encode state, gen(penelid)

xtset penelid time

xthreg casesd\_power\_g hum\_s tem\_s log\_ecpo , rx(log\_s) qx(log\_s) thnum(2) trim(0.05 0.05) grid(400) bs(100 100) thlevel(95) gen(Regime) vce(bootstrap, reps(100))

xi: xtpcse casesd\_power\_g hum\_s tem\_s log\_ecpo z1 z2 z3 i.state, correlation(psar1)

predict predict\_1

sum casesd\_power\_g predict\_1

ttest casesd\_power\_g = predict\_1, level(95)

tabstat predict\_1 casesd\_power\_g , statistics(mean) by(cross\_id)

bysort cross\_id: ttest predict\_1= casesd\_power\_g , level(95)

gen real\_z2=z2

gen real\_z3=z3

gen real\_z1=z1

replace z2=0

replace z3=0

replace z1=0

predict predict\_2

sum casesd\_power\_g predict\_2

ttest casesd\_power\_g = predict\_2, level(95)

tabstat predict\_2 casesd\_power\_g , statistics(mean) by(cross\_id)

bysort cross\_id: ttest predict\_2= casesd\_power\_g , level(95)

replace z2= real\_z2

replace z3= real\_z3

replace z1= real\_z1