

# Contents

<b>Introduction</b>	1
<b>1 Econometric Computation</b>	19
The Foundations of Computational Econometrics	28
Towards the Evaluation of Econometric Software	37
The Discovery of Econometric Software	38
The Computer as a Computational Medium	44
The Computer as an Imperfect Computational Device	47
Errors in Data as a Computational Circumstance	51
<b>2 Econometric Software: Characteristics, Users, and Developers</b>	55
Developmental Characteristics of Econometric Software	57
The Early History of Econometric Computation	58
The Takeoff Period of Econometric Software Development	60
The Adoption of the Microcomputer	66
The Characteristics of Econometric Software	68
Aspects of the Evolution of Software Features	72
The Development of the Human Interface	75
Directives Versus Constructive Commands	80
Developers, Users, and Use	86
Use and Users	87
Econometric Software Developers	94
<b>3 Econometric Diagnostic Tests</b>	97
Diagnostic Tests: A Division of Responsibilities	105
Realism Versus Instrumentalism	111
Specific Survey Characteristics	117
<b>4 The Basic Statistics</b>	123
The Historical Display of OLS Regression Results	126
Survey Results: The Core Statistics	135
The Core Statistics: The First Group	138
Known Special Cases	140

Variant Special Cases .....	141
Disturbance Properties Tests .....	145
Provisions for User-Constructed Tests .....	147
<b>5 The Failure of Assumptions .....</b>	<b>151</b>
Heteroscedasticity .....	154
Disturbance Properties .....	160
Specification Tests: Functional Form, Nonlinearity, and Simultaneity .....	165
Structural Stability Tests .....	166
Omitted Variables, Linear Restrictions and Related Tests .....	173
<b>6 Cointegration and Alternative Specifications .....</b>	<b>177</b>
Unit Root Tests .....	180
Evaluating Cointegration .....	207
Encompassing and Non-Nested Specifications Tests .....	209
Chapter Appendix .....	212
Grunfeld Data .....	212
Greene Data .....	221
<b>7 Several Historical Considerations .....</b>	<b>231</b>
Changes in Regression Displays 1969–2007 .....	233
MODLER Regression Output 1969–1970 .....	235
TSP Regression Output 1978–2007 .....	241
PcGive Regression Output 1985–2007 .....	247
Data Management Issues .....	252
<b>8 The Implications of the Findings .....</b>	<b>265</b>
<b>Appendix A Version Information for the Surveyed</b>	
Econometric Software Packages .....	271
<b>Appendix B Grunfeld’s Investment Theory: Time Series</b>	
Data on General Electric and Westinghouse (Theil, 1971,	
Table 7.1, p. 296) .....	273
<b>Appendix C U.S. Quarterly Macroeconomic Data Originally Used</b>	
by Cecchetti & Rich (Greene, 2008; Cecchetti & Rich, 2001) .....	275
<b>References .....</b>	<b>283</b>
<b>Index .....</b>	<b>305</b>

The Practice of Econometric Theory  
An Examination of the Characteristics of Econometric  
Computation

Renfro, C.G.

2009, XVI, 311 p. 28 illus., Hardcover

ISBN: 978-3-540-75570-8