Teaching Statement

Barnabás Székely

Teaching Experience

Before starting my Ph.D. at Goethe University Frankfurt, I was a teaching assistant at my home university (Eötvös Loránd University) and taught two courses: introductory macroeconomics for second-year economics majors and introduction to to time-series methods and vector autoregressions to for mathematics graduates.

During my Ph.D. at Goethe, I broadened my teaching portfolio to include quantitative methods for PhD students. I taught a short course on linear algebra and another on systems of difference and differential equations, both as part of the mathematics sequence for incoming doctoral students. These courses required preparing lecture notes, exercises, and solutions, as well as adapting material to heterogeneous student backgrounds. Currently, I am a teaching assistant for international trade economics for master's students at Goethe University.

Teaching Philosopy

I believe that even the most abstract concepts can be made accessible through intuitive examples. To illustrate, simply stating that the product of eigenvalues equals the determinant rarely captures students' attention. In contrast, visualizing determinants and eigenvalues in two dimensions, and demosntrate how these change for different matrices makes the relationship concrete and easier to grasp. I adopt a similar approach across all the subjects I teach. In mathematics, this often means building visualizations that allow students to see abstract structures at work. In economics, it involves drawing on real-world applications or telling related stories that place the theory in a more familiar context. By doing so, I aim to bridge the gap between formal material and students' intuition, helping them engage more actively with the subject and retain the core ideas more effectively.

I find teaching extremely rewarding because these extra steps significantly affect how students react to the material. At the same time, I see teaching as reciprocal, since preparing material for different audiences from undergraduates to PhD students has deepened my own understanding of economics.

Future Teaching Plans

For a PhD course, I would be glad to offer one on firm dynamics, structured around the idea of beginning with a foundational model and progressively adding complexity. Starting with Hopenhayn's (1992) heterogeneous firm framework, participants would first learn the essential mechanisms of entry and exit. From this baseline, we would extend the model by incorporating additional layers such as business cycles (Lee and Mukoyama, 2018; Clementi and Palazzo, 2016), investment decisions (Khan and Thomas, 2008), financial constraints (Cooley and Quadrini, 2001; Clementi and Hopenhayn, 2006), and R&D-driven growth (Klette and Kortum, 2004). This step-by-step approach both reinforces theoretical fundamentals and equips participants to adapt models for analyzing complex economic phenomena. In addition, I would provide opportunities to practice formulating appropriate research questions and refine ideas through regular discussions, guiding them in identifying promising topics and suitable methods.

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I realize that teaching at the Bachelor and Master level is often not supply-driven and is shaped by the needs of the chair rather than the preferences of the professor. I can flexibly teach a wide array of subjects. In econometrics, I am prepared to cover panel data methods, macroeconometrics, and Bayesian econometrics. In structural modeling, I am comfortable teaching both introductory material and more advanced courses, ranging from real business cycle and DSGE models to heterogeneous-agent modeling. Moreover, I believe that my research in macro-finance has prepared me to teach courses more closely related to finance, particularly in the area of corporate finance.

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