

Università degli Studi di Palermo

PhD in Economics, Business and Statistics

Dipartimento di Scienze Economiche, Aziendali e Statistiche



Thematic Course

Academic Vear	2023-24
Subject	Identification of Shocks and Causal Effects in Macroeconomics
Instructors	Davide Furceri, Pietro Pizzuto, Luca Bettarelli
Course description	First Module (Davide Furceri)
	This module will consist of 10 hours. It is at the level of an elective (second/third year) PhD course in a US university and requires knowledge of econometrics and inferential statistics—e.g., Wooldridge's Econometric Analysis of Cross Section and Panel Data.
	The lecture will begin by defining what a macroeconomic shock is. It then summarizes the many tools used for identifying macroeconomic shocks; first moment shocks such as those associated with fiscal and monetary policy, and productivity; and second moment shocks such as uncertainty. It will show the method used in macroeconomic to compute impulse responses of the economic variables to these shocks. It also highlights some of the complications and pitfalls, such as the effects of foresight and nonlinearities. It will finally review approaches to identify structural shocks and/or exogenous shocks.
	Second module (Pietro Pizzuto)
	This module will consist of 5 hours of laboratory in which some of the methods and techniques introduced in the first module will be practically applied using existing databases and the software STATA. Specific attention will be paid to estimating ADL (Romer and Romer, 2010), VAR (Blanchard and Katz, 1992) and local projection (Jordà, 2005) models. Suggestions on how deal with endogeneity and nonlinearities will be also provided in the context of the local projection approach.
	Third Module (Luca Bettarelli)
	This module will consist of 5 hours. It will apply the theoretical and empirical competences acquired in other modules to a topic that is at the core of the current economic and political debate: climate change. The module will review existing data to evaluate the impact of climate change and climate change policies (i.e., the shock) on national and subnation economic outcome (OECD, 2021; IRENA, 2022; Naqvi, 2021). Moreover, it will show how to further disaggregate the level of analysis by matching geospatial weather-related data with firm data (Karney, 2011).
Learning	Students completing this course should be able to:
Objectives	 Learn the key issues related to identification in macroeconomics; Discuss the relevant literature on the topic; Estimate the relevant models discussed in the labs;



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