underscoring the linkages between institutional change and policy-relevant learning. The authors call for a reiterative process such as the European EAP model, which comprises an interim review of progress and reaffirmation stages. They advocate constitutional commitment to the sustainability agenda followed closely by active implementation of provisions as the key mechanisms to achieve desired outcomes.

A key difficulty with the arguments presented is that there is little critical appraisal of the net benefits available from pursuing sustainable development goals, particularly when the centralised mechanisms used to achieve it may be very expensive. Sustainable development is presented more as a normative ideal than a clearly defined objective, which helps to explain why there is more emphasis on process rather than outcomes. The endorsement of centralised government controls to achieve sustainable development outcomes, as in the EU model, reflects the authors' acceptance of sustainable development as always being a desirable outcome no matter the costs involved.

There is some tacit acceptance of the problems involved in using centralised government controls to achieve sustainable development processes. The authors admit that a reiterative process occurs over a long-term horizon, but argue that there is generally wide acceptance of the ideals of sustainable development internationally. However, while endorsement is one thing; serious implementation is another. Putting sustainable development into practice is more difficult than just agreeing with the policy principles, as is demonstrated in the case studies presented in this volume.

In summary, this book is valuable as it promotes further reflection on the institutional dimensions of sustainable development and the reiterative relationships between policy and institutional domains, which are usually difficult to identify accurately. The comparisons between case studies allow the authors to develop a broader picture on the current and future role of institutions in sustainable development. The book provides excellent material that will be of interest to students and policy-makers interested in environmental resource management and the broader sustainability discourse. However, readers should maintain some critical reserve about the key thrust of the book that current institutions need major reform to achieve sustainability outcomes.

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Nonlinear Time Series: Nonparametric and Parametric Methods, by Jianqing Fan and Qiwei Yao. Published by Springer-Verlag, New York, USA, 2003, pp. xix + 551, ISBN 0 387 95170 9 (hdbk), $US89.95.

This book offers a modern coverage of parametric non-linear and non-parametric time series models and methods geared toward researchers in a range of disciplines. The book will particularly appeal to those in the economic sciences and financial engineering who have a solid background in linear time series models and methods. The authors provide an excellent guide to the application of non-linear time series models and methods in different disciplines, including climatology, economics, finance and medical sciences, focusing on models and methods that are of current interest to practitioners.

This book is also valuable as a reference, mainly because the theorems and their proofs are written in an extremely clear manner. Except for Chapters 1 and 3, each chapter of the book includes useful bibliographical notes. This makes the book easy to read. It may be appropriate for postgraduates with a graduate-level background in linear time series, but is not appropriate for undergraduates.

The book has 10 chapters. Each chapter begins with an introduction that provides a very good summary of the main models and methods introduced in the chapter.

Chapter 1: the 'Introduction' provides some popular time series data to demonstrate both the form of the data and possible non-linearity issues. The authors include a summary of some simple but important parametric linear and non-linear as well as non-parametric time series models.

Chapter 2: 'Characteristics of Time Series' focuses on the inclusion of some probabilistic concepts and definitions for stationary and mixing processes. The authors then include conditions for the verification of stationary and mixing properties of some important models, such as certain autoregressive conditional heteroscedastic (ARCH) models. Estimation procedures of autocorrelation and partial autocorrelation functions are discussed and illustrated through using simulated examples. The authors also briefly discuss the estimation of spectral density functions of short-memory and long-memory processes using the periodogram approach. The chapter concludes with a useful central limit theorem for partial sums of stationary and mixing processes and its application in proving certain asymptotic properties of the proposed estimators.

Chapter 3: 'ARMA Modelling and Forecasting' gives an account on existing model estimation and selection procedures for autoregressive moving average (ARMA) models. The conventional Gaussian maximum likelihood estimation procedure is discussed in some detail. For modelling and forecasting purposes, the authors summarise the famous Akaike's information criterion and Bayesian information criterion and then implement such criteria using simulated and real sets of data. Particular emphasis is given to linear forecasting.

Chapter 4: 'Parametric Nonlinear Time Series Models' provides a quite comprehensive summary of both traditional parametric non-linear models, including threshold models, and some recent developments in parametric non-linear ARCH and generalized-ARCH (GARCH) models. The account of modern ARCH and GARCH processes and their corresponding probabilistic properties is excellent. Both the estimation and testing procedures for the proposed ARCH and GARCH models are discussed in detail and then illustrated using simulated and real sets of data. The chapter concludes with some useful bilinear models as well as relevant properties of the models and their estimation procedures.

Chapter 5: 'Nonparametric Density Estimation' summarises useful results in nonparametric density estimation for both independent observations and dependent time series, which is useful background for the material on kernel smoothing of time series in Chapter 6.

Chapter 6: 'Smoothing in Time Series' applies recently developed non-parametric techniques to the estimation and testing of both conditional-mean and conditional-variance functions of non-linear time series. Both the traditional kernel method and modern local linear kernel approach are introduced, together with a good summary

of some other non-parametric estimation techniques, such as spline methods. The chapter includes detailed discussion and comparison among the use of the different non-parametric techniques, such as kernel, local polynomial and spline methods.

Chapter 7: 'Spectral Density Estimation and Its Applications' looks at dealing with time series from a point of view of spectral density estimation. The authors discuss several estimation methods, such as the periodogram approach, automatic estimation, least-squares estimation and local-maximum-likelihood estimation of spectral density. The proposed estimation methods are studied theoretically and also implemented using simulated and real examples.

Chapter 8: 'Nonparametric Models' extends the discussion in Chapter 6 to more advanced models and techniques. The inclusion of some recently proposed non-parametric models, including varying-coefficient models, is particularly interesting and useful. To the best of my knowledge the authors are among the first to present such a comprehensive review of the newly proposed models and corresponding estimation procedures. The chapter demonstrates how these models can be used in practice to provide solutions to problems that may not be solved using existing models and techniques.

Chapter 9: 'Model Validation' gives a recent account of various model specification and validation procedures. This chapter will be useful to the reader interested in non-parametric inferences. It introduces several non-parametric specification procedures for the validation of particular parametric non-linear models.

Chapter 10: 'Nonlinear Prediction' complements Chapter 3 in the field of time-series forecasting and prediction from a non-linear point of view. The authors look at three types of predictors: point predictors, predictive intervals and predictive distributions. They establish some asymptotic properties of the proposed prediction procedures and demonstrate their implementation in practice using simulated and real examples.

Apart from using this book as a reference for research, I would use some parts of it for postgraduate teaching, particularly, Chapters 6 and 8. I would recommend it to postgraduate students who are interested in learning about recent developments in non-linear and non-parametric time series modelling as well as in understanding the use of complex parametric non-linear and non-parametric time series models in practice.

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