

## Levy Clip 6 Transcript

DAN LEVY: All right, so I want to close the class asking you to reflect on-- by the way, what we just did that is a summary that is on page six of your handout, describe in more detail. What I want us to do now to close class is to ask you this question right here. I want you to reflect on it and vote with your clickers when you're ready.

All right, so given the time constraints we have right now in the penalty of whether you voted or not, why don't you just get together for one minute with the person next to you and try to figure out the answer to this question.

STUDENT: What do you think? I think so, no?

STUDENT: It's going to increase.

STUDENT: Like your r squared increases.

STUDENT: But like, just mathematically, if this increases--

STUDENT: Then your denominator--

STUDENT: Decreases.

STUDENT: Decreases.

STUDENT: So this is going to increase.

STUDENT: Were you not listening when I said before?

STUDENT: No, no, no. We just like proving.

STUDENT: No, but it's true I think.

STUDENT: But it does make sense as well, if you add something that is something associated with your variable.

STUDENT: I also think if you just had  $x_1$  then you're capturing the effect of  $x_1$  and  $x_4$  together in  $\beta_1$ . And now you're separating them out. But it's like what he said about this, this arts and academics thing.

STUDENT: I agree. But if we go a bit further, so if you add  $x_4$  does it mean that you're taking out something from the  $u$  of the residual?

STUDENT: Oh, interesting. So it depends, right?

STUDENT: Because if it's correlated, you know this, the  $x_4$  should be in the  $u$ . No?

DAN LEVY: You agree alright?

STUDENT: So suppose instead of school spending we broke it down into arts, academics, all of that, then we would say not necessarily.

DAN LEVY: All right. So please vote.

STUDENT: Like in that case,  $x_1$  would be a total of--

DAN LEVY: Please vote.

OK, I'm going to show you the results. We have two minutes left. I'm going to end class in a rather unconventional way. I'm just going to tell you that the majority answer here is incorrect. I'll see you on Tuesday of next week.

STUDENT: No, that's so frustrating.