

Evaluating Econometric Methods with Simulations

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Sommersemester/summer semester 2026

This seminar introduces Monte Carlo simulation studies as a tool to evaluate econometric estimators and testing procedures. In an initial block session, we discuss the role of simulation studies in econometrics, typical design pitfalls, and structured approaches to planning and reporting simulations.

After this introductory session, students choose one or more econometric methods and design a Monte Carlo study to investigate their finite-sample properties. The focus will be on

i) how violations of standard assumptions (e.g. misspecification, heteroskedasticity, dependence, measurement error, selection) affect estimator performance, and

ii) the comparison of alternative estimators that target the same parameter (e.g. different treatment effect estimator, fixed vs. random effects, robust vs. non-robust methods).

Students will write a seminar paper and present their work. Both should (i) summarise the methodological background, (ii) clearly explain and justify the simulation design, (iii) document implementation choices (including software), and (iv) critically interpret the simulation results in terms of bias, variance, coverage, robustness, and practical recommendations for applied work.

Studiengang: <i>Program:</i>	MSc
Termin Vorbesprechung (tt.mm.jjjj): <i>Date of preliminary meeting (dd.mm.yyyy):</i>	05.02.2026 (Potentially via zoom)
*Bearbeitungszeitraum für die Hausarbeit: <i>*Working period for term paper:</i>	
*Seminartermin: <i>*Seminar date:</i>	Introductory Session: 20 April Presentations: 6-10 July
Veranstaltungsort: <i>Venue:</i>	TBA
falls außerhalb: Kostenschätzung: <i>if out of Munich: estimated costs:</i>	€
Sprache: <i>Language:</i>	English
Empfohlene Vorkenntnisse: <i>Recommended courses:</i>	Econometrics, Statistical Software (R or similar)
Methodischer Schwerpunkt: <i>Methodological background:</i>	
*Grundlagenliteratur: <i>*Basic references:</i>	Jan F. Kiviet (2012), "Monte Carlo Simulation for Econometricians", Foundations and Trends® in Econometrics: Vol. 5: No. 1–2, pp 1-181. http://dx.doi.org/10.1561/08000000011
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* Optional (falls schon bekannt) / optionally (if already known)