WWS 403 Methods Lab

Lecture 3

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TONIGHT

The Plan

Announcements: Brief debrief and extra sessions

Part 1: How to get people to vote?

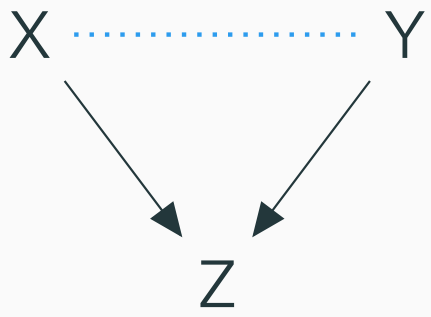
Part 2: What should I put in my model? β

Lab: Because we love labs

EXTRAS: SELECTION ON THE DEPENDENT VARIABLE

Even when there is no causal link between X and Y

conditioning on Z will create spurious association.



SELECTION ON THE DEPENDENT VARIABLE

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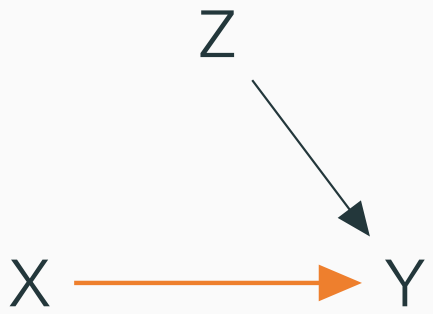
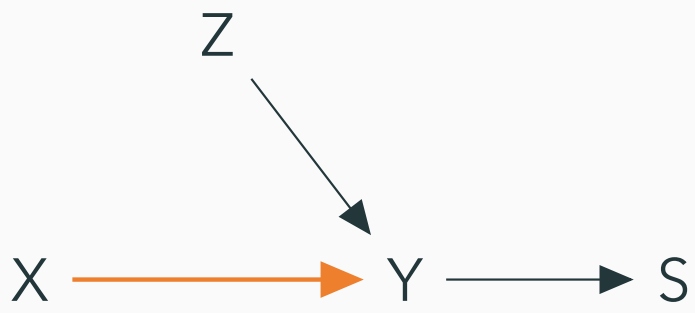
Assume Z raises Y but does not affect X



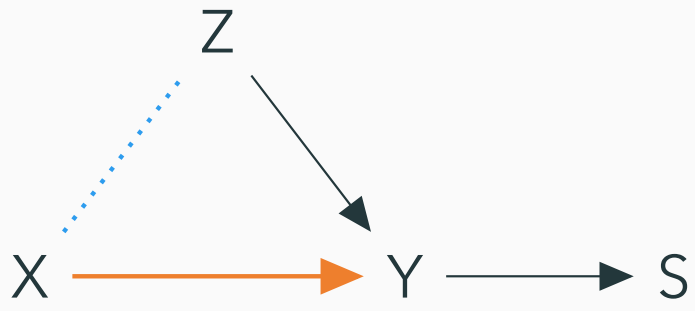
Z is not a confounder

SELECTION ON THE DEPENDENT VARIABLE

However, if we select (S) only units with, say, high Y



Then we will see spurious association between X and Z



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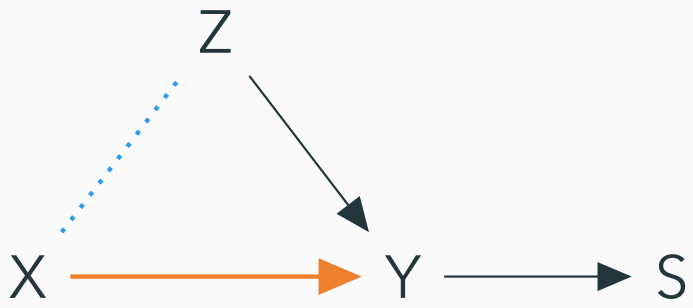
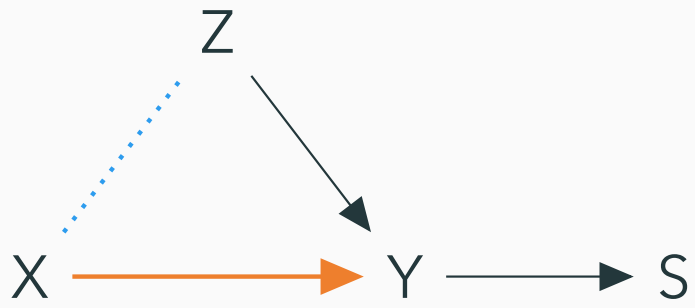


This subsample will have more high Z units with low X and more low Z units with high X than the population.

SELECTION ON THE DEPENDENT VARIABLE



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So effect of X on Y will seem to be *larger* than it really is.

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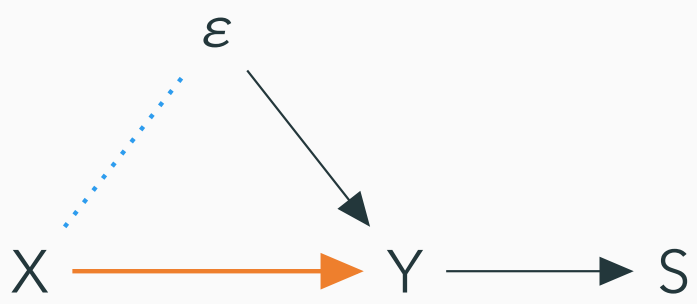

ε is now correlated with X because of the selection, so $\hat{\beta}$ no longer estimates β.