Bachelor Thesis
Session 1: General Information

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Plan for today

- General information about the bachelor thesis
  - Timeline
  - Requirements and expectations

- Structure of the thesis
  - Main sections
  - References, figures, and tables

- The research process and developing a research question
  - What makes a good research question?
  - How to develop a research idea

Outline

Outline

General Information

Bachelor Thesis Timeline

March 11	Student–supervisor matching completed
March 19	**General information session**
March 27	Workshop 1: Econometrics & identification strategies *[Optional]*
April 10	Workshop 2: Developing a research question *[Optional]*
April – Early May	Proposal submission
June	Draft submission *[Optional]*
July – Early August	Final Thesis submission period

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$\rightarrow$ **To graduate within the academic year** Thesis must be booked in Osiris by August 31 $\Rightarrow$ **submit thesis by August 7**

$\rightarrow$ **To enroll in the MSc** Thesis must be booked in Osiris by August 1 $\Rightarrow$ **submit thesis by July 10**

General Information
Feedback on the Bachelor Thesis

- **When to expect feedback**
  - Main feedback period: March–May
  - The value of feedback is highest in the early stages of the project
- **Small questions**
  - Send a message on TMS (**we are asked not to use email**)
  - I usually respond within two days
- **Bigger questions**
  - Request a 1:1 meeting
  - Send files, text, or other relevant material in advance via TMS
  - Book a week ahead so I have time to review
- **Written feedback**
  - On the proposal and the final draft
  - Covers literature review, empirical strategy, and writing
  - I aim to respond within one week

General Information

Booking 1:1 Meetings

My availability

- Wednesday 13.30-14.30 and Friday 13.00-14.00

- March–May: mostly available for in-person meetings

- From June: more limited availability; some meetings may be online

How to schedule a meeting

- Book a 15 or 30 minute time slot using this link: Booking a 1:1 Meeting

- Send a message on TMS with:
  - your question
  - relevant text, files, or results

- Cannot be booked less than five days in advance

Outline

Standards and Requirements

Learning Objectives

- **Conduct independent research**
  - Develop a research idea from a broad interest
  - Identify and engage with relevant literature

- **Develop empirical skills**
  - Identify and use relevant data sources
  - Possibly collect or combine datasets

- **Write a structured academic paper**
  - Develop a clear argument
  - Communicate ideas effectively

Standards and Requirements

Choosing Your Research Question

- You are encouraged to **develop your own research question**

- This allows you to
  - work on a topic that genuinely interests you
  - develop your own research ideas

- However, formulating a good research question is often the most challenging part of the thesis. The research question must be: **interesting and feasible**.

Standards and Requirements
Choosing Your Research Question

- You are encouraged to **develop your own research question**
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    - work on a topic that genuinely interests you
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- However, formulating a good research question is often the most challenging part of the thesis. The research question must be: **interesting and feasible**.
- I may be **particularly helpful** for topics in labor economics, especially those related to my research:
    - gender, diversity, and inequality
    - science and innovation
    - professional networks
    - artificial intelligence

If you are interested in topics related to gender and diversity

- 2026 Diversity Thesis Award: MyEUR Website

… students on diversity-related topics, making a meaningful contribution to the field.

- Award-winning students will receive a 1,000 Euro prize!

Standards and Requirements
What Distinguishes a Strong Thesis

- A clear and focused research question (more on this later)

- A **credible empirical strategy**
  - Clear understanding of the assumptions behind the empirical strategy
  - Critical evaluation of why these assumptions may fail and its implications for the estimates

- **Careful interpretation of results**
  - What do the results imply economically?

- A clear **contribution relative to the literature**

- **Clear structure and writing**

Standards and Requirements

Most applied economics papers follow a similar structure:

1. **Title and Abstract**
   - Summarize the research question, variation, and main findings
2. **Introduction**
   - Discuss *what, why, how.*
   - The introduction is a summary of the entire paper. *It should be self-contained.*
3. **Literature Review**
   - How does your paper relate to existing work?
4. **Data**
   - Describe the data, and the distribution of key variables
5. **Empirical Strategy**
   - Explain identification strategy, source of variation, and the estimating equation
6. **Results**
   - Present and interpret your findings
7. **Conclusion**
   - Summarize results and discuss implications

Standards and Requirements

Deviations in Structure

However, this is just a rule of thumb. There are many potential reasons to slightly deviate from this.

Project 1	Project 2	Project 3
Introduction	**Introduction**	**Introduction**
Institutional Context	Theoretical Framework	Literature Review
Data	Institutional Context	**Data**
Descriptive Evidence	**Data**	Descriptive Statistics
Empirical Strategy	Empirical Analysis	Identification Strategy
Main Results	**Conclusion**	Results
Interpretation and Mechanisms		**Conclusions**
Conclusions		

Standards and Requirements
Examples of Well-Exectuted Projects

- Read recently published papers in top journals to get a sense of the style

- This is usually also a good place to start your literature review. The most influential papers get published here
  - Top Five (general interest): QJE, AER, JPE, ECTRA, ReStud
  - Top Field (more specialized): AEJ journals, JOLE, JPub, ...

- Past theses from EUR students: https://thesis.eur.nl/org/1

- There are some examples of well executed theses on a broad set of topcis published as working papers by the University of Warwick and Monash University: https://warwick.ac.uk/fac/soc/economics/research/wmesp/

Standards and Requirements

Examples of Less Well-Exectuted Projects

Table A5

Annual Observed Values for All Variables in One Small (Bloemendaal) and One Large (Eindhoven) Municipality, 2010–2019

Panel A: Bloemendaal (Small Municipality)

Year	Labor Part. (%)	Men (%)	Wom en (%)	Low Edu (%)	Med Edu (%)	High Edu (%)	Du tch (%)	West ern (%)	No n- West er n (%)	15-25y (%)	25-45y (%)	45-75y (%)	Soc. Assist. (#)
2010	64.0	71.9	56.6	47.8	68.7	79.1	64.6	61.9	52.0	54.9	83.8	52.9	160
2011	62.8	70.1	55.9	42.6	65.4	83.9	63.2	61.0	45.4	53.8	80.0	53.4	170
2012	63.8	70.4	57.5	38.4	63.7	74.7	64.3	61.9	54.0	53.4	84.1	53.3	160

Standards and Requirements

Research Proposal

The proposal is the first major step of your thesis: at this point you already need a clearly defined research question.

You should be able to clearly answer:

- **What** is your research question?
- **Why** is it interesting or relevant?
- **How** will you answer it empirically?

Your proposal should outline:

[Why?]   The most relevant **papers in the literature**

[How?]   The **data** you plan to use

[How?]   The **variation** you will exploit for identification and the **estimating equation** (e.g. Difference-in-Differences model)

[How?]   The most relevant **threats to the empirical strategy**

Outline

Developing a Research Question

- Start by narrowing down your interests early
  - Think about topics that interest you
  - Start reading papers from top journals to get a sense of what others have done

- Evaluate potential research questions
  - Is it **interesting academically** or **relevant for policy**?
  - Is it **feasible** given the available data and time?
  - Does it contain some element of **novelty**?

- Once you have a research question, be able to answer three questions:
  - **What** am I doing?
  - **Why** is this question interesting?
  - **How** will I answer it empirically?

Developing a Research Question

Starting from a Broad Interest

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  - What outcomes? (junior workers? worker retention?)
  - What mechanism? (role models? mentoring? hiring decisions?)
  - **How?** What data, identification strategy?

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Start narrowing the question

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Developing a Research Question

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Erasmus

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Look for a question with broader implications

Ezafus

Developing a Research Question

An example of a well-defined Research Question: Bagues, Makany, Vattuone, and Zinovyeva 2026

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Developing a Research Question

An example of a well-defined Research Question: Bagues, Makany, Vattuone, and Zinovyeva 2026

"Do promotions of women to senior academic positions generate spillovers along the academic pipeline to junior faculty?"

Why is it interesting?

- Persistent gender gaps in academia despite equal PhD attainment (Lundberg and Stearns, 2019)

- Several policies aimed to increase female representation (quotas, female only positions)

- Multiple competing mechanisms:
    - Role model and mentoring effects
    - Changes in departmental culture
    - Changes in hiring and evaluation

- Theory and existing evidence are ambiguous: no causal evidence

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> "Do promotions of women to senior academic positions generate spillovers along the academic pipeline to junior faculty?"

How do we identify the causal effect?

- Between 2002-2007 Spanish academics had to obtain a national qualification before being eligible for promotion
- Natural experiment: **random assignment** of evaluators to promotion committees
- Connections to evaluators increase promotion probability (Zinovyeva and Bagues, 2015)
- Generates quasi-random variation in who gets promoted
    - → **In certain departments women get lucky, in others men.**
- Data: universe of Spanish public universities (departments, faculty, PhDs) linked to administrative data on the qualification system, and 3 research output databases

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Instrumental variable strategy: Estimating equation

- **First stage**

$$\text{Qualified}_{d,e}^{F} = \theta_0 + \theta_1 \text{Connections}_{d,e}^{F} + \theta_2 \text{Connections}_{d,e}^{M}$$
$$+ \theta_3 \text{ExpectedConnections}_{d,e}^{F} + \theta_4 \text{ExpectedConnections}_{d,e}^{M} + \mathbf{X}_{d,e}' \boldsymbol{\theta} + \zeta_{d,e}$$

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$$+ \gamma_3 \text{ExpectedConnections}_{d,e}^{F} + \gamma_4 \text{ExpectedConnections}_{d,e}^{M} + \mathbf{X}_{d,e}' \boldsymbol{\gamma} + \eta_{d,e}$$

- **Second stage**

$$Y_{d,e,t+k} = \phi_0 + \phi_1 \widehat{\text{Qualified}}_{d,e}^{F} + \phi_2 \widehat{\text{Qualified}}_{d,e}^{M}$$
$$+ \phi_3 \text{ExpectedConnections}_{d,e}^{F} + \phi_4 \text{ExpectedConnections}_{d,e}^{M} + \mathbf{X}_{d,e}' \boldsymbol{\phi} + \varepsilon_{d,e,t+k}$$

d = department; e = exam; t = exam year; $k \in [0, 15]$ (years ahead).
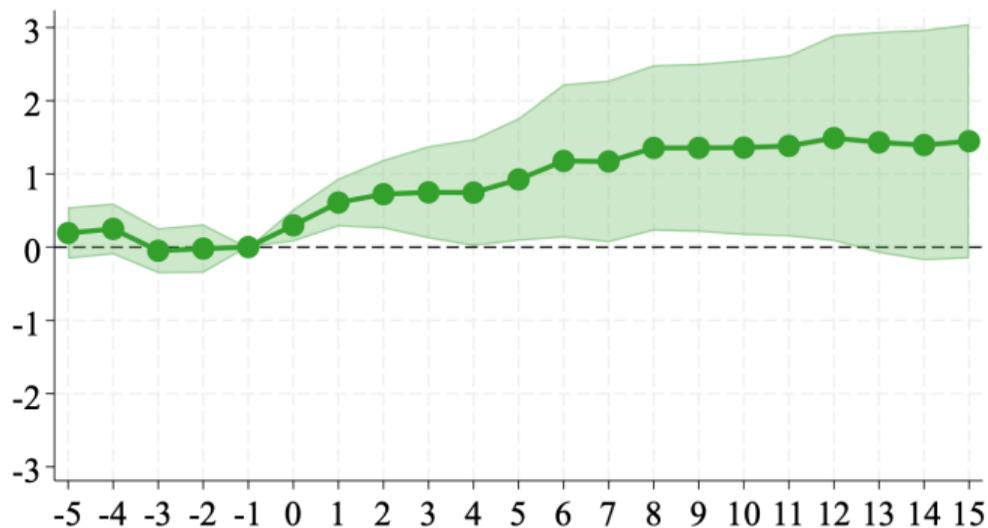
$Y_{d,e,t+k}$: department-level outcomes k years after exam e

Department Level Analysis - Impact on female faculty

Impact of a woman qualifying for Assoc. Prof. on departments' cumulative number of female promotions
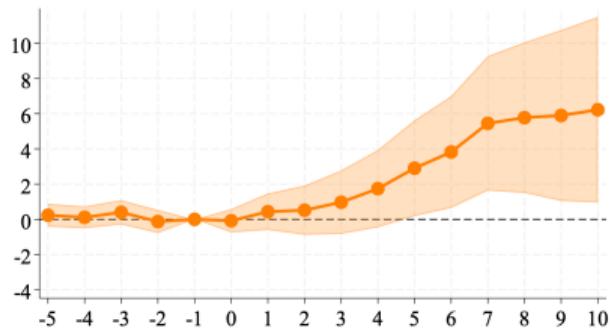
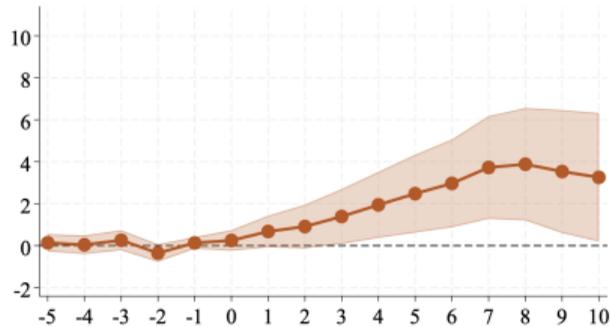ASP qualification - ASP promotions

Department Level Analysis - Impact on female graduates

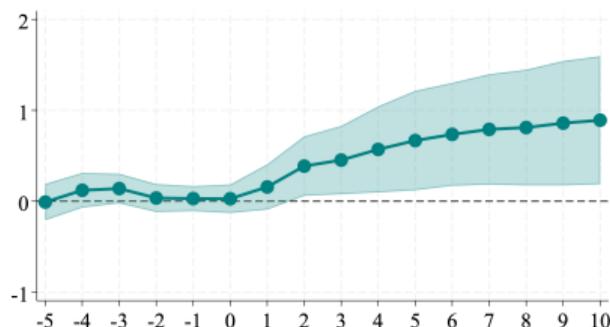Impact of a woman qualifying for Assoc. Prof. on departments' female PhD students

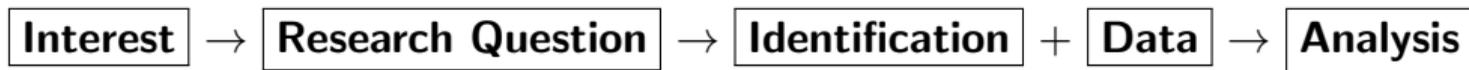

Female PhD Graduates

Female future academics

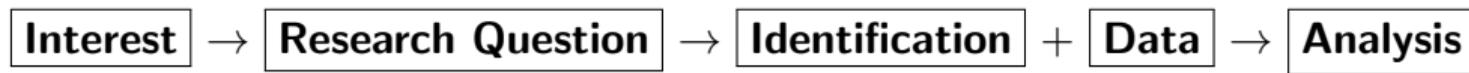Female future associate profs

Developing a Research Question
From Interest to Research Project

$$\boxed{\text{Interest}} \rightarrow \boxed{\text{Research Question}} \rightarrow \boxed{\text{Identification}} + \boxed{\text{Data}} \rightarrow \boxed{\text{Analysis}}$$

- Many ideas fail because there is no clear link between these steps. But this is natural, **most ideas are supposed to fail.**

- Once you understand what you find interesting, start thinking about multiple potential research questions

- The more you discuss with colleagues, the quicker you realize if something is both **interesting and feasible**

Developing a Research Question
From Interest to Research Project

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Let's discuss your thoughts.

Outline

$$\boxed{\textbf{Interest}} \rightarrow \boxed{\textbf{Research Question}} \rightarrow \boxed{\textcolor{red}{\textbf{Identification}}} + \boxed{\textcolor{red}{\textbf{Data}}} \rightarrow \boxed{\textcolor{red}{\textbf{Analysis}}}$$
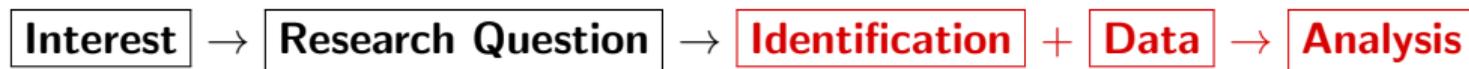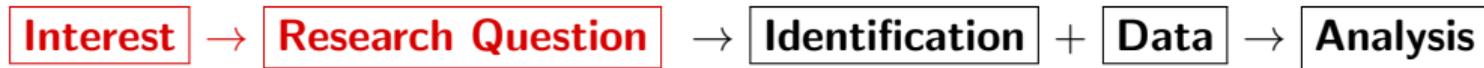
Topic: Micro-econometrics and identification strategies

- What can we learn from observational data?

- What variation allows us to identify causal effects?

- Which empirical strategies can answer economic questions?

$$\boxed{\textbf{Interest}} \rightarrow \boxed{\textbf{Research Question}} \rightarrow \boxed{\textbf{Identification}} + \boxed{\textbf{Data}} \rightarrow \boxed{\textbf{Analysis}}$$

Topic: From interests to research questions

- What makes a research question feasible?

- How to formulate a clear contribution

- Bring your own ideas and we will discuss them together

Key Takeaways and Resources

Key takeaways

- Start thinking about your **research question early**
- A good research question should be
  - **Interesting or policy relevant**
  - **Feasible** given the available data and time
  - **Specific** but with broader implications
- Always think about **identification and data**
- Ask for **feedback early** if you get stuck

Resources

- Next sessions for developing empirical toolkit and research questions
- For big questions: **30 minute 1:1 meetings**
- For small questions: **start with your peers!**

References I

BAGUES, M., M. MAKANY, G. VATTUONE, AND N. ZINOVYEVA (2026): "Female Promotions and the Academic Pipeline: Evidence from a Natural Experiment," *https://manuelbagues.com/Women_in_Academia_16_3_2026.pdf*.

LUNDBERG, S. AND J. STEARNS (2019): "Women in Economics: Stalled Progress," *Journal of Economic Perspectives*, 33, 3–22.

ZINOVYEVA, N. AND M. BAGUES (2015): "The Role of Connections in Academic Promotions," *American Economic Journal: Applied Economics*, 7, 264–292.