

Panel Data Econometrics

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Année : **M2**

Semestre : **10**

Nature : **CM**

Volume horaire : **12**

ECTS / Coef : **2**

Prérequis	<ul style="list-style-type: none">- Fundamental concepts of time-series econometrics,- Cross-sectional summary statistics,- Linear regression.
Résumé	<p>The objective of this course is to review some of the main topics in panel data econometrics and to familiarize students with the practice of these methods. They should be able to conduct panel data analysis and interpret the results from these models. They should also get critical insight to appraise econometric results obtained by other researchers using panel data. In order to cover all topics, the progression of the course will be sustained. Besides, an important effort will be made to motivate techniques in the context of applications on real data with the SAS software.</p>
Objectifs	<ul style="list-style-type: none">- Describe the main features of balanced panel data models and expose the advantages and drawback of working with such data.- Deal with the Fixed Effect and Random Effect approaches, and determine which one is the more appropriate on a specific data set.- Consider some specific issues related to non stationary panel data models.
Bibliographie	<ul style="list-style-type: none">- Baltagi, B.H. (1996), <u>Analysis of panel data</u>, Chichester; New York: Wiley.- Hsiao, C. (2005), <u>Analysis of Panel Data, 2nd edition</u>, Cambridge University Press.- Maddala, G. and Wu, S. (1999), "A comparative study of unit root tests and a new simple test", <i>Oxford Bulletin of Economics and Statistics</i> 61, 631-652.- Matyas, L. and Sevestre P. (ed.) (1996), <u>The econometrics of panel data: a handbook of the theory with applications</u>, Dordrecht; Boston: Kluwer Academic Publications.- Pedroni, P. (2004), "Panel Cointegration; Asymptotic and Finite Sample Properties of Pooled Time Series Tests with an Application to the Purchasing Power Parity Hypothesis", <i>Econometric Theory</i>, 20, 597-625.- Rault, C. (2003), "The Balassa-Samuelson effect in Central and Eastern Europe: Myth or reality ? A panel data approach", (written with Imed Drine, Balázs Égert, Kirsten Lommatzsch), <i>Journal of Comparative Economics</i>, n°3, September.- Rault, C. (2008), "Purchasing Power Parity for Developing and Developed Countries: What Can We Learn from Non-Stationary Panel Data Models?", (written with Imed Drine), <i>Journal of Economic Surveys</i>, Volume 22 Issue 4, September.- Alain Trognon (2003), « L'économétrie des données de panel en perspective », <i>Revue d'Economie Politique</i>.- Wooldridge J.M., (2001), <i>Econometric Analysis of Cross Section and Panel Data</i>, The MIT Press.

PLAN

Chapter 1: Panel data models.

(The classical error model, The one-way error component model, The fixed effect model)

Chapter 2: Between and within estimations.

(Inter-individual (between) estimation, Intra-individual (within) estimation)

Chapter 3: Optimal Estimation.

(Generalized least squares, Quasi generalized least squares, Estimation of the fixed effect model)

Chapter 4: Specification tests.

(The Fisher test, The Hausman test, The Mundlak test)

Chapter 5: Introduction to non stationary panel data models.

(Preliminary questions: Why should we test for a unit root in panel data?, What are the main differences between panel unit root tests and time series unit root tests?, “First generation” panel unit root tests (The tests by Levin and Lin, The tests by Im, Pesaran et Shin (IPS), The tests by Maddala et Wu, Introduction to “Second generation” panel unit root tests)