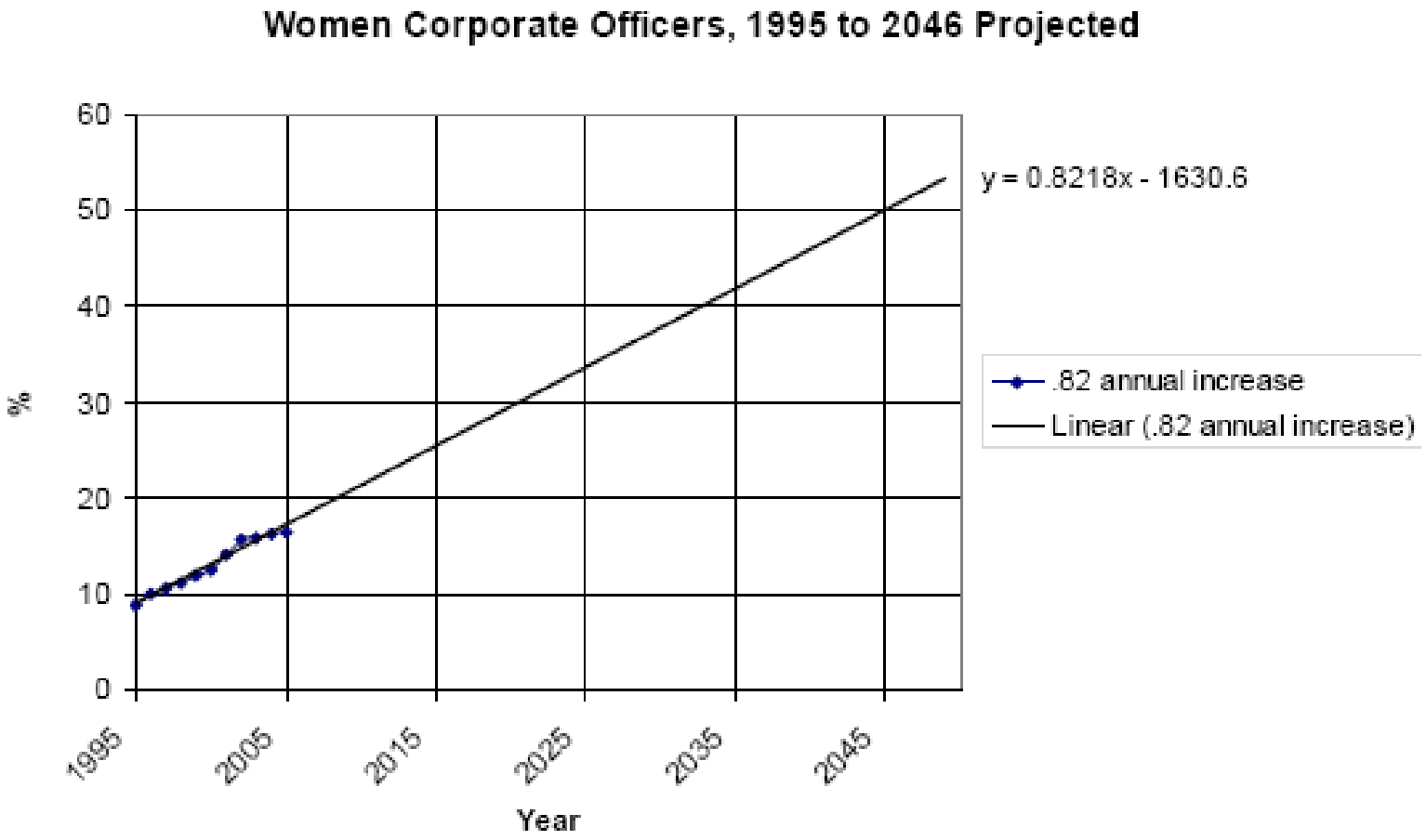
-Examine specialized groups
-Very important groups
-Analyze intriguing (and understudied) datasets
-Involving less heterogeneous samples

Justin Wolfers
The Wharton School, University of Pennsylvania
CEPR, IZA & NBER

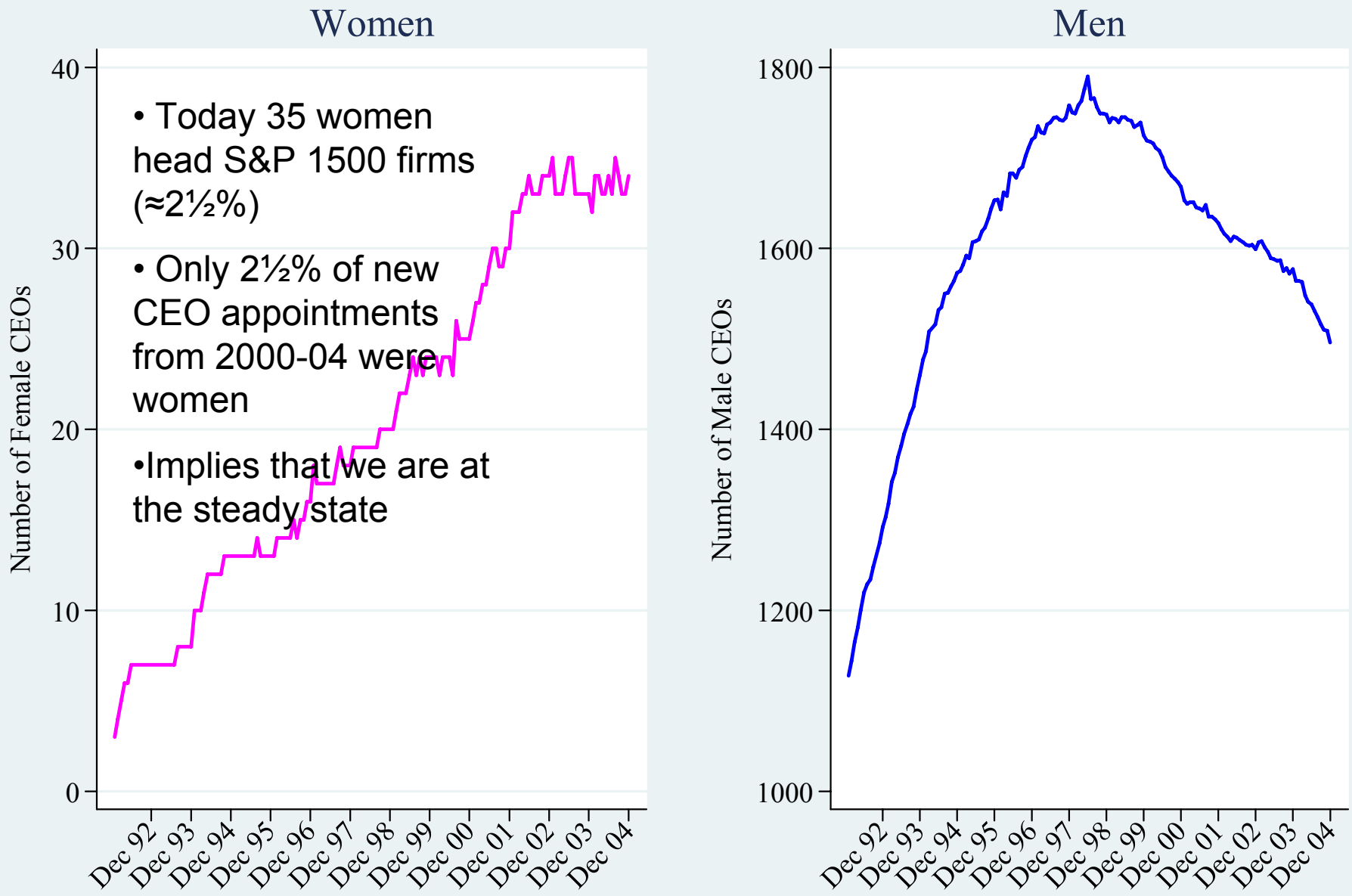
Joy & Lang: Amazing Data!

- Catalyst census of Fortune 500 Companies
  - Gender (and more) of women (and men)
  - Panel: 1996-2005
  - Dramatically under-utilized in academic research
  - Data feeds research
    - » Intriguing advocacy strategy

Joy & Lang: Depressing Fact



CEO Gender Through Time: Execucomp Sample



Source: Justin Wolfers, "Diagnosing Discrimination: Stock Returns and CEO Gender", *Journal of the European Economic Association*, 4(2/3) 531-541, May 2006.

Joy & Lang: Interpretation

Table 2a Growth of Women Corporate Officers: OLS Regressions

	Model 1		Model 2		Model 3	
	B	Std. Error	B	Std. Error	B	Std. Error
Constant	0.11	0.03	0.09	0.03	0.11	0.03
% WCO 1996	0.33	0.07			0.33	0.07
Total CO 1996	0.00	0.00				
% WBD 1996	0.24	0.09			0.24	0.09
Total WBD 1996	-0.0001	0.002			-0.0002	0.0016
% WCO 1999			0.41	0.06		
Total CO 1999			0.00	0.00		
% WBD 1999			0.21	0.07		
Total WBD 1999			0.00	0.00		
Change CO 96 to 05					0.0002	0.0001
Consumer Durables	-0.01	0.02	0.00	0.02	-0.01	0.02
Consumer Staples	0.002	0.02	0.00	0.02	0.003	0.02
Energy	-0.01	0.04	-0.01	0.04	-0.01	0.04
Financial	-0.004	0.02	-0.01	0.02	0.001	0.02
Health Care	0.02	0.03	0.00	0.02	0.02	0.03
Industrials	-0.02	0.02	-0.02	0.02	-0.02	0.02
Information Technology	-0.02	0.03	-0.02	0.02	-0.02	0.03
Materials	-0.06	0.03	-0.05	0.02	-0.06	0.03
Tele Comm	-0.02	0.04	-0.02	0.04	-0.02	0.04
Return on Capital (1996)	0.0002	0.001			0.0002	0.001
Return on Capital (1999)			0.0005	0.0004		
R-Squared	0.16	0.08	0.26	0.08	0.17	0.08
N	275		287		274	

Dependent Variable: %WCO 2005
Indicates sig at the 5% or greater level.
Source: Catalyst US Census of Women Board Directors and Women Corporate Officers 1996 - 2005, COMPUSTAT 1996, 1999

Female officers in 2005

= 0.33*Female officers in 1996

+ 0.24*Female directors in 1996

+Controls

Thus:

ΔFemale officers (over 1996-2005)

= -0.67*Female officers in 1996+...

What do different theories say?

- Mentors: $\beta>0$
- Quotas: $\beta<0$ if under quota

Joy & Lang: Fixed or Random Effects

Table 3 Growth of Women Corporate Officers: Fixed and Random Effects Estimators

	Model 1 Fixed Effects	Model 2 Random Effects
%WBD Lagged One Year	-0.025	0.028
	(0.041)	(.041)
%WCO Lagged One Year	**0.188**	**0.692**
	(0.037)**	**(0.036)****
%WBD Lagged Two Years		**0.078**
		(0.039)*
%WCO Lagged Two Years		**0.134**
		(0.037)**
ROIC		0.000
		(0.000)
Consumer Staples		-0.007
		(0.009)
Consumer Discretionary Goods		-0.001
		(0.008)
Energy		-0.025
		(0.013)
Financials		-0.007
		(0.009)
Healthcare		0.003
		(0.010)
Industrials		-0.012
		(0.008)
IT		-0.016
		(0.010)
Materials		-0.014
		(0.010)
Telecomm		-0.030
		(0.017)
Constant	**0.087**	**0.024**
	(0.006)**	**(0.010)****
R-squared	0.643	0.687
Observations	1025	764
Number of Groups	260	259

Standard errors in parentheses
* Significant at 5% level; ** Significant at 1% level
Note: For Fixed and Random Effects, R-squared Overall is reported as R-squared Value
Source: Catalyst US Census of Women Board Directors and Women Corporate Officers 1996 - 2005, COMPUSTAT 1996, 1999

Connolly & Long: Measuring Discrimination?

- Find evidence of gender differentials in:
  - *Wages* | *Rank & observables*
  - *Rank* | *observables*
  - *Promotions* | *Rank, observables*
- Measuring discrimination:
  What do we want to condition on?
  - If the promotion and rank effects are "discrimination", then we can examine gender differential in:
    Wages | *observables* (omitting rank)
    - » Will yield larger gender wage differentials
      - Ian Ayres describes this as "included variable bias"
      - But would we believe these results?
    - » Should we condition on productivity?
      - What if this is also a function of institutional investment?
      - Or mismeasurement correlated with gender (citations, editorships etc)
- Role of intra-family bargaining
  - Female economists are often partnered with male economists
  - Who causes "discrimination" against female economists?
    - » Hiring committees or husbands?

The Coming Gender Shift

- About 60% of U.S. undergraduates are women
  - And even higher in some parts of the country
- What will this do to:
  - The high-skill labor market?
  - Matching within families
    - » Female college grads now as likely to marry as their peers
    - » Who will they marry?
    - » What will this do to the labor market?