MICRO-ECONOMETRICS AND ITS GROWING ROLE

IN CORPORATE DECISION-MAKING

I. Where Econometricians Are Employed
   A. Government Agencies
   B. Private Sector
      i. Planning Divisions
      ii. Marketing Divisions
      iii. GIS Divisions
      iv. Corporate Treasury
      v. Investment Banking
      vi. Consulting
      vii. Legal Practice

II. Change in Employment Pattern of Econometricians
   A. Cowles Commission: 1930 - 40
   B. Prevalence of Macro-econometricians 1950 - mid 80's
      i. DRI
      ii. WEFA
      iii. Federal Reserve System
   C. Shift Toward Micro-econometrics mid 80's - present
      i. Greater Availability of Firm-Specific Data
         a. Scanned consumer data
         b. Market surveys
         c. Real-time corporate to individual store links
      ii. PC Computing Available at every desk
      iii. E-mail messaging and data delivery
      iv. Increased Timeliness of firm-specific data

III. Comparison of Macro-econometric and Micro-econometric Tool Boxes
   A. Macro-econometric Tool Box
      i. Simultaneous Equation Methods (Cowles Commission)
         a. 3SLS/FIML System Methods
         b. 2SLS/LIML Single Equation Methods
      ii. Vector Autoregression (VAR) Models (Sims (1980))
         a. Impulse Response Function Analysis
         b. Historical Decompositions
   B. Micro-econometric Tool Box
      i. Cross-Section and Panel Data Methods
         a. Probit/Logit
         b. Unordered Multinomial Probit/Logit
         c. Ordered Multinomial Probit/Logit
         d. Duration Models
         e. Poisson Models
f. Censored/Truncated Models  
g. Balanced and Unbalanced Panels Methods  
h. Dynamic Panel Methods  
i. Error Component Models  
ii. Time Series Methods - Univariate and Multivariate  
   a. Box-Jenkins Models  
b. Transfer Function / Intervention Models  
c. VAR / VARMAX Models  
d. Nonlinear Time Series Models  
   (TAR, SETAR, Bi-linear, Smooth Transition, etc.)  
e. Error Correction Models  
f. Neural Networks / Wavelet Models  
g. State Space Models (e.g. STAMP)  
h. Compositional Analysis

IV. Multi-faceted Nature of Econometric Training  
A. Computer Expertise  
i. SAS  
ii. EVIEWS  
iii. STATA  
iv. MATLAB  
v. GAUSS  
B. Practical Case Studies  
i. The Practice of Econometrics: Classic and Contemporary  
   - Ernst R. Berndt (1990)  
ii. Applied Econometrics: Problems with Data Sets  
iii. Titles like: "Practical" Business Forecasting  
iv. Increasing Effective Use of Monte Carlo Data Sets  
   - Judge, Griffiths, Hill, Lutekepohl, and Lee books  
   (1980's)  
C. Mathematical Statistics  
i. Finite Sample Theory  
ii. Asymptotic Theory  
iii. Weiner Processes  
iv. Non-parametrics  
D. Ability to Communicate the Complex Results of Econometrics to the Lay End-User  
E. Role of Continuing Education in an Econometrician's Life
V. The Future of Econometrics
   A. As Data Availability and Computer Speed Increases, More Econometricians will be demanded
   B. Major Areas of Growth:
      i. Forecasting
      ii. Marketing
      iii. Legal Support
   C. Websites of Interest (for jobs in econometrics)
      i. www.ibf.org
      ii. www.isf2002.org
      iii. www.nabe.com/careers.htm
      iv. www.eco.utexas.edu/joe/
      v. www.analyticrecruiting.com
      vi. www.statistics.com

VI. Two Case Studies: Applications of SAS and EVIEWS
   A. Product Line Forecasting - Texas Instruments
   B. Legal Support Analysis - KPMG
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