CONTENTS

PREFACE v
FOREWORD vii

PART I. INTRODUCTION

1. *The Relationship of Econometrics to Economics and Statistics* 3
   § 1. Economics 3
   2. Statistics 5
   3. Econometrics 8

PART II. THE WORKING METHODS OF ECONOMETRICS

2. *Mathematical Formulation* 13
   § 4. The function of mathematical economics; general remarks 13
   5. Which variables should be included in the relation? 17
   6. The mathematical form of the relation 19
   7. The way in which the time factor appears in the relation 22
   8. Connection with other relations 26
   9. Supply equation and price-fixation equation 29
   10. Macroeconomic investigations 33
   11. The description of complete systems 37
   12. The movements of complete systems 43
   13. Stable and unstable equilibria. The purpose of economic policy 49
3. *Statistical Testing* 51
   §14. Statistical testing; measuring phenomena 51
   15. Determining the components of time series; general remarks 53

§16. More refined methods: the trend 57
17. Determining and eliminating the random component 60
18. Determining the seasonal fluctuations and the business-cycle component 64
19. Simple correlation 66
20. Possibilities of application in the economic field 71
21. Multiple correlation 75
22. Evaluating the uncertainty of the results 80
23. Simultaneous equations 83
24. The use of regression analysis in econometrics 84

PART III. RESULTS OF ECONOMETRIC RESEARCH

4. *The Psychic Reactions* 91

§25. Contents and subdivisions of this chapter 91
26. Psychic reaction relations: Engel curves 92
27. The "propensity to consume" and the "multiplier" 95
28. Demand curves: agricultural products 99
29. Demand curves: services and industrial products 105
30. The demand function for all goods taken together 109
31. Dynamic demand functions 113
32. The foundations of demand curves: indifference surfaces 114

5. *The Technical Relations* 117

§33. Cost curves for separate industrial enterprises (microeconomic cost curves) 117
34. The production function (macroeconomic cost curves) 119
35. Technical development 123

6. *Reactions of Business Life* 127

§36. Supply of products 127
37. The demand for investment goods..... 129
38. Substitution elasticities 133
39. Reaction relations in the financial sphere.... 137

7. *The Functioning of Economic Systems*..... 143

§40. Separate markets (echo principle, hog cycle, building cycle) 143
41. The general business-cycle movement..... 148
42. Comparative-static systems 155
43. Concluding remarks 156

PART IV. ECONOMIC POLICY

8. *The Use of Econometric Research for the Purpose of Economic Policy (An Example)*..... 161

§44. Object and summary of this chapter..... 161
45. Description of the model and its alternatives.. 162
46. Choice of variables; boundary conditions..... 169
47. Directives and instruments; the strategy of economic policy 171
48. Isolated wage policy; consequences of the double function of wages 173
49. Isolated price policy 176
50. Devaluation 177
51. Combined wage, price, and tax policy; the "optimum" solution 179
52. A closer examination of tax and subsidy policy 183
53. The influence of wages upon employment under various side conditions 185
54. Summary; is it possible to translate our analysis into verbal deductions?..... 188

APPENDIX

A. *The Use of Correlation Analysis in Economic Research* 193

§55. Introductory 193
56. Multiple correlation analysis 194
57. Determination of uncertainty in results . . . 197
58. Simultaneous relations 200
59. Some further remarks on the reduced form method 203
60. General remarks on application of correlation method 204
61. Some successful examples 209
62. Conclusions of political and scientific importance 210

B. *Statistical Evidence on the Acceleration Principle* . . 215

§63. Theoretical introduction 215
64. Statistical verification 220

C. *Long-Term Foreign Trade Elasticities* 231

§65. Importance of long-term elasticities of imports and exports 231
66. Long-term vs. short-term elasticities 233
67. Measurement from long-time series 236
68. Measurements from cross-section studies . . . 241
69. Concluding remarks 245

BIBLIOGRAPHY 247
INDEX 249