

COVER LETTER - RASMUS DURET

I am writing to express my keen interest and qualifications for the role of Graduate Research Assistant at STICERD.

The field of Public Economics encapsulates what initially drove me to study economics: the thorough application of simple but powerful economic insights to understand the societies in which we live, and inform policy making to tangibly improve them.

My current module in Public Economics has illustrated the applicability of economic analysis to various areas of policy making, the current state of the literature, as well as the tools and methods used to implement this in practice. I have put this knowledge and these concepts into direct practice with my ongoing dissertation, for which I am studying Sweden's system of financial support for students in higher education. In particular, I am investigating whether income thresholds for support eligibility lead to bunching, and how the elimination of this threshold during COVID-19 affected students' labour supply decision. This has allowed me to see in practice how research I do can tangibly help understand and inform public policy, something I hope to further contribute to working at STICERD.

Beyond my genuine interest in the project, I am a strong suit for the role due to my experience with the collection and analysis of new data for economic research using mathematical models.

I am currently gaining experience with working with large-scale administrative datasets through my graduate dissertation. I am using Stata to analyse Swedish administrative data on the entire Swedish population, enabling me to estimate the impact of a reform to student support schemes on students' labour supply, and to simulate counterfactual policies' effects.

Working as RA for Prof. Jonas Hjort over the past year, I was charged with independently finding and collecting financial data on 300,000 firms from the Refinitiv Eikon platform. I then largely automated the extensive process of matching this to separate datasets involving ESG data and treatment/control groups using Python and R. I was fully responsible for designing and implementing the data collection and documenting it, to ensure the project's next steps rested on solid foundations.

My undergraduate dissertation was dedicated to creating a network-based model of social capital, inspired by the empirical work of Chetty et al (2022). I derived sufficient statistics for the macro-level segregation measures studied by Chetty et al, and calibrated my model parameters on their county-level data. Implementing my model with the NetworkX Python library, I ran 2 million network simulations, and was able to replicate their observations of endogenous segregation by socioeconomic status, providing a theoretical grounding for their empirical observations.

Building on top of my research experience with data collection and literature reviews, this position would allow me to gain experience with the more fundamental design, implementation, and evaluation of novel economic research using large-scale datasets and modern econometric methods in an area I find fascinating and highly impactful. This would serve as an ideal preparation for a future PhD in Economics, and a stepping stone towards my goal of becoming a professional economist able to design, implement, and evaluate policy-relevant economic analysis.

Thank you for consideration, I look forward to hearing back from you.

Kind regards,

Rasmus Duret

QUESTION 2: VALIDITY OF THE SETTING FOR RDD

Start by researching and describing precisely the institutional background to demonstrate the validity of the identification.

The paper examines the effect of severance pay and extended unemployment benefits (EB) on job search behaviour by leveraging sharp cutoffs in the eligibility for these benefits in the Austrian unemployment insurance system.

Laid off workers in Austria are eligible for severance pay (SP) equalling at least 2 months' salary if their job tenure (JT) exceeds 36 months. Workers are eligible for 20 weeks' UB with a replacement rate of ~55% if they have at least 12 months worked (MW) in the two years preceding layoff, and are eligible for EB -10 additional weeks- if they have 36 MW in the five years preceding layoff.

The authors only consider laid off workers with at least 12 working months, eligible for UB. This leaves two separate sharp cutoffs in benefit eligibility for the authors to consider: 36 months of JT for SP, and 36 MW in the past 5 years for EB.

The authors adopt a Regression Discontinuity Design (RDD) to leverage these sharp cutoffs to estimate the effect of benefits on job search effort.

Formally, the identification assumption is that individuals are as good as randomly assigned to one side of the threshold, so that individuals who receive treatment are comparable to individuals who do not.

In practice, this assumption can be validated (not tested) by checking whether workers' observables significantly differ on either side of the threshold, or whether we observe bunching. The latter could for instance arise if firms strategically fired workers before they become eligible for SP, leading to excess layoffs of individuals with JT just below 36 months.

The authors argue that worker protection regulation makes strategic firing by firms unlikely, and indeed do not find evidence of bunching in layoffs just before the JT threshold.

Similarly, they do not find any significant differences in the sample composition around the MW threshold.

However, they do find a small but significant jump in average wages at the JT threshold. They argue that they only observe this difference thanks to their powerful data, and that this will not cause bias in practice: the difference in mean wages is of only ~300€/year, a statistically significant but economically insignificant amount which is unlikely to affect search behaviour in practice.

To validate this claim, the authors further check for selection on unobservables, by studying whether the hazard rate for non-employment is discontinuous around the threshold, conditioning on observables: this behaviour should hopefully capture any unobserved heterogeneity affecting treatment assignment.

The sharp cutoffs in eligibility in the Austrian system provide an apt setting for RDD estimation, and the authors' various checks provide a credible validation of the RDD identification assumptions.

Note that JT and MW for individuals who have only worked in one job in the past five years are perfectly collinear, concerning 20% of their sample. These individuals become eligible for both benefits at the same time, entangling the effects of EB and SP on job search, and causing bias in the two individual RD estimations.

The authors separate these effects in two ways: firstly, by simply dropping the concerned individuals; secondly, by assuming that there exists some function of both JT and MW which is smooth around the 36-month threshold, and including this function in an RDD with dummies for both thresholds (the authors choose a cubic form for their control function, but this could in theory be implemented non-parametrically).