Practice: Motherhood and Wages

We'll work with `mothers.csv`. The names and descriptions of variables are:

Name	Description
`PUBID`	ID of woman
`year`	Year of observation
`wage`	Hourly wage, in cents
`numChildren`	Number of children that the woman has (in this wave)
`age`	Age in years
`region`	Name of region (North East = 1, North Central = 2, South = 3, West = 4)
`urban`	Geographical classification (urban = 1, otherwise = 0)
`marstat`	Marital status
`educ`	Level of education
`school`	School enrollment (enrolled = `TRUE`, otherwise = `FALSE`)
`experience`	Experience since 14 years old, in days
`tenure`	Current job tenure, in years
`tenure2`	Current job tenure in years, squared
`fullTime`	Employment status (employed full-time = `TRUE`, otherwise = `FALSE`)
`firmSize`	Size of the firm
`multipleLocations`	Multiple locations indicator (firm with multiple locations = 1, otherwise = 0)
`unionized`	Job unionization status (job is unionized = 1, otherwise = 1)
`industry`	Job's industry type
`hazardous`	Hazard measure for the job (between 1 and 2)
`regularity`	Regularity measure for the job (between 1 and 5)

In all analyses below, use only data from the year 2009.

We'll analyze how women's wages depend on the number of children they have. First, summarize the number of children that the women in this dataset have.

Then, create a new variable that indicates whether a women has had any children. Summarize the variable.

Using a graph, compare the wage of women with and without children.

Given that the wage variable is highly skewed, we will instead work with log wages ast he dependent variable instead. Create a new variable that is log wages.

Using a graph, compare the log wage of women with and without children.

What is the difference in log wages between women with and without children (incl. 95 percent confidence interval)? Is it significantly different from zero?

How does having an additional child affect log wages? Is it significantly different from zero?

Now, when estimating the effect of the number of children on log wages, control for potential confounders. Interpret the effect. Is it significantly different from zero?

Plot the expected log wage depending on the number of children. Include a confidence interval.

What is the effect of having any children on log wages, controlling for potential confounders? Interpret the effect. Is it significantly different from zero?

Is the effect of having any children on log wages different for women in a unionized versus a non-unionized job?