

# CODE

Center for the study of Organizations and Decisions in Economics

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## ACTIVITY REPORT 1998

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## 1. INTRODUCTION

The Center for the Study of Organizations and Decisions in Economics (CODE) is a research center at the Universitat Autònoma de Barcelona, created in 1995 to promote high quality research in the theory of economic decisions and organizations. Since the beginning of its activities, CODE's main goal is to provide an environment allowing excellence in research as measured by the international standards of scientific quality.

CODE's permanent members belong to the Department of Economics at the UAB, which has pioneered in Economics Research for the last twenty years. The Department is still the natural meeting point for the activities, like undergraduate and doctoral education, for which diversity of interests and abilities are most important.

The activity report strives to be a regular publication that our colleagues look forward to be available. The present edition cover the activities performed during 1998.

In its fourth year of activities, CODE has hosted 19 visitors from all over the world for stays ranging from one month to one year. Research activities can be grouped in five areas: Financial Economics/Macroeconomics, Industrial Organization, Mathematical Economics, Public Economics and Social Choice/Game Theory. All this research is developed through 15 research project financed by the Spanish Ministry of Education, the Catalan Government (Generalitat de Catalunya) and the European Union. It has materialized in 21 papers published in the leading economic journals and the participation of CODE members in the main academic meetings, both as organizers and as participants.

All in all we hope this report reflects the commitment of CODE to build an increasingly consistent research center that can be taken as a reference point of top quality research within in Europe and beyond.

## 2. MEMBERS

### 2.1. RESEARCHERS

**BARBERÀ SÁNDEZ, Salvador**

Ph.D.: Northwestern University (1975)

Fields of Specialization: Public Economics, Social Choice.

**BEVIÀ BAEZA, Carmen**

Ph.D.: Universidad de Alicante (1994)

Fields of Specialization: Social Choice.

**CABALLÉ VILELLA, Jordi**

Ph.D.: University of Pennsylvania (1989)

Fields of Specialization: Finance, Economic Growth

**FRADERA GARRIGA, Isabel**

Ph.D.: Northwestern University (1980)

Fields of Specialization: Mathematical Economics, Imperfect Competition.

**MACHO-STADLER, Inés**

Ph.D.: École des Hautes Études en Sciences Sociales, Paris (1989)

Fields of Specialization: Economics of Information, Industrial Organization, Public Economics.

**MARTÍNEZ GIRALT, Xavier**

Ph.D.: CORE, Université Catholique de Louvain (1988)

Fields of Specialization: Industrial Organization, Health Economics.

**MARTÍNEZ LEGAZ, Juan Enrique**

Ph.D.: Universitat de Barcelona (1981)

Fields of Specialization: Optimization Theory, Convex Analysis, Mathematical Economics.

**MASSÓ CARRERAS, Jordi**

Ph.D.: State University of New York at Stony Brook (1988)

Fields of Specialization: Game Theory, Industrial Organization, Social Choice.

**OLIVELLA CUNILL, Pau**

Ph.D.: Northwestern University (1989)

Fields of Specialization: Economics of Information, Public Economics.

**PÉREZ-CASTRILLO, David**

Ph.D.: École des Hautes Études en Sciences Sociales, Paris (1991)

Fields of Specialization: Economics of Information, Industrial Organization, Game Theory.

**PONSATÍ OBIOLS, Clara**

Ph.D.: University of Minnesota (1988)

Fields of Specialization: Game Theory.

## 2.2. ACADEMIC VISITS

**BOSSERT, Walter**

University of Nottingham, UK

September

**DUTTA, Bhaskar**

Indian Statistical Institute, India

May-June

**GERBER, Anke**

University of Bielefeld, Germany  
October-November

**JACKSON**, Matthew  
California Institute of Technology, USA  
November

**LaCASSE**, Chantalle  
University of Ottawa, Canada  
May-June

**MASCHLER**, Michael  
Hebrew University of Jerusalem, Israel  
September-October

**NEME**, Alejandro  
Universidad Nacional de San Luis, Argentina  
November 98-February 99

**OVIEDO**, Jorge  
Universidad Nacional de San Luis, Argentina  
February

**PEREA**, Andrés  
University of Maastricht ,The Netherlands  
September 97 to June 98

**RIEDINGER**, Nicolas  
École Polytechnique, France  
April to July

**RUBINOV**, Alexander  
School of Information,  
Technology and Mathematical Sciences, Australia  
June

**SEN**, Arunava  
Indian Statistical Institute, India  
May-June

**SCHAIBLE**, Siegfried  
University of California, Riverside, USA  
June

**SLOTH**, Birgitte  
University of Copenhagen

March

**VEUGELERS**, Reinilde  
University of Leuven, Belgium  
April

**WETTSTEIN**, David  
University of Ben-Gurion, Israel  
September 98-January 99

**WOODERS**, Myrna  
University of Toronto, Canada  
June

**ZWICKER**, William  
Union College, NY, USA  
December 98-April 99

### 2.3. ADMINISTRATIVE STAFF

**IGLESIAS HERNÁNDEZ**, Conxa  
**VALLEJO TEY**, Marta

## 3. AREAS OF RESEARCH

### **Financial Economics-Macroeconomics**

- 1.Security Design with Several Projects and Insider Trading (Jordi Caballé)
- 2.The Sources of Volatility in Financial Markets with Insider Trading (Jordi Caballé)

### **Industrial Organization**

- 1.Iceberg Transport Costs (Xavier Martinez-Giralt)
- 2.The impact of the "Chunnel" on the Location of Production Activities (Xavier Martinez-Giralt)
- 3.On the Effects of Antidumping Legislation (Xavier Martinez-Giralt)
- 4.Telecommunication Technologies and Location of Activities (Xavier Martinez-Giralt)
- 5.Simple Mechanisms to Implement Stable Situations in Labor Markets (David Pérez-Castrillo)

### **Mathematical Economics**

1.Convexity in Cooperative Game Theory (Isabel Fradera and Juan Enrique Martínez-Legaz)

## **Public Economics**

- 1.Optimal Inspection Policies (Inés Macho-Stadler and David Pérez-Castrillo)
- 2.Fiscal Amnesties (Pau Olivella)
- 3.Public and Private Provision of Health Care (Xavier Martínez-Giralt)
- 4.Waiting Lists in the Health Care System (Pau Olivella)
- 5.Provision of Incentives in Health Care Systems (Inés Macho-Stadler)

## **Social Choice Theory-Game Theory**

- 1.Non-manipulable Voting Mechanisms and Feasibility Restrictions (Salvador Barberà and Jordi Massó)
- 2.Cooperative Game Theory and Compromise Values (Jordi Massó)
- 3.Axiomatic Analysis of Iterative Negotiations (Clara Ponsatí)
- 4.Non-cooperative Negotiation Games with Outside Options (Clara Ponsatí)
5. Properties of the Set of Stable many-to-one Matchings (Jordi Massó)

## **4. RESEARCH PROJECTS**

A brief description is given of the research projects in which the members of CODE are involved. These projects are financed by the Ministry of Education and Science through the Inter-Ministerial Commission of Science and Technology, by the Government of Catalonia and by the European Community.

Title:Cooperation and Competition: Studies on Strategic Behaviour and Institutional Design. DGICYT PB96-1192 (3 years)

Team coordinator: Salvador Barberà

Description: This project study games and institutions from a strategic viewpoint. We try to overcome the rigid separation between what is cooperative and what is non-cooperative and mix both types of considerations. The implentability cooperative objectives and the social consequences of non-cooperative processes are examples of questions we ask both for abstract games and for specific institutional contexts. The latter include large markets, voting situations, firms and different governmental policies.

Title: Comissionat per a Universitats i Recerca. Generalitat de Catalunya SGR98-62 (2 years)

Team coordinator: Salvador Barberà

Description: Support to top quality research groups

Title: Comissionat per a Universitats i Recerca. Generalitat de Catalunya SGR96-75 (2 years)

Team coordinator: Salvador Barberà

Description: Support to top quality research groups

Title: Association Sud-Européenne d'Economie Théorique -ASSET-  
CEE-HCM CHRXCT940465

Team coordinator: Salvador Barberà

Description: Network.

Title: Convexity and Indivisibilities in Cooperative Games: Theory and Economic Applications.

DGICYT PB95-0679 (3 years)

Team coordinator: Juan E. Martínez Legaz

Description: Analysis of the role of convexity in cooperative game theory and its implications for economics models.

Title: Programa de Cooperación Científica con Iberoamérica

Team coordinator: Jordi Massó

Description: Cooperation program UAB-Universidad Nacional de San Luís, Argentina.

Title: Xarxa Temàtica Barcelona-Jocs

Team coordinator: Jordi Massó

Description: Series of seminars. The last Monday of every month in Barcelona.

Title: Programa Cátedra FBBV

Team coordinator: Clara Ponsatí

Description: Grants for foreign researchers in Spain.

Title: Mix Duopoly in Health Care Markets HP 1997-0062. (1 year)

Team coordinator: Xavier Martínez-Giralt

Description: Bilateral Research Project (Spain/Portugal)

Title: Programa Hispano-Norteamericano de Cooperación Científica y Tecnológica (1year)

Team coordinator: Salvador Barberà

Description: Bilateral Research Project (Spain/USA)

Title: Topics in Public Economics: Economics of Innovation and Health Economics PB97-0181 (2 years)

Team coordinator: Inés Macho-Stadler

Description: This project consists in applying the microeconomic analysis to two aspects of Public Economics. The first refers to the Economics of Technological Change, and the second refers to Health Economics. The aim is to obtain normative conclusions that are useful in the design of desirable technological and health policy. First, we attempt to study the optimal technological policy with respect to joint research projects and mergers, while at the same time analyzing the appropriate combination of institutional and administrative mechanisms in a technological policy. Second, we attempt to study the way in which the private and public provision of health services may coexist. As a particular case, we will analyze the MUFACE

system in Spain. We also want to engage in the design of the best organization of each the health systems, as well as the demand-cost-sharing schemes and the incentive mechanisms directed to the service providers.

Title: Modelos dinámicos: aplicaciones a la macroeconomía y al crecimiento económico PB96-1160-C02-02 (three years)

Team coordinator: Jordi Caballé

Description: In this project we intend to apply some techniques borrowed from dynamic economics to macroeconomic theory. We emphasize the applications to the areas which are more active in the present, like growth theory and exogenous and endogenous business cycles.

## 5. PUBLICATIONS AND WORKING PAPERS

**BARBERÀ**, Salvador

- (Joint with A. BOGOMOLNAIA and H. VAN DER STEL), "Strategy-Proof Probabilistic Rules for Expected Utility Maximizers", *Mathematical Social Sciences*, 35.
- (Joint with J. MASSÓ and S. SERIZAWA), "Strategy-Proof Voting on Compact Ranges", *Games and Economic Behavior*, 25.
- (Joint with J. MASSÓ and A. NEME), "Maximal Domains of Preferences Preserving Strategy-proofness for Generalized Median Voters Schemes", *Social Choice and Welfare*, 16, 1999.
- (Joint with M. MASCHLER and J. SHALEV), "Voting for Voters: A Model of Electoral Evolution", Discussion Paper #170, Center for Rationality and Interactive Decision Theory.
- "Notas sobre incertidumbre, flexibilidad, y ordenaciones de conjuntos", *ISEGORÍA, Revista de Filosofía Moral y Política*, 18.
- (Joint with A. PEREA), "Supporting others and the Evolution of Power", mimeo.
- (Joint B. DUTTA and A. SEN), "Strategyproofness of Social Choice Correspondences", mimeo.

**BEVIÁ**, Carmen

- "Fair Allocation in a General Model with Indivisible Goods", *Review of Economic Design*, 108.

¥ **CABALLÉ, Jordi**

- "Growth Effects of Taxation under Altruism an Low Elasticity of Intertemporal Sustitution", Economic Journal, 108.

**MACHO-STADLER, Inés**

- (Joint with J.D. PÉREZ-CASTRILLO), "Centralization and Decentralization in Moral Hazard Environments", Journal of Industrial Economics, 46.

- (Joint with J.D. PÉREZ-CASTRILLO and C. PONSATÍ), "Stable Multilateral Trade Agreements", Economica, 65.

- (Joint with M.P. ESPINOSA and I. AGUIRRE), "Strategic Entry Deterrance through Spatial Price Discrimination", Regional Science and Urban Economics, 28.

- (Joint with F. BARROS), "Competition for Managers and Product Market Efficiency", Journal of Economics and Management Strategy, 7.

- "Incentivos en los servicios sanitarios", in Calidad y costes en la contratación de servicios de salud, edited by Pere Ibern, Springer-Verlag, forthcoming.

- (Joint with I. JELOVAC), "Comparing Organizational Structures in Health Services", WP 412.98 UAB.

- (Joint with J.D. PÉREZ-CASTRILLO), "Centralized and Decentralized Contracts in a Moral Hazard Environment", Journal of Industrial Economics, vol. XLVI, 4.

**MARTÍNEZ GIRALT, Xavier**

- (Joint with P.P. BARROS), "On the Effects of AntiDumping Legislation", Regional Science and Urban Economics, 29(1).

- (Joint with J.M. CHAMORRO), "Telecommunication Technologies and Urban Spatial Structure", WP 368.97, UAB.

**MARTÍNEZ LEGAZ, Juan Enrique**

- (Joint with I. Singer), "On Phi-Convexity of Convex Functions", Linear Algebra and Its Applications, Vol. 278.

- Editor (Joint with J.P. Crouzeix and & M. Volle), "Generalized Convexity, Generalized Monotonicity: Recent Results", Nonconvex Optimization and Its Applications, Vol. 27.
- (Joint with F. Flores-Bazan), "Simplified Global Optimality Conditions in Generalized Conjugation Theory", Generalized Convexity, Generalized Monotonicity: Recent Results, pp. 305-329.
- (Joint with M. VOLLE), "Duality in d.c. Programming: the Case of Several d.c. Constraints", WP 427.98, UAB.
- "A Duality Theory for Totally Balanced Games", Proceedings of the IV Catalan Days of Applied Mathematics (Tarragona, 1998), 151-161, Universitat Rovira i Virgili, Tarragona.
- "Lexicographic Utility and Orderings", Handbook of Utility Theory, Volume 1, Principles, Cap.9, pp. 345-369.

### **MASSÓ, Jordi**

- (Joint with S. BARBERÀ and S. SERIZAWA), "Strategy-Proof Voting on Compact Ranges", Games and Economic Behavior, 25.
- (Joint with S. BARBERÀ and A. NEME), "Maximal Domains of Preferences Preserving Strategy-Proofness for Generalized Median Voter Schemes", Social Choice and Welfare, 16, 1999.

### **OLIVELLA, Pau**

- "Tax Amnesties and Tax Evasion Inertia", Public Finance/Finances Publiques, Vol. 4/1996, 51. \*appeared in 1999.
- (Joint with P. Pita Barros), "Patient Selection for Private Treatment under Public Health Service Waiting Lists", mimeo.

### **PÉREZ CASTRILLO, David**

- (Joint with I. MACHO-SATDLER), "Centralization and Decentralization in Moral Hazard Environments", Journal of Industrial Economics, 46,3.
- (Joint I. MACHO-STADLER and C. PONSATÍ), "Stable Multilateral Trade Agreements", Economica, 65.
- (Joint with A. ROMERO-MEDINA nd J.ALCALDE), "Hiring Procedures to Implement Stable Allocations" Journal of Economic Theory, 82.
- (Joint with I. MACHO-STADLER), "Centralized and Decentralized Contracts in a Moral

Hazard Environment", Journal of Industrial Economics, vol. XLVI, 4.

**PONSATÍ, Clara**

- (Joint with J. SÁKOVICS), "Rubinstein Bargaining with Two-Sided Outside Options", Economic Theory, 11.

- (Joint with J. SÁKOVICS), "Bargaining in a Changing Environment", in Economic Theory and Applications, edited by. A. Alkan, C.D. Aliprantis and N.C. Yannelis. Springer-Verlag, forthcoming.

- (Joint with I. MACHO-STADLER and D. PÉREZ-CASTRILLO), "Stable Multilateral Trade Agreements", Economica, 65.

**6. EDITORIAL ACTIVITIES**

**BARBERÀ, Salvador**

- Editor:

- SPANISH ECONOMIC REVIEW

- Associate Editor:

- SOCIAL CHOICE AND WELFARE

- MATHEMATICAL SOCIAL SCIENCES

- ECONOMIC THEORY

- JOURNAL OF PUBLIC ECONOMIC THEORY

- Advisory Board:

- THEORIA

- DERECHOS Y LIBERTADES

**CABALLÉ, Jordi**

- Editorial board:

- SPANISH ECONOMIC REVIEW

- INVESTIGACIONES ECONÓMICAS

**MACHO-STADLER, Inés**

- Co-editor:

- SPANISH ECONOMIC REVIEW

- Editorial board:

- REVUE ECONOMIQUE

**MARTÍNEZ LEGAZ, Juan Enrique**

- Editorial board:
- OPTIMIZATION
- JOURNAL OF CONVEX ANALYSIS

**MASSÓ, Jordi**

- Editorial committee:
- INVESTIGACIONES ECONÓMICAS

**PÉREZ CASTRILLO, David**

- Editorial board:
- SPANISH ECONOMIC REVIEW

## **7. CONFERENCES AND MEETINGS**

CODE members have attended the main conferences organized along the year. Among these we may highlight,

- International Conference on Public Economic Theory  
Alabama, USA.
- Econometric Society European Meeting  
Toulouse, France.
- ASSET Meeting  
Bologna, Italy.
- Third Spanish Meeting on Game Theory  
Barcelona, Spain
- European Economic Association Congress  
Berlin, Germany
- Jornadas de Economía Industrial  
Madrid, Spain
- XVIII Jornadas de Economía de la Salud  
Vitoria-Gasteiz, Spain

- 1998 ENTER Jamboree  
Bellaterra, Barcelona
  
- Fourth International Conference of the Society for Social Choice and Welfare  
Vancouver, Canada
  
- Summer Meetings of the Econometric Society  
Montreal, Canada
  
- Workshop on Game Theory  
Bilbao, Spain
  
- IV Catalan Days of Applied Mathematics  
Tarragona, Spain
  
- CODE Workshop on Generalized Convexity and Monotonicity in Economic Modeling  
Bellaterra, Barcelona, Spain
  
- Informs International Israel  
Tel Aviv, Israel
  
- Jornadas de Economía Financiera  
Bilbao, España
  
- Simposio de Análisi Económico  
Barcelona, Spain

## 8. SEMINARS

**BARBERÀ**, Salvador

Universitat Pompeu Fabra, Spain  
Universitat de Girona, Spain  
Universitat Internacional Menéndez Pelayo, Spain

**BEVIÁ**, Carmen

Universitat Pompeu Fabra, Spain  
Universidad de Málaga, Spain

**CABALLÉ**, Jordi

Universidad de Zaragoza Spain.  
Universidade Catolica de Lisboa, Portugal  
Universitat de Girona, Spain

**MACHO-STADLER, Inés**

Universidad de Alcalá de Henares, Spain  
Katholieke Universitaet Leuven, Belgium  
Universidad Complutense de Madrid, Spain  
Universidad de Málaga, Spain  
Universidad de Reus, Spain  
Euskalerriko Unibersitatea, Spain

**MARTÍNEZ-GIRALT, Xavier**

Universitat de Girona

**MASSÓ, Jordi**

Universidad de Málaga

**OLIVELLA, Pau**

Universidade Nova de Lisboa, Portugal

**PÉREZ-CASTRILLO, David**

Katholieke Universitaet Leuven, Belgium  
Universidade Catolica de Lisboa, Portugal  
Universidade de Sao Paulo, Brazil  
Euskalerriko Unibersitatea, Spain

**PONSATÍ, Clara**

Universidad de Zaragoza, Spain  
Rochester University, USA  
Universitat Pompeu Fabra, Spain

**9. ORGANIZATION OF CONFERENCES**

**"BARCELONA-JOCS"**

Academic year 1997/98  
Organizer: Jordi Massó

Academic year 1998/99

Organizer: Salvador Barberà

BARCELONA-JOCS is a series of seminars attended by researchers from the following six academic institutions located in Barcelona metropolitan area and Girona: Institut d'Anàlisi Econòmica (CSIC), Universitat de Barcelona, Universitat Autònoma de Barcelona, Universitat Politècnica de Catalunya, Universitat Pompeu Fabra and Universitat de Girona. It started two years ago and it consist in a monthly meeting (the last Monday of every month). Each session has two speakers, an insider from one of Barcelona institutions and an outsider from anywhere else. The seminars are hold at the Institut d'Estudis Catalans, downtown Barcelona.

**"CODE Workshop on Generalized Convexity and Monotonicity in Economic Modeling"**

June, 4-6, Bellaterra, Barcelona, Spain

Organizers: Juan Enrique Martínez-Legaz and Isabel Fradera

## 10. ORGANIZATION OF COURSES

- (Inés Macho-Stadler and Xavier Martínez-Giralt) **Principles of Health Economics** in Master in Evaluation and Management of Health Services. Universitat Autònoma de Barcelona and Agència d'Avaluació de Tecnologia Mèdica, Departament de Sanitat i Seguretat Social, Generalitat de Catalunya.

- (Inés Macho-Stadler and Xavier Martínez-Giralt) **Introductory Economics, Principles of Health Economics and Public Sector Economics** in Master in Clinic Management and Organization of Health Services. Universitat Autònoma de Barcelona and Hospitals de la Vall d'Hebron.

## 11. STAGES OF RESEARCH

**BARBERÀ**, Salvador

California Institute of Technology

USA

One month

**MACHO-STADLER**, Inés

Katholieke Universitaet Leuven, Belgium

One week

Universidade Catolica de Lisboa, Portugal  
Two weeks

Euskalerriko Unibersitatea, Spain  
Two weeks

**MARTÍNEZ-LEGAZ**, Juan Enrique

University of Texas at Arlington  
One week.

**MASSÓ**, Jordi

Universidad Nacional de San Luis  
Instituto de Matemáticas Aplicadas  
San Luis, Argentina  
One month.

**PÉREZ-CASTRILLO**, David

Katholieke Universitaet Leuven, Belgium  
One week

Univbersidade de Sao Paolo, Brazil  
One week

**PONSATÍ**, Clara

University of Cornell, USA  
3 months

## **12. ADVISING PH.D. THESIS**

**BARBERÀ**, Salvador

Advisor of ANNA BOGOMOLNAIA "Medians and Lotteries: Strategy-Proof Social Choice Rules for Restricted Domains" (Universitat Autònoma de Barcelona). Grade: Apto Cum Laude by unanimity.

Advisor of ALEXANDER KOVALENKOV "Incentives in Large Economies" (Universitat Autònoma de Barcelona). Grade: Apto Cum Laude by unanimity.

**CABALLÉ, Jordi**

Advisor of XAVIER RAURICH. "Essays on Economic Growth and Government Spending" (Universitat Autònoma de Barcelona). Grade: Apto Cum Laude by unanimity.

**MACHO-STADLER, Inés**

Advisor of IZABELA JELOVAC. "Incentive Contracts and Organization in Health Services" (Universitat Autònoma de Barcelona). Grade: Apto Cum Laude by unanimity.