Unity in diversity : studies on micro and macro panel data sets

Prefatory propositions – Bijgevoegde stellingen

behorende bij het proefschrift

Unity in Diversity: Studies in Micro and Macro Panel Data Sets

door

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1. *Similar and different* It is a misconception that vague, qualitative similarities between different observation units are useless for statistical purposes.

   (Chapters 1 and 2)

2. *Flavours of statistics* Popular flavours in statistical inference are parametric, nonparametric, semiparametric and seminonparametric; there is also a *hyperparametric* variant, better known as Bayesian method. Linked Estimation is a case in point.

   (Chapter 2)

3. *Covariance matrices* Estimation criteria like unbiasedness and minimum distance are not meaningful for covariance matrices. Generalisations of these criteria are required.

   (Chapter 3)

4. *Fixed versus Random Effects* The terminology of fixed versus random effect models is quite standard in statistics and econometrics. Nonetheless, it is nonsensical.

   (All chapters)

5. *Agreeing to differ* Men kan vaak vaststellen dat simulatie-experimenten met alternatieve econometrische modellen uiteenlopende bevindingen opleveren. Daar volgt *niet* zonder meer uit dat de modellen in kwestie tegenstrijdig zijn, en elkaars geloofwaardigheid opheffen.

   ("Macro-economische modellen voor evaluatie: Tegenstrijdig of onvergelijkbaar?", in *Overheidsinterventies: Effectiviteit en Efficiëntie,* Vijftiende Vlaams Wetenschappelijk Economisch Congres, Notulen en Open Forum, Leuven, 1981, pp. 73-77.)

6. *Multicollinearity diagnosis* The correlation matrix of estimated coefficients is a simple transformation of the familiar coefficient covariance matrix. In contrast with the covariance matrix, it is rarely provided in the output of regression analyses. Yet, it is less subject to sampling error, easier to interpret, and a valuable regression diagnostic.

   ("The Correlation Matrix of Estimated Coefficients", C.O.R.E. Discussion Paper 8307, 1983.)

7. *Pooling micro and macro data* Income elasticities in repeated surveys appear to vary through time. Hence, models meant to pool aggregate time series with household-level budget surveys should account for an evolving structure.

   (D. de Crombrugghe, F.C. Palm, J.-P. Urbain, "Statistical Demand Functions for Food in the USA and the Netherlands", *Journal of Applied Econometrics 12,* 1997, pp. 615-645.)

8. *Robust standard errors* For safe inference in regression analysis it is recommended to use a robust variance formula. The robust standard error is, so to speak, the condom of econometrics. It presents a similar flaw.

9. *Descartes on his head* René Descartes got it wrong in 1637. Following his example, we are taught to draw coordinate axes as long arrows, one pointing to the *right* ('the x-axis') and one pointing *up* ('the y-axis'). It would have been less confusing, to students in both East and West, if he had chosen to let the y-axis point *down.* Alternatively, to restore consistency, we could decide to fill pages, tables and matrices from the bottom up; and on clock faces, swap the XII for the VI.

10. *Science inflation* Funding rules rewarding researchers for long lists of publications contribute to ecological wastage and to science inflation.

11. *Bite the bullet* Even though the origin of the phrase "to bite the bullet" is a bit obscure, the words nevertheless feel accurate.

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