

University of Cape Town

## Panel Data Econometrics

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### General information

Time and location: TBA

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### Textbooks

- Arellano, M. (2003) *Panel Data Econometrics*, Oxford University Press. [ARLL] Errata.
- Baltagi. B. (2001) *Econometric Analysis of Panel Data*, Wiley, Second edition. [BAL]
- Cameron, C. and P. Trivedi (2005) *Microeconometrics*, Cambridge University Press. [CAM] Errata.
- Hsiao, C. (2003) *Analysis of Panel Data*, Cambridge University Press, Second edition. [HS]
- Wooldridge, J. (2002) *Econometric Analysis of Cross Section and Panel Data*, MIT Press.

### Course outline and readings

#### 1. Static models

1. Introduction to panel data
2. Unobserved heterogeneity.

3. Error components.
4. Specification tests.
5. Error in variables.

## Readings

- ARLL, chapters 2-4.
- Chamberlain, G. (1984) “Panel Data”, in Z. Griliches and M. D. Intriligator (eds.), *Handbook of Econometrics*, Vol. 2, Elsevier Science.
- Griliches, Z. and J. A. Hausman (1986) “Error in Variables in Panel Data”, *Journal of Econometrics*, 31, 93-118.
- Hausman, J. A. and W. E. Taylor (1981) “Panel Data and Unobservable Individual Effects”, *Econometrica*, 49, 1377-1398.
- Pritchett, L. and L Summers (1995) “Wealthier is Healthier” *The Journal of Human Resources*, 31(4):841-868, Autumn.

## 2. Incomplete panel data

1. Rotating panels.
2. Pseudo panels.
3. Pooling data.
4. Quasi panels.

## Readings

- HS, chapter 9.
- BAL, chapter chapter 9 and 10.
- Deaton, A. (1997) *The Analysis of Household Surveys: A Microeconomic Approach to Development Policy*, Johns Hopkins University Press, Baltimore, MD. Chapter 2.

- Carraro, C.; F. Peracchi and G. Weber, eds. (1993) “The Econometrics of Panels and Pseudo Panels”, *Journal of Econometrics*, 59(1/2).
- Flinn, C.; R. Kulka; R. Moffitt and K. Wolpin (2001) “Special Issue on Data Quality”, *The Journal of Human Resources*, 36(3), Summer.
- “Special Issue: Attrition in Longitudinal Surveys”, *The Journal of Human Resources*, 33(2), Summer (1998).
- Maluccio, J. (2004) “Using Quality of Interview Information to Assess Nonrandom Attrition Bias in Developing-Country Panel Data” *Review of Development Economics*, 8(1):91-109, February.

### 3. Dynamics and predetermined variables

1. Strict exogeneity and predetermined variables.
2. Partial adjustment.
3. Estimation methods.
4. Multiple individual effects.

#### Readings

- ARLL, chapter 7-8.
- Arellano, M. and S. Bond (1991) “Some Tests of Specification for Panel Data: Monte Carlo Evidence and an Application to Employment Equations,” *Review of Economic Studies*, 58(2): 277-97, April.
- Bond, S.R. (2002) “Dynamic panel data models: a guide to micro data methods and practice”, *Portuguese Economic Journal*, 1, 141-162 (also Cemmap Working Paper no. CWP09/02).
- de Janvry, A.; F. Finan, E. Sadoulet and R. Vakis (2006) “Can Conditional Cash Transfers Serve as Safety Nets to Keep Children at School and Out of the Labor Market?” *Journal of Development Economics*, 79(2): 349-373.

## 4. Discrete choice

1. Unobserved heterogeneity in non-linear models.
2. Conditional logit.
3. Random effects probit.
4. Dynamic discrete choice.
5. Fixed versus random effects.

### Readings

- CAM, chapter 23.
- Honore, B. (2002) “Non-linear models with Panel Data”, Cemmap Working Paper CWP13/02.
- Arellano, M. and B. Honoré (2001) “Panel data model: Some recent developments” in J. Heckman and E. Leamer (eds.) *Handbook of Econometrics*, Vol. 5, chapter 53.
- Gong, X.; A. Van Soest and E. Villagomez (2004) “Mobility in the Urban Labor Market: A Panel Data Analysis for Mexico” *Economic Development and Cultural Change*, 53(1):1-36, October. [Working paper version]