Econ 675 Assignment 3

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2 Question 2: Weak Instruments Simulations

Results for $n\gamma^2 = 0$

reg_type	variable	mean	st.dev	quant .1	quant .5	quant .9
ols	estimate	1.00	0.01	0.99	1.00	1.01
ols	std.error	0.01	0.00	0.01	0.01	0.01
ols	rej	1.00	0.00	1.00	1.00	1.00
2sls	estimate	0.66	20.76	0.68	1.00	1.32
2sls	std.error	3248.34	182231.00	0.07	0.22	4.95
2sls	rej	0.69	0.46	0.00	1.00	1.00
2sls	f_stat	1.00	1.39	0.01	0.44	2.65

Results for $n\gamma^2 = 0.25$

reg_type	variable	mean	st.dev	quant .1	quant .5	quant .9
ols	estimate	1.00	0.01	0.99	1.00	1.01
ols	std.error	0.01	0.00	0.01	0.01	0.01
ols	rej	1.00	0.00	1.00	1.00	1.00
2sls	estimate	0.28	31.08	-0.97	0.65	2.64
2sls	std.error	1630.89	91246.48	0.15	0.89	23.65
2sls	rej	0.32	0.47	0.00	0.00	1.00
2sls	f_stat	1.26	1.81	0.02	0.57	3.44

Results for $n\gamma^2 = 9$

*Shouts out to Ani for the help with this. Could not have done it without you!

reg_type	variable	mean	st.dev	quant .1	quant .5	quant .9
ols	estimate	0.96	0.02	0.94	0.96	0.98
ols	std.error	0.02	0.00	0.01	0.02	0.02
ols	rej	1.00	0.00	1.00	1.00	1.00
2sls	estimate	-0.31	6.73	-0.77	-0.01	0.29
2sls	std.error	15.57	713.82	0.17	0.34	1.06
2sls	rej	0.08	0.27	0.00	0.00	0.00
2sls	f_stat	9.99	6.34	2.83	8.88	18.34

Results for $n\gamma^2 = 99$

reg_type	variable	mean	st.dev	quant .1	quant .5	quant .9
ols	estimate	0.67	0.03	0.62	0.67	0.71
ols	std.error	0.03	0.00	0.03	0.03	0.04
ols	rej	1.00	0.00	1.00	1.00	1.00
2sls	estimate	-0.01	0.11	-0.15	-0.00	0.11
2sls	std.error	0.10	0.02	0.08	0.10	0.14
2sls	rej	0.05	0.21	0.00	0.00	0.00
2sls	f_stat	100.93	24.69	71.05	99.09	133.35

3 Question 3: Weak Instrument - Empirical Study

Table 1

	Dependent variable:
	l_w_wage
educ	0.063***
	(0.0003)
non_white	−0.257***
	(0.004)
married	0.248***
	(0.003)
SMSA	−0.176***
	(0.003)
ENOCENT	0.016***
	(0.004)
ESOCENT	−0.164***
	(0.005)
MIDATL	−0.053***
	(0.004)
MT	−0.092***
	(0.006)
NEWENG	−0.113***
	(0.006)
SOATL	−0.139***
	(0.004)
WNOCENT	−0.108***
	(0.005)
WSOCENT	−0.103***
	(0.005)
d_YOB_ld_0	0.008*
	(0.005)
d_YOB_ld_7	−0.015***
	(0.005)
d_YOB_ld_5	−0.012**
	(0.005)
d_YOB_ld_8	−0.014***
	(0.005)
d_YOB_ld_9	−0.022***