

# **Measuring the impact of intensity of treatment using RDD and covariates: the case of Structural Funds**

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## **Abstract:**

We evaluate the impact of EU Structural and Cohesion Funds (EUF) on Member States' regional economic growth during the period 1994-2006. Our contribution to the literature is threefold: first, we want to verify whether the different impact on regional growth also depends on the intensity of treatment, measured by the normalised amount of funds distributed in each region. Second, we use an original dataset which covers all the main sources of EUF and provides a reliable measure of the total amount of EUF payments received by each Member State. Finally, the evaluation is based on an extension of the Regression Discontinuity Design (RDD), a quasi-experimental method with strong internal validity. It is the first paper that, to our knowledge, expands the framework of the RDD to the case of continuous treatment. The results suggest an average positive effect of EUF transfers on regional growth. The estimated conditional intensity-growth function is concave and presents a maximum value, estimated on average around 345 per capita per year. Therefore, the exceeding funds could have been allocated to other lagging regions without reducing the effect on regional growth.

**Keywords:** EU Structural and Cohesion Funds; intensity of treatment; continuous regression discontinuity design

**JEL codes:** C21; H54; R11