Class 2:
What is Econometrics

$Q_i = f(P_i, P_s, I, T)$

Econic Model
* (Theory)
structural

$Q_i = f(P_i)$ — linear

$Q_i = \beta_0 + \beta_1 P_i$

?

$800

$\hat{Q}_i = \hat{\beta}_0 + \hat{\beta}_1 P_i$

$Q_i = 2 + 0.5 P_i$

$900

VS

Econometrics Model
(Hypothesis)
Reduced

Specify Model ①

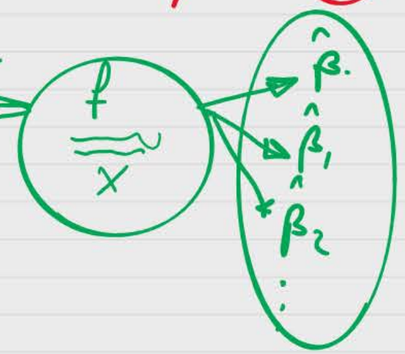
$P_H = f(Sqft, \#bd, location, age, \ldots)$

$P_H = \beta_0 + \beta_1 Sqft + \beta_2 bd + \beta_3 Loc + \beta_4 age$

Price	Sqft	bd	loc	age
P_1	800	3	✓	10
P_2	1500	2	✓	4
⋮	⋮	⋮		⋮
P_{100}				

Collect data ② ✓

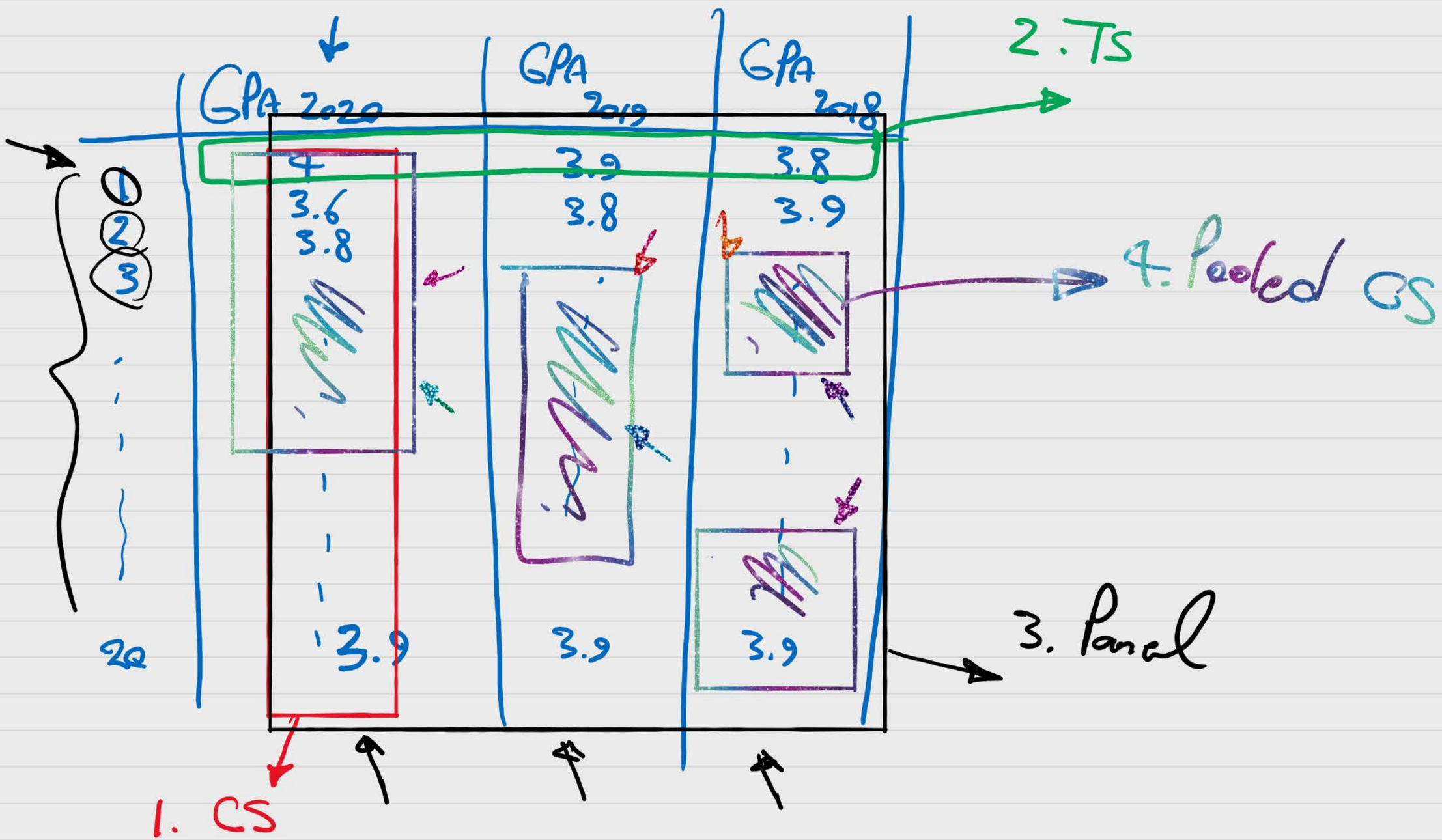
Quantify ③



$\hat{P}_{14} = \hat{\beta}_0 + \hat{\beta}_1 Sqft + \ldots$

Data sets :

20 students, GPA



Experimental vs obs data

Lab

Productivity = f(test, temp, humidy)

test → Prod

hold temp, humidity

cp

Not control

wage = f(educ, age, exp, ...)