

# **THE FORMATION OF ECONOMETRICS**

**A Historical Perspective**

CLARENDON PRESS • OXFORD

*f.*

# Contents

Introduction	1
<b>1. The Probability Foundations of Econometrics</b>	<b>7</b>
1.1 <i>The Eve of the Probability Revolution</i>	9
1.2 <i>Introduction of Probability Theory</i>	13
1.3 <i>The Haavelmo Revolution</i>	19
1.4 <i>Alternative Approaches</i>	26
1.5 <i>An Incomplete Revolution</i>	31
<b>2. Model Construction</b>	<b>37</b>
2.1 <i>Econometric Measurement without Models</i>	38
2.2 <i>Emergence of Structural Model Construction</i>	44
2.3 <i>Formalization of Structural Model Formulation</i>	52
2.4 <i>Maturity of Simultaneous-Equations         Model Formulation</i>	58
<b>3. Estimation</b>	<b>65</b>
3.1 <i>From LS to ML Estimation before         Haavelmo's Revolution</i>	<b>66</b>
3.2 <i>ML Estimation of Simultaneous-Equations Systems</i>	72
3.3 <i>Estimation with Special Concerns for         Time-Series Data</i>	79
3.4 <i>Other Estimation Methods for         Errors-in-Variables Models</i>	84
3.5 <i>From ML back to LS, Completion of Estimation         Procedure for Simultaneous-Equations Systems</i>	88
<b>4. Identification</b>	<b>95</b>
4.1 <i>Taking Shape</i>	96
4.2 <i>Initial Systematization</i>	102
4.3 <i>The First Explicit Formalization</i>	108
4.4 <i>Further Developments</i>	113

<b>5. Testing</b>	<b>121</b>
5.1 <i>Antecedents</i>	122
5.2 <i>Adoption of the Hypothesis-Testing         Framework and Invention of Econometric Tests</i>	129
5.3 <i>Hypothesis-Testing via Model Evaluation         in Applied Econometrics</i>	135
5.4 <i>Diagnostic Tests for Model Evaluation         in Theoretical Econometrics</i>	141
<b>6. Model Construction Revisited</b>	<b>149</b>
6.1 <i>Testing and Model Construction</i>	150
6.2 <i>Identification and Model Construction</i>	158
6.3 <i>Estimation and Model Construction</i>	164
6.4 <i>Model Construction and         the Probability Approach</i>	175
The History Revisited	183
Bibliography	189
Index of Names	207
Index of Subjects	210