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The Wald Estimate - Quiz

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Question 1

1/1 point (graded)

What is the Wald estimate? (Select all that apply)

- [x] a. The reduced form relationship over the first stage relationship.
- [ ] b. An estimate of the relationship between the instrument and the instrumented for regressor
- [ ] c. An estimate of the relationship between the instrument and the outcome variable
- [x] d. The simplest form of the instrumental variables estimator.

✔

Explanation

A is true by definition. Intuitively, you want to scale the effect of your instrument by your effect of your instrument on your regressor (so it makes sense to divide by the first stage). B is the relationship you are estimating in your first stage. C is the relationship you estimate in your reduced form. It is the simplest because it uses a dummy variable as the instrument.

Submit You have used 1 of 2 attempts

✔ Correct (1/1 point)

Question 2

1/1 point (graded)

In general, if some of the IV assumptions are violated, your reduced form estimates will be _____ biased relative to your Wald Estimate.

a. More

b. Less ✔

c. Equally as

d. Not as

Explanation

Continuing with the scholarship example, suppose that scholarships affect test scores through both attendance and through their effect on psychological outcomes (ex. Self-esteem). This would imply that your estimate of the effect of scholarships on test scores would be a combination of the effect of attendance, and the psychological effect. This is your reduced form estimate, which is the numerator

of your Wald estimate. So if self-esteem is omitted from your model, your reduced form will be biased. But your Wald estimate is just your reduced form divided by your first stage estimate, which is less than or equal to 1. This implies that the bias in your reduced form estimates will be "blown up" in your Wald estimate because of the fact that first stage is less than 1. So your Wald estimate will be more biased than your reduced form estimates.

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Discussion
Topic: Module 12 / The Wald Estimate - Quiz

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