# Guidelines for Oral Exam

Prof. Tzu-Ting Yang

Institute of Economics, Academia Sinica

May 27, 2026

# Oral Exam: Overview

- The oral exam serves as a **discussion of your term paper**
- It tests two things:
  (1) Whether you truly understand the **empirical method** you used in your term paper
  (2) Whether you understand the **programming commands** you used in homework (R or Stata)
- There will be **at least two questions**, one for each area above
- Follow-up questions may be asked depending on your answers

# Question 1: Empirical Method

## What is tested

You must be able to, on the spot:

- **Write out the mathematical formula** of your empirical method
  (e.g., regression equation, identification assumption, estimator)
- **Explain what each symbol means** and the intuition behind the method
- Answer **follow-up questions** about the method

## How to prepare

- Re-read the empirical strategy section of your term paper
- Make sure you can explain your method **without looking at slides**
- Think about: what is the **key identifying assumption**?

# Question 1: Examples

Sample questions depending on the method in your term paper:

| **Method** | **Possible question** |
|---|---|
| OLS / Regression | Write out your regression equation and explain what $\hat{\beta}$ means. |
| Difference-in-Differences | Write the DiD estimator. What does the parallel trends assumption say? |
| Instrumental Variables | Write the first-stage equation. Why is your instrument valid? |
| Regression Discontinuity | Explain the RDD identification strategy. What does the estimate capture? |
| Matching / PSM | Define the propensity score. What is the intuition behind matching? |

# Question 2: Programming Code

## What is tested

Based on the language you used in homework (**R** or **Stata**):

- Explain what a piece of **code does** — what each command or option means
- **Interpret the output**: what do the numbers tell you?
- If a parameter is changed, **how would the result differ**?

## How to prepare

- Re-run your homework code and make sure you understand every line
- You do not need to memorise syntax, but you must understand **what each command does**
- Key skill: given a snippet of code, **connect it to the underlying statistical concept**

# Question 2: Examples

Sample code questions:

## R example

```
feols(y ~ x1 + x2 | id + year, data = df, cluster = ~id)
```

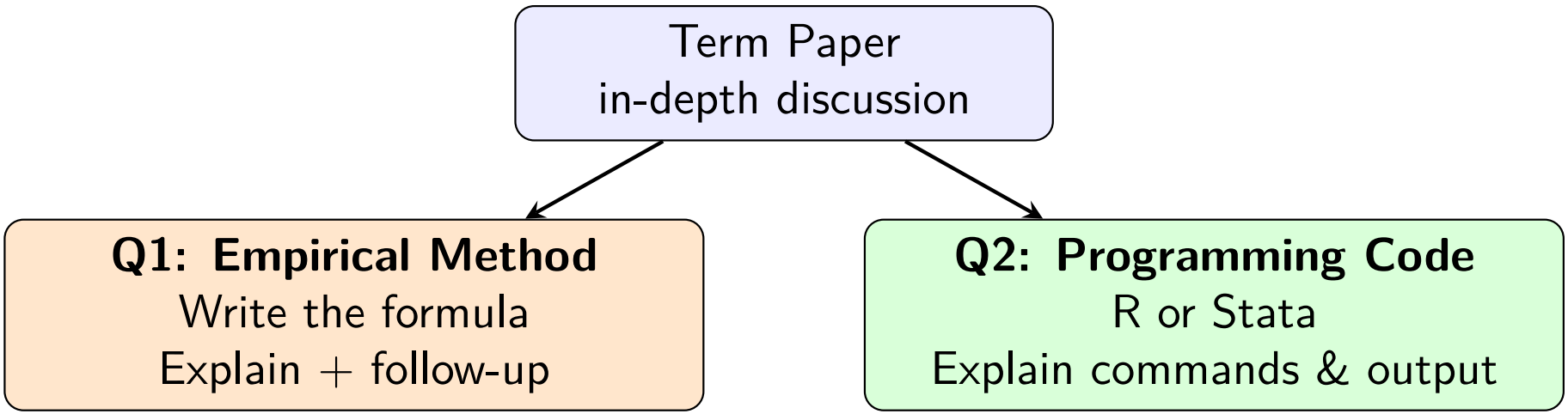
- What does `| id + year` do? Why do we include fixed effects?
- What is the role of `cluster = ~id`? What happens if you omit it?

## Stata example

```
ivregress 2sls y x1 (x2 = z), robust first
```

- What does `(x2 = z)` specify? What role does `z` play?
- What does the `first` option display? How do you assess instrument strength?

# Summary




The oral exam is not meant to trick you.
It is a chance to show that you understand what you did in your term paper and homework.