



# VNiVERSiDAD D SALAMANCA

CAMPUS OF INTERNATIONAL EXCELLENCE

## 11<sup>th</sup> COURSE:

### Data Management and Panel Data Models

Prof. Julio Pindado and Dr. Ignacio Requejo

Salamanca, from 10<sup>th</sup> to 14<sup>th</sup> July, 2017

**Limited Places! A Maximum of 20 Students**

#### Table of Contents

1. Introduction .....	2
2. Structure of the Course .....	2
3. References .....	4
4. Timetable .....	6
5. Brief Biographies .....	6
6. Academic and Research Awards .....	7
7. Publications .....	8
8. Registration.....	10
9. Participation Fee.....	10
10. Accommodation .....	10
11. Course Venue.....	11
12. Brief Reference about Salamanca....	11
13. Travelling to Salamanca .....	12
14. Experience from Past Alumni .....	13
15. Additional Information .....	19

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## Introduction

The aim of this course is to communicate the skills necessary to understand and assess the applications of panel data analysis reported in the Business Economics literature, and to provide skills which could be applied to analyzing a variety of research and policy problems related to Business Economics. The course is intended as an introduction to the issues and opportunities arising when a panel data structure is available. In particular, the course covers the different structures of data and the advantages and limitations of panel data. Additionally, a new approach to modern econometric analysis is provided, highlighting the role of conditional expectations. Both static and dynamic models for panel data analysis are presented, with special attention to choosing the most suitable estimator for each model. As a result, the course focuses on the decisions that the researcher should make instead of the algebraic derivation of the models. Moreover, several cases on how to derive economic models combining panel data and Stata are discussed. Finally, the efficient research process using panel data and Stata is shown by analyzing a case.

## Structure of the Course

### PART I. ECONOMETRIC MODELS FOR PANEL DATA

#### Lesson 1. Estimation Methods: Endogeneity and Instrumental Variables

- 1.1. Data Structures
- 1.1. Role of Conditional Expectations in Econometrics
- 1.2. Linear Regression Framework
- 1.3. The endogeneity problem: Sources and Responses
- 1.4. Instrumental Variables Estimation
- 1.5. Generalized Method of Moments

#### Lesson 2. Introduction and Linear Static Models for Panel Data

- 2.1. Characterizing Panel Data Methods
- 2.2. Advantages and Limitations of Panel Data
- 2.3. Why is the Panel Data Methodology Needed?
- 2.4. Fixed Effects Models
- 2.5. Random Effects Models
- 2.6. Fixed Effects Models versus Random Effects Models
- 2.7. Limitations of Linear Static Panel Data

#### Lesson 3. Linear Dynamic Models for Panel Data

- 3.1. Autoregressive Models
- 3.2. Models with Endogenous Variables
- 3.3. Models with Predetermined Variables
- 3.4. Models with Strictly Exogenous Variables
- 3.5. System GMM
  - 3.5.1 System GMM for Autoregressive Models
  - 3.5.2 System GMM for Models with Predetermined Variables
- 3.6. Specification Tests
  - 3.6.1 Testing for Residual Serial Correlation
  - 3.6.2. Testing for Overidentifying Restrictions
  - 3.6.3. Incremental Sargan Tests



#### **Lesson 4. Nonlinear Panel Data Models**

- 4.1. Introduction to Discrete Response Models
- 4.2. Fixed Effects Logit
- 4.3. Random Effects Logit
- 4.4. Censored Regression Models

### **PART II. PANEL DATA METHODS WITH Stata**

#### **Lesson 5. Introduction to Data Management with Stata**

- 5.1. Basic Concepts
- 5.2. Format and Content of Data Files
- 5.3. Data Management
- 5.4. Stata Work Environment: Do Files and Output Files
- 5.5. Joining Data

#### **Lesson 6. Managing Variables for Research**

- 6.1. Types of Variables: Storage and Displaying Format
- 6.2. Management of Variables
- 6.3. Descriptive Analysis
- 6.4. Creating Variables for Research

#### **Lesson 7. Advanced Operations with Stata**

- 7.1. Using Matrices
- 7.2. Advanced Commands
- 7.3. Error Messages
- 7.4. Online Help

#### **Lesson 8. Model Estimation with Stata**

- 8.1. Introduction to Model Estimation with Stata
- 8.2. Estimation of Linear Static Models for Panel Data
- 8.3. Estimation of Linear Dynamic Models for Panel Data
  - 8.3.1. The Difference GMM Estimator
  - 8.3.2. The System GMM Estimator
- 8.4. Estimation of Nonlinear Panel Data Models

#### **Lesson 9. Deriving Economic Models Combining Panel Data and Stata: Case Analyses**

- 9.1. Improving Previous Models
- 9.2. Implementing New Research Strategies
- 9.3. Obtaining the Optimal Value of Parameters

#### **Appendix A. Panel Data and Publication**

- A.1. Explaining the Panel Data Methodology in the Paper
- A.2. How to Answer Referees' Questions on the Methodology
- A.3. Comparison between Estimators

#### **Lesson 10. Efficient Research Process by Using Panel Data and Stata: A Case Analysis**

- 10.1. Collecting the Data
- 10.2. Joining the Data
- 10.3. Constructing Variables
- 10.4. Constructing Variables by Using Estimation Results
- 10.5. Panel Data Structure and Variable Analysis
- 10.6. Estimation of the Model
- 10.7. Process of Incorporating New Ideas



## References

### **Main References**

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### **Additional References**

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## Timetable

Date	Time	Lesson	Lecturer	Room
10-07-2017 Monday	16-20	Lesson 1 Lesson 2	Julio Pindado	Lecture Room
11-07-2017 Tuesday	9-13	Lesson 3 (3.1-3.4)	Julio Pindado	Lecture Room
11-07-2017 Tuesday	15-18	Lesson 5 (5.1-5.4)	Ignacio Requejo	Computer Lab
12-07-2017 Wednesday	9-11	Lesson 3 (3.5) Lesson 4	Julio Pindado	Lecture Room
12-07-2017 Wednesday	11-13	Lesson (8.1-8.2)	Julio Pindado	Computer Lab
12-07-2017 Wednesday	15-18	Lesson 5 (5.5) Lesson 6	Ignacio Requejo	Computer Lab
13-07-2017 Thursday	9-13	Lesson (8.3-8.4)	Julio Pindado	Computer Lab
13-07-2017 Thursday	15-18	Lesson 7	Ignacio Requejo	Computer Lab
14-07-2017 Friday	9-11	Lesson 10 (10.1-10.3)	Ignacio Requejo	Computer Lab
14-07-2017 Friday	11-14	Lesson 9 Appendix A Lesson 10 (10.4-10.7)	Julio Pindado	Lecture Room

## Brief Biographies

**Julio Pindado** is Professor of Accounting and Finance at Universidad de Salamanca (Spain) and Professorial Fellow of Accounting and Finance at the Division of Accounting and Finance at Leeds University Business School, University of Leeds (UK). He has published academic peer-reviewed articles on corporate finance and governance in several top journals ranked with a high impact factor in the Journal Citation Report, such as the Strategic Management Journal, Financial Management, Journal of International Business Studies, Journal of Corporate Finance and Corporate Governance: An International Review. Prof. Pindado is Advisory Editor of Frontiers in Finance and Economics, serves as a member of the Editorial Advisory Board of Journal of Financial Regulation and Compliance and Review of Behavioral Finance. Additionally, Prof. Pindado has served as a member of the Board of Directors of the European Financial Management Association (2003-2005). He has also served as instructor at the 2004 and 2007 “Merton H. Miller” Doctoral Seminar, organized by Prof. John Doukas, managing editor of European Financial Management. Prof. Pindado has also been Visiting Fellow at the Institute of Finance and Accounting at the London Business School.

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**Ignacio Requejo** is Assistant Professor of Finance at Universidad de Salamanca (Spain). He holds a PhD degree in Business Economics with a “European Distinction” from this university. During his doctoral studies, he has stayed at Saïd Business School (University of Oxford) as a Visiting Doctoral Student and at the Centre for Corporate Governance at London Business School (University of London) as a Visiting Research Assistant. Ignacio’s thesis on family firms was awarded the 2011 Best Doctoral Dissertation Award sponsored by the Family Firm Institute (FFI) and Relative Solutions. His work has been published in top finance and governance journals, including the Journal of Corporate Finance, Corporate Governance: An International Review, Journal of Business Finance and Accounting, and Journal of Empirical Finance. He has presented several papers in which the panel data methodology is used in numerous international conferences, including the Financial Management Association (FMA) International Annual Meeting, the European Financial Management Association (EFMA) Annual Conference and the Annual International Family Enterprise Research Academy (IFERA) Conference. He has also presented his work at research seminars held at Saïd Business School, London Business School, Leeds University Business School and University of Strathclyde Business School. Ignacio is Visiting Lecturer at the University of Strathclyde Business School and Associate Editor of the International Journal of Multivariate Data Analysis, which is published by Inderscience.

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6

### Academic and Research Awards

- Lozano, B., Martinez, B. and Pindado, J.: IFERA Best Conference Paper Award at the **13th Annual IFERA Conference**, which took place between the 2nd and the 5th of July 2013 in St. Gallen (Switzerland), for the paper “Drivers of the effect of the main shareholder on firm value: The case of young family-owned businesses”
- Requejo, I.: 2011 Best Doctoral Dissertation Award sponsored by the Family Firm Institute (FFI) and Relative Solutions and awarded at the **2011 FFI Annual Conference** held in Boston (US) for the thesis entitled “Corporate Governance in Family Firms: Effects of Family Control on Firm Value and Corporate Financial Decisions”
- Pindado, J., Requejo I. and de la Torre, C.: “GEEF” Best Policy-oriented Research Paper Award at the **10th Annual IFERA Conference**, which took place between the 6th and the 9th of July 2010 in Lancaster (UK), for the paper “Family control and the investment–cash flow sensitivity: Empirical evidence from the Euro zone”
- Pindado, J., Requejo I. and de la Torre, C.: “University of Alberta” Best Family Business Research Paper Award at the **8th Annual IFERA Conference**, which took place between the 2nd and the 5th of July 2008 in Breukelen (The Netherlands), for the paper “Ownership concentration and firm value: Evidence from Western European family firms”
- Requejo, I.: Award for the Best Paper presented at the **I International Accounting & Finance Doctoral Symposium**, which took place on the 16th and 17th of April 2008 in Prato (Italy), for the paper “The effect of family control on corporate performance”.



- Pindado, J. and de la Torre, C.: Award for the Best Paper published in the **European Financial Management Journal** in 2006 for the paper “The Role of Investment, Financing and Dividend Decisions in Explaining Corporate Ownership Structure: Empirical Evidence from Spain”.
- Pindado, J. and Rodrigues, L.: Award for the Best Paper published in the **Financial Markets and Portfolio Management Journal** in 2005 for the paper “Determinants of financial distress costs”.

### Publications using the Panel Data Methodology

- Martinez, B and **Requejo, I.**, “Does the type of family control affect the relationship between ownership structure and firm value?”, *International Review of Finance*, 2017, Vol. 17, pp. 135-146.
- Pindado, J., Requejo, I.** and de la Torre, C., “Does family control shape corporate capital structure? An empirical analysis of Eurozone firms”, *Journal of Business Finance and Accounting*, 2015, Vol. 42, pp. 965-1006.
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- Galván, A., **Pindado, J.** and de la Torre, C., “Diversification: A value-creating or value-destroying strategy? Evidence from the Eurozone countries”, *Journal of Financial Management, Markets and Institutions*, 2014, Vol. 2, No. 1, pp. 43-64.
- Bastos, R. and **Pindado, J.**, “Trade Credit during a Financial Crisis: A Panel Data Analysis”, *Journal of Business Research*, 2013, 66, pp. 614-620.
- Pindado, J., Requejo, I.** and de la Torre, C., “Do family firms use dividend policy as a governance mechanism? Evidence from the Euro Zone”, *Corporate Governance: An International Review*, 2012, Vol. 20, No. 5, pp. 413-431.
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- Pindado, J.** and de la Torre, C., “Capital structure: new evidence from the ownership structure”, *International Review of Finance*, 2011, Vol. 11, No. 2, pp. 213-226.
- Pindado, J.**, de Queiroz, V. and de la Torre, C., “How do Firm Characteristics Influence the Relationship between R&D and Firm Value?”, *Financial Management*, 2010, Vol. 39, No. 2, pp. 757-782.





- Pindado, J.** and de la Torre, C., “The Effect of Ownership Structure on Underinvestment and Overinvestment: Empirical Evidence from Spain”, *Accounting & Finance*, 2009, Vol. 49, No. 2, pp. 363-383.
- Bastos, R. and **Pindado, J.**, “Trade credit, creditor protection and accounting standards: evidence from an international sample”, *Revista de Economía Financiera*, 2009, No. 17, pp. 10-33.
- Pindado, J.**, Rodrigues, L. and de la Torre, C., “How do insolvency codes affect a firm’s investment?”, *International Review of Law and Economics*, 2008, Vol. 28, pp. 227-238.
- Pindado, J.** and de la Torre, C., “Financial Decisions as Determinants of Ownership Structure: Evidence from Spanish Family Controlled Firms”, *Managerial Finance*, 2008, Vol. 34, No. 12, pp. 868-885.
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- Bastos, R. and **Pindado, J.**, “An agency model to explain trade credit policy and empirical evidence”, *Applied Economics*, 2007, Vol. 39, No. 2, pp. 2631-2642.
- Pindado, J.** and de la Torre, C., “The Role of Investment, Financing and Dividend Decisions in Explaining Corporate Ownership Structure: Empirical Evidence from Spain”, *European Financial Management*, 2006, Vol. 12, No. 5, pp. 661-687.
- Pindado, J.**, Rodrigues, L. and de la Torre, C., “How does financial distress affect small firms’ financial structure?”, *Small Business Economics: An International Journal*, 2006, Vol. 26, No. 4, pp. 377-391.
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- Miguel, A., **Pindado, J.** and de la Torre, C., “Ownership structure and firm value: New evidence from Spain”, *Strategic Management Journal*, 2004, Vol. 25, No. 12, pp. 1119-1207.
- Pindado, J.** and de la Torre, C., “Why is ownership endogenous?”, *Applied Economics Letters*, 2004, Vol. 11, No. 14, pp. 901-904.
- Morgado, A. and **Pindado, J.**, “The underinvestment and overinvestment hypotheses: An analysis using panel data”, *European Financial Management*, 2003, Vol. 9, No. 2, pp. 163-177.
- Del Brío, E., Miguel, A. and **Pindado, J.**, “Investment and firm value: An analysis using panel data”, *Applied Financial Economics*, 2003, Vol. 13, No. 12, pp. 893-903.
- Miguel, A. and **Pindado, J.**, “Investment decisions: Lessons from Spanish firms”, *The International Journal of Finance*, 2003, Vol. 15, No. 1, pp. 2537-2556.
- Miguel, A. and **Pindado, J.**, “Determinants of capital structure: New evidence from Spanish panel data”, *Journal of Corporate Finance*, 2001, Vol. 7, No. 1, pp. 77-99.



## Registration

Before registering online, acceptance to the course will be confirmed by the course organizers. To this aim, please, send an email to Dr. Ignacio Requejo (E-mail: [irequejo@usal.es](mailto:irequejo@usal.es)) with the following information:

- Name and Surname:
- Research Interests:
- Country:
- Brief Curriculum Vitae:

The information requested above should be sent, preferably, **by May 15<sup>th</sup>**. **Acceptance to the course will be confirmed as soon as possible upon receipt of these details.** To guarantee the quality of the course, only a maximum of 20 students will be accepted. The brief CV sent with your registration details will be the main acceptance criterion.

## Participation Fee

The registration fee for the **course** is **EUR 330** and includes the course materials. In addition to a binder with the contents covered in the course, the Stata files (.do, .dta and .log) to be used during the classes will also be provided. The fee also includes **a welcome coffee** the first day of the course and **a farewell Lunch** that will take place on Friday, July 14<sup>th</sup> at Apartahotel Hall88:

[www.exehall88apartahotel.com/Salamanca](http://www.exehall88apartahotel.com/Salamanca).

**Special Price!** Given that the 11<sup>th</sup> Course on “Data Management and Panel Data Models” will take place the week before the 5<sup>th</sup> Course on “Advanced Dynamic Panel Data Methods”, which is also organized by Universidad de Salamanca, there is a special price for those interested in attending both courses. For participants that attend both events, the total fee is **EUR 495**.

Summary of Fees	
11 <sup>th</sup> Course on “Data Management and Panel Data Models” <b>EUR 330</b>	5 <sup>th</sup> Course on “Advanced Dynamic Panel Data Methods” <b>EUR 220</b>
11 <sup>th</sup> Course on “Data Management and Panel Data Models” & 5 <sup>th</sup> Course on “Advanced Dynamic Panel Data Methods” <b>EUR 495 (Save EUR 55!)</b>	

For those accepted to the course, details on the method of payment will be provided upon notification of acceptance.

## Accommodation

Colegio Cuenca: <http://www.resa.es/Residencias/Colegio-de-Cuenca>

This hall of residence is only a two minute walk from the venue.

Colegio Oviedo: <http://www.usal.es/webusal/node/4190>

This hall of residence is only a two minute walk from the venue.



Colegio Mayor Arzobispo Fonseca: <http://www.usal.es/node/4297>  
This hall of residence is just a ten minute walk from the venue.

Apartahotel Hall88: [www.exehall88apartahotel.com/Salamanca](http://www.exehall88apartahotel.com/Salamanca)  
This hotel is only a three minute walk from the venue.

Hotel Abba Fonseca: [www.abbafonsecahotel.com/](http://www.abbafonsecahotel.com/)  
This hotel is only a ten minute walk from the venue.

Hotel Artheus Carmelitas: [www.artheushoteles.es](http://www.artheushoteles.es)  
This hotel is just a fourteen minute walk from the venue.

## Course Venue

Universidad de Salamanca  
Facultad de Economía y Empresa  
Campus Miguel Unamuno, Edificio FES  
37007, Salamanca (Spain)

The exact location can be found in the following internet link:

<http://www.usal.es/node/19>

The Facultad de Economía y Empresa is located in the new campus of Universidad de Salamanca, just some minutes away from the bus station. The main entrance to the Course Venue is from 'Paseo de Francisco Tomás y Valiente'.



*Universidad de Salamanca – New Campus*



*Facultad de Economía y Empresa – Main Entrance*

## Brief Reference about Salamanca

Salamanca is a city in western Spain, in the region of Castilla and León. Because of its beautiful buildings and urban environment, the Old City was declared a UNESCO World Heritage Site in 1988. It is the most important University City in Spain and is known for its contributions to the teaching of the Spanish language. Salamanca attracts thousands of international students, generating a diverse multicultural environment.



*Old Facade – Universidad de Salamanca*





View of Salamanca – Cathedral and Roman Bridge

It is situated approximately 200 km (124 mi) west of Madrid and 80 km (50 mi) east of the Portuguese border. The University of Salamanca, which was founded in 1218, is the oldest university in Spain and the third oldest western university. With its 30,000 students, the university is, together with tourism, the economic engine of the city.

13

## Travelling to Salamanca

**Spanish Airports:** <http://www.aena.es>

The commercial airports closest to Salamanca are Adolfo Suárez Madrid-Barajas and Valladolid-Villanubla. Adolfo Suárez Madrid-Barajas is the largest Spanish airport and there are regular flights from/to most national/ international destinations.

**Bus:** <http://www.venta.avanzabus.com>

There is a direct bus from Madrid airport to Salamanca. There are two bus stops to travel to Salamanca. The Avanzabus/AutoRes bus departs from the bus stop located in Terminal T1 of Madrid-Barajas airport (ground floor, opposite baggage reclaim hall 2):

[http://www.aena-aeropuertos.es/csee/Satellite?Language=ES\\_ES&ca=MAD&pagename=cartografia&poi=1237555933611&ps=t&swidth=873&sheight=533](http://www.aena-aeropuertos.es/csee/Satellite?Language=ES_ES&ca=MAD&pagename=cartografia&poi=1237555933611&ps=t&swidth=873&sheight=533)

And then it stops in the bus stop located in Terminal T4 of Madrid-Barajas airport (ground floor) before beginning the journey to Salamanca:

[http://www.aena.es/csee/Satellite?Language=ES\\_ES&ca=MAD&pagename=cartografia&poi=1184831194719&ps=t](http://www.aena.es/csee/Satellite?Language=ES_ES&ca=MAD&pagename=cartografia&poi=1184831194719&ps=t)

Alternatively, you can take the underground/a taxi to travel to the central bus station in Madrid (Estación de Autobuses de Madrid – Estación Sur) and take a bus from Madrid city centre to Salamanca. You can buy the bus ticket online in advance. The bus journey from Madrid to Salamanca takes approximately 2 hours and 40 minutes.

**Train:** <https://venta.renfe.com/vol/index.do>

The trains to Salamanca depart from Madrid-Chamartin train station. You can take the underground/a taxi to travel to Madrid-Chamartin train station from Madrid-Barajas airport. You can buy the train ticket online in advance. The train journey from Madrid to Salamanca takes approximately 2 hours and 40 minutes.



### Experience from Past Alumni

“The (panel data) course was divided into two closely related but distinct parts: A theoretical part that introduces the participants into advanced methods in panel data analysis, and a practical part that was an introduction of the STATA software. Both parts were extremely helpful, because the methods that were taught are the gold standard in panel data analysis. I recommend every researcher with solid knowledge about statistics and interest in learning STATA to attend this course. The organization is perfect, the atmosphere very familiar, the application process uncomplicated, and the outcome outrageous.”



***Thomas Kaspereit***  
***Universität Oldenburg (Germany)***



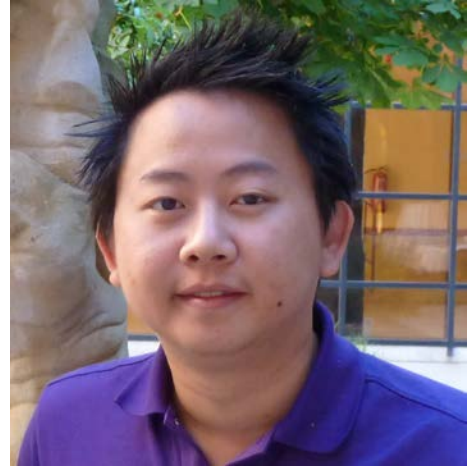
“It seems to me a useful course because panel data methodology is widespread in business research. Data management is another important feature of the course. Both aspects of the course have come up to my expectations. When I finished the course – especially the data management lessons with STATA – I only felt a little upset because... I realized I could have done the same work faster! So, I’m willing to apply it in my next research works.”

***Mª Pilar Velasco González***  
***University of Valladolid (Spain)***



“I found the GMM course very useful, interesting and applicable for all researchers in the areas of accounting and finance. Prof. Pindado created the right balance of theory and application such that we understood the benefits and superiority over other cross-sectional and time-series frameworks and also its limitations.

Individuals unfamiliar with Stata are not disadvantaged as Dr. Requejo and Dr. De La Torre taught the class the basics of using Stata and useful tips and tools from their experience. The program included more advanced Stata material and the best sites/forums to search for help in the future when required. Any participant of this course virtually has no impediments not to use the GMM methodology as Prof. Pindado provides the GMM Stata code, example datasets and expected results. Prof. Pindado walks you through the entire process of loading the data, applying the functions and interpretation of results.



I highly recommend this course to PhD students and early career researchers who wish to use GMM in their research as they will be able to apply the principles, tools and technology immediately upon completion of the workshop. Salamanca is a beautiful city with the 3<sup>rd</sup> oldest university in the world and an abundance of cultural and historical heritage to engage any visitor. I have to admit, one of the factors that led to my application to the workshop was the opportunity to visit Salamanca itself.”

***Kwong Yew (Rand) Low***  
***University of Queensland (Australia)***



“I enjoyed the course on “Data Management and Panel Data Models” as it offered a valuable mix between the theoretical background on panel data analysis techniques with its practical application in the computer lab. Although the course was primarily focused on research in the field of finance and accounting, the instructors did a great job answering questions regarding the application of the presented methods to other / related fields. It is recommended to bring sound knowledge of statistics, but experience with STATA is not necessary as the instructors provided patiently an introduction to this software.

Overall, I have to say it was a great experience learning about panel data from two knowledgeable researchers. They presented many examples from their own research which made the learning experience even more interesting. The course was well organized, and the social events were much fun. And also the city of Salamanca was worth the trip.”

***Fabian Bernhard***  
***INSEEC – Grande École de Commerce (France)***



“The main problem in most econometric classes I attended before participating in this course was the difficulty to reconcile theory and practice. And this is precisely what the course taught by Prof. Pindado and Dr. Requejo solves. For each econometric estimation method presented, they discussed both the theoretical basis and the implementation strategy. This allows participants to better understand the reasons at the basis of each estimation procedure and the underlying assumptions and at the same time to learn how to apply and use them in their own research projects. To this main point, I would add a very interesting program, very good professors’ teaching skills and a suitable environment. I strongly advise this course!”



**Carlo Raimondo**  
*Università di Bologna (Italy)*

“The course is a real eye opener! Being developed by the high calibre academics, it is perfectly designed and extremely well taught. Starting with the intuitive explanation of fundamental principles in panel data analysis, Professor Pindado taught us when, where, and how to use the most sophisticated estimation techniques. Static, dynamic, and non-linear models were explained by using carefully selected examples from the Business Economics literature. The use of very good real-life examples always facilitates understanding, contributes to the rapid absorption of the material, and makes this course unique. The comprehensive STATA training organised by Dr. Requejo cannot be underestimated as well. It is an important part of the course - inspiring for the beginners and hugely beneficial for the experienced STATA users. Prof. Pindado and Dr. Requejo share their knowledge and expertise by demonstrating how to develop panel data models in STATA with special attention being paid to the selection of the estimator for each model, interpretation of results, and robustness tests. All participants receive excellent course material including examples of datasets and STATA codes which can be applied immediately. Upon completion of this workshop, I improved my own empirical paper significantly, as I became familiar with the principle, and had been equipped with all necessary tools. It was great to be able to learn panel data management techniques in one of the oldest Universities on the Globe in the beautiful Salamanca, with its own unique traditions, fantastic food, and difficult-to-resist shopping! I would strongly recommend this course for PhD students and early career researches who plan to use panel data in the future.”



**Valentina Tarkovska**  
*Dublin Institute of Technology (Ireland)*



I strongly recommend the Panel Data Course to PhD students, and early career researchers who wish to master their panel data modelling skills, and their command of STATA. This course has additional value for researchers in the corporate finance, as majority of examples used in the programme come from this area of literature.

This intensive course provides learner with strong theoretical background, and equips with tools and knowledge necessary to apply panel data models in practice, using STATA software.

Thanks to the good plan of sessions, the learning process is extremely efficient. Almost every day starts with a demanding theoretical part, followed by more relaxed workshop in panel data management in STATA. After a whole day of studying, one can rest admiring beautiful architecture and enjoying great atmosphere in the old city of Salamanca.



**Agnieszka Trzeciakiewicz**  
**Hull University Business**  
**School (United Kingdom)**



**Reemda Jaeschke**  
**Carl von Ossietzky University**  
**Oldenburg (Germany)**

Dear future participants of the “Data Management and Panel Data Models” course,

I can definitely ensure that signing up for this course is the right decision!

As a German researcher focusing on research fields like Accounting and Corporate Governance, I appreciated this course very much for my future academic career. The course provides a thorough overview of how to use Stata in research projects, always providing you with good practical help during the lessons. Also, the course gives you a very good overview on the existing theoretical models within panel data analysis. At the end of the course you understand each model, including its main advantages and disadvantages, its mathematical background and how to implement it with Stata.

In addition, the course provides an excellent setting for researchers to extend their international network of professional colleagues. Before, during and after class you can get together and discuss your current research topics and exchange future ideas. If you want to do research with panel data I can highly recommend you to participate in the course!





The “Data Management and Panel Data Models” course has been a great experience! The organization and the participants were top-class.

The course material is well structured and it is a true joy to learn from professionals that have years of hands-on experience using these methods. The hand-outs and the rest of the material provided is a collection of valuable information you may want to consult every so often when using panel data.

I strongly recommend this course to anybody that has low familiarity with panel data models (and Stata for that matter!), but also to more experienced scholars that want to up-date their knowledge and get an overview of data management, GMM, Stata and panel data. Last but not least, studying in the beautiful city of Salamanca is definitely worth the effort!



**Paula Apascariței**  
**IESE Business School**  
**(Spain)**

My decision to participate in the summer course on panel data models was driven by an urgent need to understand and learn the advanced econometric techniques. Looking back, I can firmly assure that the program accurately developed by Prof. Julio Pindado and Dr. Ignacio Requejo fully met my expectations and helped a lot in improving my empirical research project.



**Iuliia Udoieva**  
**Philipps-Universität**  
**Marburg (Germany)**

The course is well-structured, balanced and time-optimal. The lectures go through the tiniest details of considered methods: starting with motivation through formal description till efficient implementation and practical advice on publications. The comprehensive theoretic material is harmonically complemented by numerous exercises in Stata, while the tempo of teaching is appropriate.

Overall, the course covers all the milestones of panel data evaluation with a plenty of examples and additional references. Notably, the lecturers succeed to provide an intuitive and easy-to-follow explanation for the topics being far from the easiest ones. The teaching of Prof. Pindado and Dr. Requejo meets every student’s need and nobody remains unconsidered.

The evenings in Salamanca are perfectly suited for having a walk through the fabulous Old City (a UNESCO World Heritage Site) and enjoying experience and ideas’ exchange with participants from all over the world. Finally, who can boast to study in the 4th oldest university in the world?! I would regret not to come to Salamanca!



Attending the “Data Management and Panel Data Models” course at Spain’s oldest university was a highly valuable experience. What I thoroughly enjoyed about this course was the open, honest and realistic approach of Prof. Julio Pindado to everything he taught during the course. All the lessons were well structured and supported by the real-world examples including most from his own research and experience, which certainly was the unique element in this course. All the participants were given detailed notes on each lesson and a soft copy with all the dataset and ready to run STATA codes, which came handy and very helpful to process the information during the class and afterwards to practice.



**Sushil Sainani**  
**University of Liverpool**  
**(United Kingdom)**

Dr. Ignacio Requejo complemented this course very well by organizing lab session on data management using STATA software.

He designed and delivered sessions in a way that it was well suited for both beginners and advanced STATA users. Another benefit of this course was one-to-one sessions with Prof. Julio, which was a great opportunity to discuss the issues or to take advice from him on our current research. Prof. Julio and Dr. Ignacio are truly committed and enthusiastic. Participating in the course helped me to become an independent researcher.



**Malte Janzen**  
**Universität Hamburg**  
**(Germany)**

The course is an ideal starting point for researchers concerned with data analysis and management, and panel data econometrics. Although the group was very heterogeneous, Prof. Pindado did a great job explaining the theoretical aspects of panel data econometrics. We were given the possibility to discuss problems and questions from our own research with him – in course and individually after the lectures. He is enthusiastic about the methods and tools taught and will not stop to explain until everyone is satisfied.

The second part of the course is taught in the computer lab. Dr. Requejo is an excellent teacher for STATA. He is very patient and benefits from great knowledge about the theoretical aspects and the statistical software alike. The course starts with the very basics of STATA, so no sound knowledge is required.

At the end of the course you will be able to apply everything you studied with Prof. Pindado in STATA. You will be exhausted after the course but Salamanca offers a lot to relax in the evening.



I very much enjoyed the time spent in Salamanca, since the course was very useful for me. As a researcher focusing on research fields such as Corporate Governance, GMM estimation is a very powerful methodological tool, but complicated. Thanks to the course, I acquired both strong theoretical background and practical help in the sense of how to apply it in Stata.

The course is well structured and it is a truly good use of time because you can learn so many useful things from an experienced professor within several days. Besides, the material provided is a good collection of valuable information you can refer to even after you finish the course when you try to apply panel data analysis in your own project. I highly recommend this course to PhD students who would like to master their panel data modelling skills.



**Jingsi Leng**  
**Hull University Business**  
**School (United Kingdom)**

15

#### Additional Information

For additional details on the course, please, go to the following link:

[Research Methods Courses](#)

For further information, please, contact:

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