

CONTENTS

Preface	iii
1. Least Squares Under Ideal Conditions	1
1.1 Introduction	1
1.2 Least Squares: Algebraic Results	2
1.3 Basic Statistical Results	6
1.4 Further Statistical Results	11
1.5 Tests of Hypotheses	18
2. Violations of the Ideal Conditions	35
2.1 Introduction	35
2.2 Disturbances with Nonzero Mean	36
2.3 Multicollinearity	40
2.4 Nonnormal Disturbances	55
2.5 Generalized Least Squares	64
2.6 Sets of Regression Equations	72
2.7 Asymptotically Uncooperative Regressors	85
3. Stochastic Regressors	93
3.1 Introduction	93
3.2 Autoregressive Models	96
3.3 Instrumental Variables	101
3.4 Errors in Variables	105

4. Simultaneous Equations I	119
4.1 Introduction	119
4.2 The Reduced Form	121
4.3 Ordinary Least Squares	122
4.4 Identification	128
4.5 Indirect Least Squares	145
4.6 Two-stage Least Squares	149
4.7 The k-Class	166
4.8 Limited Information Maximum Likelihood	169
5. Simultaneous Equations II	201
5.1 Introduction	201
5.2 Three-stage Least Squares	201
5.3 Full Information Maximum Likelihood	216
5.4 The Derived Reduced Form	236
Appendix	249
Author Index	263
Subject Index	265