

Table 1. OLS

	(1) Year 1	(2) Year 2	(3) Year 3	(4) Year 4	(5) Year 5	(6) Sum
Fisc multiplier. Full sample	0.11** (0.04)	0.12** (0.05)	-0.04 (0.04)	-0.21*** (0.07)	-0.32** (0.12)	-0.42** (0.16)
Observations	457	440	423	406	389	389
Fisc multiplier. Large Cons.	0.12** (0.04)	0.13** (0.05)	-0.04 (0.04)	-0.23*** (0.07)	-0.33** (0.12)	-0.41* (0.19)
Observations	457	440	423	406	389	389
Fisc multiplier. Small Cons.	0.06 (0.07)	0.11 (0.15)	0.03 (0.14)	-0.07 (0.19)	-0.23 (0.28)	-0.53 (0.50)
Observations	457	440	423	406	389	389

Table 2. OLS by bin

	(1) Year 1	(2) Year 2	(3) Year 3	(4) Year 4	(5) Year 5	(6) Sum
Fisc multiplier, y = boom	0.21*** (0.07)	0.24*** (0.07)	0.05 (0.05)	-0.17 (0.11)	-0.22 (0.15)	-0.02 (0.24)
Observations	222	205	192	180	175	175
Fisc multiplier, y = slump	-0.03 (0.04)	-0.07 (0.07)	-0.17 (0.11)	-0.23* (0.12)	-0.41** (0.18)	-0.98** (0.40)
Observations	235	235	231	226	214	214
Fiscal multiplier, large change, y = boom	0.23** (0.08)	0.24*** (0.08)	0.06 (0.06)	-0.15 (0.11)	-0.18 (0.15)	0.13 (0.28)
Fiscal multiplier, small change, y = boom	0.06 (0.11)	0.21 (0.35)	-0.04 (0.40)	-0.32 (0.37)	-0.57 (0.41)	-1.55 (1.14)
Observations	222	205	192	180	175	175
Fiscal multiplier, large change, y = slump	-0.02 (0.05)	-0.05 (0.08)	-0.18 (0.13)	-0.30* (0.16)	-0.52** (0.23)	-1.16* (0.56)
Fiscal multiplier, small change, y = slump	-0.05 (0.12)	-0.16 (0.21)	-0.10 (0.23)	0.13 (0.32)	0.17 (0.49)	0.03 (1.10)
Observations	235	235	231	226	214	214

Table 3. IV binary v cts

	(1) Year 1	(2) Year 2	(3) Year 3	(4) Year 4	(5) Year 5	(6) Sum
Fisc multiplier, binary IV	-0.34*** (0.11)	-0.72*** (0.22)	-0.76*** (0.24)	-0.78*** (0.22)	-0.88*** (0.26)	-2.94*** (0.80)
FirstStageFStat	32.85	33.41	26.61	31.99	30.78	30.78
Observations	457	440	423	406	389	389
Fisc multiplier, cts. IV	-0.46*** (0.12)	-0.81*** (0.22)	-0.69** (0.29)	-0.58** (0.27)	-0.68** (0.28)	-2.77*** (0.92)
FirstStageFStat	53.90	51.52	48.95	45.25	42.39	42.39
Observations	457	440	423	406	389	389

Table 4. IV by bin, binary

	(1) Year 1	(2) Year 2	(3) Year 3	(4) Year 4	(5) Year 5	(6) Sum
Fisc multiplier, y = boom	-0.34 (0.30)	-0.32 (0.46)	-0.13 (0.47)	-0.59 (0.47)	-0.81 (0.54)	-1.36 (1.62)
FirstStageFStat	11.60	10.22	8.16	11.67	11.87	11.87
Observations	222	205	192	180	175	175
Fisc multiplier, y = slump	-0.25* (0.14)	-0.76*** (0.23)	-0.95*** (0.29)	-0.79*** (0.31)	-0.93** (0.42)	-3.35*** (1.10)
FirstStageFStat	32.45	32.45	27.74	28.34	28.10	28.10
Observations	235	235	231	226	214	214

Table 5. Balance check

	diff.
Public debt to GDP ratio	0.13*** (0.03)
Deviation of log output from trend	-0.72*** (0.20)
Output growth rate	-0.63*** (0.18)
Treatment (lagged)	0.56*** (0.04)
Observations	491

Table 6. Residual Test

	OLS	IV (binary)	IV (continuous)
dly	0	0	0
drprv	.24	.56	.54
dlcpi	0	0	0
dlriy	.01	0	0
stir	0	0	0
ltrate	0	.01	.02
cay	0	0	0

Table 7. Fiscal treatment regression, pooled probit estimators

	(1)	(2)	(3)	(4)
Public debt to GDP ratio	0.328*** (0.073)	0.283*** (0.073)	0.115* (0.064)	0.113* (0.064)
Deviation of log output from trend		-0.026** (0.011)	-0.012 (0.009)	
Output growth rate		-0.030** (0.012)		-0.024** (0.010)
Treatment (lagged)			0.413*** (0.020)	0.413*** (0.019)
Observations	457	457	457	457
Model AUC	0.613	0.657	0.805	0.815
s.e.	0.0267	0.0261	0.0222	0.0219

Table 8. AIPW full sample

	(1) dr1	(2) dr1	(3) dr1	(4) dr1	(5) dr1	(6) dr1
ATE u wts	-0.17 (0.17)	-0.55** (0.23)	-0.61*** (0.20)	-0.88** (0.32)	-1.14** (0.42)	-3.22*** (0.89)
Observations	456 (1) dr1	439 (2) dr1	423 (3) dr1	406 (4) dr1	389 (5) dr1	389 (6) dr1
ATE u wts	-0.24 (0.16)	-0.70** (0.26)	-0.75*** (0.25)	-0.93** (0.33)	-1.23** (0.47)	-3.61*** (1.06)
Observations	456	439	423	406	389	389

Table 9. AIPW boom vs. slumps

	dr1	dr1	dr1	dr1	dr1	dr1
ATE u wts boom	-0.33 (0.22)	-0.68* (0.39)	-0.36 (0.41)	-0.55 (0.57)	-0.56 (0.84)	-1.80 (1.85)
ATE u wts slump	-0.19 (0.19)	-0.76*** (0.25)	-0.96*** (0.33)	-0.68 (0.43)	-0.95 (0.61)	-3.54** (1.52)
Observations	456	439	423	406	389	389

Table A1. OLS with Country-Fixed Effects and Controlling for World Growth

	(1) Year 1	(2) Year 2	(3) Year 3	(4) Year 4	(5) Year 5	(6) Sum
Fisc multiplier, y = boom	0.21*** (0.07)	0.25*** (0.07)	0.06 (0.05)	-0.18* (0.10)	-0.26* (0.14)	-0.07 (0.24)
Observations	222	205	192	180	175	175
Fisc multiplier, y = slump	-0.03 (0.03)	-0.06 (0.06)	-0.17 (0.10)	-0.23* (0.12)	-0.41** (0.17)	-0.97** (0.37)
Observations	235	235	231	226	214	214
Fiscal multiplier, large change, y = boom	0.23*** (0.08)	0.25*** (0.08)	0.07 (0.06)	-0.17 (0.10)	-0.22 (0.14)	0.08 (0.27)
Fiscal multiplier, small change, y = boom	0.04 (0.12)	0.19 (0.33)	-0.02 (0.40)	-0.35 (0.37)	-0.68 (0.39)	-1.68 (1.11)
Observations	222	205	192	180	175	175
Fiscal multiplier, large change, y = slump	-0.03 (0.04)	-0.05 (0.08)	-0.18 (0.12)	-0.30* (0.16)	-0.52** (0.22)	-1.16** (0.53)
Fiscal multiplier, small change, y = slump	-0.05 (0.12)	-0.15 (0.21)	-0.10 (0.23)	0.13 (0.32)	0.16 (0.49)	0.03 (1.09)
Observations	235	235	231	226	214	214

Table A2. IV with Country-Fixed Effects and Controlling for World Growth, bin IV

	(1) Year 1	(2) Year 2	(3) Year 3	(4) Year 4	(5) Year 5	(6) Sum
Fisc multiplier, y = boom	-0.32 (0.29)	-0.33 (0.48)	-0.14 (0.47)	-0.54 (0.41)	-0.67* (0.41)	-1.18 (1.40)
FirstStageFStat	11.50	10.31	9.03	14.43	14.75	14.75
Observations	222	205	192	180	175	175
Fisc multiplier, y = slump	-0.24* (0.14)	-0.76*** (0.23)	-0.95*** (0.28)	-0.79*** (0.30)	-0.94** (0.39)	-3.38*** (1.01)
FirstStageFStat	32.89	32.89	27.99	28.82	28.56	28.56
Observations	235	235	231	226	214	214

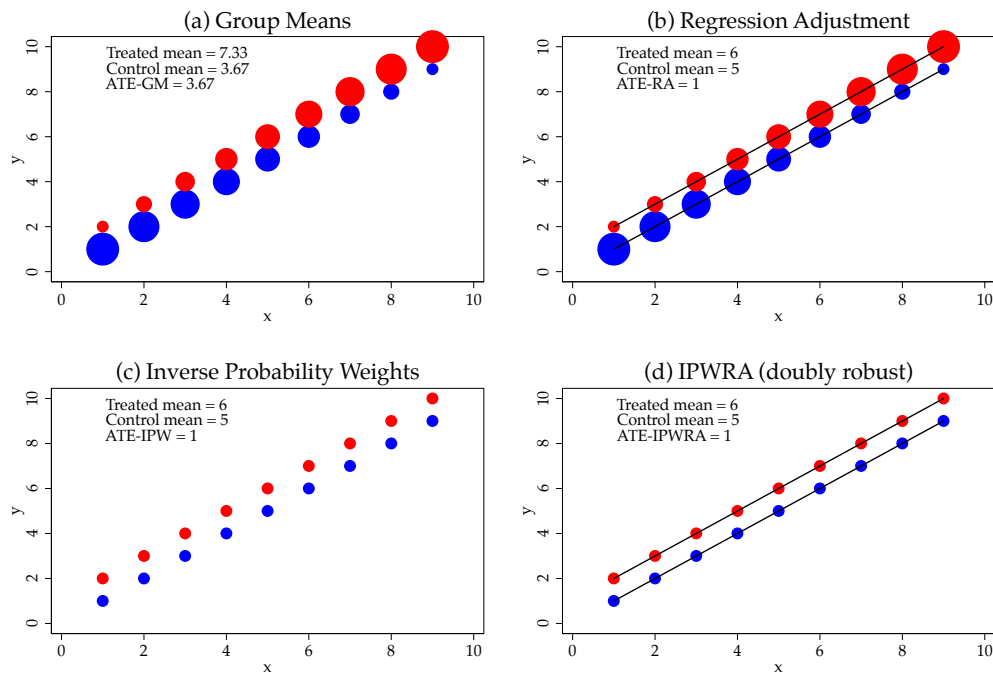
Table A3. ATE robustness

	(1) dr1	(2) dr1	(3) dr1	(4) dr1	(5) dr1
ATE_boom	-1.81 (1.85)	-1.74 (1.84)	-1.72 (1.86)	-1.82 (1.90)	-1.78 (1.93)
ATE_slump	-3.46** (1.50)	-4.00** (1.40)	-3.88** (1.41)	-3.58** (1.50)	-3.58** (1.48)
RobSEboom	0.89	10.23	11.32	0.88	0.90
RobSEslump	0.80	10.16	9.57	0.82	0.82
Stage1AUC	0.88	0.85	0.85	0.87	0.86
se	0.02	0.02	0.02	0.02	0.02
Observations	389	389	389	389	389

Table A4. Treatment on treatment

	(1) F.Treatment	(2) F2.Treatment	(3) F3.Treatment
Treatment	0.509*** (0.054)	0.281*** (0.055)	0.171*** (0.042)
Observations	439	421	404

Figure 1. IPWRA example



Outcome model: $y = x + \text{Treated}$; Treatment model: $p(\text{Treated}) = x/10$; True ATE = 1.

Figure 2. Overlap

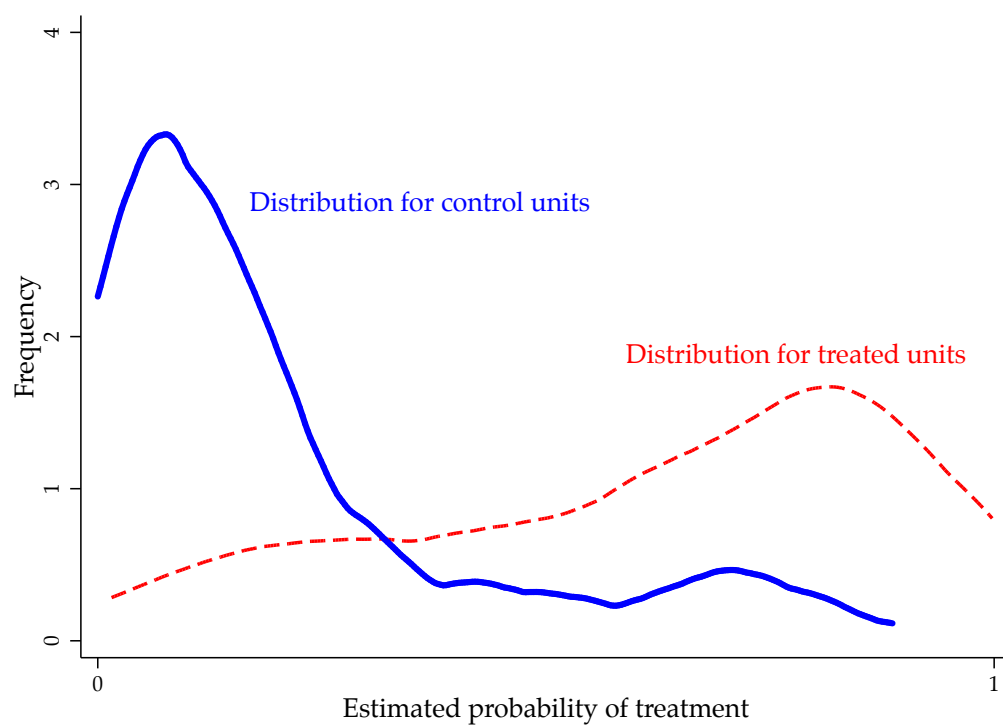


Figure 3. LPs with unrestricted slopes

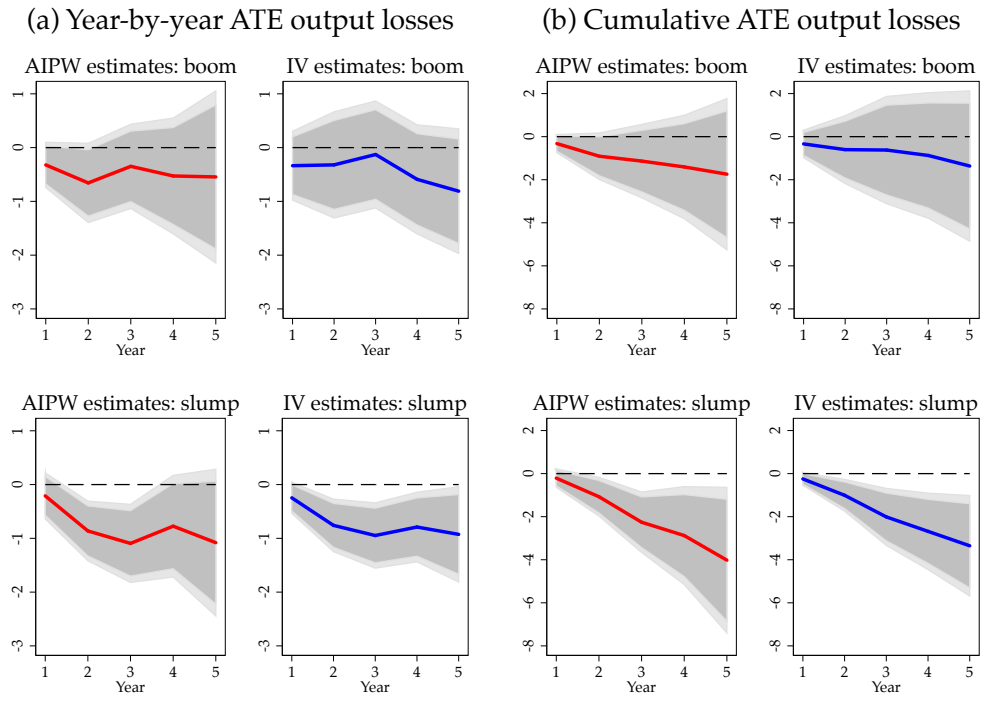
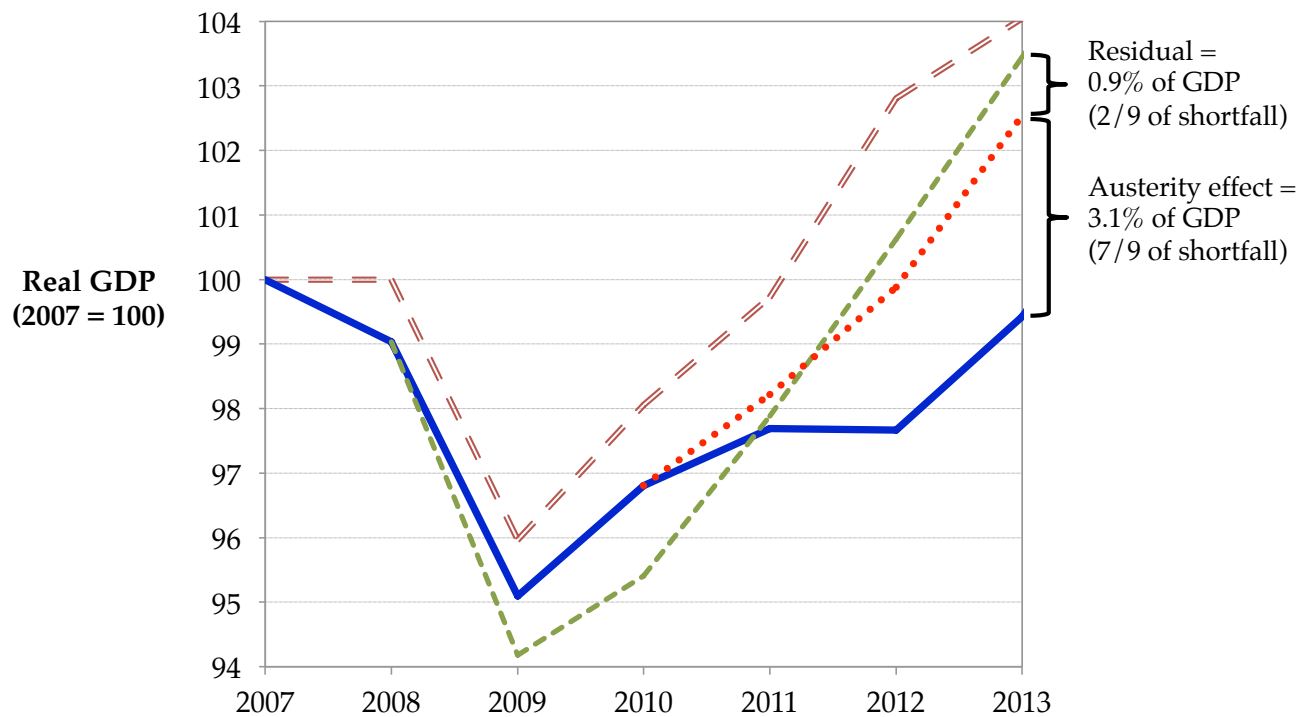


Figure 4. UK counterfactual



- History: real GDP, average — financial crisis recession, high leverage cases (Jordà, Schularick, and Taylor 2013)
- Data: real GDP, actual — UK Office for National Statistics
- - - Forecast: real GDP, predicted — UK Office for Budget Responsibility, June 2010
- Model: real GDP, counterfactual — actual minus estimated effect of austerity 2011–2013