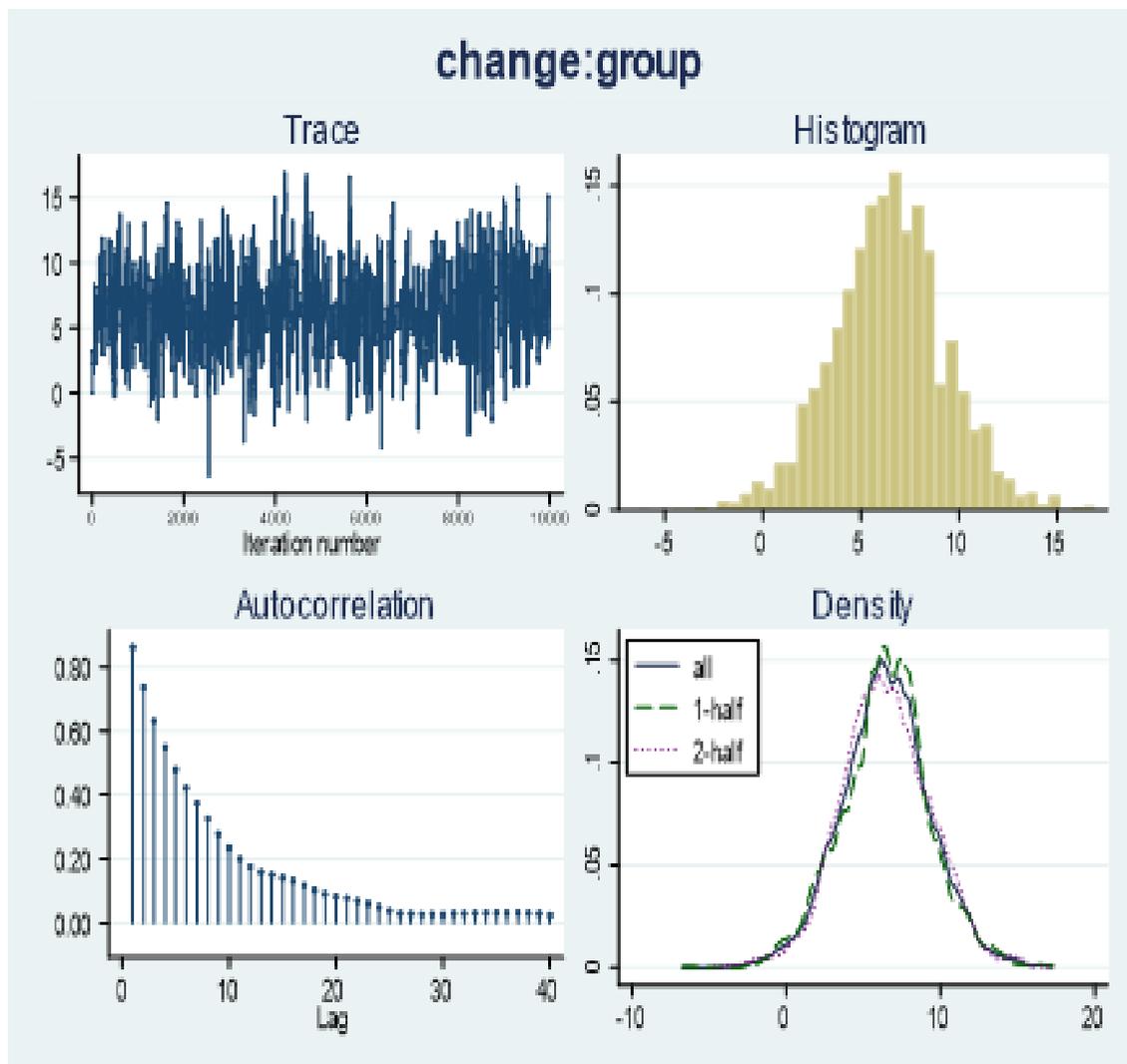


First draft, please do not quote.

# Applied Advanced Econometrics

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## PREFACE

This text contains the first draft of my lecture notes on applied econometrics most of which were prepared for my Advanced Econometrics classes at the New School for Social Research during the last two years. The emphasis of the text is on the needs of students wishing to employ econometrics for research; those who wish to delve more deeply into the econometric theories of the topics examined should consult some of the works cited in the text. The selected topics partly reflect my own research interests, for instance in slow converging series with regard to spectral analysis and bounds test of panel cointegration. Hence, I cannot claim the text examines all key areas of applied econometrics. Still, it does cover a wide range: microeconometrics, including duration models; short and long panel data analysis, including dynamic and heterogenous panels, and macroeconomic time-series to which I have added a new chapter on volatility analysis. The text is divided equally into two sections that broadly follow my classes of advanced econometrics I and II at New School. However, I have allocated longer treatments and more exercises to two areas: models of duration analysis in view of their relevance to Covid-19 related pandemic research in health and economics, and Bayesian econometrics, as the approach requires background in non-simulation, prior to simulating applications. I have also prepared a supplementary text of solutions manual for end-of-chapter exercises of the full text to non-empirical and computer-based questions. A folder of all data files in Stata used in every chapter is also available online at the New School. A note on sequencing numbers for referencing: those inside brackets refer to the equations; those without brackets to the chapter sections. Reference list contains each chapter key sources, not the more extensive list cited in the text.

Finally, I would like to thank the students at New School who attended my classes; their curiosity, questions and discussions have brought more clarity and accuracy to the text, though undoubtedly there is much room for improvement.

Feridoon Koohi, August 2021

## Contents

Preface		Page 2
<b>Part One: Advanced Econometrics I</b>		
<i>i. Core Methods</i>		
<b>Chapter 1</b>	Maximum Likelihood & Other Nonlinear Estimation	4
<b>Chapter 2</b>	Generalized Method of Moments	14
<i>ii. Microeconometrics</i>		
<b>Chapter 3</b>	Discrete Dependent Variable Models	24
<i>iii. Panel Data Econometrics</i>		
<b>Chapter 4</b>	Analysis of Panel Data	40
<b>Chapter 5</b>	Dynamic Panel Data Models	50
<i>iv. Time-Series Analysis</i>		
<b>Chapter 6</b>	Forecasting with AR & MA Processes	64
<b>Chapter 7</b>	Stationary Series, VAR & Granger Causality	89
<b>Chapter 8</b>	Stationarity Tests, Cointegration and VEC	102
<b>Chapter 9</b>	ARDL & Panel Data Unit-root Test of Integration	132
<b>Chapter 10</b>	Volatility Analysis, ARCH & GARCH Processes	138
<b>Part Two: Advanced Econometrics II</b>		
<i>v. Microeconometrics</i>		
<b>Chapter 11</b>	None-Parametric and Semi-Parametric Econometrics	157
<b>Chapter 12</b>	Bootstrap	171
<b>Chapter 13</b>	Hazard Functions & Models of Duration Data	185
<i>vi. Long Panel Data</i>		
<b>Chapter 14</b>	ARDL Long Panel Cointegration Test & VEC Estimation	207
<i>vii. Time-series Analysis</i>		
<b>Chapter 15</b>	Spectral Analysis of Time-series	216
<b>Chapter 16</b>	State-Space Models and Kalman Filter	238
<i>viii Bayesian Econometrics</i>		
<b>Chapter 17</b>	Bayesian Econometric Analysis	259
<b>Chapter 18</b>	Bayesian Simulation Models	282
<b>Mathematical Appendix</b>		307