Midterm Review

EC 320: Introduction to Econometrics

Winter 2022

Practice

Regression Table

Example: 2016 election

Q: Write down the regression model estimated in column 1.

Outcome: Trump Margin (%)

Explanatory variable	**1**	**2**	**3**
Intercept	**-40.7**	42	-65.7
	(1.95)	(1.49)	(2.99)
White (%)	**0.91**		1.05
	(0.024)		(0.027)
Poverty (%)		-0.647	0.883
		(0.087)	(0.081)

A: $\text{Trump}_i = \beta_0 + \beta_1 \text{White}_i + u_i$.

Regression Table

Example: 2016 election

Q: Write down the regression model estimated in column 2.

Outcome: Trump Margin (%)

Explanatory variable	**1**	**2**	**3**
Intercept	-40.7	**42**	-65.7
	(1.95)	**(1.49)**	(2.99)
White (%)	0.91		1.05
	(0.024)		(0.027)
Poverty (%)		**-0.647**	0.883
		(0.087)	(0.081)

A: $\text{Trump}_i = \beta_0 + \beta_1 \text{Poverty}_i + u_i$.

Regression Table

Example: 2016 election

Q: Write down the regression model estimated in column 3.

Outcome: Trump Margin (%)

Explanatory variable	**1**	**2**	**3**
Intercept	-40.7	42	**-65.7**
	(1.95)	(1.49)	**(2.99)**
White (%)	0.91		**1.05**
	(0.024)		**(0.027)**
Poverty (%)		-0.647	**0.883**
		(0.087)	**(0.081)**

A: $\text{Trump}_i = \beta_0 + \beta_1 \text{White}_i + \beta_2 \text{Poverty}_i + u_i$.

Regression Table

Example: 2016 election

Q: Does omitting $\mathbf{White}_i$ bias the estimator of the $\mathbf{Poverty}_i$ coefficient?

Outcome: Trump Margin (%)

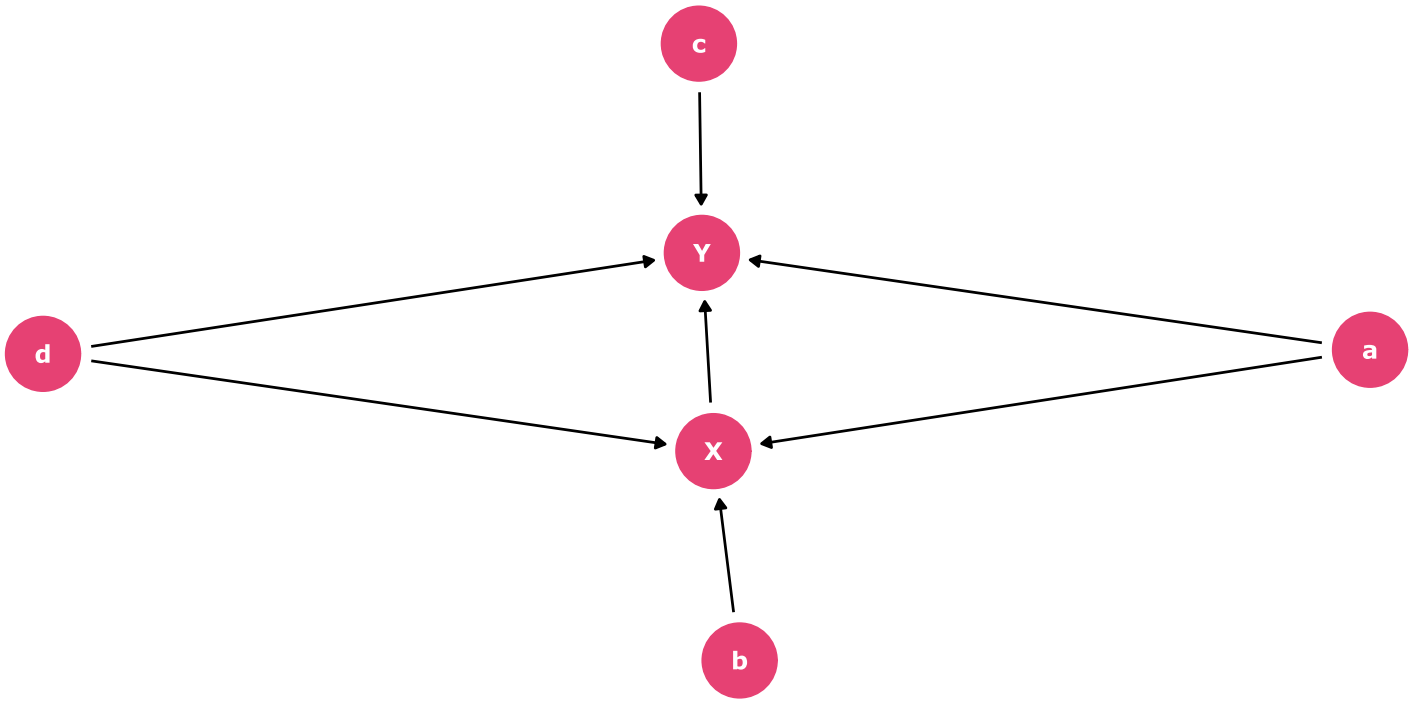
Explanatory variable	**1**	**2**	**3**
Intercept	-40.7	**42**	**-65.7**
	(1.95)	**(1.49)**	**(2.99)**
White (%)	0.91		**1.05**
	(0.024)		**(0.027)**
Poverty (%)		**-0.647**	**0.883**
		(0.087)	**(0.081)**

A: *"Omitting $\mathbf{White}_i$ appears to cause negative omitted-variable bias. The size of the bias is $\beta^{\text{Short}}_{\text{Poverty}} - \beta^{\text{Long}}_{\text{Poverty}} = -0.647 - 0.883 = -1.53$."*

Omitted Variables

Goal: Isolate the effect of **X** on **Y**.

Q: Which variables, if omitted, would cause omitted-variable bias?



A: a and d.