

Optimal Pollution Level A Theoretical Identification

This dissertation consists of three separate papers that either derive optimal management strategies for environmental and natural resource management, develop theoretical models explaining observed effects government management of environmental and natural resources or both. Chapter 1 shows that sharing arrangements between capital owners and labor in renewable resource industries have substantial implications for the industry's profits, optimal resource management, and the resource's ecological state. Effectively, sharing agreements can interact with fluctuations in natural capital to cause inefficient investment levels and skew industry rents toward labor. As a consequence, optimal regulatory policy for such industries must account for the implications of such sharing arrangements. The model demonstrates why management tools like individual transferable quotas in fisheries, have had unexpected ecological benefits in terms of increasing and stabilizing fishery stocks. Chapter 2 extends the research joint venture (RJV) literature to cover government funded energy-related collaborations between private firms and national laboratories. It uses a game theoretic framework to explain why a RJV including a national lab will tend to have significantly more participants than a private RJV. The model predicts that regulatory capture is likely to occur from firms that work with national labs in RJs and receive exogenous funding, such as federal grants, to perform RJV research. Further, it is possible that RJs including national labs that do not receive exogenous funding are more likely to consist of more heterogeneous firms. Chapter 3 considers the implications on optimal pollution control when ambient levels of pollution are known but all emission sources are not. The model shows that if the dispersion models are misspecified due to incomplete inventories of emissions, optimal ambient pollution levels can actually increase. In this case, if R & D can increase the set of known emitters, a regulator may actually choose not to spend any resources to do as it can cause a decrease in expected welfare.

A short, rigorous introduction to intermediate microeconomic theory that offers worked-out examples, tools for solving exercises, and algebra support. This book takes a concise, example-filled approach to intermediate microeconomic theory. It avoids lengthy conceptual description and focuses on worked-out examples and step-by-step solutions. Each chapter presents the basic theoretical elements, reducing them to their main ingredients, and offering several worked-out examples and applications as well as the intuition behind each mathematical assumption and result. The book provides step-by-step tools for solving standard exercises, offering students a common approach for solving similar problems. The book walks readers through each algebra step and calculation, so only a basic background in algebra and calculus is assumed. The book includes 140 self-assessment exercises, giving students an opportunity to apply concepts from previous worked-out examples.

Environmental Kuznets Curves - one of the most controversial issues of current environmental economics - suggest that economic growth may lead to environmental quality improvements. Why and under which circumstances this may be so, are the questions addressed in this book. The approach taken is formal, using techniques of static and dynamic optimisation. In addition, the main assumptions, arguments and conclusions are also presented in a non-formal way.

This title was first published in 2003. Economists have had increasing success in arguing the merits of market-based approaches to environmental problems. By making polluting expensive, market-based approaches provide polluters with incentives to clean up, rather than mandates to stop polluting. These approaches include pollution taxes, transferable emissions permits and subsidies for pollution abatement. The purpose of this volume is to explore the situations where Command and Control (CAC) may not be all bad, and in fact might even have some advantages over market-based instruments (MBI).

Optimal Policy Structure in Natural Resource and Environmental Economics

The Theory of Environmental Agreements and Taxes

Globalizations and Emerging Issues in Trade Theory and Policy

Environmental Kuznets Curves

OECD Studies on Water Diffuse Pollution, Degraded Waters Emerging Policy Solutions

Theory, Policy, and Practice

This book argues that current economist theories do not take into account the socially constructed nature of the debate surrounding the environment and environmental policy. It examines whether proposed economic solutions to environmental policy are, in fact, viable in practice. The book demonstrates that social conflicts cause policy compromises, which shape the economic system of a post-industrial ecological society. The author offers an innovative socio-economic theory of environmental politics, which illuminates the transformation dynamics brought about by the ecological crisis. Regulation Theory and Sustainable Development will be of interest to students and scholars of environmental politics, policy and

governance.

This unique graduate textbook offers a compelling narrative of the growing field of environmental economics that integrates theory, policy, and empirical topics. Daniel J. Phaneuf and Till Requate present both traditional and emerging perspectives, incorporating cutting-edge research in a way that allows students to easily identify connections and common themes. Their comprehensive approach gives instructors the flexibility to cover a range of topics, including important issues - such as tax interaction, environmental liability rules, modern treatments of incomplete information, technology adoption and innovation, and international environmental problems - that are not discussed in other graduate-levels texts. Numerous data-based examples and end-of-chapter exercises show students how theoretical and applied research findings are complementary, and will enable them to develop skills and interests in all areas of the field. Additional data sets and exercises can be accessed online, providing ample opportunity for practice. For more information, visit the book's website at <http://phaneuf-requate.com/>.

"The labor of nature is paid, not because she does much, but because she does little. In proportion as she becomes niggardly in her gifts, she exacts a greater price for her work. Where she is munificently beneficent, she always works gratis." David Ricardo * This book interprets nature and the environment as a scarce resource. Whereas in the past people lived in a paradise of environmental superabundance, at present environmental goods and services are no longer in ample supply. The environment fulfills many functions for the economy: it serves as a public-consumption good, as a provider of natural resources, and as receptacle of waste. These different functions compete with each other. Releasing more pollutants into the environment reduces environmental quality, and a better environmental quality implies that the environment's use as a receptacle of waste has to be restrained. Consequently, environmental disruption and environmental use are by nature allocation problems. This is the basic message of this book.

In this book, Professors Baumol and Oates provide a rigorous and comprehensive analysis of the economic theory of environmental policy. They present a formal, theoretical treatment of those factors influencing the quality of life. By covering both the theory of externalities and its application to environmental policy, the authors have retained the basic structure and organization of the first edition, which has become a standard reference in the field. In this edition, however, they have updated their analysis to incorporate recent research in environmental economics.

Environmental and Natural Resource Economics

Economics, Game Theory And International Environmental Agreements: The Ca' Foscari Lectures

Economics of Natural Resources and the Environment

Theory, Modeling and Experience in the Management of Nonpoint-Source Pollution

Microeconomics

Economic Theory and the Cities

ENVIRONMENTAL ETHICS, 7th Edition presents the main issues in environmental ethics using a diverse set of readings arranged in dialogue format. The seventh edition of this popular anthology features selections from contemporary authors as well as readings from classic writers, all chosen for their clarity and accessibility. By exploring both sides of every topic, this edition helps students quickly grasp the subject and move from theory to application. Making this textbook even more enjoyable to read include new sections on Environmental Justice, Climate Change, Food Ethics, Nature and Naturalness, Sustainability, Population and Consumption, Future Generations, and Holism. Important Notice: Media content referenced within the product description or the product text may not be available in this version.

The science and management of environmental problems is a vast area, comprising both the natural and social sciences, and the multidisciplinary links often make these issues challenging to comprehend. Economics, Game Theory and International Environmental Agreements: The Ca' Foscari Lectures aims to introduce students to the multidimensional character of international environmental problems in general, and climate change in particular. Ecology, economics, game theory and diplomacy are called upon and brought together in the common framework of a basic mathematical model. Within that framework, and using tools from these four disciplines, the book develops a theory that aims to explain and promote cooperation in international environmental affairs. Other books on the topic tend to be research-oriented volumes of various papers. Instead, this is a book that offers a reasonably-sized synthesis of the multidimensional societal problems of transfrontier pollution, particularly of climate change. It uses mathematical modeling of economic and game theory concepts to examine these environmental issues and demonstrate many results in an accessible fashion. Readers interested in understanding the links between ecology and economics, as well as the connection between economics and institutional decision-making, will find in this text not only answers to many of their queries but also questions for further thinking.

Despite the growing consensus on the need for action to counteract climate change, complex economic and political forces have so far prevented international actors from making much headway toward resolving the problem. Most approaches to climate change are based in economics and environmental science; in this book, Parkash Chander argues that we can make further progress on the climate change impasse by considering a third approach—game theory. Chander shows that a game-theoretic approach, which offers insight into the nature of interactions between sovereign countries both strategically and the kinds of outcomes such interactions produce, can illuminate how best to achieve international agreements in support of climate-change mitigation strategies. Game Theory and Climate Change develops a conceptual framework with which to analyze climate change as a strategic or dynamic game, bringing together cooperative and noncooperative game theory and providing practical analyses of international negotiations. Chander offers economic and game-theoretic interpretations of both the Kyoto Protocol and the Paris Agreement and argues that the Paris Agreement may succeed where the Kyoto Protocol failed. Finally, Chander discusses the policy recommendations his framework generates, including a global agreement to support development of cleaner technologies on a global scale.

Policy failures in environment and development have been blamed on fragmented and eclectic policies and strategies. The 1992 United Nations Conference on Environment and Development, the 'Earth Summit' in Rio de Janeiro, called therefore for an integrated approach in planning and policy making to achieve long-term sustainable growth and development. The Conference also recognized in its plan, the Agenda 21, that integrated policies need to be supported by integrated information, notably requiring the implementation of integrated environmental and economic accounting by its mem-

During the preparations for the Rio Summit, scientists and practitioners of national accounting met in a Special Conference on Environmental Accounting, organized by the International Association for Research in Income and Wealth (IARIW) in Baden, Austria. Their aim was to explore the need for and methodologies of adjusting national accounts for environmental reasons. National accountants have mounting criticism that conventional accounting neglected new scarcities in natural capital, as well as the social cost of environmental degradation. The result of their deliberations was a draft manual issued by the United Nations Statistics Division (UNSD) as a handbook of Integrated Environmental and Economic Accounting.

Handbook of Environmental Psychology and Quality of Life Research

Experiments on Energy, the Environment, and Sustainability

Optimal Control Theory and Static Optimization in Economics

Allocation, Economics and Policy

Environmental Economics: A Very Short Introduction

A Study on the Economic Theory and Political Economy of Environmental Quality Improvements in the Course of Economic Growth

Presents a collection of research findings on topical issues in international trade theory and policy. This work deals with trade liberalization and outsourcing. It examines trading clubs and preferential trading agreements. It features six chapters on the various aspects of trade and aid.

Presents experimental economics research focusing on issues of environmental quality and sustainability. This title covers such topics as institutions for cap-and-trade, eco-tourism, urban sprawl, and optimal pollution control strategies.

Provides an applied, practical approach to environmental economic theory that is accessible to students who have had minimal exposure to economics as well as those with an advanced understanding. With a strong focus on policy and real-world issues, Callan/Thomas's ENVIRONMENTAL ECONOMICS AND MANAGEMENT: THEORY, POLICY AND APPLICATIONS, Fifth Edition, complements economic theory with timely, real-world applications. Undergraduate or MBA students gain a clear perspective of the relationship between market activity and the environment. This text integrates a strong business perspective into the development of environmental decision making for a unique vantage point often overlooked in more conventional approaches. Students learn to use economic analytical tools, such as market models, benefit-cost analysis, and risk analysis, effectively to assess environmental problems and to evaluate policy solutions. With a proven, modular structure, this edition provides a well-organized presentation with the flexibility to tailor the presentation to your needs. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Marine pollution causes significant damage to fisheries and other economically productive uses of the ocean. The value of that damage can be quantified by economists, but the meanings of those valuations and how they are derived are often obscure to noneconomists. Economic Losses from Marine Pollution brings a fuller understanding of the variety and extent of marine losses and how they are assessed to scientists, lawyers, and environmentalists by systematically identifying and classifying marine losses and relating them to models and methods of economic valuation. The authors use a step-by-step approach to show how economists have used these methods and how they approach the problem of assessing economic damage. The book begins by describing the importance of economic valuation of marine damages, the history of concern over marine pollution, and the development of economic methodologies to assess damage from it. Following that, the book: considers types of marine pollution and their effects on organisms, ecosystems, and humans, and the corresponding economic effects of those biological impacts introduces the economic principles and methods needed to understand and to assess economic damages expresses losses from water quality impairments in terms of economic value introduces the basic economic techniques that have been developed and used to measure changes in economic value discusses how to apply those economic techniques, and presents a variety of practical examples explores limitations and problems that can arise in such applied work. Economic Losses from Marine Pollution includes all of the relevant economic theory together with specific examples of how that theory has been and can be applied. It offers environmental professionals with little or no background in economics the basic economic tools needed to understand economic valuations of environmental damage, and represents a unique handbook for environmental and marine scientists, lawyers, economists, policy professionals, and anyone interested in issues of marine water quality.

Economic Theory for Environmentalists

CO2 Policy Performance in Comparative Perspective

Natural Resources

Share Ownership Distribution, Non-renewable Resources Extraction Rate and Pollution Intensity

Environmental Economics and Management: Theory, Policy, and Applications

Emerging Policy Solutions

This edition of the Southeast Asian Economic Outlook examines the macroeconomic situation and medium-term growth prospects for countries in the region; structural challenges; green growth strategies, policies and institutions; and environmental taxes.

Economic Theory for Environmentalists is a much-needed and heralded new book that examines the implications of neoclassical economic theory and how it relates to the environment and environmental activity. It addresses the ongoing conflict between market forces and environmental integrity and explains how neoclassical economic theory views the relationship between economic activity and the natural world. Each chapter outlines the concepts of economic theory and the relevance of its environmental and policy implications. It focuses on both micro and macro-economics.

Policy tools such as price and income elasticities, consumer surplus and methods for measuring the economic value of environmental resources are discussed. A case study which examines a range of

policy options is presented. Examples are also given throughout the text to illustrate regional and international policy questions. Presented in a simple and easy to understand manner, this valuable book is suited for anyone dealing with environmental, economic, or policy issues.

This unique book makes a contribution to the deeper understanding of various trade-related investment measures (TRIMs). The issues have been largely inspired by the use of trade policies on foreign investment adopted in China and many other nations from the 1960s to the 1990s. Building upon the existing literature and the authors' own work, the 20 chapters in the book examine, using several versions of general-equilibrium frameworks, resource allocation and welfare effects of both trade-related investment measures and investment-related trade/environmental measures. Traditional and duality microeconomic tools and modelling techniques have been extensively utilised in analysing various real-world, investment and environmental issues, especially those encountered in developing economies. Policy implications regarding optimal trade, investment and environmental policies that emerged from the analyses are also provided. This book is self-contained in applications of trade theories and related general-equilibrium modelling techniques. It may be used as an advanced textbook in trade theory and policy as well as a reference book for policy makers, professional practitioners and academic researchers in designing trade policies.

Nonpoint-source pollution (NPSP) poses a special challenge to society's ability to manage its collective environmental good - especially surface and groundwater quality. Since there is no 'point', such as an outfall pipe, from which the pollution is being discharged and can be measured, pollution can reach the ambient environment without being monitored. Since management of air and water pollution requires the definition and enforcement of limits on discharges or the imposition of fees on those discharges, inability to measure limits our ability to manage this environmental problem. This book presents a state-of-the-art review and discussion of economists' efforts to resolve this major problem and attempts to provide a way of working around it. The book sets forth the theoretical issues, modeling, and the actual programs set up to confront this issue.

A Contemporary Approach

Principles of Environmental Economics and Sustainability

Optimal Control with Economics and Management Science Applications

Theory and Implementation of Economic Models for Sustainable Development

Economics of the Environment

In this book, first published in 1990, Judith Rees considers the spatial distribution of resource availability, development and consumption, and the distribution of resource-generated wealth and welfare. Showing that there are no simple answers, she analyses the complex interactions between economic forces, administrative structures and political institutions. This well-structured text is essential reading for upper-level students in geography, environmental planning, economics and resource management.

The Second Edition of *Economic Theory and the Cities* has been revised and expanded with both the graduate student and the practicing professional in mind. Providing a state-of-the-art synthesis of important theoretical topics in urban economics, the volume emphasizes the fundamental links between urban economics and new developments in mainstream economic theory. From the Preface: In this book I present what I believe to be the most important theoretical topics in urban economics. Since urban economics is a rather diffuse field, any presentation is necessarily selective, reflecting personal tastes and opinions. Given that, I note on what basis I chose the material that is presented and developed. First, the basic spatial model of a monocentric city is presented, since it lays the foundation for thinking about many of the topics in urban economics. The consideration of space and spatial proximity is one central feature of urban economics that distinguishes it from other branches of economics. The positive and negative externalities generated by activities locating in close spatial proximity are central to analysis of urban phenomena. However, in writing this book I have tried to maintain strong links between urban economics and recent developments in mainstream economic theory. This is reflected in the chapters that follow, which present models of aspects of the most important topics in urban economics--externalities, housing, transportation, local public finance, suburbanization, and community development. In these chapters, concepts from developments in economics over the last decade or so are woven into the traditional approaches to modeling these topics. Examples are the role of contracts in housing markets and community development; portfolio analysis in analyzing housing tenure choice and investment decisions; the time-inconsistency problem in formulating long-term economic relationships between communities, developers, and local governments; search in housing markets; and dynamic analysis in housing markets and traffic scheduling. The book ends with chapters on general equilibrium models of systems of cities, demonstrating how individual cities fit into an economy and interact with each other. This book is written both as a reference book for people in the profession and for use as a graduate text. In this edition, a strong effort has been made to present the material at a level and in a style suitable for graduate students. The edition has greatly expanded the sections on housing and local public finance so these sections could be studied profitably by a broad range of graduate students. Recommended prerequisites are an undergraduate urban economics course and a year of graduate-level microeconomic theory. It is possible that the book can be used in very advanced undergraduate courses if the students are well versed in microeconomics and are quantitatively oriented. Key Features * Focus on the basic spatial model of the monocentric city * Expanded sections on housing and local public finance * Discussion of the critical role of spatial proximity of different economic activities, such as housing, transportation, and community development

'Buz Brock's contribution to economic theory in general and economic dynamics in particular are characterized by an unmatched richness of ideas and by deep theoretical, empirical as well as computational analysis. Brock's contribution to economic dynamics range from one extreme of the field, global stability of stochastic optimal growth models, to another extreme, market instability and nonlinearity in economic and financial modelling and data analysis. But his work also includes environmental and economic policy issues and, more recently, the modelling of markets as complex adaptive systems. This collection of essays reflects Brock's richness of ideas that have motivated economists for more than three decades already and will continue to influence many economists for the next decades to come.' - Cars H. Hommes, University of Amsterdam, The Netherlands 'Buz Brock has been, from the beginning of his career, one of the most original thinkers in dynamic economics. His early work showed that growth with random elements could be studied effectively and above all posed exactly the right questions. His more recent work has brought complexity theory to the fore and shown its implications for financial and other markets. In the process, he has both introduced and used econometric tools to show the relevance of his work to empirically observed phenomena. It is very useful to have his work in collected form.' - Kenneth J. Arrow, Stanford University, US This outstanding collection of William Brock's essays illustrates the power of dynamic modelling to shed light on the forces for stability and instability in economic systems. The articles selected reflect his best work and are indicative both of the type of policy problem that he finds challenging and the complex methodology that he uses to solve them. Also included is an introduction by Brock to his own work, which helps tie together the main aspects of his research to date.

There is widespread concern for long-term environmental issues in relation to economic processes and developments. Among the concerned scientists are economists, who have taken up the challenge to apply economic insights and tools for the study of long-term environment-economy interactions, and to give the concept of sustainable development 'economic hands and feet'. This book presents a pluralistic perspective on efforts, problems and successes in this area. This collection of papers was originally prepared for an international symposium titled *Economic Modelling of Sustainable Development: Between Theory and Practice*, which was hosted by the Vrije

Universiteit in Amsterdam, on December 20th 1996. The main motivation for this symposium was that the usefulness of the concept of sustainable development for theoretical and applied modelling is still being debated; growth theorists, resource economists, ecological economists, policy makers and many others are trying to deal with the concept in various, and sometimes conflicting, ways. The aim of the symposium was to bring together different theoretical and implementational perspectives on modelling for sustainable development. We hope that this volume will inform a wide audience about the perspectives and progress in this important area of research, as well as stimulate further research, notably on applied modelling and practical methods for the analysis of sustainable development at various (spatial) scales. The papers have, in due course, been revised several times based on comments made by discussants, referees and the editors.

Principles of Environmental Economics

Public Finance in Theory and Practice Second edition

Intermediate Microeconomic Theory

A History of Economic Theory and Method

Neutrosophic Sets and Systems, Vol. 47, 2021

Economic Losses from Marine Pollution

Economics, as intellectual discourse, is not a settled body of principles; it is a heterogeneous discipline with numerous traditions, each based on a cluster of theories. Ekelund and Hebert, experienced researchers and educators, balance continuity and consensus in the evolution of economic theory with alternative points of view about the nature, scope, and method of economic inquiry. Their creative approach gives readers a feel for the thought processes of the great minds in economics and underscores key ideas impacting contemporary thought and practice. Building on the solid foundation of previous editions, the fifth edition of A History of Economic Theory and Method presents an updated and expanded examination of the essential theoretical elements of an economy and the numerous institutions that affect market behavior, beginning with the ancient Greeks and ending with the late twentieth century. It features an in-depth interpretation of the transition from classical to neoclassical economic thought, exposes some of the dissident voices raised against classical economic orthodoxy, discusses game theory, takes a close look at the origins of traditional microeconomics, avoids highly technical or graphically complicated material, and examines the advantages and disadvantages of economics achieving a scientific status applying mathematical and statistical techniques in economic inquiry. Chapters contain boxed material that enrich touchstone ideas or mark procedural disagreements and alternative approaches to economics.

Recent years have witnessed considerable consolidation between the disciplines of environmental and ecological economics at research level, but until now textbooks in the area have done little to reflect this. Ahmed Hussen's book is to date the only one to reconcile the two standpoints. The central focus of the book will continue to be on this systematic integration of both mainstream and ecological approaches to environmental economics, and an acknowledgement that enduring solutions to major contemporary environmental challenges can be obtained through studies based on a well-conceived and balanced interdisciplinary approach. However, this third edition also contains much that is new. Chiefly, brand new chapters appear covering the following topics: The economics of climate change The economics of biodiversity and ecosystem services 'Green' accounting and alternative economic and social indicators of sustainability The business case for environmental sustainability An Appendix that provides a brief historical account of the development of ecological economics The result is a comprehensive introduction to the main facets of environmental and ecological economics – a text that boldly refuses to put up barriers between disciplines and takes a holistic approach to vital issues. This student-friendly textbook contains a variety of study tools including learning points, boxed features, case studies, revision questions and discussion questions, and an Appendix that provides students with a review of basic economic principles relevant to the study of the environment and its management. Written in a clear and accessible style, this book will prove an excellent choice for introducing both students and academics to the world of environmental economics.

This Handbook presents a broad overview of the current research carried out in environmental psychology which puts into perspective quality of life and relationships with living spaces, and shows how this original analytical framework can be used to understand different environmental and societal issues. Adopting an original approach, this Handbook focuses on the links with other specialties in psychology, especially social and health psychology, together with other disciplines such as geography, architecture, sociology, anthropology, urbanism and engineering. Faced with the problems of society which involve the quality of life of individuals and communities, it is fundamental to consider the relationships an individual has with his different living spaces. This issue of the links between quality of life and environment is becoming increasingly significant with, at a local level, problems resulting from different types of annoyances, such as pollution and noise, while, at a global level, there is the central question of climate change with its harmful consequences for humans and the planet. How can the impact on well-being of environmental nuisances and threats (for example, natural risks, pollution, and noise) be reduced? How can the quality of life within daily living spaces (home, cities, work environments) be improved? Why is it important to understand the psychological issues of our relationship with the global environment (climatic warming, ecological behaviours)? This Handbook is intended not only for students of various disciplines (geography, architecture, psychology, town planning, etc.) but also for social decision-makers and players who will find in it both theoretical and methodological perspectives, so that psychological and

environmental dimensions can be better taken into account in their working practices.

Optimal Control theory has been increasingly used in Economi- and Management Science in the last fifteen years or so. It is now commonplace, even at textbook level. It has been applied to a great many areas of Economics and Management Science, such as Optimal Growth, Optimal Population, Pollution control, Natural Resources, Bioeconomics, Education, International Trade, Monopoly, Oligopoly and Duopoly, Urban and Regional Economics, Arms Race control, Business Finance, Inventory Planning, Marketing, Maintenance and Replacement policy and many others. It is a powerful tool of dynamic optimization. There is no doubt social sciences students should be familiar with this tool, if not for their own research, at least for reading the literature. These Lecture Notes attempt to provide a plain exposition of Optimal Control Theory, with a number of economic examples and applications designed mainly to illustrate the various techniques and point out the wide range of possible applications rather than to treat exhaustively any area of economic theory or policy. Chapters 2,3 and 4 are devoted to the Calculus of Variations, Chapter 5 develops Optimal Control theory from the Variational approach, Chapter 6 deals with the problems of constrained state and control variables , Chapter 7, with Linear Control models and Chapter 8, with stabilization models. Discrete systems are discussed in Chapter 9 and Sensitivity analysis in Chapter 10. Chapter 11 presents a wide range of Economics and Management Science applications.

Environmental Accounting in Theory and Practice

Theory and Policy

Tools and Step-by-Step Examples

Fifth Edition

Regulation Theory and Sustainable Development

An Integrated Economic and Ecological Approach

Optimal Policy Structure in Natural Resource and Environmental Economics

Can economic growth be environmentally sustainable? This crucial question goes right to the heart of environmental economics and is a matter of increasing concern globally. The first edition of this popular title was the first introductory textbook in environmental economics that truly attempted to integrate economics with not only the environment but also ecology. This new version builds and improves upon the popular formula with new material, new examples, new pedagogical features and new questions for discussion. With international case-studies and examples, this book will prove an excellent choice for introducing both students and other academics to the world of environmental economics.

There is increasing concern for scarcity of natural resources and deterioration of the environment due to economic activity. Although theoretically the Hotelling rule not only provides an optimal extraction for the resource owner's profit maximization problem but also provides the optimal solution for society as a whole, the rule fails to fit the facts and only applies to the idealised world for which it was constructed. In particular, when the resource firm realises it can affect its price depending on extraction, shareholders will disagree on the extraction rate. Thus, how to deal with the shareholders' interests and make decisions for resource firms is of central importance. Endogenizing firms' objectives through shareholder voting via majority rule is considered as the solution. This thesis analyzes the behaviour of resources firms in shareholder voting equilibrium when the firms' decisions are taken through shareholder voting. Firstly, theoretical models are formulated for the extraction rate and pollution intensity of resources firms respectively. We show that the share ownership owned by the largest shareholder is an important determinant of extraction rate and pollution intensity. Moreover empirical studies using panel data are conducted to test the hypothesis. We find strong evidence supporting our theoretical implications. As for the extraction rate in resource firms, the results indicate a significant and negative relation between extraction rate and the share owned by the largest shareholder. However, a significantly positive relation is found using oil fields level data. As for the pollution emissions in firms, we find the firm where the largest shareholder holds a larger share will have lower pollution intensity.

Optimal control theory is a technique being used increasingly by academic economists to study problems involving optimal decisions in a multi-period framework. This textbook is designed to make the difficult subject of optimal control theory easily accessible to economists while at the same time maintaining rigour. Economic intuitions are emphasized, and examples and problem sets covering a wide range of applications in economics are provided to assist in the learning process. Theorems are clearly stated and their proofs are carefully explained. The development of the text is gradual and fully integrated, beginning with simple formulations and progressing to advanced topics such as control parameters, jumps in state variables, and bounded state space. For greater economy and elegance, optimal control theory is introduced directly, without recourse to the calculus of variations. The connection with the latter and with dynamic programming is explained in a separate chapter. A second purpose of the book is to draw the parallel between optimal control theory and static optimization. Chapter 1 provides an extensive treatment of constrained and unconstrained maximization, with emphasis on economic insight and applications. Starting from basic concepts, it derives and explains important results, including the envelope theorem and the method of comparative statics. This chapter may be used for a course in static optimization. The book is largely self-contained. No previous knowledge of differential equations is required.

Growth Theory, Nonlinear Dynamics, and Economic Modelling

A Course in Environmental Economics

Business Leaders and Ecological Modernisation

Theory and Applications

Southeast Asian Economic Outlook 2011/12

The Theory and Practice of Command and Control in Environmental Policy

'Martin Enevoldsen's book is a pioneering work that compares the impacts of various non-regulatory environmental strategies in achieving measurable pollution reductions. Much has been written on the theoretical virtues and drawbacks of green taxation versus the adoption of voluntary agreements when it comes to effective implementation of environmental goals. In convincing detail, this book makes the case for the effectiveness of environmental taxation, its barriers being primarily political in nature rather than economic. Green taxes are highly controversial even in the most environmentally conscious nations, particularly when they are regarded as a purely fiscal instrument. The successful Danish CO2 taxation on industry, which this study proves to be much more effective than the Dutch system of voluntary agreements or the Austrian laissez-faire policies, relied not only on the inducement of the CO2 tax itself; all of the tax revenue was ploughed back into industry as subsidies for investments in advanced energy saving technologies. Martin Enevoldsen's book is simply a "must" for political scientists, environmental economists and environment policymakers.' - Svend Auken, M.P. and former Danish Minister for Environment and Energy Although there is a huge demand for accurate analysis of environmental policy outcomes in both the academic and policy-making communities, there is currently very little theoretical research on this issue. This ambitious book redresses the balance by constructing a new theoretical framework at the crossroads between economics and political science to account for the effectiveness of environmental governance. Drawing on insights from new institutional economics, environmental economics, collective action theory and social capital theory, the author analyses how policy outcomes are influenced by institutional factors that constrain and empower the target groups of environmental regulation.

Papers on neutrosophic statistics, neutrosophic probability, plithogenic set, paradoxism, neutrosophic set, NeutroAlgebra, etc. and their applications.

After decades of regulation and investment to reduce point source water pollution, OECD countries still face water quality challenges (e.g. eutrophication) from diffuse agricultural and urban sources of pollution, that is disperse pollution from surface runoff, soil filtration....

If environmental protection is costly, how much should we spend on pollution control? Is it worth reducing pollution to zero, or should we accept some level of pollution because of the economic benefits associated with it? How can we assess the benefits that people get from a less-polluted atmosphere? In broad terms, environmental economics looks at how economic activity and policy affect the environment in which we live. Some production generates pollution, such as power station emissions causing acid rain and contributing to global warming, but household consumption decisions also affect the environment, where more consumption can mean more waste sent to polluting incinerators. However, pollution is not an inevitable consequence of economic activity - environmental policies can require polluting firms to clean up their emissions, and can encourage people to change their behaviour, through environmental taxes on polluting goods, for example. Generally, though, these measures will involve some costs, such as installing pollution control equipment. So there's a trade-off: a cleaner environment, but economic costs. In recent years, many economists have argued for greater use of incentive in the form of pollution charges and emissions trading rather than more traditional direct regulation of polluters. In this Very Short Introduction, Stephen Smith discusses environmental issues including pollution control, reducing environmental damage, and global climate change policies, answering questions about how we should balance environmental and economic considerations, and what form government policies should take. Including many illustrative case studies and examples he shows that this is an exciting field of economics, and one that is at the heart of many public debates and controversies. ABOUT THE SERIES: The Very Short Introductions series from Oxford University Press contains hundreds of titles in almost every subject area. These pocket-sized books are the perfect way to get ahead in a new subject quickly. Our expert authors combine facts, analysis, perspective, new ideas, and enthusiasm to make interesting and challenging topics highly readable.

Citizenship and Social Rights

Trade-Related Investment Measures

The Interdependence of Self and Society

Introductory Optimization Dynamics

The Theory of Environmental Policy

Environmental Ethics: Readings in Theory and Application

This broad-ranging text offers an analysis of the idea of citizenship and its relevance to social problems and social policies in advanced industrial societies. Twine demonstrates that two concepts are essential to an understanding of the issue of citizenship: the socially embedded nature of human agents, and their interdependence both with each other and with the natural and social worlds they inhabit. Twine emphasizes the social nature of individual needs and individual rights. He shows that interdependence is not limited to the mutual linkages within advanced industrial societies, but extends both to the relations between advanced and developing nations and to the environmental contexts of human existence.

The events of the last decade have challenged the contemporary neo-classical synthesis in all branches of economics, but particularly public finance. The most notable feature of the 2nd edition of Public Finance in Theory and Practice is the infusion of behavioral economics throughout the text, with an end of chapter question inviting the student to apply a behavioral lens to some question or issue. There continues to be an emphasis on the importance of the institutional context, drawing on examples from many countries and emphasizing the role of lower level governments in a federal system. The first five chapters establish this context by reviewing the role of government in a market system, the description of government structure from an economic perspective, the basic data about revenue and expenditures, the elements of public choice, and the distributional role of government. The book has been substantially reorganized to put more emphasis on public expenditure. Expanded treatment of public goods includes common property resources and congestible or club goods. Expanded discussion of budgeting and cost-benefit analysis provides some practical application of the theory. Updated discussions of social security, public education and health care address these three major contemporary public finance issues. The traditional emphasis on revenue (taxes, fees and grants) has been retained but follows rather than precedes the discussion of expenditures.

Game Theory and Climate Change

A Handbook For Assessment

Scientific Essays of William Allen Brock