

# Estimation and inference in cross-sectionally dependent panel data models

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ASSERTIONS  
ACCOMPANYING THE THESIS  
ESTIMATION AND INFERENCE IN CROSS-SECTIONALLY  
DEPENDENT PANEL DATA MODELS

BY  
HANDE KARABIYIK

1. Many financial and macroeconomics panel data are cross-sectionally correlated. Ignoring this cross-sectional dependence has the potential to invalidate the standard estimation and inference methods. (Chapters 2,3 and 4)
2. Cross-sectional dependence can be caused by an unknown number of unobserved common factors and the assumption regarding number of unobserved factors plays an important role in the choice of the method to account for the cross-sectional dependence. (Chapter 2)
3. In a panel error correction set up we can model the short-run and long-run effects of non-stationary unobserved common factors, however the dynamic nature of the factors will require a special method to deal with the cross-sectional dependence that is caused by those factors. (Chapter 3)
4. The long-run relation can be efficiently estimated from a conditional error correction model if the conditioning variables are weakly exogenous for the parameters of interest. When testing for weak exogeneity in a panel set up, cross-sectional dependence should be taken into account. (Chapter 4)
5. Systematically collected data can be used in a fruitful way to test economic theories, evaluate the effects of policies, find causal relationships between economic indicators.
6. Advances in econometric theory allow empirical researchers to answer more challenging questions about the actual economic phenomena and permits them to work with a less structured data.
7. Ninety percent of the data in the world has been generated over the last two years. This fact implies an increase in the amount of questions that can be answered by using data, which in turn implies an increase in the demand for econometric techniques to be used in the analysis of data.
8. Considering the fact that economic indicators of different units (i.e. countries, firms etc.) are affected by the same global shocks, the results of this thesis will lead to more reliable answers to socially and economically relevant questions.
9. Research is the quest for creating new knowledge but sometimes it is perceived as struggling towards reaching an imaginary goal that most likely is not there.
10. *“The struggle itself towards the heights is enough to fill a man’s heart. One must imagine Sisyphus happy.”* - Albert Camus, The Myth of Sisyphus.