Syllabus

Course Description

Course Title	Methods and applications for Empirical Economics
Course Code	29128
Course Title Additional	
Scientific-Disciplinary Sector	NN
Language	English
Degree Course	PhD Programme in Economics and Finance
Other Degree Courses (Loaned)	
Lecturers	
Teaching Assistant	
Semester	First semester
Course Year/s	2026/27
CP	2
Teaching Hours	12 - 6 hours Prof. Fabio Pieri, 6 hours Prof. Chiara Tomasi
Lab Hours	0
Individual Study Hours	0
Planned Office Hours	0
Contents Summary	The course introduces students to empirical analysis using observational data. After presenting the foundations of this type of analysis and discussing the main sources of microdata available for research, the course will address the problem of endogeneity and its main causes. The course adopts a "laboratory-based" approach. Lectures aimed at introducing the theoretical models and the main methodological issues will be followed by tutorials. During the tutorials, students will deepen their knowledge of econometric software and use real-world data for a range of applications. Possible applications include: estimating firms' productivity and market power; empirical analysis using international trade data;

	the use of patent data; and empirical analysis of market imperfections.
Course Topics	Module 1: Firms in international trade (heterogeneous firms, export decisions, trade policies, productivity, quality). Module 2: Firms, hierarchies, and knowledge management.
Keywords	
Recommended Prerequisites	
Propaedeutic Courses	
Teaching Format	• Frontal lectures • In class presentations by students
Mandatory Attendance	Required
Specific Educational Objectives and Learning Outcomes	PhD programme: The courses aim to train researchers with strong quantitative and theoretical skills, capable of analyzing economic and financial phenomena. Candidates' dissertations are expected to adhere to the highest standards of scientific rigor and to demonstrate innovative features that make them suitable for publication in leading international peer-reviewed journals. The programme therefore seeks to contribute to the international scientific debate in economics and finance. To this end, candidates will be encouraged to employ state-of-the-art methodologies and to adopt a multidisciplinary approach. The advanced training provided by the programme, together with the research methods required to complete the dissertation, prepares candidates both for an academic career and for high-level professional positions involving policy analysis and policymaking. Course 29128: • Acquire the skills to interpret empirical findings and relate them to relevant theoretical frameworks. • Gain methodological tools to refine and strengthen their Ph.D. research proposals in line with the approaches covered in the course.
Specific Educational Objectives and Learning	• Develop a solid understanding of modern methods for counterfactual analysis using observational data.

Outcomes (additional info.)	• Critically assess different areas of application of these techniques.
Assessment	Individual presentation in which each student will have the opportunity to deepen the analysis of their Ph.D. research topic. The presentation should clearly define a specific research question, identify potential data sources, outline the appropriate empirical methodology, and discuss the main estimation challenges anticipated in the project.
Evaluation Criteria	Student evaluations will be based on several criteria: • The clarity with which they explain the research question (25%). • The appropriateness of the empirical methods proposed to address it (25%). • The originality and creativity in identifying potential data sources (25%). • Their critical ability to anticipate potential estimation challenges and suggest solutions for addressing them (25%).
Required Readings	• Quoc Thai L. and Tomasi, C. (2023) "Trade liberalization and firms' performance in Vietnam: the role of local business environment", Regional Studies, 57(9), 1681-1713. • Mauro Caselli, Jiuli Huang, Chiara Tomasi, Min Zhu (2024) "Anti-dumping and Product Quality", working paper. • Jiang, W. 2017. "Have Instrumental Variables Brought Us Closer to the Truth." Review of Corporate Finance Studies 6, no. 2: 127–140. • Oster, E. 2019. "Unobservable Selection and Coefficient Stability: Theory and Evidence." Journal of Business & Economic Statistics 37, no. 2: 187–204. • Garicano, L. 2000. "Hierarchies and the Organization of Knowledge in Production." Journal of Political Economy 108: 874–904. • Pieri, F., Vatiero, M. 2024. "Firm hierarchy and the market for knowledge", Journal of Economics & Management Strategy, DOI: https://doi.org/10.1111/jems.12617
Supplementary Readings	
Further Information	
Sustainable Development Goals (SDGs)	