Consolidation of the Haavelmo-Cowles Commission Paradigm
(based on Chapter 1 of my book draft: The Reformation of Econometrics: A Historical Perspective)

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Coverage and Main Aims

• Time period: 1950s – 1960s
• A ‘normal science’ period in Kuhn’s terminology
• What are the main factors contributing to the consolidation, which has lead to the orthodox econometrics?
• What issues were unresolved then which led to the reforms during the 1970s – 1980s?
Main Findings

Key consolidation factors for the Haavelmo-CC paradigm:

• Academic fitness in terms of scientific rigour with internal consistency and math elegance
• Conformity to economics as the measurement provider of a priori theories
• Self-contained education programme

• Empirical relevance played very minor role
Background factors of the Haavelmo-CC programme

• Academic trigger: the Keynes-Tinbergen debate
• Haavelmo’s discovery of the OLS ‘bias’ in SEMs
• Poor availability of data and primitive computing facility
• Applied economic issues require comprehensive social knowledge and tacit experience, which was somehow beyond the hard science methodology and the immediate pedagogical needs
Essence of the Haavelmo-CC Methodology

• Historical reasons: Makes econometric practice credible to established economists

• Formalised econometric practice following Frisch’s vision of structural models and Haavelmo’s probability approach

• Main goal: assist policy evaluation and design, rather than forecasting
Haavelmo → the CC Programme

• Methodological: systematically bridge theory and empirical research in a logically rigorous manner
  → science is measurement
• Disciplinary (economics): demarcation between the economists and the econometricians
  → econometrics serves to measure economics
• Technical: econometric procedure comprised model specification, identification and estimation based on given structural model of the simultaneous-equations model (SEM) form
  → the measures should be internally consistent and statistically optimal
Haavelmo → the CC Programme

• Structural parameters: given in *a priori* formulated theoretical models (‘model choice’ not considered)

• Specification: classical assumption on error terms

• Identification: mathematical conditions needed for unique estimability of these parameters

• Estimation: derivation and choice of statistically optimal parameter estimates, which are also easily computable, e.g. LIML → IV
### Table 1. Chapter Layout of Major Econometrics Textbooks during 1950-1970

<table>
<thead>
<tr>
<th>Author (year)</th>
<th>Total no. of chapters</th>
<th>Numbers of chapters on themes of:</th>
<th></th>
</tr>
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<tbody>
<tr>
<td></td>
<td></td>
<td>Applied studies</td>
<td>Statistical methods &amp; estimators</td>
</tr>
<tr>
<td>Tinbergen (1951)</td>
<td>8</td>
<td>5</td>
<td>1</td>
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<tr>
<td>Tintner (1952)</td>
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<td>3</td>
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<td>Klein (1953)</td>
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<td>2</td>
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<td>Valavanis (1959)</td>
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<td>Brennan (1960)</td>
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<tr>
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<td>Goldberger (1964)</td>
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<tr>
<td>Malinvaud (1966)</td>
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<tr>
<td>Malinvaud (1966) (French ed.: 1964)</td>
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<td>Christ (1966)</td>
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<td>2</td>
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<td>Leser (1966)</td>
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<td>&gt;3</td>
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<tr>
<td>Fox (1968)</td>
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<td>Dhryme (1970)</td>
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<tr>
<td>Wonnacott &amp; Wonnacott (1970)</td>
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</table>
Paradigm Consolidation: Textbook Standardisation

- Gradual disappearance of applied contents
- Growing coverage of statistical methods
- Gradual dominance of the SEM techniques
- Little coverage of ideas and methodological disputes
- Further division of advanced and elementary levels by mathematical statistics
Paradigm Consolidation: Research Dissemination

- Arguments on contentious issues relating to ‘model choice’ were short-lived
- Research emulating the CC’s technical contribution established as the norm
- Core task: devising statistically best measures for given structural parameters from a priori formulated models for various issues
The Trygve Haavelmo Centennial Symposium

Paradigm Consolidation: Research Dissemination

Figure 1. Numbers of Research Papers on SEMs during 1950-1970
The Role of Applied Studies

Two CC members have engaged themselves in applied modelling:

• Haavelmo: empirical studies on consumption with the aim to use applied results as illustrations for theoretical arguments

• Klein: empirical macro models for the purposes of forecasting and policy analyses following Tinbergen
The Role of Applied Modelling (continue)

General impact on the econometrics community:

- Haavelmo: became the standard of empirical case illustrations in textbooks; his (1947) paper as the inspiration to finite sample distribution research (Basmann, 1974)

- Klein: empirical description favoured out of textbooks; model results drew more outside attention except for criticisms over forecasting results and validity of policy simulations
Tensions at the Turn of 1970

- Frisch: ‘Playometrics’— self-admiring works showing little social and scientific responsibility;
- Leontief: Academics complacency in showing off their prowess – growth of the mathematical model-building industry with little practical relevance;
- Leijonhufvud: ‘Priestly caste’ of the academic tribe – ranking from ‘Math-Econ’ to ‘Develops’ with only ceremonial use of models
- Lucas: ‘spectacular failure’ of macro-econometric models – why they are useless for policy analyses
Reforms of the Haavelmo-CC Paradigm

- Maintain the scientific style of the Haavelmo-CC paradigm
- Aim at improving the credibility of the Haavelmo-CC paradigm rather than abandon it
- Reorient attention from parameter measurements towards model choice / specification search
- Resort to more statistical methods and more data-instigated modelling techniques
- Direct relevance to applied economic issues remains relatively a minor concern
Many Thanks!