

# ASAP Assignment 2

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# 1 Difference in Difference

Description: You are tasked with estimating the effects of the 1993 policy intervention on labor supply for single women by whether or not they had children. – The relevant variables in this case are: state - US-State/ province of residence year - Year urate - US-State/province unemployment rate children - number of children per women nonwhite - nonwhite finc - annual family income earn - annual earnings (of women) age - age of women ed - Years of education work - Indicator work status (employed or not) unearn - unearn Income

Outcome variable: INDICATOR WORK STATUS Time indicator: at 1993 (beginning) create time variable Goal: estimate the effect of the 1993 policy intervention on labor supply for single women by whether or not they had children (Dummy for whether they had children or not??)

The unit of analysis are females in the US

Question: The main predictor is meant to be whether women has children; Should we use that as a dummy or numeric variable?? – something like degree of treatment

## 1.1 Indicate which of the coefficients(s) from equation (1) yield the following outcomes

SEE SLIDE 57 ff

$$(1) y_{it} = \beta_0 + \beta_1 + \beta_2 + \beta_3 D_i T_t + \epsilon_{it}$$

$$E = (y_{T=1}|D = 1) \quad E = (y_{T=0}|D = 1) \quad E = (y_{T=1}|D = 0) \quad E = (y_{T=0}|D = 0)$$

$$[E(y_{T=1}|D = 1) - E(y_{T=0}|D = 1)] - [E(y_{T=1}|D = 0) - E(y_{T=0}|D = 0)]$$

## 1.2 Provide a suitable matrix plot as on slide 55

Predictor is WHETHER YOU HAVE CHILD OR NOT