EC212 Weekend PS General Feedback

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This is generic feedback for questions 1 and 2 of the first weekend problem set from EC212 (2022)

- 1a: Most people had good suggestions for the factors that could be in u and whether or not they would be correlated. For the exam: make sure that you justify what you say is true (for example, don't just say 'they're positively correlated' but explain why you'd expect that to be the case). In general (for the whole problem set) make sure you answer everything the question wants you to!
- 1b: About 80% of people had the right definition and had some small adjustments that would be good to make for exam technique (eg saying what breaking SLR4 would mean in this context). The other $\approx$ 20% had a completely wrong definition of unbiasedness. If you wrote that unbiasedness is anything other than E(beta hat) = beta then please let me know if you'd like to go over it again - I want to make sure you can do it right
- 1c: Virtually everyone got this correct
- 1d: Nearly everyone had the right answer, though some people got /100 and $\times$ 100 the wrong way around
- 1e: The question was a little confusing about whether it wanted you to interpret with beta = -5.82 (before part iv applied) or beta = -0.0582 (after it had been) so I gave both answers as correct. Just make sure though that you realise the interpretation: if x goes up by 1 we expect on average y to go up by 100 beta %
- 1f: Many people missed out the class size $\times$ private term. Please see the GitHub notes on interaction effects for more details and why you have to do this!
- 2a: Generally very well done. Just make sure you answer the whole question (ie both why you'd expect the coefficient to be negative and how you get the 10.6 number) to ensure that you get full marks
- 2b: Most interpretations were close to being fully correct - see what I commented about yours specifically to see what you need to add
- 2c: Almost universally done correctly (apart from a couple people who made typos or accidentally subtracted numbers which they should have added)

- 2d: Most people got the right idea. Please use the word multicollinearity explicitly here given if you didn't do it - to make it clear that this is what you're talking about
- 2e: A few people didn't write out the OVB formula when describing this. In general if there is an equation which helps you answer the question, make sure you include it. That way it'll be clear to the examiner what you're arguing. Also it stops you making mistakes!
- Remember that there is a cost to adding extra variables in terms of often higher variance of the estimates (look at formula for OLS estimates under heteroscedasticity). We talk about choosing correlation models as a bias/variance trade off - as I talked about in class. As such, we should be using some measure of this: either a T test (what the solutions suggest), adjusted R^2, or MSE. R^2 itself doesn't work as that's always higher if we have more regressors