

Counterfactual Impact Evaluation in Action: Lessons from ESF Programs

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Centre for Research on Impact Evaluation (CRIE)



- Joint initiative of
 - Directorate General for Employment, Social Affairs and Inclusion (**DG EMPL**)
 - Joint Research Centre (JRC)
- Established in June 2013
- Support to Member States (MS) and DG EMPL to set up the necessary arrangements for **carrying out Counterfactual Impact Evaluations (CIE) of European Social Fund (ESF) funded interventions**

Competence Centre on Microeconomic Evaluation (CC-ME)

- Mission

To enhance EU policies through **data-driven microeconomic analysis** and to provide **causal evidence** on what policies work.

- Services

Counterfactual Impact Evaluations as well as advice and capacity building on data collection, evaluation design and methodology



CRIE Counterfactual: Services

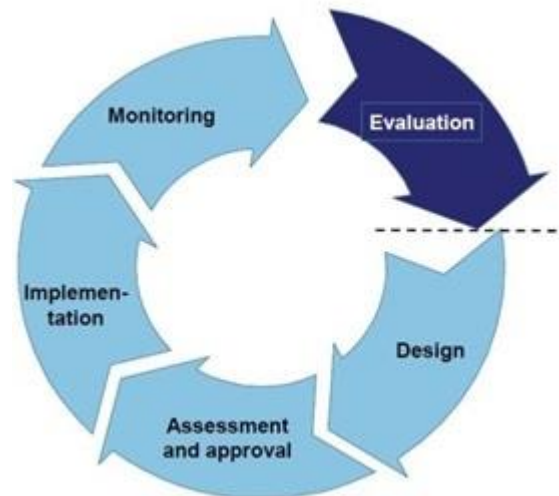
QAS

CRIE provides ad hoc support on various tasks related to CIE.

CRIE accompanies ESF MAs carrying out CIE themselves or with the support of contractors throughout the different phases of the evaluation process.

CoP

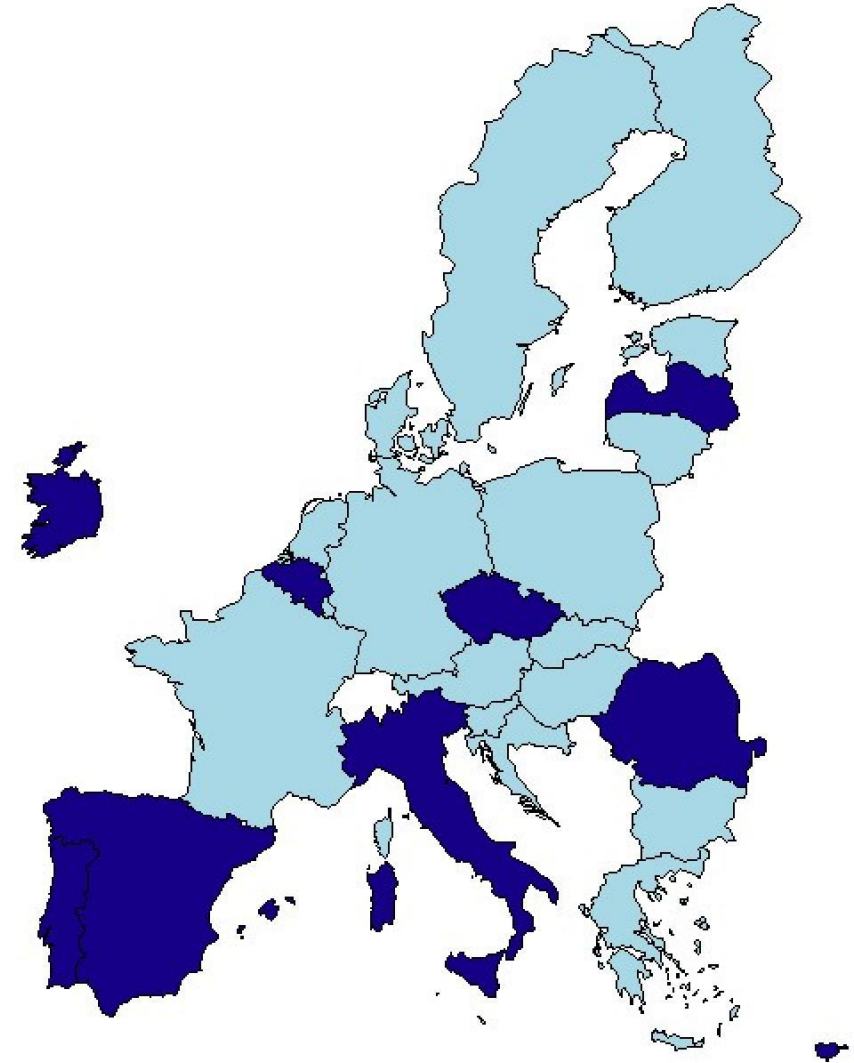
Annual meeting, since 2016



CRIE counterfactual impact evaluations

Past evaluations

- [WELL \(Work Experience for Graduates\) programme](#) , Umbria , **Italy**
- [Vocational training programme implemented in Latvia under the Youth Guarantee](#), **Latvia**
- ["Work experience for Young Persons"](#)
Flanders, **Belgium**
- ["JobsPlus"](#) programme, Ireland,
- [Youth Employment Initiative \(YEI\)](#) , **Portugal**
- [Higher education grant system for less privileged students](#), **Portugal**
- [Support to Schools in Form of Simplified Reporting Projects -Templates for Nursery Schools and Primary Schools](#) **Czech Republic**



CRIE counterfactual impact evaluations

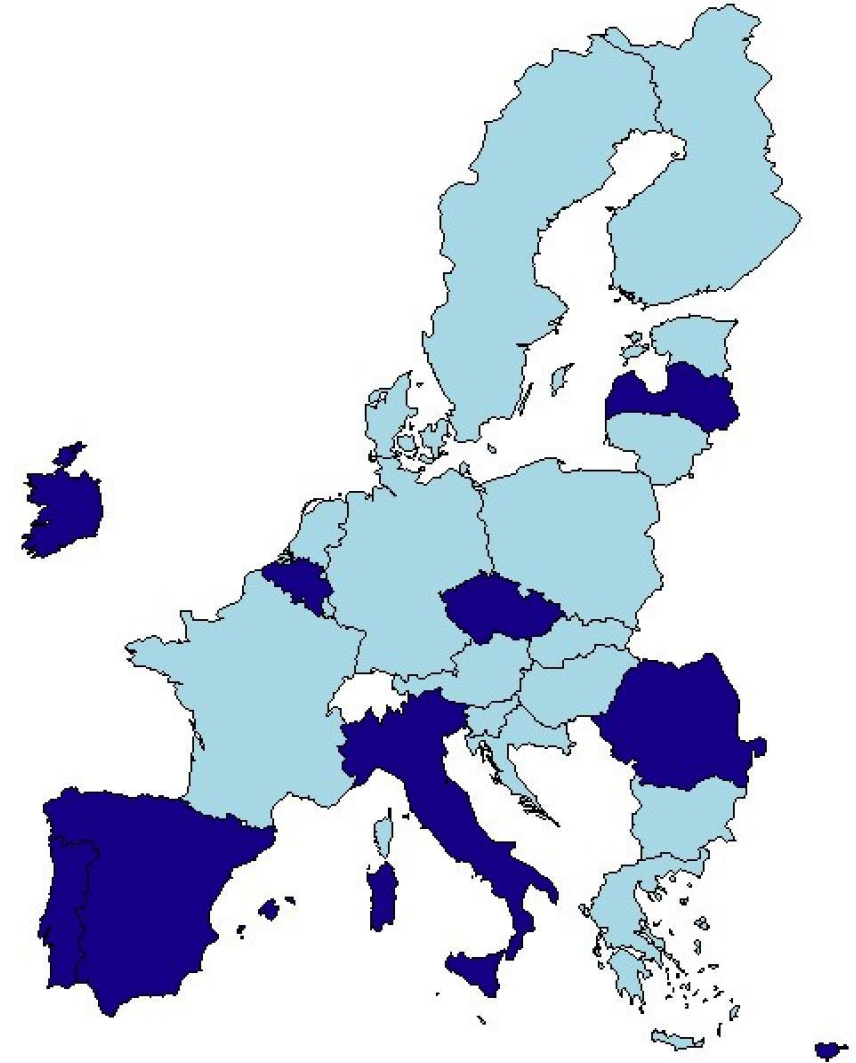
Current evaluations

Open call Evaluation Ready 2024:

- **Cyprus:** School and Social Inclusion Actions (DRASE)
- **Latvia:** PES vocational guidance (counselling) services for unemployed and other target groups
- **Results to come in 2026**

Open call Evaluation Ready 2025:

- **Spain:** Personalised employment integrated itineraries for Roma people under Acceder Programme
- **Romania:** Reducing the number of people at risk of poverty and social exclusion
- **Results to come in 2027**



Case study- Higher education grant system for less privileged students



JRC TECHNICAL REPORT

Evaluation of the higher education grant system for less privileged students in Portugal

Sophie Guthmuller
Elena Claudia Meroni

European Commission, Joint Research Centre, Guthmuller, S., Meroni, E., Evaluation of the higher education grant system for less privileged students in Portugal – , Publications Office of the European Union, 2022, <https://data.europa.eu/doi/10.2760/95533>

Collaboration between **JRC S.3 CC-ME**, **DG EMPL G.5** and the **Portuguese MA**

Policy description - summary

- **Objective:** Favor **access to higher education** and increases **attendance success** for students with low income.
- **Annual monetary benefit**, to attend a higher education course: fee + money.
- **Eligibility criteria:** The student's household does not have an adequate minimum level of financial resources. **“Need-based” (less than 7.000 euros per capita)**
- The grant is supported by the State and by the European Social Fund (ESF) in the less privileged regions of North, Centre, and Alentejo of Portugal.
- Evaluation research question: Do the grant improve academic outcomes of recipients?



Planning an evaluation and choosing CIE methods

- What is the **general aim** of the policy?
- What is the **institutional background** where the policy will be applied?
- During the same period of policy-intervention, are there any **related contemporaneous policies**?
- Policy design
 - Selection process
 - Timing
- Data availability

Policy design– in detail

Selection process

- Who is the target population?
- Are participants chosen at random?
- Is participation voluntary (selection bias)?
- Is there a deterministic rule to define participation (thresholds, selection criteria)?
- Is there a group of people who do not benefit from the action can be used as control?

Policy design– in detail

Selection process

- Who is the target population? **Low income families**
- Are participants chosen at random? **No**
- Is participation voluntary (selection bias)? **Yes, individuals need to apply**
- Is there a deterministic rule to define participation (thresholds, selection criteria)? **Income threshold**
- Is there a group of people who do not benefit from the action can be used as control? **Yes, non beneficiaries with high income**

Policy design– in detail

Timing

- When does the action start?
- When does the action end?
- Are the start/end dates staggered over time?
- Do all units participate at the same time?

Policy design– in detail

Timing

- When does the action start?
- When does the action end?

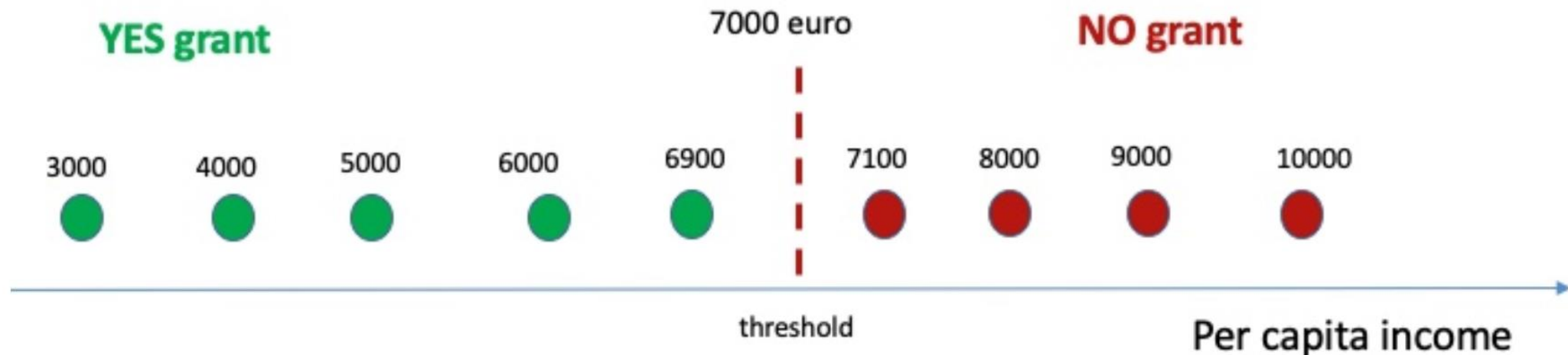
Has been in place for many years

- Are the start/end dates staggered over time? No
- Do all units participate at the same time? Yes

Methodology

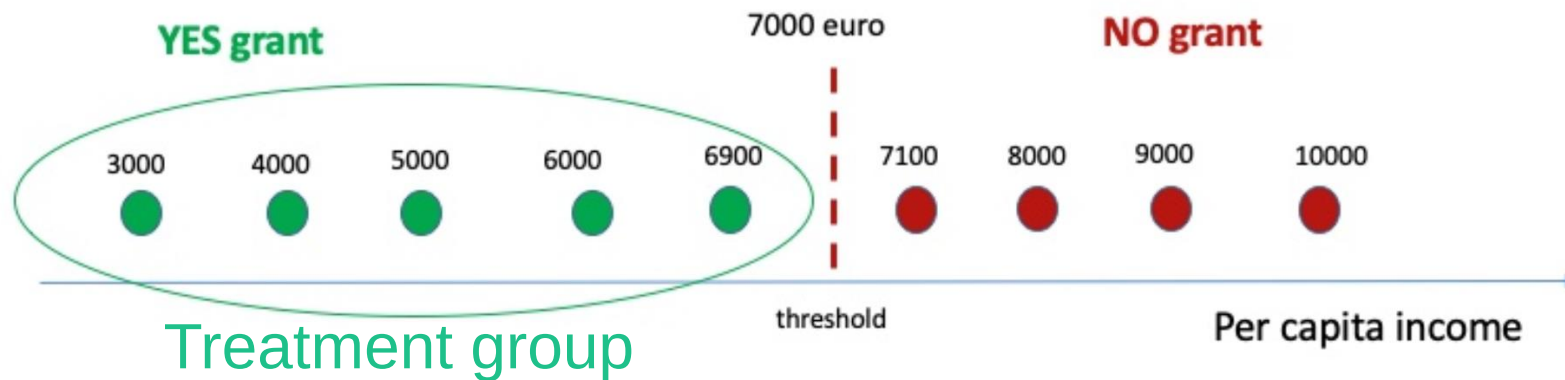
The main problem to estimate the causal effect: those who receive the scholarship are very different to those who not (**selection bias**)

Design: how are treated units selected?



Treatment and control group (counterfactual)

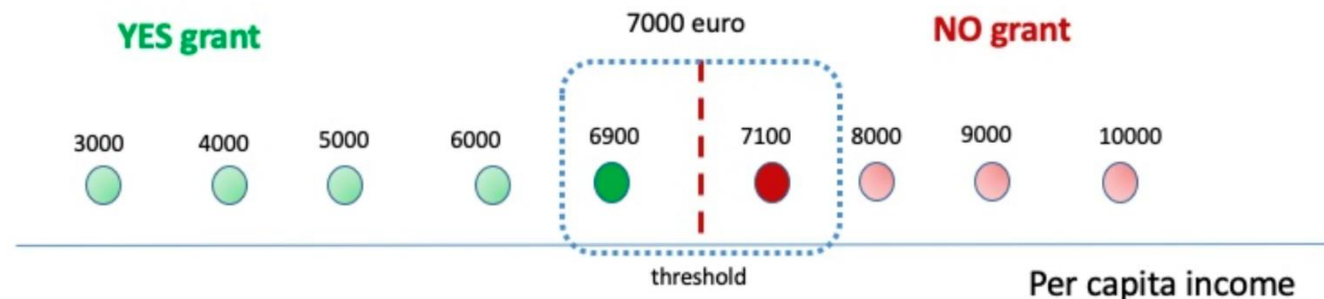
- What would have happened to the recipients had they not received the grant?
- Need a control group to use their outcomes as counterfactuals
- What would be a good control group?



RDD intuition

Around the threshold:

- Marginal difference in students' household income;
- We expect that their characteristics are, on average, the **same**; **except for their probability of receiving the treatment**.
- Students whose income is just above the threshold can be used as a comparison group
- At the threshold, it is as if students were randomly assigned to treatment → RDD features a **local randomised experiment** at the threshold.
- **Main assumption:** Nothing else significant affecting the outcome happens at the threshold



Data planning

- Are there homogeneous data available from both treated and potential control units?
- Do we need to collect our own data? (Ideally planned prior to intervention implemented)
- For how long after the intervention we need data to observe an effect?

Data planning

- Are there homogeneous data available from both treated and potential control units? Yes, administrative data from scholarships 2012-2018 linked with academic career with an unique student identifier
- Do we need to collect our own data? (Ideally planned prior to intervention implemented) No
- For how long after the intervention we need data to observe an effect? Data from 6 years period, enough to see an effect

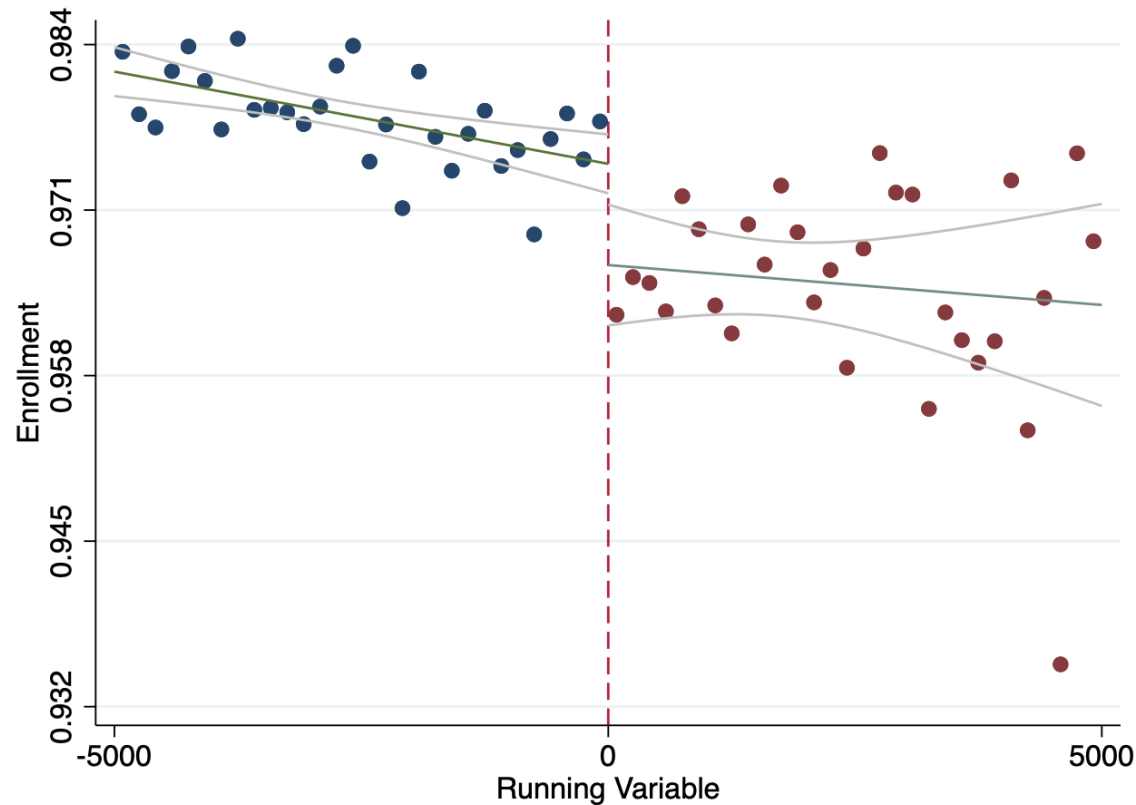
Outcome variables

The main outcomes of interest can be grouped into five categories:

1. Whether the student is enrolled in the course in December of the first year (**immediate dropout**)
2. Whether the student is **enrolled** in the course at the end of the **first year**
3. How many **credits** were obtained that year
4. Whether the student **graduated** and if so if graduation was on time
5. Which is the **final grade**.

All aligned with the main objectives of the policy (i.e. favor **access to higher education** and increases **attendance success** for students with low income)!

Results: Probability of enrollment



Effect	0.017*** (0.006)
Bandwidth	[1433:1433]
Observations	[80125:14839]
Effect. obs	[15496:7710]
Standard errors in parentheses	
*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$	

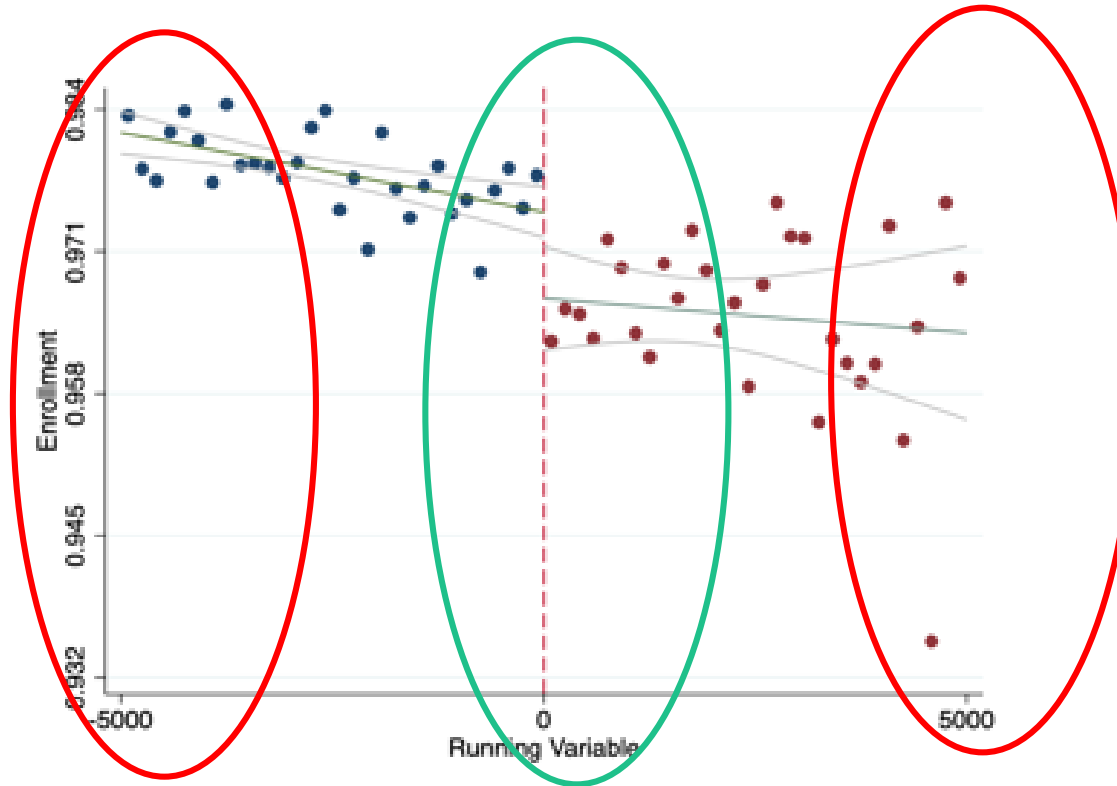
Results

Students receiving the grant show

- Higher **enrollment rates** (**1.7 p.p**)
- Higher rates for what concern reaching at least 36 **credits** (**2.6 p.p**), and obtaining all the credits (**3.8. p.p.**) at the end of the first year
- Similar graduation rates
- Higher **graduation on-time** rates (**5.6 p.p**)

What treatment effect are we measuring?

But what happens here?



But what would happen here?

What happens here

The estimates measure the effect of a grant of 1,000€ among those who have around 7,000€ per capita on family income!

Thank you



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