

Institute for Economic Analysis Institut d'Anàlisi Econòmica

Consejo Superior de Investigaciones Científicas



Aknowledgements

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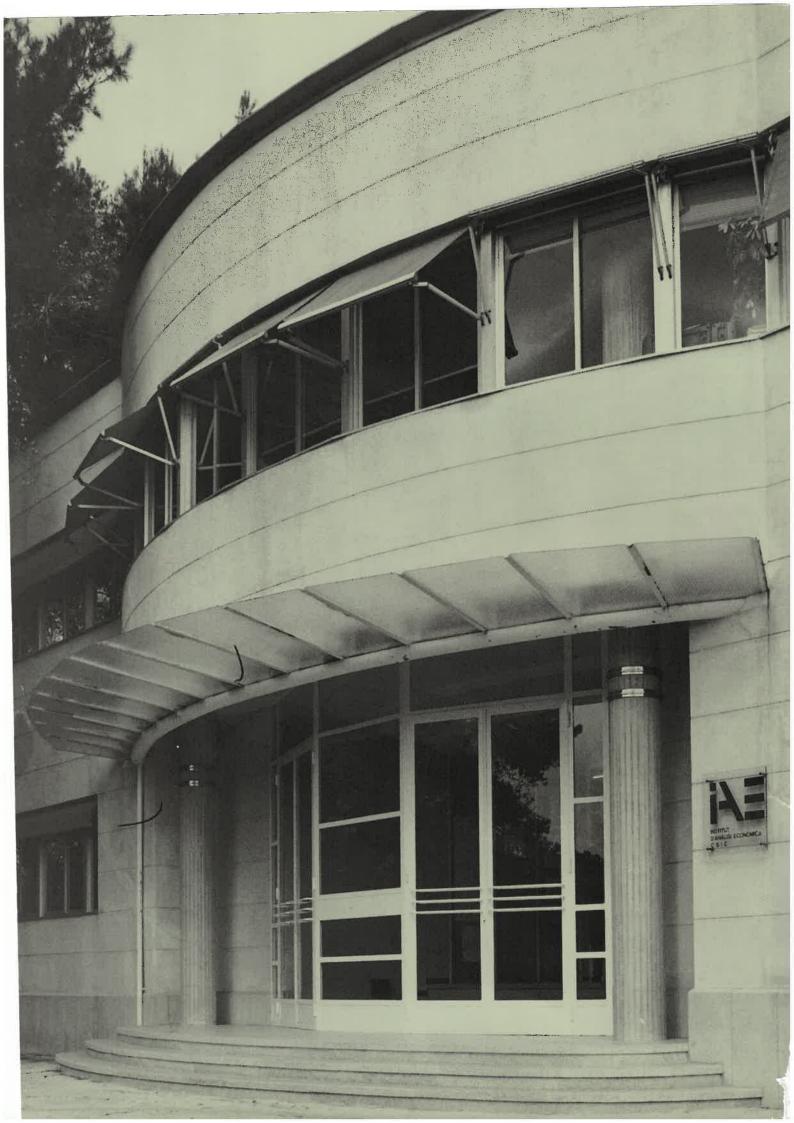


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The Institute for Economic Analysis (IAE) is a center of the Spanish Council for Scientific Research (CSIC). The Institute was created in 1985 and is located in its own building since 1989. Its goal is to promote research in economics at the highest scientific level. This report presents a systematic account of what has been done at the Institute during its 15 years of existence.

The main goal of the Institute is to create a supportive environment for the development of theoretical and applied research according to the standards of the international research community. The Spanish Evaluation and Prospective Agency, several agencies of the European Union, the Institut d'Estudis Catalans, and several external evaluations of research groups in economics in Spain and Europe have recognized the Institute as a center of excellence at the national and the international levels. For instance, according to publications in nine leading international economic journals, which can be considered as representative, during the period 1991-1996 the Institute jointly with the UAB was ranked fifth in Europe (including Israel) in terms of total research output. The Institute by itself would rank tenth (and thus would be the leading Spanish institution) despite its small size. The Institute has contributed to placing Spain on the European map of economic research. In the previously cited ranking, Spain as a whole was ranked fourth, above countries with higher populations such as Germany or Italy. Other related studies show similar results. The Institute has developed a wide

program of theoretical and applied research focusing its contributions in industrial organization, banking and finance, public economics, game theory, regional economics and economic growth. In the period 1986-2000 this research program has resulted in the publication of 146 articles in international journals, 72 articles in Spanish journals, 49 chapters in books and 12 books by the permanent members and visitors of the Institute. During this period 39 articles have been published in nine core journals.

In applied economics the studies on R&D, innovation and growth, the effects of economic integration on industry and finance, the regulation of network industries, and competition policy should be highlighted. In addition, several studies have also examined Spanish regional economics (regional finances, regional convergence and the effects of the euro). The applied projects focusing on Catalonia, Spain and Europe have been developed with the aid of several institutions and government agencies. Among these we should emphasize the Spanish Ministry of Economy and Finance, Fundación BBV, Generalitat de Catalunya, Fundación COTEC, Comisión Nacional del Sistema Eléctrico and the European Commission. A good number of these projects have been jointly developed with the Fundación de Economía Analítica (FEA).

The Institute has had as permanent faculty researchers from the US, Hungary, France, Italy, Belgium, Germany, Portugal and Switzerland. In addition, we have hosted approximately two hundred

visitors from countries such as Korea, India, Japan, Canada, Iceland, Israel, Turkey, the United Kingdom or the Netherlands, of whom 26 have stayed more than six months. It is not by chance that the working language of the Institute is English. The IAE has contributed to modifying the direction of the brain drain of economists. The Institute has organized 43 conferences. Many of these conferences have been developed jointly with international institutions such as the Review of Economic Studies, the World Trade Organization, the Centre for Economic Policy Research, the Econometric Society and the International Economic Association. Other conferences on policy issues in Spain have been jointly with Spanish institutions such as the Institut Català de Finances, Fundación BBV, Fundación Ramón Areces and Caixa Manresa. In addition, the Institute and the Economics Department of the Universitat Autònoma de Barcelona (UAB) organize every year the Simposio de Análisis Económico, which is a meeting point of Spanish economists.

The Institute has participated in six European networks (now in three). The researchers at the Institute have contributed to a large number of academic conferences and editorial boards of top international journals. A large number of speakers have presented their research in seminars at the IAE, including the Bellaterra Seminar, the Financial Economics Seminar and the Regulation Seminar.

The Institute has also contributed to the graduate program IDEA, at

the UAB where more than 120 courses have been taught since 1986. The faculty of the Institute has directed 40 Masters and 17 Ph.D. theses. In addition, the Institute has also organized a Summer School jointly with the European Economic Association and a second one with a European network of experimental economics.

These activities have been performed with a very small faculty. In 1989 the permanent faculty was composed of five persons (two Professors and three Tenured Scientists). Today the permanent faculty is composed of six people (two Research Professors, one Research Scientist and three Tenured Scientists). Fernando Vega, Joan Antoni Ketterer, Carmen Matutes and Xavier Calsamiglia (the first IAE director) have been permanent members of the IAE. Moreover, Albert Marcet, Ramon Marimon, Philippe Bacchetta, Gérard Genotte, Kai-Uwe Kühn, Pierre Régibeau, Sandro Brusco, Matilde Machado, Kate Rocket, József Sákovics and Frédéric Palomino have also been members of the Institute. Overall, 28 researchers have been members of the permanent faculty of the IAE at various times.

The Institute has also benefited from the collaboration of 30 affiliated researchers and 42 research collaborators during its academic life. In addition, 42 research assistants and scholarship holders have provided assistance to different research projects undertaken at the IAE. Finally the assistance of the staff has been critical to the proper functioning of the Institute. During the last decade the diver-

gence between the scientific productivity of IAE and the amount of financing has grown. Although the IAE is one of the top institutions in terms of publications per researcher, public funding (total and per researcher) has decreased sharply during this period. The increase of funding coming from European competitive projects and the stability of research contracts has partially alleviated the decrease of public funding from Spain. The Institute accomplishments are due to an important collective effort that started from the creation of the IAE by Enric Trillas, President of the CSIC in 1985. The contribution of the first directors of the IAE Xavier Calsamiglia and Joan Maria Esteban, and the manager Inmaculada Ginés were critical to this success. The IAE continues its research in the areas detailed in this report. Two new applied projects include

The IAE continues its research in the areas detailed in this report. Two new applied projects include the economic evaluation of the Spanish regional organization under the sponsorship of the Institut d'Estudis Autonòmics of the Generalitat de Catalunya and Fundación BBVA, and the continuation of the studies on innovation under the sponsorship of the Fundación COTEC.

The IAE wants to continue offering its commitment to excellence by contributing a supportive atmosphere for quality research in economics.

Xavier Vives
Director



Notes:

¹ See Kalaitzidakis, Mamuneas and Stengos (European Economic Review, 43, 1999).

² See García, Montanés and Sanz (Revista de Economía Aplicada, 1999) and Bergantinos, Da Rocha and Polomé (mimeo 2000).

³ Journal of Economic Theory, Review of Economic Studies, American Economic Review, Journal of Political Economy, Quarterly Journal of Economics, Rand Journal of Economics, Journal of Monetary Economics, Econometrica and Journal of Finance.



Permanent Researchers

Klaus Abbink

received his Dr. rel. pol. degree from the University of Bonn in August 2000. He is a member of the Institute since 2000. His research area is experimental economics, where he focuses both on the foundations of economic behavior and on applications. Examples of the former are his studies on the experimental analysis of reciprocity and corruption. The latter are represented by ongoing work on spectrum auctions and government bond issuing. He has published in Theory and Decision, Journal of Economic Behavior and Organization, and Games and Economic Behavior. Furthermore, he is co-author of a widely used software package, RatImage, for computerized experiments.



Philippe Bacchetta

is director of the Study Center Gerzensee, a foundation of the Swiss National Bank, He is also professor of macroeconomics at the University of Lausanne and a research fellow of the Centre for Economic Policy Research (CEPR) in London. He received his Ph.D. in economics from Harvard University and his B.A. and M.S. in Economics from the University of Lausanne. Before joining the Study Center, Philippe Bacchetta was assistant professor at Brandeis University, USA, and at ESADE in Barcelona. He has been affiliated with the IAE since 1989 and was a full-time member between 1991 and 1993. He has also taught at the University of Geneva, the Universitat Autònoma de Barcelona, and CEMFI in Madrid. He is member of council of the European Economic Association and chairman of the Economic Theory working group of the Swiss Society for Economics and Statistics. He is on the editorial board of Economic Policy, Spanish Economic Review, and Moneda y Credito. His research interests include open economy macroeconomics, international finance, and monetary economics.



Jordi Brandts

obtained his Ph.D. from the University of Pennsylvania in 1986. He has been a member of the Institute since 1993. Previously he has been professor at the Universitat Autònoma de Barcelona and visiting professor at the University of California at Berkeley. His research areas are experimental economics and public economics. His current work focuses on analyzing, by means of experiments, three main issues. The first consists in delineating the precise nature of interdependent preferences, the second in the study of strategic behavior and its relation to equilibrium analysis and the third in the characterization of the performance of different experimental market mechanisms. He is also interested in the redistributive effects of government intervention. He has published in the American Economic Review, Games and Economic Behavior, Journal of Public Economics, Economic Theory and the International Journal of Game Theory.



«In the past 15 years the Institut d'Anàlisi Econòmica (IAE) has been one of the leading European research centers in economics, particularly in the economics of information and in its applications to industrial and financial economics. The economics of information and its applications have been a very exciting area of research in the whole of social sciences, and the IAE has truly excelled in this area.

In its activity, the IAE has also linked up very effectively with similar research centers in the rest of Europe, in a variety of ways - via exchange of researchers, workshops, research networks, and ioint research projects. In fact, the IAE has been a major contributor to the transnational network of research that has been born and has grown in Europe in the last 15 years.»

Marco Pagano Università di Salerno

Sandro Brusco

obtained his Ph.D. from Stanford University, Graduate School of Business, in 1993. He was a member of the Institute from 1993 to 1996, when he moved to the Universidad Carlos III de Madrid. Currently he is a research affiliate of the Institute. He has also been a visiting scholar at the London School of Economics and a visiting professor at the University of California, San Diego. His main interests lie in the area of mechanism design, both theoretical and applied. His main contributions are in the areas of the theory of implementation with sequential mechanisms and the prevention of collusive behavior in organizations. He is currently working on issues related to the optimal design of trading mechanisms and the internal organization of firms. He has published in Economics Letters, Economic Theory, Journal of Economics and Management Strategy, Journal of Economic Theory, Social Choice and Welfare, Review of Economic Design, European Economic Review and International Economic Review.



Roberto Burguet

obtained his Ph.D. from the State University of New York at Stony Brook. He has been a member of the Institute since 1992. He has also been professor at the Universitat Autònoma de Barcelona, and visiting professor at the COLMEX (México) and UCD (Dublin). His research areas include the theory of contracts and auctions, and the economics of information. His present research includes the study of the effects of corruption on the competitive bidding for contracts. He also does research on how the market provides incentives for effort and mobility of labor, on how visibility affects the clauses of labor contracts, and on some problems related to environmental policy and international trade. Among others, he has published in the Journal of Economic Theory, International Economic Review, Games and Economic Behavior, Economic Theory, and European Economic Review.



Permanent Researchers

Xavier Calsamiglia

He obtained the bachelor degree in economics with honors at the Universitat de Barcelona in 1969. He did his graduate work at the Universidad Complutense de Madrid and the University of Minnesota, where he obtained the Ph.D. in Economics in 1975. He has been professor of economics at the Universidad de Zaragoza, the Universitat Autònoma de Barcelona and the Universitat Pompeu Fabra. He was the first director of the Institut d'Análisi Econòmica (CSIC) from 1984 to 1989. He served as vice-chancellor of research and dean of the Facultat de Ciències Econòmiques at the Universitat Pompeu Fabra between 1993 and 1995. He has published in Econometrica, Journal of Economic Theory, Journal of Mathematical Economics and International Economic Review His main research fields are public economics, decentralization theory, general equilibrium and mathematical economics.



Ramon Caminal

obtained his Ph.D. from Harvard University in 1987. He has been a member of the Institute since 1989. Previously, he has been professor at the Universitat Autònoma de Barcelona, and has taught at the University of Toulouse, the Universitat Pompeu Fabra and the Universidad de Oviedo. He has also been visiting scholar at Harvard University. Currently He is research fellow of the Centre for Economic Policy Research (CEPR), co-editor of the Spanish Economic Review, and associate editor of the European Economic Review. His research areas are industrial economics and macroeconomics. Within the first area, he has focused on information-related issues. with frequent applications to banking. In the second area his main interest lies in the microfoundations of macroeconomics. He has published in Rand Journal of Economics, Journal of Public Economics, European Economic Review, Journal of Industrial Economics, International Journal of Industrial Organization, Economica, Journal of International Money and Finance, International Tax and Public Finance, Journal of Economics and Management Strategy, International Review of Economics and Finance, and Annales d'Economie et Statistique.



Giacinta Cestone

obtained her Ph.D. from the University of Toulouse in 2000. Her areas of research are contract theory, corporate finance and industrial organization. She previously graduated from the University of Napoli, and obtained her M.A. at Bocconi University in Milano. She joined the Institute in September 1999 as a fellow of the TMR. Network on "The Industrial Organization of Banking and Financial Markets in Europe". Her research deals with the interaction between firms' financial arrangements and their product market behavior. In particular, she investigates the anti-competitive potential of banks' equity-holdings in industrial firms and the impact of financial links within diversified business groups.

She is currently interested in venture capital financing, and is studying the joint allocation of control and cash-flow rights in venture capital contracts.



Joan M^a Esteban

has Ph.D. degrees from Oxford University and the Universitat Autònoma de Barcelona. He has been a member of the IAE since its foundation and was its director between 1989 and 1991. He has been in charge of the High Council for Scientific Research (CSIC) in Catalonia between 1993 and 1996 and the Spanish government representative before the High Council of the European University Institute, Florence, between 1988 and 1996. His research combines theory and applications. His applied work is concerned with regional economics and fiscal federalism.

The theoretical research covers a variety of topics ranging from income distribution and inequality to infinite horizon economies with overlapping generations. At present he works on polarization and conflict.

His contributions have been published in journals such as American Political Science Review,
Econometrica, Economics of
Governance, European Economic
Review, International Economic
Review, Journal of Economic
Theory, Regional Science and
Urban Economics and Social
Choice and Welfare.



He has published the book *The Social Viability of Fiat Money* (Springer Verlag, 1991).

Angel de la Fuente

obtained his Ph.D. in economics from the University of Pennsylvania and has been member of the Institute since his graduation in 1991. His research areas are economic growth and regional economics and he is also interested in questions of mathematical economics and public finance. His current research work focuses on the empirical analysis of the determinants of the rate of economic growth, on regional policies and on regional financing. He is a member of the editorial boards of Moneda y Crédito, Investigaciones Económicas and Revista de Economía Aplicada, and he has been assistant editor of the Spanish Economic Review. He has published in Journal of Monetary Economics, Journal of Economic Dynamics and Control, Economics Letters and in many Spanish journals. He is the author of a mathematics textbook for graduate students in economics, Mathematical methods and models for economists, (Cambridge University Press, 2000).



Permanent Researchers

Gérard Gennotte

is a principal of JWM Partners, LLC, an investment management firm based in Greenwich, Connecticut. JWM Partners, LLC ("JWMP"), specializes in the development and application of sophisticated financial technology to investment management.

Until 1999, Gerard was a senior strategist at LTCM which he joined at the outset. He is actively involved in the marketing and new investment aspects of the firm's business and works at JWM Partners (UK), Ltd., the firm's wholly owned subsidiary in London.

He is a graduate of the Ecole Polytechnique and of MIT, where he completed his Ph.D. He taught at the University of California, Berkeley, and at the University of Chicago.

He was a member of the Institute in 1995. As an academic his work focused on asset pricing and banking theory. He has published in American Economic Review, Review of Financial Studies, and Journal of Finance and Management Science.



Carole Haritchabalet

obtained her Ph.D. from the University of Toulouse in 1998. She was a member of the Institute in 1999. She is now assistant professor at the University of Toulouse. Her areas of specialization include industrial economics, the economics of information and the economics of risk and insurance. Her current research deals with the interaction between consumer learning and intertemporal price competition for experience goods. She has published in the Geneva Papers on Risk and Insurance Theory and the Revue d'Economie Politique.



Juan Antonio Ketterer

obtained his Ph.D. in economics from the University of Minnesota in 1988. Currently he is Chief Executive Officer of Indice Multimedia, S.A.. His previous positions in chronological order were consultant of the World Bank, visiting professor of finance at the J.L. Kellogg Graduate School of Management of Northwestern University, assistant professor of finance at Carnegie-Mellon University, member of the IAE, associate professor of finance at the Universitat Pompeu Fabra, deputy general manager of the MEFF Renta Fija (Spanish market of futures and options), vice-chairman of Intermoney, S.A., principal managing director of the CIMD of Colombia, S.A., chairman of Corretaje Multi-Bolsa, A.V.B., chairman of CIMD of Colombia, S.A. and consultant to the Inter American Development Bank. He is an expert in financial products and markets. He has published in Journal of Mathematical Economics and in various journals of financial economics.

Kai-Uwe Kühn

Kühn received his doctorate in economics from Nuffield College, Oxford University, in 1991. He is currently an associate professor of economics at the University of Michigan. He was a member of the Institute from 1993 to 1997. Previously he was a prize research fellow at Nuffield College, Oxford. He has also held visiting positions at Princeton University and the CEMFI in Madrid. His work has mostly focused on theoretical industrial organization, regulation and competition policy. He also has an interest in labor market theory. In the area of industrial organization he has published on topics like durable goods monopoly, vertically related markets, and regulation. His most recent work has studied the impact of market transparency on the competitiveness of markets, the impact of mergers on collusion, regulatory theory in the presence of entry and the issue of product reputations in vertically related markets. He has also written extensively on competition issues including information exchange, joint dominance, and the regulation of postal markets, electricity markets and telecommunication. Among other journals, he has published in the Journal of Political Economy and the Rand Journal of Economics.

Matilde Machado

has a Ph.D. in economics from Boston University (1997). Her research interests are in the areas of empirical industrial organization and health economics. She joined the Institute in September 1997 and in January 1999 moved to the Department of Economics at the Universidad Carlos III de Madrid but remained as a research affiliate of the IAE. In September 2000 she accepted an appointment of visiting scholar at the Department of Population and International Health of the Harvard School of Public Health. Her research covers several topics. From the financing of substance abuse treatment, to the development of a methodology to compare the productivity of health care providers, to the development of an estimator for count data and the assessment of market power in the Spanish electricity industry.



«Research in economics needs, probably more than in other fields of research, a friendly institutional environment. **University departments** are only sometimes a friendly environment. That is why it is important to experiment with other kind of environments and support research groups. For those of us who for vears have tried to carry out this experimentation, the Institute is a source of envy. It has not only been able to shape itself as a very powerful group in basic research but, at the same time, has got involved with research on more policy-oriented problems. The Institute has come of age; let's all congratulate it.»

Juan Urrutia, Professor of economics President of the Social Board, Universidad Carlos III (Madrid).

Permanent Researchers

Albert Marcet

obtained his degree in economics at the Universitat Autònoma de Barcelona in 1982 and his Ph.D. at the University of Minnesota in 1987. He is professor of economics at the Universitat Pompeu Fabra since its foundation in 1990. He has also been professor at Carnegie-Mellon University, the Institute, the Universitat Autònoma de Barcelona, CEMFI (Madrid), and London Business School. His main research areas are macroeconomics, fiscal policy, resolution of dynamic models, and economic models of learning. His current research focuses on simulation methods to study the redistributive effects of taxes over capital and labor, the effects of incomplete markets on the debt of government, models of asset valuation with heterogeneous agents, the understanding of hiperinflations with learning models, and methods to solve dynamic problems with temporal inconsistency. He has published, among others, in Journal of Economic Theory, Journal of Political Economy, American Economic Review, Review of Economic Studies, and European Economic Review.

Ramón Marimón

obtained his Ph.D. in economics from Northwestern University in 1984. He is currently Secretario de Estado for Scientific and Technological Policy (Ministry of Science and Technology). His fields of research are economic theory, growth theory, monetary and financial theory, contract theory and mechanism design, game theory and experimental economics. He is working in areas such as recursive experimental economies, fiscal and monetary discipline, strategic delegation to the European Central Bank, recursive contracts, learning and equilibria indeterminacy, financial restrictions and economic cycles, and the stability of the parliamentary system against a presidential system. Among other journals he has published in Economic Journal, European Economic Review, American Economic Review and Economic Theory.

Carmen Matutes

She was a member of the Institute from 1987 to 2000. She has been a CEPR fellow since 1989. Currently she is a reader at the University of Edinburgh. She has been member of the council of the European Economic Association (1994-1998), and was the coordinator of the ANEP's (Spanish NSF equivalent) evaluation of projects in economics, law and geography between 1991 and 1993.

Her research focuses in the field of industrial organization, and specifically deals with firms' technological decisions, issues in multi-market competition, and the microeconomics of banking. She has published in various international journals including European Economic Review, Journal of Industrial Economics, Journal of Financial Intermediation, Journal of Economics and Management, and Rand Journal of Economics. Currently she is associate editor of the European Economic Review, the International Journal of Industrial Organization, and panel member of Economic Policy.







Nicolas Melissas

obtained his Ph.D. in economics from the Université Libre de Bruxelles in 2000.

He joined the Institute in September 1999 under the TMR network "Market structure of the network industries evolution". His main field of research is the study of gregarious behaviour and social learning. He has recently started working in the market microestructure area.



Frédéric Palomino

obtained his Ph.D. degree in economics from the European University Institute in 1994. He is assistant professor of finance at Tilburg University and research affiliate of the CEPR. He spent the academic year 1999-2000 at the Institute, under the TMR network "Banking and financial markets industrial organization in Europe". His main fields of interest are in the financial economics area, particularly funds management compensation and competition in the mu-tual funds market. One of his other fields of interest is finance applied to sports leagues. He has published in Journal of Finance, International Journal of Game Theory and Economic Theory.



Paul Pezanis

received his Ph.D. from the European University Institute in 1997. From 1995 to 1998 he was a lecturer at the University of New South Wales, Australia. Since then he has visited the universities of Bonn and Pompeu Fabra and is now a member of the Institute since 2000. His research is in applied microeconomics and focuses on the possible effects of buyers' asymmetric preferences on the formation of prices in auction markets. His work includes the empirical analysis of (fish) auction data and the running of laboratory experiments to test various predictions which relate to the selling of Government bonds, spectrum, electricity and fish. He has published in Social Choice and Welfare.



Permanent Researchers

Pierre Régibeau

obtained his Ph.D. in economics from the University of California at Berkeley in 1987. He began his career at the Sloan School of Management at MIT before moving to the Kellogg Graduate School of Management at Northwestern. He visited the Institute for a year, 1993-1994, and joined its researchers staff in 1995. He became a CEPR fellow in 1996.

He has worked on many topics in applied microeconomics, including compatibility, intellectual property rights, energy markets, organizational form and international trade policy. His publications have appeared in several refereed journals, including the Rand Journal of Economics, the International Journal of Industrial Organization and the Journal of Economics and Management Strategy.

He is now at the University of Essex and has recently become editor of the *Journal of Industrial Economics*.



Katharine Rockett

obtained her doctorate in economics from the University of California at Berkeley in 1988 with a thesis entitled "Essays on the Licensing of Technology and on International Coordination of Macroeconomic Policy."

Her subsequent work has focused on the economics of new technologies.

In particular, she has studied licensing policy, the economics of the patent system, and organizational screening methods for new technologies.

She taught at the Kellogg Graduate School of Business from 1988 to 1995.

She was member of the Institute during the academic year 1998-99. She is currently professor at the University of Essex.



József Sákovics

received his Ph.D. from Stanford University in 1990. He was a member of the Institute from 1991 to 2000. His field of research is game theory, both in its foundations and in its applications. His current research focuses on the analysis of decentralized markets, building on his previous work on trading mechanisms like bargaining and auctions. The questions he asks himself are how prices are formed, what quantity of goods is exchanged, what qualities of goods are offered and, how does the microstructure of the market influence the answers to the previous questions. He has published in Economic Theory, Games and Economic Behavior, International Economic Review, and Journal of Economic Theory, among others journals.



Fernando Vega

obtained his Ph. D. from the University of Minnesota. He was a member of the Institute from 1987 to 1990 and, since then, he is a professor at the Universidad de Alicante. His present research interests lie in game theory, with special emphasis on network dynamics, learning, and bounded rationality. His more than 50 articles have been published in economic journals (such as, for example, Econometrica, Journal of Economic Theory and International Economic Review), in biology journals (Journal of Theoretical Biology), in physics journals (Physical Review), and in multidisciplinary journals (Advances in Complex Systems). He is the author of the monograph Evolutionary Games and Economic Behavior, published by Oxford University Press, and of the textbooks Economía y Juegos: Teoría y Aplicaciones, published by Editorial Antoni Bosch, and Economics and the Theory of Games, to be published by Cambridge University Press. He has been visiting professor at the Indian Statistical Institute, the Institute for Advanced Studies (Vienna), the Hebrew University of Jerusalem and at Harvard, California-San Diego and Boston Universities. He is currently co-editor of the $Spanish\ Economic$ Review and member of the editorial board of Lecture Notes in Mathematical Systems (Springer Verlag) and Investigaciones Económicas.



Xavier Vives

is research professor and director of the IAE. He is research fellow of the London-based Centre for Economic Policy Research (CEPR). He has been professor at the Universities of California (Berkeley), Harvard, New York (King Juan Carlos Chair), Pennsylvania, Autònoma de Barcelona and Pompeu Fabra. He has also been researcher of the FEDEA. He has been director of the Industrial Organization program of the Centre for Economic Policy Research from 1991 to 1997. He is the current editor of the European Economic Review, coeditor of the Journal of Economics and Management Strategy and associated editor of the Rand Journal of Economics and Journal of Financial Markets. His fields of specialization are industrial economics, information economics and financial economics. His current research deals with the microstructure of financial markets, banking regulation and anti-trust policies. He is the author of five books (among them Oligopoly Pricing: Old Ideas and New Tools, MIT Press 1999) and editor of five more. He has also published 38 articles in international journals such as American Economic Review, Econometrica, Journal of Political



Economy, Review of Economic Studies, Journal of Economic Theory, Rand Journal of Economics, Journal of Mathematical Economics and Review of Financial Studies. In addition he has published 17 chapters of books and 28 articles in other journals. He obtained the Rey Juan Carlos I prize in social sciences research in 1988. He is a Fellow of the Econometric Society (1992) and also obtained the Societat Catalana d'Economia prize in 1996.

Research Affiliates and Project Collaborators

Project Collaborators

CARMEN ANSÓTEGUI (1993), ESADE

PHILIPPE BACCHETTA (1990), Studienzentrum Gerzensee

FERNANDO BALLABRIGA (1994-1995), ESADE

Research Affiliates

ISABEL BUSOM (1990-1993), Universitat Autònoma de Barcelona

Lluís Alsedà (1986), Universitat Autònoma de Barcelona

JORDI CABALLÉ (1990-1992, 1994), Universitat Autònoma de Barcelona

Maite Cabeza (1992, 1994), Universitat Autònoma de Barcelona

PHILIPPE BACCHETTA (1994-1999), Studienzentrum Gerzensee

Xavier Calsamiglia (1990-1991), Universitat Pompeu Fabra

Salvador Barberá (1988-1989), Universitat Autònoma de Barcelona

SUCHAN CHAE (1994-1995), Rice University

DIRK BERGEMANN (1994-1997). Yale Universitu

CARMEN ANSÓTEGUI (1994-1995), ESADE

MICHAEL CREEL (1992, 1994), Universitat Autònoma de Barcelona

Sandro Brusco (1998-2000), Universidad Carlos III

BHASKAR DUTTA (1994-1995), Indian Statistical Institute

ISABEL BUSOM (1988-1989, 1994-1999), Universitat Autònoma de Barcelona

Ramón Faulí (1992, 1995), Universitat d'Alacant

MELVYN COLES (1998-2000), Essex University

PABLO ANTOLÍN FERNÁNDEZ (1990, 1992), OECD, Paris MICHAEL CREEL (1991), Universitat Autònoma de Barcelona

GARY FIELDS (1994-1995), Cornell University

ISABEL FRADERA (1986-1989), Universitat Autònoma de Barcelona

Modest Fluvià (1992, 1994), Universitat de Girona

Jaume García (1986-1987), Universitat Pompeu Fabra

ISABEL FRADERA (1990), Universitat Autònoma de Barcelona

Teresa García-Milá (1988-1989), Universitat Pompeu Fabra

MIGUEL A. GARCÍA-CESTONA (1992), Universitat Autònoma de Barcelona

Jordi Gual (1988-1989, 1994-1999), Instituto de Estudios Superiores de la Empresa

Walter García Fontes (1992, 1994), Universitat Pompeu Fabra

Hugo Hopenhayn (1993-1994), University of Rochester

Teresa García-Milá (1990), Universitat Pompeu Fabra

Byoung Jun (1994-1999), Korea University

JAVIER GARDEAZÁBAL (1992), Universidad del País Vasco

Kai-Uwe Kühn (1998-2000), University of Michigan

GÉRARD GENNOTTE (1995), Long Term Capital Management, London

MATILDE MACHADO (2000), Universidad Carlos III

JORDI GUAL (1990, 1993), Instituto de Estudios Superiores de la Empresa

Antonio Manresa (1986-1989, 1994), Universitat de Barcelona

CHARLES HOLT (1994-1995), University of Virginia

Xavier Martínez (1988-1989), Universitat Autònoma de Barcelona

JOAN ANTONI KETTERER (1990, 1992), Indice Multimedia, S.A.

Eugenio Miravete (1996-2000), University of Pennsylvania

Antonio Manresa (1990-1993), Universitat de Barcelona

David Pérez (1991), Universitat Autònoma de Barcelona

Albert Marcet (1990, 1992, 1994), Universitat Pompeu Fabra

CLEMENTE POLO (1986-1987), Universitat Autònoma de Barcelona

Xavier Martínez (1990-1992, 1994), Universitat Autònoma de Barcelona

DIEGO PUGA (2000), University of Toronto

Jordi Massó (1991-1992), Universitat Autònoma de Barcelona

Antonio Rangel (1998-2000), Stanford University

LEONARDO MEDRANO (1995), CIDE, Mexico

Debraj Ray (1994-2000), New York University

BEATRIZ MERINO (1995), EBRD, Londres

JOSEP LLUIS RAYMOND (1986), Universitat Autònoma de Barcelona

Damien Neven (1995), University de Lausanne

JOAN E. RICART (1987), Instituto de Estudios Superiores de la Empresa

Joan Ramon Palau (1992), Universitat de Girona

Ferran Sancho (1986-1987), Universitat Autònoma de Barcelona

CLARA PONSATI (1990-1991), Universitat Autònoma de Barcelona

Manuel Santos (1986-1989), University of Minnesota

Pierre Régibeau (1995), Essex University

Alberto Trejos (1994-1997), Northwestern University

MARTA REGÚLEZ (1992), Universidad del País Vasco

Luis Rivera-Batiz (1992), IMF, Washington

KATHARINE ROCKETT (1995), Essex University

Vicenç Salas (1992), Universidad de Zaragoza

Manuel Santos (1990), University of Minnesota

Daniel Serra (1992, 1994), Universitat Pompeu Fabra

KARL SHELL (1994-1995), Cornell University

EVA VENTURA (1990), Universitat Pompeu Fabra

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Research

The IAE has developed a strong research activity both in the areas of basic and of applied research. Below we present a selection of articles and books published by IAE permanent members and affiliates during their time a the institute. Section 3.1. contains basic research publication, while section 3.2. contains these in the area of applied research. During the period 1985-2000 the members of the IAE have published more than a hundred articles in international journals (146 if we take into account affiliated members), 64 in Spanish journals (72 taking into account affiliated members). In additon, they have published 7 international books, 5 Spanish books, 17 chapters in international books and 32 chapters in Spanish books.

Basic research

Selected Publications

We include the abstracts of some of the publications of the members of the IAE.

Industrial Organization and Oligopoly Theory

CAMINAL, RAMON

"Inflation and optimal price adjustment under monopolistic competition", *Economica*, 59, 1992, 179-97.

This paper considers a model of a monopolistically competitive industry with a large number of firms producing imperfect substitutes. There is an exogenous inflation rate and each firm must pay a fixed cost every time it adjusts its nominal price. It is shown that, under quite general conditions, there exists a continuum of periodic and synchronized equilibria, each one associated with a different frequency of price adjustment. Consequently, the same frequency of price adjustment is compatible with a full range of inflation rates.

"Price advertising and coupons in a monopoly model", *Journal of Industrial Economics*, 44, 33-52.

Caminal, Ramon and Carmen Matutes "Endogenous switching costs in a duopoly model", International Journal of Industrial Organization, 8, 3, 1990, 353-374

We analyze the effect of alternative pricing policies on the competitive outcome in a two-period, differentiated product duopoly model. If firms can precommit to a second period price for other loyal customers equilibrium profits fall, but if they precommit to a discount, then

The Instituto de Análisis Econónomico has established a world reputation for the quality of its research. It has been very progressive in taking the lead in several branches of economic theory and their application to concrete and important problems of the day in Spain and in Europe generally. The use of game theory and related ideas both in theoretical development and in practical application, e.g., the concept of polarization, has been striking. Indeed, the theory has developed out of confrontation with empirical reality, and this is a source of the strength and robustness of the theory. Similarly, there has been rich work in the economics of asymmetric information, with attendant applications to financial markets, industrial organization, regulation, and antimonopoly policy.

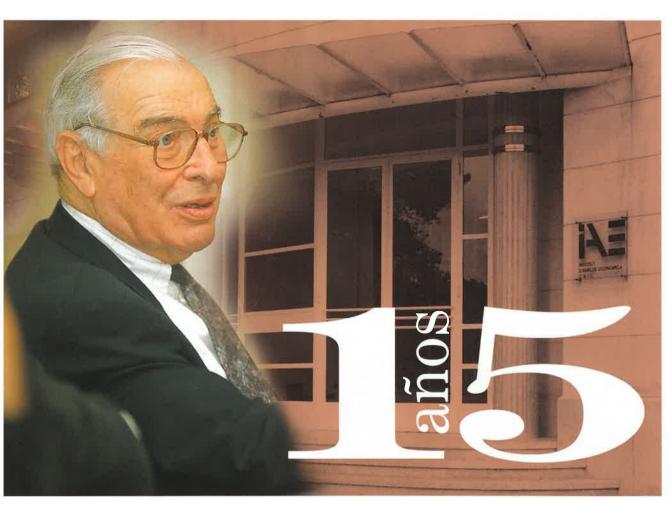
KENETH J. ARROW Stanford University Nobel Prize

the equilibrium profits increase. In either case, switching costs are endogenized: in period two firms discriminate against newcomers.

KÜHN, KAI-UWE

"Nonlinear Pricing in Vertically Related Duopolies", Rand Journal of Economics, 28, 1997, 37-62.

A vertically separated duopolistic market is analyzed in which manufacturers compete in wholesale price schedules and retailers in quantity. Under certainty there exists a continuum of equilibria. The introduction of an uncertain demand parameter, observed only by retailers, dramatically reduces the set of equilibria. Quantity discounts emerge in markets with only moderately decreasing returns to scale in manufacturing (and quantity competition downstream). With additive shocks to demand, the equilibria coincide with those of markets in which vertically integra-



ted firms compete in supply functions before market uncertainty is resolved. However, generically equilibria in the author's model are not supply function equilibria.

KÜHN, KAI-UWE

"Coase versus Pacman: Who Eats Whom in the Durable Goods Monopoly?", (with N.-H. von der Fehr), Journal of Political Economy, 103, 1995, 785-812.

In standard durable-goods monopoly models, both the set of buyers and the set of prices are assumed to be continua. If the set of buyers is finite, the perfectly discriminating monopoly outcome is a unique subgame perfect equilibrium when the seller is sufficiently patient. Introducing instead a smallest unit of account yields the Coasian outcome as a generically unique subgame perfect equilibrium for patient enough buyers. A folk theorem is obtained if both sets are finite.

These results reflect a strategic disadvantage of having to make moves with a large impact on other players' payoffs. The analysis is extended to durable-goods oligopoly.

Kühn, Kai-Uwe

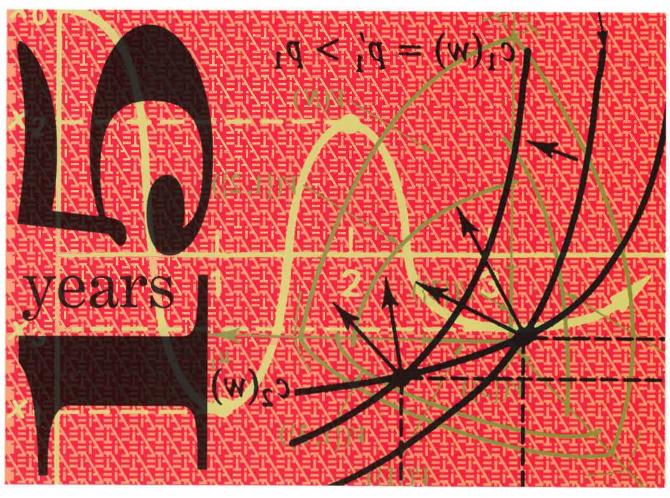
"Product Line Decisions and the Coase Conjecture", (with Jorge Padilla), Rand Journal of Economics, 27, 1996, 391-414.

We show that the Coase conjecture does not hold when a durable-goods monopolist also sells nondurable goods that are demand related to the durable. The presence of nondurable complements or substitutes reduces the rate at which the monopolist introduces the durable into the market. The price of the durable does not converge to marginal cost. We analyze the incentives of a monopolist to extend his product line to a durable or a nondurable. Most significantly, the pro-

fit from adding a durable to the product line disappears as the time between offers becomes short. We study the effects of entry into markets for nondurables and their implications for merger policy.

Kühn, Kai-Uwe and Xavier Vives
"Excess Entry, Vertical
Integration, and Welfare", Rand
Journal of Economics, 30, 4, 1999,
575-603.

This article provides a systematic analysis of the welfare effects of vertical integration by a monopolist input supplier into a monopolistically competitive downstream industry. We give sufficient conditions on consumer preferences that lead to Pareto-improving vertical integration and demonstrate a close relationship between assumptions on preference for variety, excess entry in monopolistically competitive markets, and the welfare effects of vertical integration:



Excess entry in downstream markets tends to give rise to Paretoimproving vertical integration. We extend the analysis to vertical oligopoly and access price regulation.

Matutes, Carmen
"Price Competition in MultiMarket Duopolies" (with Rajiv. Lal.),
Rand Journal of Economics, 20, 4,
1989, 516-37.

In this article, we analyze the pricing strategies of firms that compete for the demand of an assortment of goods in a complete information static framework. In particular, we model the competition between two symmetric firms in a market that consists of two types of consumers, each of which may buy one unit of both goods sold by the two firms. We show that all Nash equilibria are such that neither firm charges the same price for both goods. Interestingly, under certain conditions, the firms jointly price discri-

minate between the two types of consumers and may even achieve the same level of profits as if they maximized joint profits; for another set of conditions, the unique equilibrium is such that the price for one of the goods and the price for the bundle are the same as the price of the good in a standard Hotelling model with one good. Finally, we show that if these equilibria exist, both firms prefer to sell both goods rather than specialize in either one of them. These results are a direct consequence of the interplay between the multimarket rivalry and the existence of more than one market segment, as modelled in this article.

Matutes, Carmen. and Pierre Régibeau "Mix and Match": Product Compatibility without network externalities, Rand Journal of Economics, 19, 2, 1988, 221-34.

In industries where consumers can

assemble their own systems, firms must decide whether to make their components compatible with those of their rivals. The authors examine a two-stage game in which two fully-integrated firms make their compatibility decisions before competing in prices. The symmetric perfect Nash equilibrium of this game is shown to involve full compatibility. Although compatibility leads to higher prices than incompatibility, it also increases the variety of systems available so that some consumers are better off with compatibility, while others are hurt. If standardization is costless,

Matutes, Carmen, Régibeau, Pierre and Katherine Rockett
"Optimal Patent Design and the Diffusion of Innovations", Rand Journal of Economics, 27, 1, 1996, 60-83.

VIVES, XAVIER
Oligopoly Pricing: Old Ideas and

Over the past ten years, the IAE has become a leading European research center in Economics. On the research side, it has produced major contributions in economic theory and the theory of Industrial Organization. In particular, the current research on the Industrial Organization of Finance and Banking, as well as on the Regulation of Public Utilities, on Anti-Trust Policy and the implications of European **Integration for Industrial and Income** Policies. On the institutional side, the IAE has played a major role in the development of research networks in Europe. In particular, Xavier Vives has initiated the IO programme at CEPR with great success, and he co-founded the now well-known European Symposium in Economic Theory, to the development of which the Institut has been key. Also, thanks to the Institut and its researchers, the Autonoma University has been an active participant to the ENTER network. As a result of all these invest-

ments during the past decade, the IAE has become an indispensable component of the European academic network in Economics, and an intellectual leader on the Theory and Policy of European Integration.

PHILIPPE AGHION

Harvard University

New Tools, MIT Press, 1999, pp.425

This book reviews the theory of oligopoly pricing from the perspective of modern game theory. It builds on the ideas of the founding fathers of the field. The focus is on models of pricing, from a partial equilibrium perspective. This approach is biased by this author's own work in the field. It includes some consideration of entry and industrial structure issues, and the study of the evolution of state variables that condition pricing, but the main concentration is on short-run supply theory, both from a dynamic and a static perspective. Competition in non-price variables such as advertising and R&D, or issues related to price discrimination, vertical relations, switching and search costs, and network externalities are not explicitly addressed.

 $\hbox{``Nash Equilibrium with Strategic Complementarities", } \textit{Journal of}$

Mathematical Economics, 19, 3, 1990, 305-321.

Using lattice-theoretical methods, the author analyzes the existence and order structure of Nash equilibria on noncooperative games where payoffs satisfy certain monotonicity properties (which are directly related to strategic complementarities), but need not be quasi-concave. In games with strategic complementarities, the equilibrium set is always nonempty and has an order structure that ranges from the existence of a minimum and a maximum element to being a complete lattice. Some stability properties of equilibria are also pointed out.

"Trade Association Disclosure Rules, Incentives to Shares Information and Welfare", Rand Journal of Economics, 21, 3, 1990, 409-430.

"Technological Competition, Uncertainty and Oligopoly", Journal of Economic Theory, 48, 2, 1989, 386-415.

"On the Strategic Choice of Price Policy in Spatial Competition" (WITH J.F. THISSE), American Economic Review, 78, 1, 1988, 122-137.

The strategic incentives, with respect to the choice of price policy in spatial competition, are analyzed in a duopoly model. Price discrimination emerges as the unique equilibrium outcome in games with either simultaneous choice of policy and price or sequential choice where firms may commit first to uniform mill pricing before the actual market stage. Nevertheless, profits may be higher with uniform

pricing. The authors' models are applied to analyze some common business practices that arise in geographical pricing, like the basing point system, and in the pricing of varieties or options from a base product in a product-differentiation context.

Learning, Information Aggregation and Market Microstructure

Bergemann, Dirk
"Market diffusion with two-sided
learning", (with Juuso Valimaki),
Rand Journal of Economics, 28, 4,
773-95, 1997.

"Learning an Strategic Pricing", (WITH JUUSO VALIMAKI), *Econometrica*, 64, 5, 1996 1125-1149.

BURGUET, ROBERTO

"Optimal Repeated Purchases when Sellers are Learning about Costs", Journal of Economic Theory, 68, 2, 1996, 440-455.

A buyer repeatedly purchases some good. Suppliers privately learn their cost only upon producing at least once. Efficiency would imply sampling sellers until one is found with cost lower than a (increasing with time) reservation value. Then the good would be permanently purchased from the seller with lowest cost. A sequence of second-price auctions with participation premia and entry fees is shown to be both efficient and optimal for the buyer. An alternative calls for price offers by informed sellers, with compensations that increase in the offer. In both cases, the buyer subsidizes competition through participation premia or compensations.

Basic research

BURGUET, ROBERTO AND XAVIER VIVES Social Learning and Costly Information Acquisition, Economic Theory, 2000, vol. 15, pp. 185-205.

CAMINAL, RAMON AND XAVIER VIVES "Why Market Shares Matter: An Information-Based Theory", Rand Journal of Economics, 27, 2, 1996, 221-239.

Consider a duopoly market in which consumers have heterogeneous information about the quality differential q of the two goods. When firms are ignorant about q, consumers rationally believe that a firm with a high market share is likely to produce a high-quality good. As a result, firms try to signal-jam the inferences of consumers and compete for market shares beyond the level explained by short-run profit maximization. When firms know q, multiple equilibria may exist but, under a regularity condition, there is one equilibrium in which market shares signal quality and then the market tends to be more competitive.

PALOMINO, FRED

"Noise Trading in Small Markets", Journal of Finance, 51, 4, 1996, 1537-50.

VIVES, XAVIER

"Aggregation of Information in Large Cournot Markets", Econometrica, 56, 4, 1988, 851-876.

Consider a homogeneous product market where firms have private information about an uncertain demand parameter and compete in quantities. The author examines the convergence properties of Bayesian-Cournot equilibria as the 24economy is replicated and conclu-

des that large Cournot (or almost competitive) markets do not aggregate information efficiently except possibly when the production technology exhibits constant returns to scale. A competitive market is nevertheless cons trained efficient when taking as given the decentralized private information structure of the economy. The results are shown to be robust to the consideration of endogenous information acquisition and to the addition of extra rounds of competition.

"Learning and Convergence to a Full-Information Equilibrium are not Equivalent", (WITH BYOUNG. JUN), Review of Economic Studies, 63, 1996, 653-674.

"How fast do rational agents learn?", Review of Economic Studies, 60, 1993, 329-347.

A simple dynamic model of rational learning through market interaction by asymmetrically informed riskneutral agents, uncertain about a valuation parameter but whose pooled information reveals it, is presented. The model is a variation of the classical partial equilibrium model of learning in rational expectations in which the market price is informative about the unknown parameter only through the actions of agents. It is found that learning from market prices and convergence to the rational expectations equilibrium is slow, at the rate I divided by [the square root of n to the 1/3] (where n is the number periods of market interaction), whenever the average precision of private information in the market is finite.

"The Speed of Information Revelation in a Financial Market

The Institut d'Anàlisi Econòmica has played a central role in **European economics since its** creation in the mid eighties. The constitution of one of Europe's leading research groups in industrial organization in a strong theory environment demonstrates, if this had been needed, that good policy formulation builds on solid theoretical foundations. The Institut is to be applauded not only for its high-level scientific publications, but also for contributing to the Autonoma's overall reputation as an internationally open center of excellence and a first-rate educational institution. As a partner of the Autonoma through the ENTER doctoral program and as a European researcher, I strongly hope that the Institut will pursue the excellent job accomplished thus far.

JEAN TIROLE Institut d'Economie Industrielle Toulouse

Mechanism", Journal of Economic Theory, 67, 1, 1995, 178-204.

"Short term investment and the informational efficiency of the market", Review of Financial Studies. 8, 1, 1995, 125-160.

A dynamic finite-horizon market for a risky asset with a continuum of risk-averse heterogeneously informed investors and a risk-neutral competitive market-making sector is examined. The article analyzes the effect of investors' horizons on the information content of prices. It is shown that short horizons enhance or reduce accumulated price informativeness depending on the temporal pattern of private information arrival. With concentrated arrival of information, short horizons reduce final price informativeness; with diffuse arrival of information, short horizons enhance it. In the process a closed-form solution to the dyna-



mic equilibrium with long-term investors is derived.

Learning from others: A welfare Analysis, *Games and Economic Behavior*, 20, 1997, 177-200.

Banking

CAMINAL, RAMON

"Financial Intermediation and the Optimal Tax System", *Journal of Public Economics*, 63, 3, 1997, 351-82.

In this paper a stylized general equilibrium model is constructed to analyze the relative efficiency of taxing financial intermediaries. A crucial feature of the model is that tax collection costs are endogenous, i.e. they result from primitive assumptions about information and transaction costs, instead of being assumed ad hoc. The model provi-

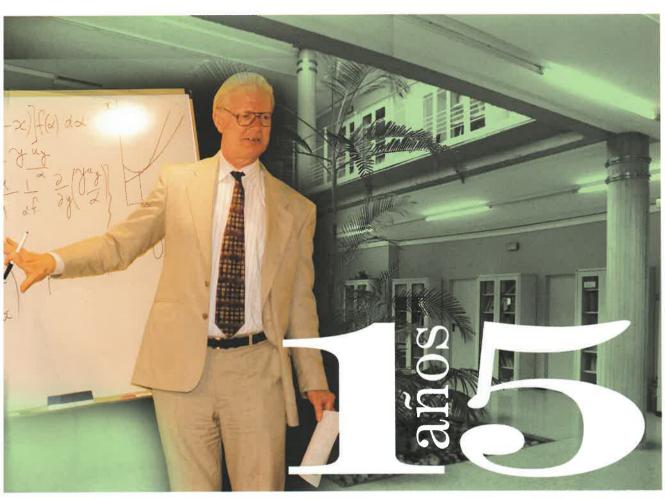
des useful insights into the welfare costs and incidence of banks' reserve requirements or, equivalently, of a tax on deposits. In particular, it is shown that a tax on bank deposits can be part of an optimal tax system, provided banks' monopoly power is significant. However, if the banking industry is perfectly competitive, the first dollar of revenue is more efficiently collected by a uniform capital income tax, although a strictly positive welfare loss is incurred.

Matutes, Carmen and Xavier Vives "Competition for deposits, fragility, and insurance", Journal of Financial Intermediation, 5, 1996, 184,216.

"Imperfect Competition, Risk Taking, and Regulation in Banking", European Economic Review, 44, 2000, 1-34.

We assess the welfare implications

of banking competition under various deposit insurance regimes in a model of imperfect competition with social failure costs and where banks are subject to limited liability. We study the links between competition for deposits and risk taking incentives, and conclude that the welfare performance of the market and the appropriateness of alternative regulatory measures depend on the degree of rivalry and the deposit insurance regime. Specifically, when competition is intense and the social failure costs high, deposit rates are excessive both in a free market and with riskbased insurance. If insurance premiums are insensitive to risk then the same is true even if there is no social cost of failure. We find also that in an uninsured market with nonobservable portfolio risk or with flat-premium deposit insurance deposit regulation (rate regulation or deposit limits) and direct asset restrictions are complemen-



Eliminating interregional differences in intermediate education levels will reduce the per capita income dispersion by 26%, while equating the actual public capital stock will do it by 19%.

FEDER transfers have reduced the per capita income regional dispersion by 5%, i.e. roughly one third of the total convergence observed in the eighties.

DE LA FUENTE ANGEL,

"Inversión pública y redistribución regional: el caso de España en la década de los ochenta, *Papeles de Economía Española 67*, 1996, 238-56.

DE LA FUENTE ANGEL,

"Algunas reflexiones sobre el papel redistributivo de la inversión pública," en A. Castells y N. Bosch (editores), Desequilibrios territoriales en España y en Europa, Editorial Ariel, Barcelona 1999, 137-49.

These two publications analyze the implicit criteria of the territorial allocation of public investment in Spain during the eighties. The author quantifies the efficiency costs of a redistributive an infrastructure policy, taking into account the possible dynamic effects on induced investment. The results show that observed investment is consistent with an allocation rule that assigns roughly equal weights to efficiency and to equity, and that the efficiency costs of a higher redistribution is quite small.

ESTEBAN, JOAN MARIA

"Un análisis de las desigualdades interregionales en Europa: la década de los ochenta", in A. Castells and N. Bosch (eds.) Desequilibrios territoriales en España y en Europa, Editorial Ariel, Barcelona, 1999, 58-93.

This study contains a detailed analysis of European interregional

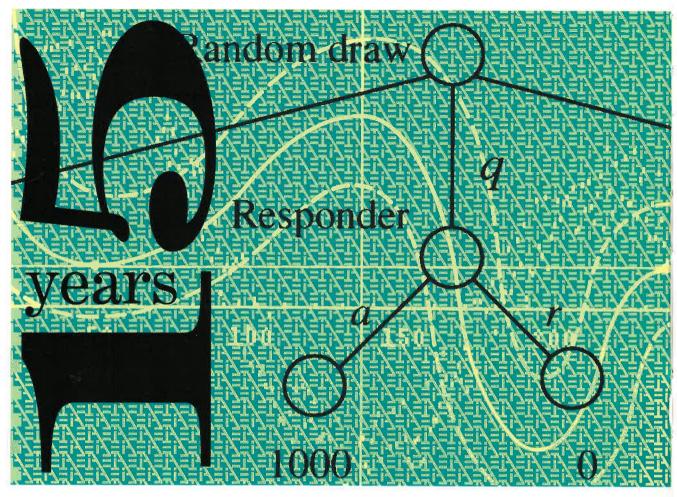
inequalities and of their evolution during the eighties. There is no clear pattern in the evolution of the interregional inequalities during that period. However, this evidence hides a combination of two forces of opposite sign: there is a significant convergence among countries, while there is also a significant increase of regional inequalities inside the countries. During this period a clear tendency to convergence in per capita productivity per employed worker is offset by an increasing interregional divergence in unemployment and labor market participation rates.

ESTEBAN, JOAN MARIA AND JUAN ANTONIO DURO,

"Factor Decomposition of Cross-Country Income Inequality, 1960-1990", *Economics Letters*, 60 1998, 269-275.

ESTEBAN, JOAN MARIA

"Regional Conver-gence in Europe



and the Industry-Mix: a Shift-Share Analysis", Regional Science and Urban Economics, 30 (2000), 353-364. In these articles the authors develop a new technique for the decomposition of per capita income inequality into the sum of the corresponding indexes of per employed worker productivity, the unemployment rate and the participation rate. In addition, the weight of each component within the European Union is compared with the results obtained when the analysis is applied to the inequality between OECD countries.

Finally, a new methodology is proposed to identify whether existing inequalities in per employed worker productivities are the consequence of the specialization of the regions in high or low productivity industries or the result of structural elements (such as the lack of enough infrastructure or human capital).

Economic Integration, the Euro and Growth

DE LA FUENTE, ANGEL,

"Integración económica, crecimiento y convergencia real," en *Pro y contra la moneda única*, Fundación Argentaria y Estudios de Política Exterior, Madrid, 1997, 223-252.

ESTEBAN, JOAN MARIA, JORDI GUAL, RAMON CAMINAL, CARLES BOIX AND PEDRO. VIDELA, Catalunya dins l'Europa de l'Euro, Ed. Antoni Bosch, 1999.

This book analyzes the effect of the introduction of the euro in Catalonia.

It studies the influence of the Monetary Union on the asymmetry of regional cycles and on the difficulties of designing stabilization policies when cycles are asymmetric. It analyzes its incidence on the labor market, on the production

structure and on regional growth perspectives.

Other Regional Economics Topics

ESTEBAN, JOAN MARIA

"Desigualdad y Polarización: la distribución interregional de la renta en España", Revista de Economía Aplicada, 4, 1996, 5-26.

This article studies the evolution of polarization in the territorial distribution of income in Spain. The results obtained show that, for the Spanish case, there exists a persistent process to convergence to the mean. The gap between richer and poorer regions has become substantially smaller.

DE LA FUENTE, ANGEL,

"La dinámica regional de la población española: un panorama y algunos resultados preliminares."

Revista de Economía Aplicada, 20,

The celebration of the 15 years of the creation of the IAE is a reason of pride for the Spanish economic research community. The high quality of the scientific production in economics during this period is definite proof that an institution guided by academic excellence criteria is able to establish a high degree of reputation both in Spanish and international terms. The IAE has been the breeding ground of a great number of excellent economists. Thus, together with a large number of publications in top-ranked academic journals, the members of the IAE have had a very active participation in the public discussion of the most relevant problems of economic policy, such as the regulation of the financial and other industries, policies of promotion of regional growth and competition, and the economic integration of Spain in

Europe.

JUAN J. DOLADO Professor of Economics Universidad Carlos III (Madrid).

1999, 53-108.

This article studies interregional migratory dynamics in Spain. There is no clear evidence of a decrease of the mobility of the Spanish population nor of a decrease of the sensitivity to interregional differences in economic opportunity variables. There is, however, strong evidence of a higher sensitivity to variables related to quality of life and of a high decrease of emigration incentives due to the reduction of regional differences in employment opportunities and income levels.

Innovation and Growth Determinants

Innovation and Growth

DE LA FUENTE, ANGEL AND XAVIER VIVES (editors),

"Innovación tecnológica y crecimien-

to económico", Fundación Cotec, Colección Estudios no. 11, 1998.

DE LA FUENTE, ANGEL,

"¿Convergencia real? España en la OCDE.", Moneda y Crédito, 207, 1998, 1-57.

DE LA FUENTE, ANGEL,

"Una nota sobre la rentabilidad social del I+D y el nivel óptimo de gasto." Papeles de Economía Española, 81, 1999, 88-91.

DE LA FUENTE, ANGEL,

"A Note on Incentives and Researcher Productivity in Spanish Public Institutions",

Investigaciones Económicas, 19, 2, 1995, 291-300.

These studies analyze the sources of growth and of real convergence of the OECD countries during the period 1960-95. The model used in the analysis takes into account the main immediate determinants of the growth rate of an economy (including, together with technological investment, physical and human capital accumulation, the evolution of activity and employment rates and the effect of the public sector).

There is evidence that technological investment has an important positive effect on productivity growth.

The annual growth rate of the Spanish economy would have been half a point higher if the level of technological investment had been similar to the average of the OECD countries.

There is also some evidence of an important decrease of inequality among the analyzed countries. This process of real convergence, however, has been negatively affected by two factors that tend to perpetuate income differences over time. The first of them is related to the negative evolution of employment in the poorest countries of the sample (specially the Spanish case). The second factor is the persistence of significant differences in technological investment between the two groups of countries. In this respect, the relative position of Spain has improved during the period considered.

However, compared to the average of industrialized countries there still exists a strong investment deficit. Finally, the results also show that the level of resources devoted to technological investment is by far less than the optimum in almost all OECD countries and that the social profitability of this kind of investment is by far superior to that of physical capital accumulation. Thus, the study concludes that higher efforts in the area of technological investment should be one of the priorities of a policy designed to promote the convergence of Spain to average European income and welfare.

Other Topics in Economic Growth

DE LA FUENTE, ANGEL,

"Inversión, catch-up tecnológico y convergencia real". Papeles de Economía Española, 63, 18-34, 1995.

DE LA FUENTE, ANGEL AND XAVIER VIVES, "The sources of Irish growth," en A. Gray, editor, International Perspectives on Irish Economic Issues, 112-34, INDECON Public Policy Series, Dublin, 1997).

Applied research

DE LA FUENTE, ANGEL

"Capital humano y crecimiento: evidencia empírica y situación española en relación a la OCDE", (with José María da Rocha), *Moneda y Crédito*, 203, 1996, 43-84.

This paper deals with the relationship between education and growth. One of its main findings is the existence of a strong complementarity between human capital and technological training. The study also analyzes the Spanish case and identifies several shortcomings of education policies.

DE LA FUENTE, ANGEL

"Restructuring government expenditure," Report for the European Comission (2nd Executive Board), May 1997.

The main result of this study is that fiscal policy affects economic growth through three main channels.

First, public investment has a positive effect on growth and private investment, although it faces strongly decreasing returns over expenditure levels. Second, public expenditure tends to reduce private investment through a reduction of the available income in the private sector and of the incentives for accumulation.

The third result is that an increase in the size of the public sector, measured by its participation in GDP, tends to reduce the productivity level through several distortions. The implicit tax rate of this effect is considerable: around 30% on average.

Industrial Economics, Regulation and Competition

Industrial Analysis

GUAL, JORDI, XAVIER VIVES AND LLUÍS TORRENS,

"El impacto de la integración económica europea en los sectores industriales españoles. Análisis de sus determinantes" en *La econo*mía española ante el Mercado Unico Europeo, J. Viñals editor, Alianza Editorial, 1992, 229-312.

The aim of the study is to analyze the determinants of the impact of the Spanish integration in the European Union for the industrial sector case.

The study was based on a sample of specific industries considered to be representative of Spanish industry as a whole.

The analysis covers 27 industries included in the 3-digit NACE-CLIO classification.

Taking into account the initial situation before integration (1985), and using information on trade and production flows, on the degree of concentration of industries and returns of scale parameters, the authors calibrate parameters of demand functions for local and foreign outputs.

Using that initial calibration the impact of customs barriers elimination, the effect of a reduction of non customs barriers, and the evolution of the segmented local markets to a single integrated market at the supranational level are simulated. The model is one of imperfect competition in order to accommodate oligopolistic behavior, considered to be quite frequent in many of the

markets under study.

It also makes it possible to incorporate the existence of product differentiation and hypothetical scale economies.

The analysis tries to quantify the weak starting point of Spanish firms confronted with a trade liberalization process. A first quantification is obtained by taking into account data on the smaller size of the local productive unit with respect to its competitors. Similarly, the study quantifies the size of the preferences of Spanish consumers for foreign products. In some industries those preferences are very strong and can reflect the lower quality of local products as well as the relative disadvantage with respect to similar variables (commercial networks, customer service...). This makes Spanish firms less competitive even when similar price and cost structures are considered.

Brandts, Jordi, Isabel Busom, Ramon Caminal, Carmen Matutes, Xavier Vives, Teresa Garcia-Milà and Xavier Martínez "An Analysis of the Impact of the European Community R&D Policies in Spain", July 1989, European Commission.

This study presents econometric evidence that European aid is not a perfect substitute for private investment, and thus has a positive impact on total R&D expenditure, as well as on the temporal horizon of projects.

Moreover, European funds not only allow the continuation of already started project. They also induce firms to enter into new fields and even to explore new research areas. However, the participation of Spanish firms in European pro-

grams is exclusively limited to biggest size firms. Although there is room for improving informational flows, there is no evidence that this lack of investment by small and middle-size firms is due to the lack of knowledge, rather than to selfexclusion, due to technological or financial problems.

BRANDTS, JORDI, ISABEL BUSOM, RAMON CAMINAL, CARMEN MATUTES, XAVIER VIVES. TERESA GARCIA-MILÀ AND XAVIER MARTÍNEZ

"An Overall Evaluation of the State of R&D in Spain", July 1989, European Commission

This work contains an econometric study, based on a wide sample of firms and research centers, of the main economic determinants of the technological behavior of Spanish firms as well as of the main characteristics of the research developed in the public research centers (mainly Universities and CSIC). The global evaluation of the state of the R&D activities in Spain is not positive, although it seems that there are some tendencies that can lead to a moderate optimism. Among the most surprising results of the econometric study we can highlight the following: (i) the size of the firms is not an important variable in determining R&D efforts, at least above a certain benchmark, (ii) the percentage of private capital also seems not to be very relevant. Actually the firms with highest effort in R&D tend to have a high ratio between investment and sales. That is, these are firms with positive expectations or with a high capital intensity. Finally, the evaluation of the research of the public centers is not positive. Very small expenditure

levels and very short-term research plans.

Anti-Trust Policy

KÜHN, KAI-UWE AND XAVIER VIVES. "Information Exchange Among Firms and their Impact on Competition", February 1995, European Commission Report.

This report evaluates the incentives for information exchange among firms and their welfare consequences with the aim of designing a competition policy in that field. The report critically studies the academic literature of static and dynamic competition models and its relationship with information exchange and analyzes antitrust legislation as well as the anti-trust cases appeared in the US and Europe. The report contains a proposal for competition policy with regard to information exchange among firms.

KÜHN, KAI-UWE, CARMEN MATUTES AND XAVIER VIVES (with London Economics) "Single Market Review 96: Competition Issues", Subseries V, Volume 3, 1997, European Commission.

The 1985 White Paper, Completing the internal market, generated great expectations. Cecchini's study, published in 1988, quantified those expectations and concluded that a substantial part (23%) of the single market benefits would be the consequence of an increase in competition.

The study includes an economic analysis of the evolution of the competitiveness options in the

European markets and of how they have been affected by the measures designed to achieve a single market.

The analysis also includes an examination of the different aspects of firms' behavior which could be restricting the full achievement of the competition benefits of a single market, and evaluates the role of a competition policy in achieving this objective.

Gual, Jordi

"Reducing State Aids in the European Union" in The Political Economy of Industrial Policy in Europe and the Member States, D. Neven and L.H. Röller (eds.), Sigma Pub. (forthcoming, 2000).

The aim of this study is to analyze if the control of state aids in the European

Union can benefit from a policy based on effective aggregate limits on the state aid given by the EU Member States.

Such a policy could have no real effect in the absence of a limit on the programs that remain out of the control of the Commission. The author presents a detailed methodological framework for the whole project, provides information regarding suggested cuts and compares them with recent data on state aid reduction (EU 7TH Survey).

Gual, Jordi

"The Three Common Policies: An Economic Analysis" in Buigues, Jacquemin and Sapir (eds.) EC policies on trade, competition and industry, Edward Elgar, Aldershot 1995.

This study evaluates the coherence 37

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between industrial policy, competition policy and market policy in the European Union.

This evaluation is performed from the perspective of an optimal development of the economic policies as suggested by economic theory, taking into account legal and institutional restrictions imposed by the treaties and regulations of the European Union. The analysis shows that, due to the limited policy instruments available to the Union, market and competition policies have to satisfy several objectives that can be opposed to each other. This multiplicity of objectives leads to non-optimal interventions.

This lack of efficiency could be reduced with an effort in integration policies (mainly, the control of state aid).

VIVES, XAVIER

"Concentración y competencia", in Anuario de la Competencia 1996, Fundación ICO, 1998, 71-85.

This article uses recent developments in industrial organization to understand the relationship between concentration, market power and economic welfare.

It presents the implications of the analysis for the design of a public policy for the control of concentration with applications to Europe and Spain.

VIVES, XAVIER

"La defensa de la competencia en el sector bancario" en Anuario de la Competencia 1998, Fundación ICO, 1999, 71-82.

This article surveys the role of gcompetition in the banking industry and its relationships with regulation.

It also examines the evolution of the industry and the role of the mergers. The article proposes up a methodology for analyzing bank mergers under the framework of competition, with special focus on the practice in the U.S.. It concludes with some advice for the improvement of anti-trust policy in the industry.

Regulation

KÜHN, KAI-UWE AND PIERRE RÉGIBEAU (edited by Jordi Brandts) "¿Ha llegado la competencia? Un análisis económico de la reforma de la regulación del sector eléctrico en España", IAE Report, 1998.

The analysis presented in this report is based on recent developments in regulation theory and on the experience of countries, such as the United Kingdom, more advanced than Spain in the application of regulatory reforms.

It is a rigorous analysis, with strong foundations, about what the new theories of regulation of utilities say and how they can be applied to the Spanish case. The conclusions are not too optimistic about the path that regulation has taken in Spain. Essentially the authors posit that the current regulatory reform in Spain is a lost opportunity to introduce competition in a non-competitive sector. Thus, the answer to the question whether competition has arrived in the sector is no. However, several positive immediate measures are suggested that can be implemented without changing current legislation. Other measures, that do involve revising the current legislation but which would contribute to improve resource allocation, are also suggested.

BURGUET, ROBERTO

"Evaluación crítica de las reglas del mercado español de generación de energía eléctrica"

This study presents an economic analysis of the rules used in the Spanish wholesale electric market, after the reform of January 1998. The main aim is to obtain a diagnostic of the main market design aspects that could be improved upon in order to obtain a more efficient allocation of electricity. The report identifies problems dealing with the format of the offers (it recommends suppressing the minimum income condition and suggests several alternatives), the energy allocation used in the secondary regulation reserve and the payment for power warranty. The effects of vertical and horizontal concentration in generation and the format of the "transition costs to competition" are also studied. With respect to the latter, it is shown that there is a lack of a consistent regulation for the phase after the payment of the transition costs.

Brandts, Jordi

"Estudio experimental sobre el diseño de mecanismos de mercado para el sector eléctrico".

This study analyzes, from an experimental perspective, the interactions between contract markets and spot markets. It is part of a wider research project consisting in using experimental methodology to

analyze several of the problems that are arising in the context of the worldwide regulation reform process. The study is motivated by the importance that the interrelations of both types of markets can have in the recent process of reorganization of the electric power industry which, since the nineties, has been underway in a large number of countries. In particular, it analyzes whether the introduction of a contracts market makes the overall market more competitive. Experimental results obtained until now suggest that both for the case of competition in quantities and in the case of competition in supply functions the introduction of a contracts market increases competition.

Banking and Finance

One of the highest priority areas of applied research in the Institute has been the evolution of the banking industry in Catalonia, Spain and Europe during a key period dominated by two strong phenomena: deregulation and European integration. The research referred to below pertains to the structure, behavior and outcomes of the industry in the different geographic areas, as well as to different topics related to regulation and public intervention.

European Integration and Banking Supervision

VIVES, XAVIER
"Banking Competition and
European Integration", en
European Financial Integration,
A. Giovannini y C. Mayer, editors,
Cambridge University Press,
1991. 9-31.

VIVES, XAVIER

"Regulatory Reform in European Banking", European *Economic Review*, 35, 1991, 505-515.

Both articles study the forecasted impact of a single European market on the banking industry. Three central claims are defended. First, the main effect of integration will be on banks' strategies, which will change emphasis from collusion to competition. Second, banking markets will remain segmented, with different degrees of competition, and thus the benefits of integration will be non-uniformly distributed. Third, mergers, acquisitions and cross-ownership will tend to relax competition.

VIVES, XAVIER, DAVID BEGG, PIERRE ANDRÉ CHIAPPORI, FRANCESCO GIAVAZZI, COLIN MAYER, DAMIEN NEVEN, LUIGI SPAVENTA AND CHARLES WYPLOSZ

Monitoring European Integration: The Making of Monetary Union, CEPR, 1991.

VIVES, XAVIER

"The Supervisory Function of the European System of Central Banks", Giornale degli Economisti e Annali di Economia, October-December 1992, 51, 9-12, 523-532.

These studies analyze different questions related to the effects of a single currency on a number of regulatory issues. A series of suggestions to guarantee financial industry stability are presented, both for the transition and for the period after the introduction of a single currency. Some of these recommendations deal with the distribution of rights over regulation and monitoring between national governments and European governing bodies.

VIVES, XAVIER, JEAN-PIERRE DANTHINE, FRANCESCO GIAVAZZI AND ERNST-LUDWIG VON THADDEN

Monitoring European Integration: The Future of European Banking, CEPR 1999.

This study analyze the causes and consequences of the recent wave of mergers and acquisitions in the banking industry, as well as the impact of new information technologies and of recent developments in the economic integration process. The study shows the high degree of segmentation of financial markets inside the EU, partly due to differences in the regulatory framework, cultural differences, weakness of bond markets and the strong relationship between banks and local firms. It is possible that this situation will change substantially. This would create important regulatory and monitoring problems. If the European Central Bank refuses to take over these activities, an important problem of international coordination will arise.

VIVES, XAVIER

"Restructuring Financial Regulation in the European Monetary Union", forthcoming in Journal of Financial Services Research.

This article deals with the distribution of rights over financial regulation in a monetary union. The author analyzes, first, the impact of a single currency is analyzed, together with that of other important changes in the environment on the degree of interrelation of local banking industries and on the likelihood of contagion problems and liquidity crisis at the European level.

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Secondly, the optimal design of banking and financial monitoring is discussed.

It is suggested to open a debate on the need for a monitoring agency at the European level, probably segregated from the Central Bank, as is currently the case in the United Kingdom.

VIVES, XAVIER

"Lessons from European Banking Liberalization and Integration", forthcoming in *The Internationalization of Financial Services*, WTO-World Bank, Kluwer International.

This study analyzes the impact of financial liberalization and integration on the European banking industry and its implications for public regulation and monitoring. The main conclusions are the following.

First, the establishment of a single market has had important consequences, since national authorities have been induced to liberalize and promote competition within their jurisdictions. Second, the European experience shows that deregulation and liberalization increase the degree of competition, which is positive as long as the public authorities increase the degree of monitorization. Third, the policy of promoting big national banks undertaken by their respective national governments could create important problems of competition and the desirability of a supranational authority.

The Banking Industry in Catalonia and Spain

CAMINAL, RAMON, JORDI GUAL AND XAVIER VIVES

"Competition in Spanish Banking", en European Banking in the 1990's, J. Dermine editor, Basil Blackwell, 1990.

XAVIER VIVES

"Deregulation and Competition in Spanish Banking", *European Economic Review*, P&P, 34, 1990, 403-415.

Both papers present an overview of the changes in the Spanish banking industry during the last decades, both in the regulatory framework and in the structure and the behavior of the industry. The articles present the main challenges of the European integration process. The analysis allows a forecast of a higher degree of competition in the industry, an overall development of the financial markets and a welfare increase.

GUAL, JORDI.

"La competencia en el sector bancario español", Documenta, Fundación BBV, 1992.

This study analyzes the impact of changes in regulation and of the expectations of European integration on the degree and structure of competition in the industry. In the first part, the author analyses topics such as the changes that the 1989 "price war" ("guerra de las supercuentas") produced in the structure of the industry, as well as the process of mergers and credit restrictions that substantially altered competition during the following one year and a half. In the

second part, the evolution of industry structure in the main EU countries is analyzed, with special emphasis on the process of restructuring and consolidation of the industry in Europe.

GUAL, JORDI.

"La racionalización del sector bancario en España", Documenta, Fundación BBV, 1994.

This study partially updates the previous one, but also analyzes in depth the process of rationalization in the industry promoted by an increase of rivalry among financial firms and the resulting pressure to cut expenditures.

Three types of factors that lead to the restructuration of the industry are analyzed: the excessive number of bank offices that a lot of firms have; the new competition created by the introduction of new products and the effects of foreign competition.

VIVES, XAVIER, RAMON CAMINAL AND LLUÍS TORRENS

"Les entitats financeres a Catalunya" in L'economia de Catalunya davant del canvi de segle", Generalitat de Catalunya-BBV, 1994.

This study offers an overview of the financial industry in Catalonia, composed by banks, savings' banks and insurance companies, for the period 1982-92. There are some substantial structural differences between the banking industry in Catalonia and in the rest of Spain: a higher power of savings' banks (especially in the deposit segment), a very low market share of local banks and a higher degree of financial sophistication of custo-

mers. In terms of behavior, it has been observed that both assets and liabilities rates are higher than in the rest of Spain. On the other hand, Catalan firms have a higher dependency on own funds than on bank loans.

This phenomenon seems compatible with the specialization of savings' banks in the deposit segment and with the weak role of local banks.

CAMINAL, RAMON.

"Els Fluxos de capital entre Catalunya i la resta del món (1990-1994), en La balança de pagaments a Catalunya: Una aproximació dels fluxos econòmics amb la resta d'Espanya i l'estranger (1993-1994), Institut d'Estudis Autonòmics, Generalitat de Catalunya, 1997, 243-314.

This study presents several indicators of the capital flows between Catalonia and the rest of the world, for the period 1990-94. The methodology used makes it possible to distinguish among the different channels through which capital imports and exports take place. In particular, savings' banks tend to generate financial surpluses that are exported abroad, while banks tend to import funds. However, the behavior of these flows shows an important cyclic component. In particular, credit to customers by banks and savings' banks is very sensible to macroeconomic conditions. Thus, the lack of credit during a recession would imply the creation of financial surpluses that banks and savings' banks would try to send abroad, either through the market, or internally.

Sponsors

The applied projects carried out by the IAG have been developed in close collaboration with the Fundación de Economía Analítica and under the sponsorship of the following institutions:

CENTRE FOR ECONOMIC POLICY RESEARCH

COMISIÓN EUROPEA

Comisión Nacional del Sistema Eléctrico

Fundación Banco Bilbao Vizcaya

Fundación Cotec para la Innovación Tecnológica

Fundación Fondo para la Investigación Económica y Social

Fundación Pedro Barrié de la Maza, Conde de Fenosa

GENERALITAT DE CATALUNYA

Instituto de Estudios Económicos de Galicia Pedro Barrié de la Maza

Instituto de Estudios Fiscales

MINISTERIO DE ECONOMÍA Y HACIENDA

ACTIVITIES.C

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The Institute has organized a significant number of conferences (around 32). Among them we highlight the following:

Simposio de Análisis Económico (1985-2000)

Since 1985 the Institute has been organizing, together with the UAB Economics Department, the Simposio de Análisis Económico, the reference conference of Spanish academic economists.

The number of presentations has been growing from around 30 to more than 180 with a number of participants around 250. The simposium typically also includes a series of invited lectures by leading academics.

Concentration Year in Industrial Organization (1987)

From January to May 1987 the Institute invited 16 first-rate specialists from the different areas in industrial organization. Each of them stayed in the Institute at least one week and gave three seminars. Xavier Vives and Joan Enric Ricart (Instituto de Análisis Económico and Universitat Autònoma de Barcelona) were the organizers. The concentration year finished at the end of June with a Simposium on Industrial Policy in Spain and the EEC, organized by Carmen Matutes (UAB and INSE-AD), Joan Enric Ricart and Xavier Vives.

Theory of Resource Allocation Mechanisms: Some Recent Developments (1987)

Meeting organized jointly with the Economics Department of the Universitat Autònoma de Barcelona.

Symposium on Intertemporal Economic Theory (1988)

Simposium organized by Joan Maria Esteban and Manuel Santos.

Meeting on Recent Advances in Macroeconomic Theory (1989)

International meeting organized by Ramon Caminal, Joan Maria Esteban, Teresa Garcia-Milà, Ramon Marimon and Andreu Mas-Colell

Congress on Dynamic Economic Models (1989)

This congress was jointly organized with the Instituto Universitario de Gestión y Economía del CECO, Universitat Autònoma de Barcelona and Universidad Complutense de Madrid. Michel Boldrin, Mercedes Gracia, Erno



Workshop about futures markets (1989). From left to right: José Trujillo, Xavier Vives, F. Xavier Ruiz del Portal, José Manuel Basáñez, Josep Lluís Oller and Joan Ketterer. Palla and Manuel Santos were the members of the organizing comitee.

ASSET meeting: Meeting of the Southern European Economic Theory Association (1993)

The 1993 meeting took place in Barcelona, jointly organized with the Universitat Autònoma de Barcelona, and Universitat Pompeu Fabra. Roberto Burguet, Teresa García Milà and David Pérez Catrillo were the members of the organizing committee.

6th World Congress of the Econometric Society (1990)

From August 22nd to 28th Barcelona hosted the World Congress of the Econometric Society. Sponsored by 40 institutions and Spanish companies, there were 1,386 presentations from scholars from all over the world. The local organizing committee was composed by: Salvador Barberà, Ramon Caminal, Joan Ma Esteban, Teresa Garcia-Milà, Xavier Martínez, Josep Ll. Raymond, Manuel Santos and Xavier Vives.

Industrial Organization and Competition Policy, CEPR-IAE (1992)

This conference was organized jointly with the London-based Centre for Economic Policy Research (CEPR). Jordi Gual, Carmen Matutes, Patrick Rey and Paul Seabright were the organizers.

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SPES Conference on European Industry (1992)

This conference took place in the context of the SPES Program. The organizing committee was composed by Jordi Gual and Bruce Lyons.

Democracy and Development, International Economic Association Conference (1992)

The conference was organized by the International Economic Association. The organizing committee was composed by Anthony B. Atkinson, Amaresh Bagchi, Joan Maria Esteban and Gareth Stedman Jones.

Regional Integration, Trade and Growth (1993)

This congress was jointly organized with the London-based Center for Economic Policy Research (CEPR) and Universitat Pompeu Fabra. Ramon Marimon, Richard Baldwin, Daniel Cohen, Angel de la Fuente, Massimo Motta and Xavier Vives were the members of the scientific committee.

Learning (1994)

This conference was jointly organized with the Universitat Pompeu Fabra by Albert Marcet and Xavier Vives.



Conference on Learning (1994). Seppo Honkapohja, Drew Fudenberg, In Ho Lee and Juuso Valimaki.

Fiscal Implications of the European Integration (European Network) (1994)

This was the second meeting of this network. Jordi Brandts was the organizer.

European Workshop on General Equilibrium Theory (1995)

This workshop has been meeting yearly since 1990 with the aim of improving communication among young researchers in this area of



XX Years Celebration of the Graduate Program IDEA (1994), UAB.

economics. However, it also allows the active participation of more experienced scholars. In 1995 this conference was organized by the Institute under the supervision of Joan Maria Esteban.



Javier Pérez-Farguell, Caja Madrid



James Mirrlees, Xavier Vives and Joan M^a Esteban.



General Meeting of the Journal of Industrial Economics (JIE). From left to right: S. Borenstein, T. Von'Ungern-Stenberg, J. Farrell, M. Waterson, L. White, M. Hviid, X. Vives, G. Faulhaber, M. Slade, T. Bresnaman and F. Brown (Barcelona, June 26, 1995).

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Kai-Uwe Kühn and Jean Jacques Laffont.



Richard Gilbert, Xavier Vives and Miquel Puig (CCRTV)

Telecommunications: Competition and Regulation (1995)

This conference, organized jointly with the London-based Centre for Economic Policy Research (CEPR) by Jordi Brandts and Kai-Uwe Kühn, consisted in the presentation and discussion of recent research and in a round table with the participation of professionals from the telecommunications industry.

Market Microstructure (1996)

This conference was jointly organized with the Centre for Economic Policy Research (CEPR) by Günter Franke, Marco Pagano and Xavier Vives. The conference participants presented and discussed several research papers it also included a round table with the participation of practitioners from the financial markets.



Market Microestructure Conference (1996). Bruno Biais. Hyun Song Shin and Jozsef Sakovics.

International **Conference "Public** Loans in Europe" (1996)

The conference was organized by Ramon Caminal jointly with the Centre de Recerca en Economia Internacional (Universitat Pompeu Fabra), financed by the Institut Català de Finances (Generalitat de Catalunya). The core of this conference was published in a book under the direction of Ramon Caminal.

Review of Economic Studies Tour (1997)

The Institute was elected by the Review of Economic Studies to host a European meeting of young American and European economists. The Board of Editors of the journal selects the eight best theses written in the United States and Europe in the different fields of economics and invites their corresponding authors to present their work in several of the bestrated research centers in Europe and Israel. The meeting was organized by Pierre Régibeau.



International Economic Congress of Central Catalonia (1997)

The Congress dealt with "New Contributions to the Analysis of Distribution and Income Taxation", and was the first of the program of Caixa de Manresa Congrés Internacional d'Economia de la Catalunya Central, developed jointly with the CODE (Universitat Autònoma de Barcelona) and CREI (Universitat Pompeu Fabra), In 1997 the organizer was Joan Ma Esteban.



Adolf Todó, Caixa de Manresa

Competition and Trade Policy (1997)

This conference, jointly organized with the Centre for Economic Policy Research (CEPR), dealt with topics such as the design of competition policy (for instance mergers policies) in open economies, the relationship between

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competition and market policies (for instance antidumping and state aids) and the effects of foreign trade on competition and internal efficiency. Richard Baldwin, Jordi Gual, Massimo Motta and Pierre Régibeau were the members of the organizing committee.



Frank Wolak.

Regulation and Competition Policy in Network Industries (1998)

This meeting was organized jointly with the Fundación Ramon Areces. Xavier Vives was the organizer.



From left to right: Francesc Vicent, Xavier Vives, Pere Junyent, Artur Mas, Ernest Sena and Joan Enric Ricart.

2nd International ICF Seminar "Corporate Governance" (1998)

This conference consisted in the exposition of research work and in a round table which included the presence of businessmen, government officials, and media. It was organized by Ramon Caminal and Xavier Vives. The conference was coorganized with Institut Català de Finances (Generalitat de Catalunya) who sponsored it. The content of the conference gave rise to a book edited by Xavier Vives, published by Cambridge University Press.

Manresa Conference on Finance (2000)

This conference was the fourth of a series of yearly conferences under the sponsorship of Fundació Caixa de Manresa.

The aim of this conference was to attract the most relevant international experts on financial economics. Topics such as the pricing of financial assets, corporate finance, banking, regulation and experimental and empirical models were covered. A selection of papers presented at this conference will be published in the European Economic Review after proper evaluation.

The Centre for Economic Policy Research (CEPR) contributed to the organization.



3rd International ICF Se-minar: "Globalization and the Location of

Economic Activities" (2000)

The aim of this meeting was to contribute to a rigorous discussion of the ways in which economic globalization is affecting economic activities. Some of the topics analyzed were the way in which globalization affects interregional inequalities, and the relationship between specialization and innovation in a globalized framework. The conference was organized by Jordi Brandts and Xavier Vives and took place under the sponsorship of the Institut Català de Finances (Generalitat de Catalunya).

Sponsorship

The organization of the conferences would not have been possible without the financial sponsorship of the following institutions and firms:

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ACTIVITES. VISIT

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Lawrence Ausubel, University of Maryland

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Guillermo de la Dehesa, President of the CEPR



MICHELE BOLDRIN, University of Minnesota



Costas Azariadis, UCLA



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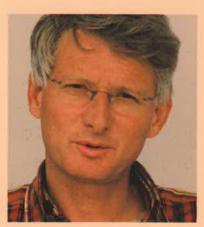
TIMOTHY BRESNAHAN, Stanford University

NGRESEARCHERS.

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Pierre André Chiappori, University of Chicago



JEAN-PIERRE DANTHINE, Université de Lausanne



Mathias Dewatripont Université Libre de Bruxelles

Visitors (six months or more)

José Ma Aizpurua, Universidad Pública de Navarra Pablo Antolín, OCDE GARY BOLTON, Pennsylvania State University TIMOTHY BRESNAHAN, Stanford University SUBIR CHATTOPADHYAY, Universidad YEON-KOO CHE University of Wisconsin JON DANIELSSON, London School of GIANNI DE FRAJA. University of York JEAN IVES DUCLOS, Université Laval JAMES FAIRRURN, University of Sussey Peter Funk, Universität Köln JOSEPH GREENBERG, McGill University Ma. Dolores Guilló, Universidad JONATHAN HAMILTON, University of Florida JOSEPH HARRINGTON, Johns Hopkins Universitu CHARLES A. HOLT, University of Virginia BENTLEY MACLEOD, University of Southern California ALEJANDRO MANELLI, Arizona State University MICHAEL MANOVE, Boston University Ma José Murgui, Universidad de Valencia DAMIEN NEVEN, Université de Lausanne MARTIN PERRY, Rutgers University PAUL SEABRIGHT, Université de Toulouse JAIME SEMPERE, Centro de Estudios

Económicos, El Colegio de México

Turquía

MURART SERTEL, Bogazici University,

FERNANDO VEGA, Universidad de Alicante

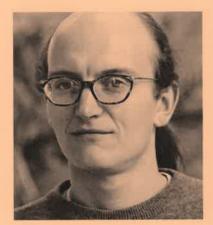
Visitors (less than six months)

LAUREL A. ADAMS, Northwestern SVEND ALBAEK, Center for Economic Research, Tilbura University Francisco Alcalá, Universidad de Murcia ALBERTO ALESINA, Harvard University BETH ALLEN, University of Minnesota SIMON P. ANDERSON, University of Virginia Manuel Antelo, Universidad de Santiago MARK ARMSTRONG, Oxford University ALAN AUERBACH, University of California. LAWRENCE AUSUBEL, University of Maruland COSTAS AZARIADIS, UCLA Kyle Bagwell, Columbia University ABHIJIT BANERJEE, MIT VENKATARAMAN BHASKAR, Essex Universitu GARY BECKER, University of Chicago JEAN PIERRE BENOIT, New York University HELMUNT BESTER, Freie Universität Berlin SUGATO BHATTACHARYA, Michigan Business School SUDIPTO BHATTACHARYA London School of **Economics and Political Science** GARY BIGLAISER, University of North Carolina, Chapel Hill KEN BINMORE, University College London CHARLES BLACKORBY, University of British Columbia ROBIN BOADWAY, Queen's University, Canadá MICHELE BOLDRIN, University of Minnesota

PATRICK BOLTON, Princeton University

ACTIVITES. VISITI

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James Fairburn, University of Sussex



GERALD R. FAULHABER, University of Pennsylvania



GIANNI DE FRAJA, University of York

«The IAE is an excellent research center. There should be more like this in Europe. It is focused, well organized, "lean", and with the correct sense of what is good. I very much hope that the center can find financial support to continue to prosper. It is important for a center like this to maintain a critical mass. My visit there was enjoyable and productive.»

Alberto Alesina, Harvard University



RICHARD GILBERT, University of California, Berkeley



Jonathan Hamilton, University of Florida



JUAN FRANCISCO JIMENO, FEDEA and Universidad de Alcalá de Henares

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RICHARD KIHLSTROM, University of Pennsylvania



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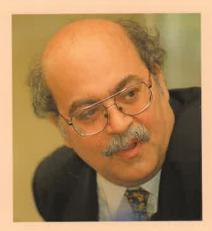
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JUAN FRANCISCO JIMENO, FEDEA and
Universidad Alcalá de Henares

Bruno Jullien, Université de Toulouse

ACTIVITES. VISIT

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Andreu Mas-Colell, Generalitat de Catalunya





PRESTON MCAFEE. University of Texas, Austin

«The IAE is, without any doubt, one of the leading economics research centers in Europe. From its creation it has been able to maintain a high standard of activity and publications, with a cost-effectiveness ratio hard to surpass. Far from being closed in itself, it has promoted its presence in other institutions and plays a very important role in the celebration of the Simposio de Análisis Económico. It is also, thanks to its members, a friendly and accessible center despite being physically away from the city center.»

José Manuel González-Páramo, Universidad Complutense de Madrid and Bank of Spain.



Maureen o'Hara, Cornell University



JORGE PADILLA, CEMFI



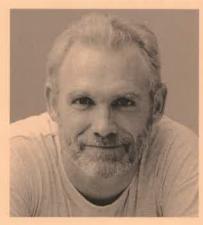
Martin Perry, Rutgers, The State University of New Jersey

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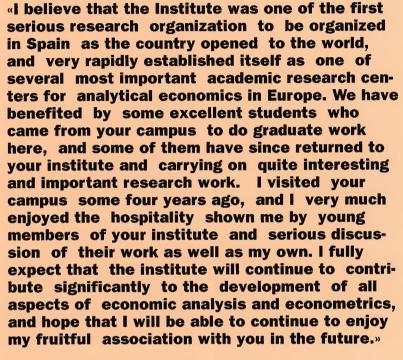
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«I remember the starting years of the IAE, its creation and its first steps. The facts have by far exceed the expectations. The IAE and the academic economists can be proud of themselves»

Carmen Herrero, Universidad de Alicante

PARTICIPATION IN EU

15 years 15 years 15 years 15 years 15 years 15 years 15 years

Frontiers of Institutional Economics, 1994-1997

This project was part of an European Research Network dedicated to the study of the implications of economic integration in the design of economic institutions. It was coordinated by the Milanbased Innozenzo Gasparini Institute for Economic Research (IGIER) and financed by the Commission of the European Union through the Human Capital and Mobility Program. Other participants were: European Centre for Advanced Research in Economics, Institut d'Economie Industrielle and Instituto Valenciano de Investigaciones Económicas. The three main research topics were: 1) Political integration and subsidiarity, 2) Integration of regulatory policies and 3) Economic integration. At the Institute the network was directed by Xavier Vives.

Fiscal Implications of European Integration, 1994-1997

Project financed by the Commission of the European Union as part of the Human Capital and Mobility Program, jointly with the Fundación de Economía Analítica. This project was coordinated by the Université Catholique de Louvain and their participant members were: University of Essex, Universität Bonn, Institut d'Economie Industrielle (Université des Sciences Sociales de Toulouse), Keele University, Economic and Social Research Institute (Dublin), Universitá di Bologna, Service d'Economie Publique (Université de Liège), and Institute of Economics (Copenhagen Business School). It was directed at the Institute by Jordi Brandts. The research focused on indirect taxation, taxation of capital income and redistribution.

Markets and Games, 1994-1998

This project was part of an European Research Network on the application of game theory to market analysis coordinated by the CentER of Economic Research (Tilburg University). The Universidade Nova de Lisboa, Stockholm Universitet, Universität Dortmund, Institute for Advanced Studies and Handelshögskolan i Stockholm were the other participant members. Roberto Burguet and József Sákovics were the members of the Institute who participated in it. The project was financed by the Commission of the European Union as part of the Human Capital and Mobility Program.

«The IAE has been a reference point for all of us, for its clear academic focus and its commitment to prove the quality of its research by its subsequent publication in the top-level scientific publications. At the same time, the IAE has made an effort to put together different public and private institutions with its projects, showing the interest of its researchers in socially relevant economic problems. What the IAE has accomplished is just an illusion for other people. Thus, its trajectory is an empiric reference of good

ROPEAN NETWORKS.

15 years 15 years 15 years 15 years 15 years 15 years 15 years

Industrial Organization of Banking and Financial Markets in Europe, 1998-2000

The project is coordinated by the Centre for Economic Policy Research (CEPR) and the other participants are: European Centre for Advanced Research in Economics (Brussels), Institut d'Economie Industrielle (Toulouse), Università degli Studi di Salerno, Université de Lausanne and London School of Economics (Financial Markets Group). Xavier Vives is the scientific coordinator of the project and Ramon Caminal leads the Institute team. The project consists in a program of research and training centered on: 1) Excessive competition and systematic risk in the banking industry, 2) Industrial Organization of stock markets, 3) Industrial Organization of credit markets.

Evolution of the Market Structure of Network Industries, 1998-2000

This project promotes new research on the evolution of the market structure, regulatory regimes and the future importance and size of European network industries such as telecommunications, power, aerial transportation ,railways and water. The project is coordinated by the Wissenschaftszentrum Berlin and the remaining participants are: European Centre for Advanced Research in Economics (Brussels), Institut Européen d'Administration des Affaires (INSEAD), Universität Mannheim, Universidade Nova de Lisboa, London Business School and the Centre for Economic Policy Research. In the Institute the project has been directed by Carmen Matutes and Pierre Régibeau.

European Network for the Delevopment of Experimental Economics and its Application to Institutions and Individual Decisions, 1998-2000

The project aims at promoting innovative research in experimental economics. The two main topics are: 1) The development and influence of institutions and 2) The fundamental study of individual decisions in economic environments. The coordinating institution is the Universiteit van Amsterdam and the remaining participants are Universitat Pompeu Fabra, University of York, Universität Bonn, Ludwig Botzmann Institute for Economic Research de Viena, Humboldt-Universität zu Berlin and The Hebrew University of Jerusalem. At the Institute the project is coordinated by Jordi Brandts.

research practices of great social value, since it is a stimulous for other people to follow course. It is not by chance that it has been visited and imitated, at least partially, by so many researchers and Spanish groups interested in learning from its experience. A large number of Spanish economists consider the IAE part of themselves.»

Francisco Pérez, Universidad de Valencia and IVIE

SEMINARS.

15 years 15 years 15 years 15 years 15 years 15 years 15 years

Bellaterra Seminar (1986-2000)

The Institute organized a weekly seminar jointly with the Economics Department of the Universitat Autònoma de Barcelona. More than 400 papers were presented.

Applied Microeconomics Seminar (1989-1990)

The Institute organized an Applied Microeconomics Seminar, coordinated by Xavier Vives, where topics as different as theoretical microeconomics, game theory, empirical analysis or economic policy were analyzed. The presentations covered a wide variety of fields: industrial economics, financial economics, public economics and foreign trade, among other topics. The common factor of the seminars was the microeconomic foundation of the analysis.

Financial Economics Seminar(1991-1997)

Seminar of the Banking and Finance Studies Program (under the sponsorship of the Fundación BBV) coordinated by Jordi Caballé and Xavier Vives. Almost 150 articles dealing with finance topics were presented.

Spanish Economy Seminar (1996-1997)

Weekly Seminar about different topics of the Spanish Economy.

Regulation Seminar (1996-1999)

This was a bimonthly seminar dealing with regulation topics. The Seminar in which around 20 articles both theoretical and empirical were presented, included informal presentations on specific regulation policy questions and recent advances in regulation. The seminar took place in the context of the research program financed by the Comisión Nacional del Sistema Eléctrico.

Informal Microeconomics Seminar (1998-2000)

Bimonthly seminar dealing with microeconomic topics. In it research in progress is presented. Until now more than 20 research papers have been presented.

«Economic research in Europe has experienced a process of constant improvement and consolidation over the last fifteen years. The Institute of Economic Analysis has been a major contributor to this process. It has also been one of the forces behind the emergence of Barcelona as a center for high level training and research in economics.»

Salvador Barberà, Universitat Autònoma de Barcelona

TEACHING.

15 years 15 years 15 years 15 years 15 years 15 years 15 years

Graduate Program IDEA (International Doctorate in Economic Analysis)

Since its foundation, the Institute has been collaborating with the UAB Department of Economics in the graduate program IDEA. This program is part of an international network which includes the University College London, CentER and Tilburg University, University of Social Sciences Toulouse, University of Mannheim and the Free University of Brussels.

Members of the Institute have participated in teaching duties of the Program, teaching 121 courses of topics such as:

EXPERIMENTAL ECONOMICS

FINANCE

INDUSTRIAL ORGANIZATION

PUBLIC ECONOMICS I AND II

INFORMATION AND LEARNING

MACROECONOMICS I AND II

MICROECONOMICS II

COMPETITION POLICY

GAME THEORY

GROWTH THEORY

As part of the graduate program it has been organized the following workshops, done under a weekly or biweekly basis:

- Econometrics
- Macroeconomics
- Microeconomics

European Economic Association Summer School (2000)

The European Economic Association organizes every year, with the aid of the European Union, a summer school for graduate students. In addition to exposure to lectures taught by wellknown international researchers. some of the students have the chance of presenting and discussing their own articles with the instructors. The XIth EEA Summer School was organized by and held at the Institute in September 2000 and the topic covered was economic growth and the European experience. The course was directed by Angel de la Fuente, with the collaboration of Jordi Caballé (UAB) and Antonio Ciccone (UPF)

Experimental Economics Summer School and Workshop (2000)

Between September 12 and 24, 2000 the BEaST (Barcelona Bellaterra Experimental **Economics and Summer School** Two Thousand) took place in Barcelona. This meeting, jointly organized with the Universitat Pompeu Fabra in the framework of the European Network of Experimental Economics (ENDE-AR), had two parts. In the first part, 25 students from almost all EU countries attended an experimental economics course taught by international faculty. In the second part 15 research projects in progress were presented. The meeting was organized by Antoni Bosch (UPF), Rosemarie Nagel (UPF) and Jordi Brandts.

Direction of Theses

Teaching duties have been complemented by the supervision by members of the IAE of 40 Master theses and 17 PhD theses.

Funding

The main funding sources of the Institute for Economic Analysis are the Higher Council for Scientific Research (CSIC), the competitive projects from the Spanish Ministry of Education and Science (DGICYT), the European Union, Generalitat de Catalunya (competitive projects and subsidies), Universitat Autònoma de Barcelona, and contracted research projects (a large number of them jointly with the Fundación de Economía Analítica).

The level of funding of the Institute coming from CSIC has evolved downwards since 1993, with a decrease in real terms of around 15% from the period 1992-5 to the period 1996-9 and with a forecast of a decrease of 17% from the average of 1996-99 and 2000. The contribution of the DGICYT projects increased from 1992-5 to 1996-9 but decreases in the forecast for 2000 to a half of the average of the period 1996-9. Funding coming from the Generalitat de Catalunya was reduced around 69% from the period 1992-5 to the period 1996-9 and there is a forecast for the year 2000 of a 47% decrease with respect to the average of the period 1996-9. By contrast, the competitive funding obtained from European projects increased around 79% in the period 1996-9 compared to the period 1992-5, and there is a forecast for the year 2000 of an increase of around 36% over the average of the period 1996-9.

The maintenance (with a slight decrease) of the funding coming from projects has not precluded that the global resources at the disposal of the IAE have decreased by 10% in the period 1996-9 compared with the period 1992-5, with a forecast for the year 2000 of a decrease of 11% compared to the average of the years 1996-9. Funding per permanent researcher decreased by 25% in the period 1996-9 compared with 1992-5, with a forecast for the year 2000 of a decrease of 16% compared with the average of the period 1996-9.

The previous measures are reflected in the evolution of the shares of total funding of the Institute. One can appreciate that funding coming from CSIC and the Generalitat have a decreasing trend (for CSIC, from 55% in $1992\mbox{-}5$ to 52% in $1996\mbox{-}$ 9 and 48% in the forecast for the year 2000; for the Generalitat the figures are respectively 6%, 2%, 1%), an oscillation of the funding coming from MEC (respectively 9%, 12% and 6%), a significant increase of the contribution of the European Union (respectively 6%, 12% and 19%), and a stable path of the funding coming from research contracts (respectively 22%, 20% and 24%).

Figure 1. Evolution of Average Funding

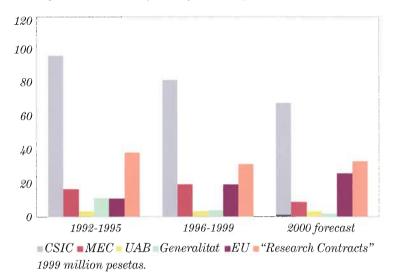
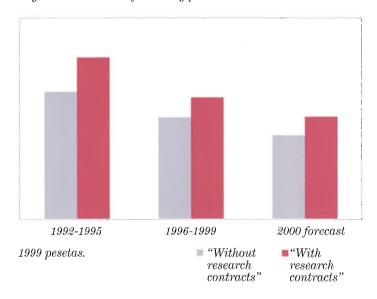
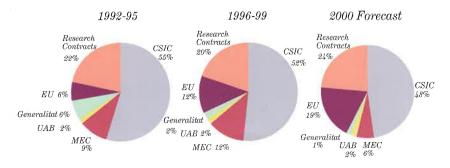


Figure 2: Evolution of Funding per Permanent Researcher



 $Figure\ 3.\ Funding\ Composition.$



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