

Lecture 11: Limitations of Meta-Analysis

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[Limited asset market participation and the elasticity of intertemporal substitution](#) [\[PDF\] from northwestern.edu](#)
A Vissing-Jorgensen - 2002 - nber.org
... for limited asset market participation is crucial for obtaining reasonable values of the **elasticity of intertemporal substitution**, it is too early to precisely determine the extent to which it helps resolve ... **substitution** cross-sectionally, using a time series of cross-sections of C ...
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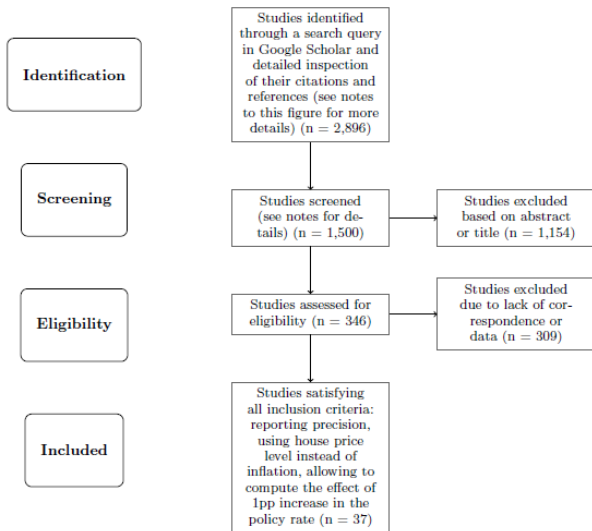
[Estimating the elasticity of intertemporal substitution when instruments are weak](#) [\[PDF\] from nber.org](#)
M.Yogo - Review of Economics and Statistics, 2004 - MIT Press
... THE **elasticity of intertemporal substitution (EIS)** in **consumption** is a parameter of central importance in macroeconomics ... rates to the current level of aggregate demand in the **intertemporal IS** relation ... implications for the relative magnitudes of income and **substitution** effects in ...
[Cited by 132](#) - [Related articles](#) - [SFX@cnb](#) - [BL Direct](#) - [All 14 versions](#)

[Long-run labor supply and the elasticity of intertemporal substitution for consumption](#) [\[PDF\] from cepr.org](#)
S Basu... - manuscript, University of Michigan, 2002 - cepr.org
... income and **substitution** effects on labor supply cancel, so that a permanent increase in the real ... across time, (B) **empirical estimates** of the **elasticity of intertemporal substitution** have repeatedly ... averaged rational expectations error et + θ et-i. C is **consumption**, r is the real interest ...
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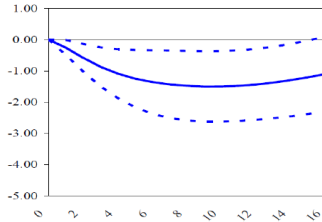
[The intertemporal elasticity of substitution: An exploration using a US panel of state data](#) [\[PDF\] from jstor.org](#)
P Beaudry... - Economica, 1996 - JSTOR
... 1996] **INTERTEMPORAL ELASTICITY OF SUBSTITUTION** ... Consequently, any mis-measurement of the actual cost of housing could greatly impair any evidence of short-run **intertemporal substitution**, and therefore ? ... **Consumption Instruments** Lags 0 (se) A (se) IES (se) OID test ...
[Cited by 120](#) - [Related articles](#) - [BL Direct](#) - [All 8 versions](#)

[Reconciling conflicting evidence on the elasticity of intertemporal substitution: A macroeconomic perspective](#) [\[PDF\] from psu.edu](#)
F Guvenen - Journal of Monetary Economics, 2006 - Elsevier
... to 1, reflecting the view that a high degree of **intertemporal substitution** is more ... In an influential paper Hall (1988) has argued that **consumption** growth is ... of heterogeneity: limited participation

Universal coverage



Measurement error

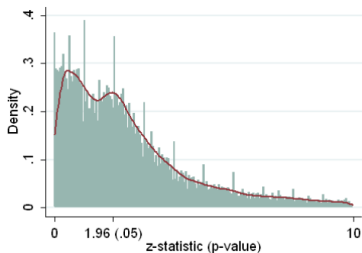


Canada		
horizon	response	confidence interval
1	-0.231	(-0.407, -0.016)
2	-0.578	(-1.012, -0.135)
4	-1.076	(-1.853, -0.299)
8	-1.454	(-2.554, -0.359)
12	-1.414	(-2.534, -0.287)
16	-1.084	(-2.259, 0.131)
max	n.a.	n.a.

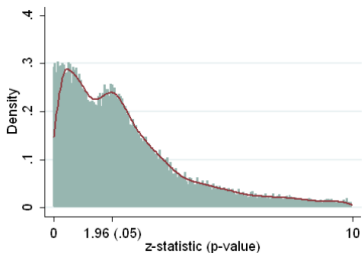
Obtained from: page 50, Figure 2

Frequency: Quarterly

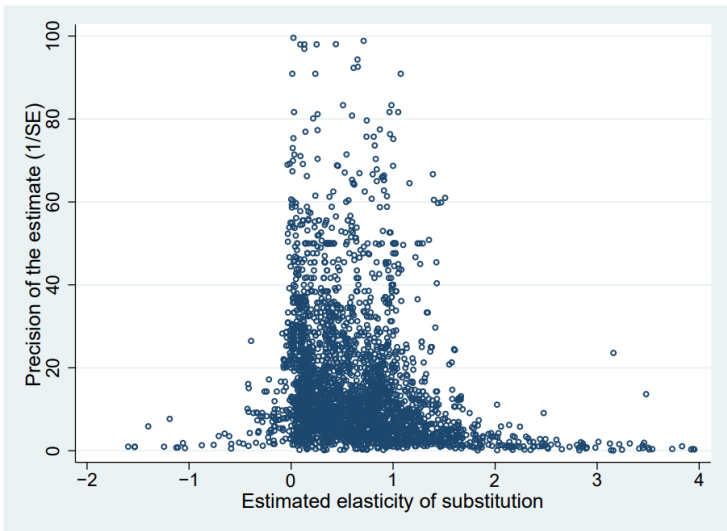
Note: Responses are in %.



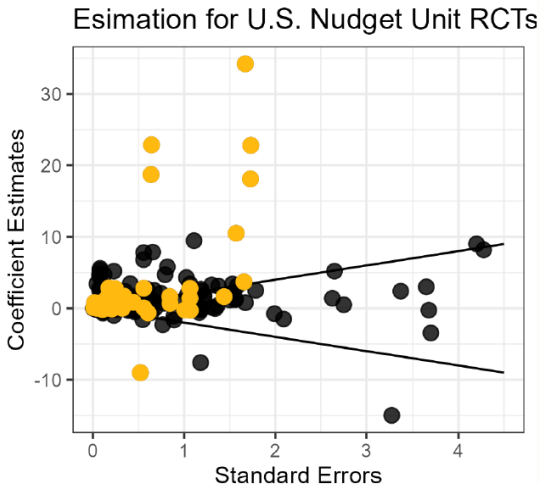
(a) Raw distribution of z-statistics.



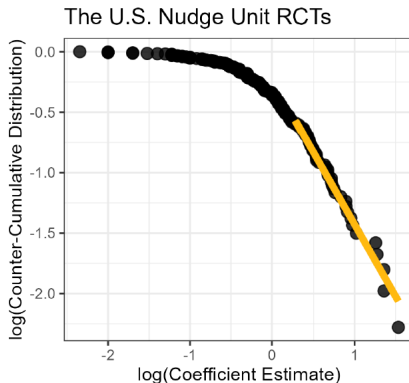
(b) Unrounded distribution of z-statistics.



Too much heterogeneity

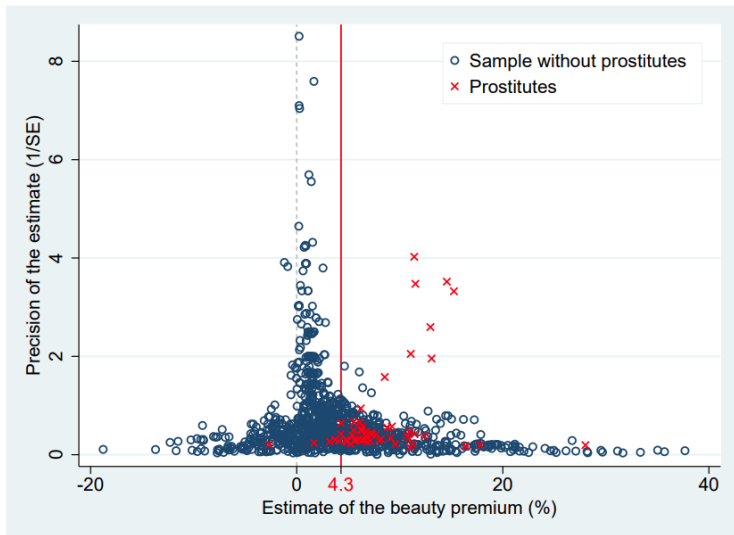


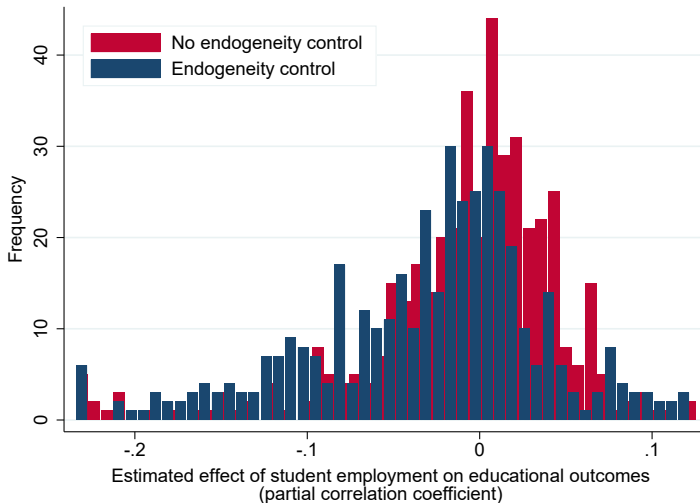
Too much heterogeneity



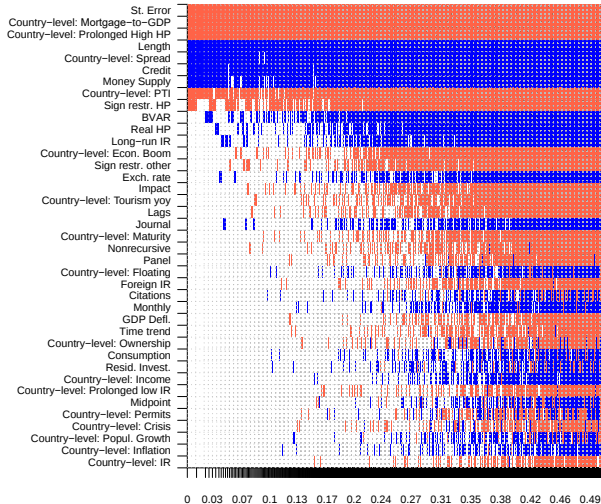
$$\log(1 - G(\beta))_i = -\underbrace{1.19}_{=\hat{\alpha}} \log \beta_i - \log \underbrace{1.90}_{=\hat{b}_{\min}}$$

Too much heterogeneity





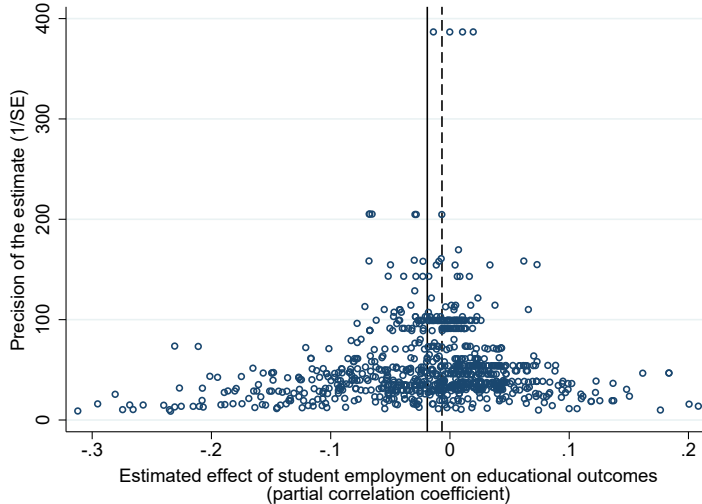
Omitted variables



Attenuation bias



Partial correlations



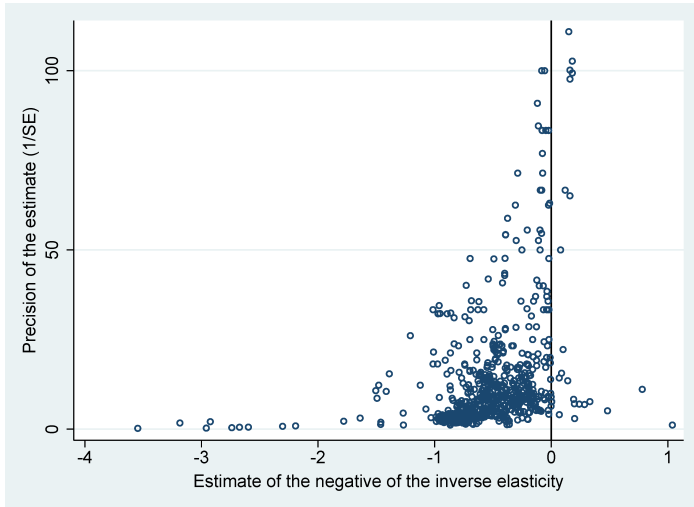
Partial correlations

$$r_p = \frac{t}{\sqrt{t^2 + \text{df}}},$$

$$S_1^2 = \frac{(1 - r_p^2)^2}{\text{df}},$$

$$S_2^2 = \frac{1 - r_p^2}{\text{df}}.$$

Inverse coefficients



Based on Taylor series expansion. Basic formula:

$$\text{Var}(Y) = \text{Var}(f(X)) \approx [f'(\mu_X)]^2 \text{Var}(X).$$

Example: Suppose $Y = X^2$. Then $f(x) = x^2$ and $f'(x) = 2x$, so that:

$$\text{Var}(Y) \approx [2\mu_X]^2 \text{Var}(X) = 4\mu_X^2 \sigma_X^2.$$

Example: Suppose $Y = \frac{1}{X}$. Then $f(x) = \frac{1}{x}$ and $f'(x) = -\frac{1}{x^2}$, so that:

$$\text{Var}(Y) \approx \left[\frac{-1}{\mu_X^2} \right]^2 \text{Var}(X) = \frac{\sigma_X^2}{\mu_X^4}.$$

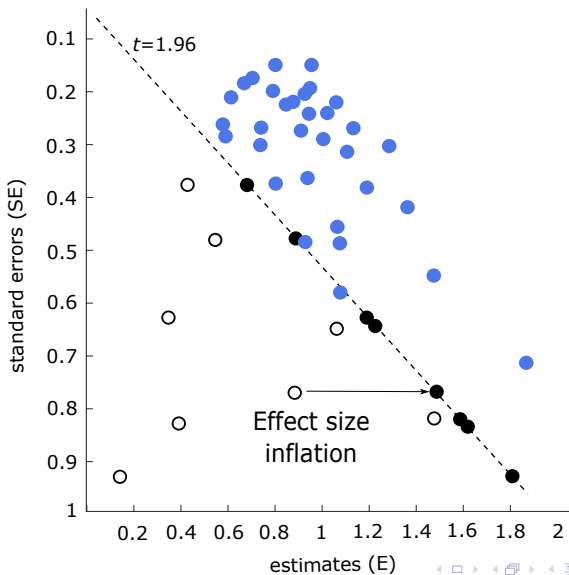
Tests disagree

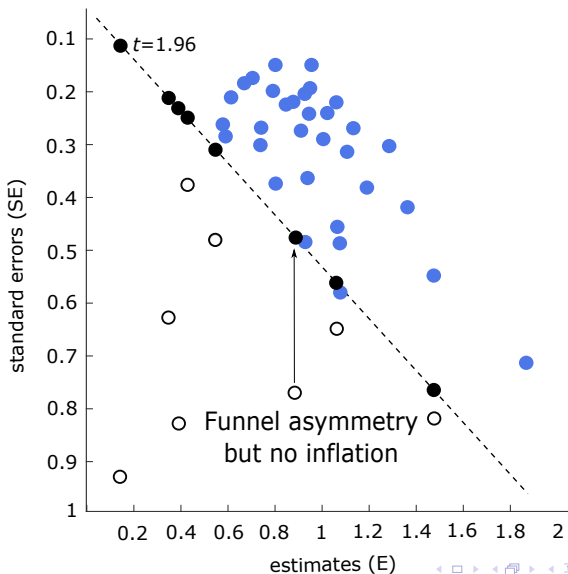
Panel A: Linear tests

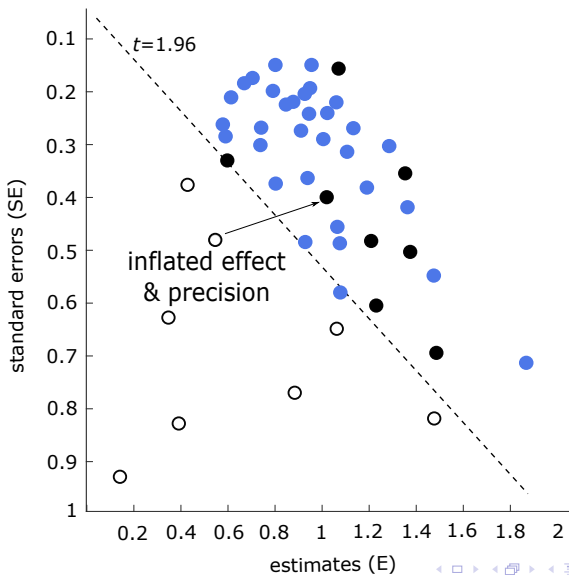
	OLS	FE	Precision	Study	IV
Standard error (<i>publication bias</i>)	1.595*** (0.262) [0.93, 2.20]	0.788*** (0.283) -	2.222*** (0.484) [1.23, 3.31]	2.106*** (0.258) [1.53, 2.56]	2.706 (2.103) -
Constant (<i>mean beyond bias</i>)	0.301*** (0.044) [0.12, 0.42]	0.370*** (0.026) -	0.247*** (0.065) [0.11, 0.31]	0.252*** (0.109) [0.13, 0.38]	0.130* (0.066) -
Observations	723	723	723	723	522
Studies	36	36	36	36	23

Panel B: Nonlinear tests

	Ioannidis <i>et al.</i> (2017)	Andrews & Kasy (2019)	Bom & Rachinger (2019)	Furukawa (2021)	van Aert & van Assen (2021)
Effect beyond bias	0.260*** (0.041)	0.356*** (0.061)	0.207** (0.094)	0.187* (0.112)	0.374*** (0.020)
Observations	723	723	723	723	723
Studies	36	36	36	36	36







Bias in meta estimators

