

# 1.3 The Econometric Model

- An econometric model consists of a **systematic part** and a **random error**
- $Q^d = f(P, P^s, P^c, INC) + e$
- $f(P, P^s, P^c, INC) = \beta_1 + \beta_2 P + \beta_3 P^s + \beta_4 P^c + \beta_5 INC$
- $Q^d = \beta_1 + \beta_2 P + \beta_3 P^s + \beta_4 P^c + \beta_5 INC + e$

# Econometric Models Of Cyclical Behavior Studies In Income And Wealth No 36

**KJ Lindholm-Leary**



## **Econometric Models Of Cyclical Behavior Studies In Income And Wealth No 36:**

Econometric Model Performance Lawrence R. Klein, Edwin Burmeister, 2016-11-11 Models of the American economy exist in government research institutes universities and private corporations Given the proliferation it is wise to take stock because these models come from diverse sources and describe different conditions from alternative points of view They could be saying different things about the economy The high level comparative studies in this volume gathered from several issues of the International Economic Review with a substantive introduction and the addition of more comparative material evaluate the performance of eleven models of the American economy the Wharton Mark III Model Brookings Model Hickman Coen Annual Model Liu Hwa Monthly Model Data Resources Inc DRI Model Federal Reserve Bank of St Louis Model Michigan Quarterly Econometric MOEM Model Wharton Annual and Industry Model Anticipation Version of the Wharton Mark III Model Fair Model U S Department of Commerce BEA Model Each of the proprietors or builders of these models describes his own system in his own words These studies come closer than ever before to standardizing model operations for testing purposes Some of the models are monthly while others are annual but the quarterly unit of time is the most frequent Some are demand oriented others are supply oriented and focus on the input output sectors of the economy Some use only observed objective data others use subjective anticipatory data Both large and small models are included In spite of the diversity the contributors have cooperated to trace the differences between their models to root causes and to report jointly the results of their research There are also some general papers that look at model performance from outside the CEME group

The Collected Essays of Richard E. Quandt Richard E. Quandt, 1992-01-01 Professor Richard Quandt has made a major contribution to the development of economics in the 20th century The range and significance of his work has long required a collection of his essays which will allow his contribution to be assessed as a whole Despite an early interest in microeconomic theory Richard Quandt has devoted most of his career to econometrics and in particular modal split estimation More recently his work has focused on the econometrics of disequilibrium models with reference to both free market and planned economies As well as outlining his many articles in microtheory general econometrics disequilibrium modeling financial economics and the economics of planned economies this collection should have a particular value for all scholars interested in the emergence of the new economies in Eastern Europe a subject to which Professor Quandt has applied himself in recent years This book includes an introduction by Professor Quandt describing his early life in Budapest and the circumstances which led him to study economics in America

**The Theory and Practice of Econometrics** George G. Judge, William E. Griffiths, R. Carter Hill, Helmut Lütkepohl, Tsoung-Chao Lee, 1991-01-16 This broadly based graduate level textbook covers the major models and statistical tools currently used in the practice of econometrics It examines the classical the decision theory and the Bayesian approaches and contains material on single equation and simultaneous equation econometric models Includes an extensive reference list for each topic

A History of Econometrics

R.J. Epstein, 2014-06-28 This comparative historical study of econometrics focuses on the development of econometric methods and their application to macroeconomics The analysis covers the origins of modern econometrics in the USA and Europe during the 1920 s and 30 s the rise of structural estimation in the 1940 s and 50 s as the dominant research paradigm and the crisis of the large macroeconomic models in the 1970 s and 80 s The completely original feature of this work is the use of previously unknown manuscript material from the archives of the Cowles Commission and other collections The history so constructed shows that recent debates over methodology are incomplete without understanding the many deep criticisms that were first raised by the earliest researchers in the field

### **The Business Cycle: Theories and Evidence**

M.T. Belongia, Michelle R. Garfinkel, 2012-12-06 These proceedings from a conference held at the Federal Reserve Bank of St Louis on October 17 18 1991 attempted to layout what we currently know about aggregate economic fluctuations Identifying what we know inevitably reveals what we do not know about such fluctuations as well From the vantage point of where the conference s participants view our current understanding to be these proceedings can be seen as suggesting an agenda for further research The conference was divided into five sections It began with the formulation of an empirical definition of the business cycle and a recitation of the stylized facts that must be explained by any theory that purports to capture the business cycle s essence After outlining the historical development and key features of the current theories of business cycles the conference evaluated these theories on the basis of their ability to explain the facts Included in this evaluation was a discussion of whether and how the competing theories could be distinguished empirically The conference then examined the implications for policy of what is known and not known about business cycles A panel discussion closed the conference highlighting important unresolved theoretical and empirical issues that should be taken up in future business cycle research

What Is a Business Cycle Before gaining a genuine understanding of business cycles economists must agree and be clear about what they mean when they refer to the cycle

### **Time Series Analysis and Macroeconometric Modelling**

Kenneth Frank Wallis, 1995-01-01 An excellent reference volume of this author s work bringing together articles published over a 25 year span on the statistical analysis of economic time series large scale macroeconomic modelling and the interface between them Aslib Book Guide This major volume of essays by Kenneth F Wallis features 28 articles published over a quarter of a century on the statistical analysis of economic time series large scale macroeconometric modelling and the interface between them The first part deals with time series econometrics and includes significant early contributions to the development of the LSE tradition in time series econometrics which is the dominant British tradition and has considerable influence worldwide Later sections discuss theoretical and practical issues in modelling seasonality and forecasting with applications in both large scale and small scale models The final section summarizes the research programme of the ESRC Macroeconomic Modelling Bureau a unique comparison project among economy wide macroeconometric models

### **Macroeconometric Models**

Władysław Welfe, 2013-02-15 This book gives a comprehensive description of macroeconometric modeling and its

development over time The first part depicts the history of macroeconometric model building starting with Jan Tinbergen's and Lawrence R Klein's contributions It is unique in summarizing the development and specific structure of macroeconometric models built in North America Europe and various other parts of the world The work thus offers an extensive source for researchers in the field The second part of the book covers the systematic characteristics of macroeconometric models It includes the household and enterprise sectors disequilibria financial flows and money market sectors

**Quantitative Economic Policies and Interactive Planning** Andrew J. Hughes Hallett, Hedley J. B. Rees, 1983-01-20 Econometrics: Alchemy Or Science? David F. Hendry, 2000-10-26 Econometrics Alchemy or Science analyses the effectiveness and validity of applying econometric methods to economic time series The methodological dispute is long standing and no claim can be made for a single valid method but recent results on the theory and practice of model selection bid fair to resolve many of the contentious issues The book presents criticisms and evaluations of competing approaches based on theoretical economic and econometric analyses empirical applications and Monte Carlo simulations which interact to determine best practice It explains the evolution of an approach to econometric modelling founded in careful statistical analyses of the available data using economic theory to guide the general model specification From a strong foundation in the theory of reduction via a range of applied and simulation studies it demonstrates that general to specific procedures have excellent properties The book is divided into four Parts Routes and Route Maps Empirical Modelling Strategies Formalization and Retrospect and Prospect A short preamble to each chapter sketches the salient themes links to earlier and later developments and the lessons learnt or missed at the time A sequence of detailed empirical studies of consumers expenditure and money demand illustrate most facets of the approach Material new to this revised edition describes recent major advances in computer automated model selection embodied in the powerful new software program PcGets which establish the operational success of the modelling strategy Economic Theory and Econometrics Lawrence Robert Klein, 1985 **Analysing the Structure of Economic Models** J.P. Ancot, 2012-12-06 Understanding the structure of a large econometric model is rather like the art of winetasting or like the art of playing a musical instrument The quality of a wine results from a complex combination of various elements such as its colour which should be clear and crystalline its smell which can be decomposed into a general aroma and a variety of particular characteristics more or less persistent depending on the type and the age of the wine its taste of course which again is a complex system whose equilibrium and charm depend on the whole set of ingredients alcohol tannin glycerine sugar acidity Similarly a clarinetist's musicianship depends on the quality of his instrument on his embouchure fingering tonguing and articulation techniques on his sense for rhythm phasing and tone colour However the enchantment produced by a Romanian Conti or by a brilliant performance of Brahms's F minor sonata for clarinet and piano arises from a process which is at the same time much simpler and much more complex than the straightforward juxtaposition of individual causal relations In recent years econometricians and

macro economists have been challenged by the problem of keeping abreast with an ever increasing number of increasingly more complex large econometric models The necessity of developing systematic analytical tools to study the often implicit and hidden structure of these models has become more evident

*Growth, Volume 1* Dale W. Jorgenson, 1998-12-07 Volume 1 Econometric General Equilibrium Modeling presents an econometric approach to general equilibrium modeling of the impact of economic policies Earlier approaches were based on the calibration of general equilibrium models to a single data point The obvious disadvantage of calibration is that it requires highly restrictive assumptions about technology and preferences such as fixed input output coefficients These assumptions are contradicted by the massive evidence of energy conservation in response to higher world energy prices beginning in 1973 The econometric approach to general equilibrium modeling successfully freed economic policy analysis from the straitjacket imposed by calibration As a consequence of changes in energy prices and new environmental policies a wealth of historical experience has accumulated over the past two decades Interpreted within the framework of the neoclassical theory of economic growth this experience provides essential guidelines for future policy formation

Volume 2 *Energy the Environment and Economic Growth* presents a new econometric general equilibrium model of the United States that captures the dynamic mechanisms underlying growth trends and responses to energy and environmental policies Jorgenson uses the model to analyze the impacts of environmental regulations on US economic growth and tax policies for controlling U S emissions of carbon dioxide

*Business Cycles and Depressions* David Glasner, 2013-12-16 Experts define review and evaluate economic fluctuations Economic and business uncertainty dominate today s economic analyses This new Encyclopedia illuminates the subject by offering 323 original articles on every major aspect of business cycles fluctuations financial crises recessions and depressions The work of more than 200 experts including many of the leading researchers in the field the articles cover a broad range of subjects including capsule biographies of leading economists born before 1920 Individual entries explore banking panics the cobweb cycle consumer durables the depression of 1937 1938 Otto Eckstein Friedrich Engels experimental price bubbles forced savings lass Steagall Act Friedrich hagen qualitative indicators use of macro econometric models monetary neutrality Phillips Curve Paul Samuelson Say s law supply side recessions James Tokin trend and random wages Thorstein Veblen worker job turnover and more

*The Debate Over Stabilization Policy* Franco Modigliani, 1986-09-18 This 1986 book examines some of the main issues that have characterized macroeconomics the debate between monetarists and Keynesians the response to demand shocks and supply shocks by which the monetary authorities control aggregate nominal income and the use and relevance of the money supply as a target and the consumption function and the determinants of wealth It shows that Keynesian stabilization policies succeeded in reducing instability due to demand shocks dramatically but that no aggregate demand policy can stabilize both price and employment simultaneously after a supply shock However by assigning an overall social cost to excess unemployment and initially unexpected inflation an optimism path can be derived In looking at the

consumption function and determinants of wealth the empirical evidence is shown to be most consistent with the life cycle hypothesis A concluding section is devoted to the impact on private and national society of the social security revolution

Macro-econometric Models Götz Uebe, Joachim Fischer, 1992 This is the second edition essentially a completely newly written state of the art introduction into the field of macro econometric models Its first focus is to present the different specifications and strands of ideas of macro econometric models its empirical and analytical uses in economic policy economic theory economic history and empirical applications It documents the intellectual achievements and performance of applied macroeconomic models in general theoretically and by typical and representative illustrations leading the reader to the frontiers of present research Secondly the book is an introductory text into the bibliography of macro models which is the background of the monograph Recalling the field of macro econometric models there are additional appendices e g explaining the keywords which cover this territory of economic knowledge and documenting the huge use of such models A multilingual cross reference dictionary German English French Spanish Italian concludes the book **The Forecasting**

**Accuracy of Major Time Series Methods** Spyros G. Makridakis, 1984 STATISTICS ECONOMETRIC METHODS  
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AVERAGE METHOD EXPONENTIAL SMOOTHING METHOD REGRESSION METHOD FORSYTH METHOD SALES  
FORECASTING *Macrodynamics: Fluctuations and Growth* Pierre-Yves Hénin, 2013-04-15 Building from the micro

foundations of economic behaviour to a full survey of macroeconomics the book examines growth theory and equilibrium and disequilibrium approaches to provide a comprehensive survey of all the rival theoretical approaches that underlie central policy debates A survey of pre Keynesian theories of growth fluctuations and the various short and long cycles and crises is followed by an exposition of Keynesian theory and its subsequent development and of the neo classical revival Topics covered include Non clearing markets Involuntary unemployment Persistent inflation As well as full coverage of the English language literature Macrodynamics covers important contributions from the new school of French macroeconomists including Malinvaud Benassy and Grandmont *Modelling Economic Series* Clive William John Granger, 1990 This is a volume of

readings for graduate students especially those taking courses in applied econometrics who need to learn how to evaluate the validity of present theories and techniques The aim of the text is to aid readers in the difficult task of actually constructing models The essays vary in the degree of technical sophistication used but each paper intends to provide students with a sound knowledge of the practical difficulties of model specification evaluation and interpretation as well as advice on tackling these difficulties *Dynamic Econometrics* David F. Hendry, 1995 The main problem in econometric modelling of time series is discovering sustainable and interpretable relationships between observed economic variables The primary aim of this book is to develop an operational econometric approach which allows constructive modelling Professor Hendry deals with methodological issues model discovery data mining and progressive research strategies with major tools

for modelling recursive methods encompassing super exogeneity invariance tests and with practical problems collinearity heteroscedasticity and measurement errors He also includes an extensive study of US money demand The book is self contained with the technical background covered in appendices It is thus suitable for first year graduate students and includes solved examples and exercises to facilitate its use in teaching About the Series Advanced Texts in Econometrics is a distinguished and rapidly expanding series in which leading econometricians assess recent developments in such areas as stochastic probability panel and time series data analysis modeling and cointegration In both hardback and affordable paperback each volume explains the nature and applicability of a topic in greater depth than possible in introductory textbooks or single journal articles Each definitive work is formatted to be as accessible and convenient for those who are not familiar with the detailed primary literature      Economic Forecasting Terence C. Mills,1999



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