Guidelines for Oral Exam

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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**? What goes wrong if it fails?

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)
```

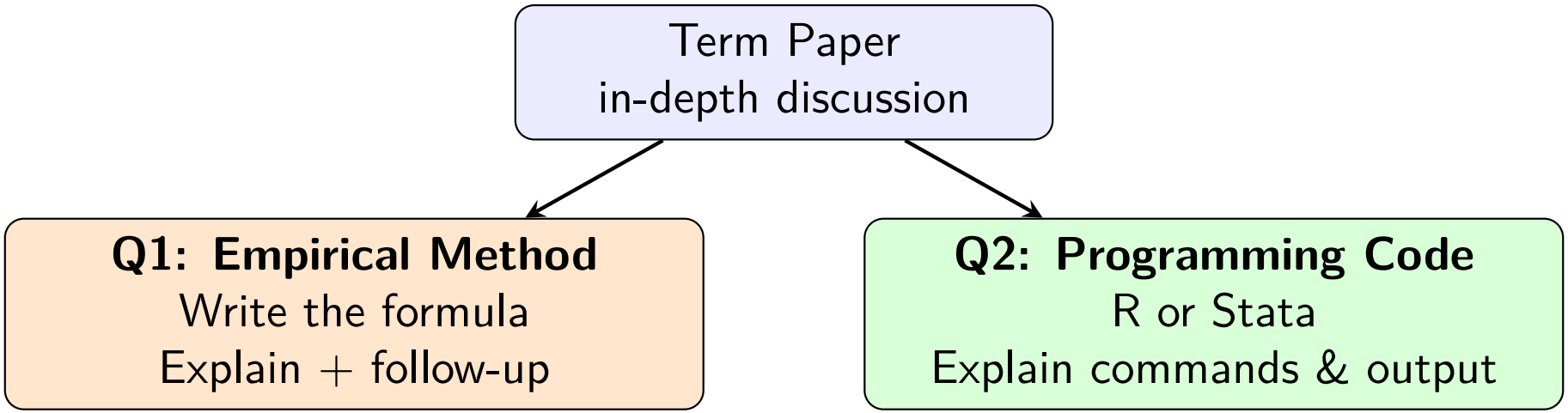
- What does `| id + year` do? Why do we include fixed effects?
- What is the role of `cluster = ~id`? What happens if you omit it?

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.