

Testing non-stationary panel data with persistent cross-sectional dependence

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STELLINGEN

BEHORENDE BIJ HET PROEFSCHRIFT

TESTING NON-STATIONARY PANEL DATA WITH PERSISTENT CROSS-SECTIONAL DEPENDENCE

DOOR

CHRISTIAN GENGENBACH

1. While common factors provide a flexible approach to model cross-sectional dependence, the way the common factors enter the model has important implications on the nature of the dependence which has to be considered when testing.
(Chapters 2 and 3)
2. Not all panel unit root tests using common factors test the same data component. Practitioners have to take that into consideration when selecting an appropriate method.
(Chapter 2)
3. If the common factors are properly accounted for, average based statistics can still be used for panel tests despite the fact that individual statistics are not cross-sectionally independent.
(Chapter 4)
4. Communalities among panel members can be exploited by pooling but the potential gains of doing so can be limited by strong cross-sectional dependence.
(This thesis.)
5. Scientists try to uncover the rules and laws that shape the world. However, economic agents (humans) like to change the rules of the game.
6. A good econometric method has to be both advanced enough to yield reliable results and simple enough to be applied in practice.
See e.g. A. Zellner, H. Keuzenkamp and M. McAleer (eds.), *Simplicity, Inference and Modeling (Keeping it Sophisticatedly Simple)*, Cambridge University Press, 2001.
7. Simulated data is useful when analyzing the performance of an econometric method. Finding real data that fits the method can be problematic.
8. Forecasting is an important function of many economic models, but during extreme events when forecasts would be most valuable they are prone to failure.
9. It is important to remain critical of your own research but you also have to be prepared to defend your results if they are correct.
10. Everything existing in the universe is the fruit of chance and necessity.
Democritus