



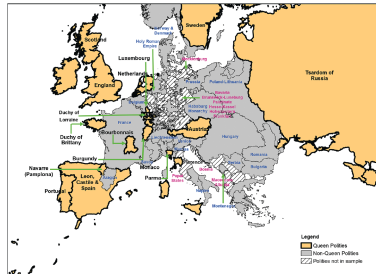
New Challenges to International Cooperation: Automation and Climate Change

Carlos Felipe Balcazar

MacMillan Center

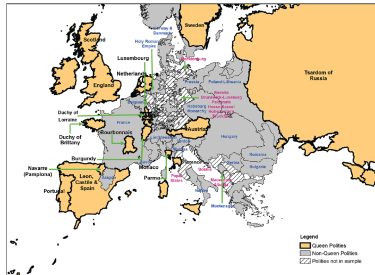
April, 2024

Leaders and bureaucrats



- Leaders, diplomats and other bureaucrats are key political actors.

Leaders and bureaucrats



- ▶ Leaders, diplomats and other bureaucrats are key political actors.
- ▶ Define, guide and execute domestic and int' policy.
 - ▶ Quality matters; incentives matter; independence matters.
 - ▶ Leaders type: hawks/doves. Showing resolve.
 - ▶ Bureaucrat types: career and appointees.

Leaders and bureaucrats

	First Stage	
	Queen	Queen
FBM _{t-1}	-.239*** [.01]	-.168** [.033]
Sister _{t-1}288*** [.009]
Observations	3,586	3,586
R ²	.302	.515
Mean of DV	.160	.160
Standard controls	Y	Y
Flexible sibling controls		Y

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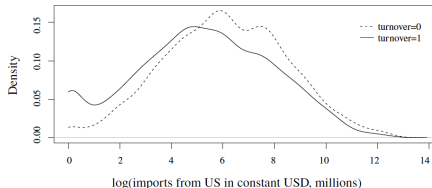
Leaders and bureaucrats

Variables	In War (1)	In War (2)	In War (3)	In War (4)
Queen	.107** [.016]	.130** [.011]	.400** [.039]	.388** [.022]
Observations	3,586	3,586	3,586	3,586
R^2	.439	.460	.399	.437
Mean of DV	.296	.296	.296	.296
Specification	OLS	OLS	IV	IV
Instruments			FBM _{t-1}	FBM _{t-1} , Sister _{t-1}
Standard controls	Y	Y	Y	Y
Flexible sibling controls		Y		Y
Kleibergen-Paap F -statistic			9.25	10.32
Montiel-Pflueger effective F -statistic			...	10.37
Montiel-Pflueger 5% critical value			...	5.35

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		MID ONSET _{t,t}	
		0	1
TURNOVER _{t,t}	0	4088 (99.03%)	40 (0.97%)
	1	3973 (96.69%)	136 (3.31%)



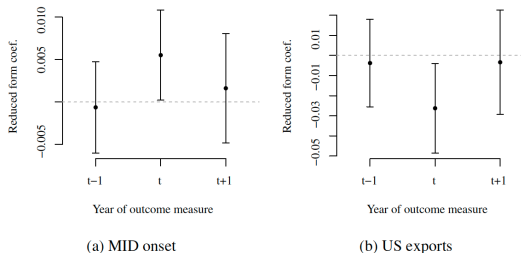
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<i>Dependent variable</i>	<i>First stage</i> TURNOVER _{i,t}	<i>Reduced form</i> MID ONSET _{i,t}	
	(13)	(14)	(15)
CAREER ENTER _{i,t-3}	0.309 (0.020) $p = 0.000$		0.007 (0.003) $p = 0.035$
POLITICAL ENTER _{i,t-3}	0.090 (0.025) $p = 0.000$		0.002 (0.005) $p = 0.622$

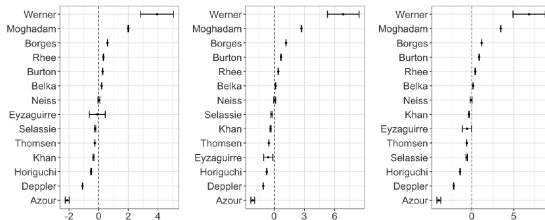
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- ▶ Influence outcomes. (Other examples?)

Theoretical limitations in IV designs

$$C = \alpha + \beta Y + u,$$

$$Y \equiv C + I.$$

- ▶ Cowles Foundation: the regression model is derived from theory.

Theoretical limitations in IV designs

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$$Y = \frac{\alpha}{1 - \beta} + \frac{I}{1 - \beta} + \frac{u}{1 - \beta}.$$

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Theoretical limitations in IV designs

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- ▶ Cowles Foundation: the regression model is derived from theory.
- ▶ Selection of instrument should be guided by theory.
 - ▶ What is “exogenous” in the system? Why?
 - ▶ Different instruments \Rightarrow different implications. (LATE theorem.)
 - ▶ Who are the compliers? Are they theoretically relevant?

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- ▶ When are results generalizable and/or transportable?
 - ▶ Needs a parsimonious theory.
- ▶ Recall commensurability!

Sensitivity analysis

$$Y = X\beta + Z\gamma + \varepsilon,$$
$$X = Z\Pi + V,$$

- How big unobserved confounding needs to be to kill results.

Sensitivity analysis

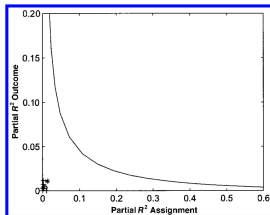


FIGURE 1. LALONDE EXPERIMENTAL SAMPLE

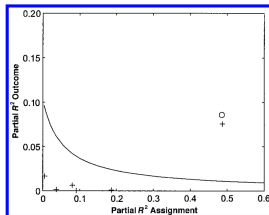


FIGURE 3. LALONDE NONEXPERIMENTAL GAIN SAMPLE

- How big unobserved confounding needs to be to kill results.

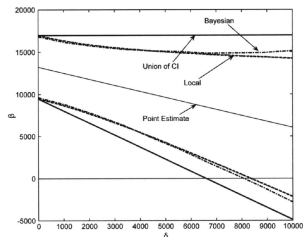
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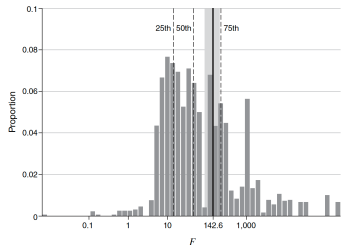
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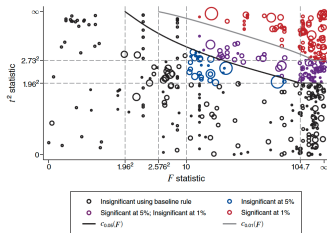
- ▶ How big unobserved confounding needs to be to kill results.
- ▶ Plausibly exogeneity of instrument.
- ▶ Instrument should be strong (statistically).
 - ▶ 10 is a rule of thumb under homoskedasticity.
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 - ▶ t-Ratio is an appropriate alternative; bootstrapping can help too.

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Next class...

Presentations!